

May 31, 2012

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**SUBJECT: Draft 2012 Annual Long-Term Monitoring Report for the Fire Training and Demonstration Pad (SEAD-25) at Seneca Army Depot Activity in Romulus, NY; Contract W912DY-08-D-0003, Task Order 0008**

Dear Mr. Nohrstedt:

Parsons Government Services Inc. (Parsons) (formerly Parsons Infrastructure & Technology Group Inc.) is pleased to submit the Draft 2012 Annual Long-Term Monitoring Report for the Fire Training and Demonstration Pad (SEAD-25) at the Seneca Army Depot Activity (SEDA) in Romulus, New York. This work was performed in accordance with the Scope of Work for Task Order 0008 under Contract No. W912DY-08-D-0003. This Report provides a review of long-term groundwater monitoring conducted during February and March 2012, and provides recommendations for future long-term monitoring at SEAD-25. This document also provides a review of the effectiveness of the remedy implemented at the SEAD-25 in 2005.

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

Sincerely,



Todd M. Heino, P.E.  
Vice President

Enclosures

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May 31, 2012

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**SUBJECT: Draft 2012 Annual Long-Term Monitoring Report for the Fire Training and Demonstration Pad (SEAD-25) at Seneca Army Depot Activity in Romulus, NY; EPA Site ID# NY0213820830 and NY Site ID# 8-50-006**

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

Parsons Government Services Inc. (Parsons) (formerly Parsons Infrastructure & Technology Group Inc.) is pleased to submit the Draft 2012 Annual Long-Term Monitoring Report for the Fire Training and Demonstration Pad (SEAD-25) at the Seneca Army Depot Activity (SEDA) in Romulus, New York (EPA Site ID# NY0213820830 and NY Site ID# 8-50-006). This Report provides a review of long-term groundwater monitoring conducted during February and March 2012, and provides recommendations for future long-term monitoring at SEAD-25. This document also provides a review of the effectiveness of the remedy implemented at SEAD-25 in 2005.

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Todd Heino, P.E.  
Vice President  
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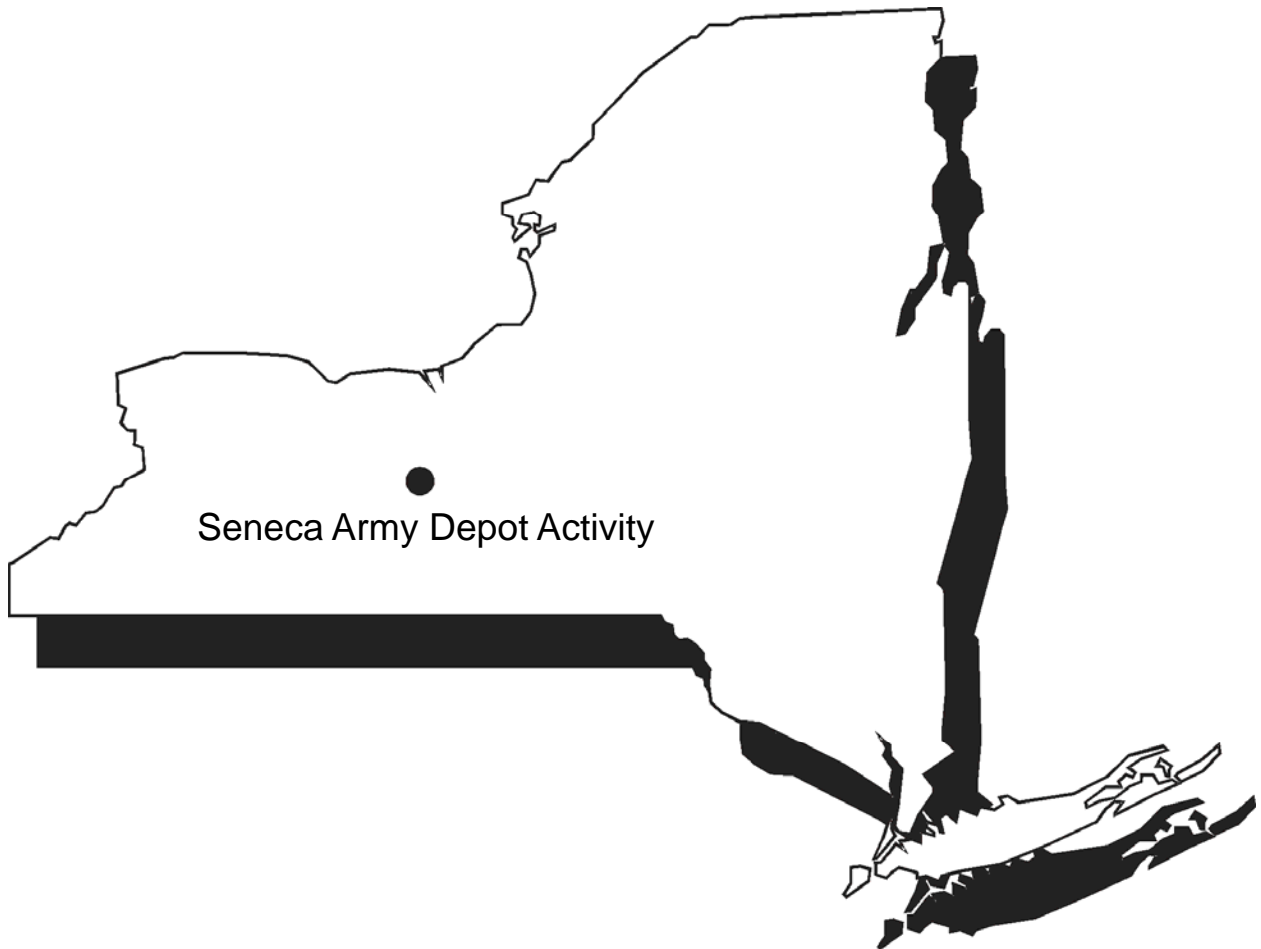
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US Army, Engineering & Support Center  
Huntsville, AL



Seneca Army Depot Activity  
Romulus, NY



**DRAFT**

**2012 ANNUAL LONG-TERM MONITORING REPORT**

FIRE TRAINING AND DEMONSTRATION PAD (SEAD-25)

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**

MAY 2012

**DRAFT**

**2012 ANNUAL LONG-TERM MONITORING REPORT**

**FOR THE FIRE TRAINING AND DEMONSTRATION PAD (SEAD-25)**

**SENECA ARMY DEPOT ACTIVITY, ROMULUS, NEW YORK**

**Prepared for:**

**U.S. ARMY, ENGINEERING & SUPPORT CENTER, HUNTSVILLE**

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**Contract Number W912DY-08-D-0003**

**Task Order No. 08**

**EPA Site ID# NY0213820830**

**NY Site ID# 8-50-006**

**MAY 2012**



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## 1.0 INTRODUCTION

This report provides a review of the calendar year (CY) 2012 (Round 9) long-term groundwater monitoring (LTM) sampling event conducted at the Fire Training and Demonstration Pad (SEAD-25) at the Seneca Army Depot Activity (SEDA or Depot) in Seneca County, New York in late February and early March 2012. This document also provides recommendations for future LTM and a review of the effectiveness of the remedy implemented at SEAD-25 in 2005. This report has been issued by Parsons Government Services Inc. (Parsons) on behalf of the U.S. Army (Army), Engineering and Support Center, Huntsville and the Seneca Army Depot Activity.

In accordance with the *Record of Decision (ROD) for the Fire Training and Demonstration Pad (SEAD-25) and the Fire Training Pit and Area (SEAD-26)* (Parsons, 2004) and the *Final Remedial Design Work Plan and Design Report (RDR) for the Fire Training and Demonstration Pad (SEAD-25) and the Fire Training Pit and Area (SEAD-26)* (Parsons, 2005), a Remedial Action (RA) was completed in November 2005 for both area of concerns (AOCs), and the results of the actions were documented in the *Construction Completion Report for SEAD-25 and SEAD-26, Final (CCR)* (Parsons, 2006). The SEAD-25 RA involved the removal of 1,722 cubic yards (cy) of soil and sediment impacted by volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) at SEAD-25.

Long-term groundwater monitoring is being performed at SEAD-25 as part of the continuing post-closure monitoring and maintenance (PCMM) operations as described in the RDR. Groundwater monitoring was required at the AOC as a condition of the ROD since contaminant concentrations found in the groundwater at the AOCs prior to the RA exceeded applicable groundwater standards. Semi-annual groundwater monitoring of the ten monitoring wells (MW25-2, MW25-3, MW25-8, MW25-9, MW25-10, MW25-13, MW25-15, MW25-17, MW25-18, and MW25-19) located at SEAD-25 continued until 2012 when the EPA and NYSDEC agreed as recommended in the SEAD-25 *Fourth Long-Term Monitoring and Site Review Report* (Parsons, May 2011) to reduce the semi-annual to an annual monitoring event and also reduce the number of wells to be monitored from ten to five since the down-gradient wells have shown no COCs during any of the post-RA sampling events. The focus of future sampling events (e.g., 2013) would only be on wells MW25-2, MW25-3, MW25-9, MW 25-10 and MW25-17 where historic information indicates that COCs of interest have been found in these wells.

**Table 1** presents a summary of the historic LTM sampling and analysis events that have been conducted at SEAD-25 since the completion of the RA activities. Nine (9) LTM sampling events including the most current event completed in the first quarter of 2012 (2012Q1) have been conducted at SEAD-25 since the completion of the RA at the site in late 2005. This *2012 Long-Term Monitoring Report* provides complete details of LTM activities conducted during the annual LTM event in 2012. This Report also provides an overall summary of the data collected at SEAD-25 since LTM began in late 2005.

## 2.0 SITE BACKGROUND

### 2.1 Site Description

The Seneca Army Depot is a 10,587-acre former military facility located in Seneca County in the towns of Romulus and Varick, New York, which was owned by the United States Government and operated by the Department of the Army between 1941 and 2000. The general location of the SEDA is shown on **Figure 1**. In 1999, SEDA's military mission was terminated and the installation was closed in 2000. Since 2000, the Army has assumed a caretaker role at the SEDA, pending the close-out of environmental investigations, studies, and remedial activities that are required at the former facility. As part of SEDA close-out activities, more than 8,250 acres of land within the former Depot has been transferred to new owners for reuse.

The Seneca Army Depot is located between Seneca Lake and Cayuga Lake in Seneca County and is bordered by New York State Highway 96 on the east, New York State Highway 96A on the west, and sparsely populated farmland to the north and south. The Fire Training and Demonstration Pad (SEAD-25) is located in the east-central portion of SEDA. The site is bounded to the east by Administration Avenue, beyond which is undeveloped land covered by deciduous trees; to the south by Ordnance Drive beyond which is an open grassy field and a stand of coniferous trees; to the west by a drainage ditch running from the northeast to the southwest with grassland, brush and conifers between the site and the ditch; and, to the north by grassland and a former baseball field. A site map of the SEAD-25 area and its location within the SEDA is included as **Figure 2**. As situated, SEAD-25 sits a minimum of 1,350 feet away from the nearest SEDA boundary, which is located to the east of the AOC. A more detailed site map of SEAD-25 is provided as **Figure 3**. SEAD-25 was in use from the late 1960s to the late 1980s. The former pad was used for fire control training. During the 1980s, the pad was used twice for fire-fighting demonstrations, including one demonstration in 1982 or 1983, and one in 1987.

#### Site Hydrologic and Geologic Conditions

The hydrogeologic setting for SEAD-25 was previously described in detail in Section 3.1.6 of the *Final RI Report*<sup>1</sup> (RI Report) dated May 1998. A brief summary of hydrologic conditions described in the RI Report and historical groundwater conditions encountered during previous sampling events is presented below. Hydrologic conditions as observed during the 2012 LTM event are discussed in **Section 3.1** of this Report. Groundwater contours presented in the RI Report indicate that shallow groundwater flow below the pad is radial, with a stronger horizontal gradient to the south and west. The radial groundwater flow observed below the pad at SEAD-25 is believed to be a local phenomenon influenced by a bedrock topographic high located beneath the pad. The RI Report identified groundwater flow direction in the deeper, competent shale zone as to the west and southwest.

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<sup>1</sup> *Remedial Investigation Report for the Fire Training and Demonstration Pad (SEAD-25) and the Fire Training Pit and Area (SEAD-26), Seneca Army Depot Activity, Parsons Engineering Science, Inc., May 1998*

The horizontal hydraulic gradients as presented in the RI Report ranged from 0.01 feet per foot (ft/ft) to 0.02 ft/ft in both the shallow saturated zone located in the till/weathered shale bedrock and in the deep saturated zone located in the competent shale bedrock. The hydraulic conductivities at SEAD-25 were found to range from  $1.0 \times 10^{-5}$  centimeters per second (cm/sec) to  $3.4 \times 10^{-3}$  cm/sec, with an average of  $6.1 \times 10^{-4}$  cm/sec in the shale/weathered bedrock. Both downward and upward vertical gradients were calculated for SEAD-25; the downward hydraulic gradients ranged from -0.04 ft/ft to -0.21 ft/ft, and upward hydraulic gradients ranged from 0.01 ft/ft to 0.07 ft/ft.

SEAD-25 is located very near a combined topographic and bedrock high within the east central portion of the former Depot. As such, all recharge to the local groundwater table comes from infiltration of storm-event water down through the surface into the underlying aquifer at, and in very close proximity to the AOC. Surface water run-off competes with infiltration as much of the storm-event precipitation is captured in neighboring drainage ditches and is conveyed to lower elevation areas within the Depot, which are down-gradient of the AOC's well recharge area.

The shallow overburden underlying SEAD-25 is thin, consisting of a till and fractured shale ranging from roughly 5 to 15 feet in thickness, which overlies competent shale bedrock. The monitoring wells sampled as part of SEAD-25 LTM effort are all located in the shallow, overburden aquifer where the groundwater contamination was originally identified. As such, the combination of run-off and low infiltration or aquifer recharge periods that occur during extended dry or low water periods cause the overburden water table to thin to levels where samples cannot be collected from many of the wells and has not allowed a strict adherence to a semi-annual sampling schedule. This affects the collection of samples from one or more of the three source wells (MW25-2, MW25-3, and MW25-9). These wells are located closest to the former source area that was removed during the 2005 RA activities and historically have shown levels of BTEX (i.e., benzene, toluene, ethyl benzene, and total xylenes) and chlorinated organic compound content. When dry or low water conditions are encountered in the field, event sampling is postponed until adequate water can be collected from the source wells to support essential groundwater analyses (e.g., VOCs).

## 2.2 Soil and Groundwater Impacts

As described in the RI Report, the primary COCs historically observed at SEAD-25 included aromatic VOCs (benzene, toluene, ethyl benzene, and total xylenes) in soil and groundwater, as well as lesser amounts of five selected chlorinated VOCs, including 1,1,1-trichloroethane, 1,1-dichloroethane, 1,2-dichloroethene (total) (1,2-DCE), chloroform, and trichloroethene (TCE), in groundwater. Vinyl chloride (VC), a degradation product of TCE and 1,2-DCE, was identified above the cleanup goal of 2.0 ug/L at a concentration of 2.6 ug/L in MW25-2 during event 8 LTM and thus is included in the list of COCs at the site.

The pre-remedial action impacts from BTEX compounds occurred at three soil sample locations (SB25-3, SB25-4, and SB25-5) clustered together in the western half of the pad. The vertical impacts extended from the land surface to a depth of 4 to 6 feet below ground surface (bgs), which corresponds

approximately to the top of competent bedrock (encountered at approximately 4.5 feet bgs during the RA). The highest concentrations of BTEX were detected at soil boring SB25-5, measuring 15,810 micrograms per Kilogram ( $\mu\text{g}/\text{Kg}$ ), 151,500  $\mu\text{g}/\text{Kg}$ , and 10,200  $\mu\text{g}/\text{Kg}$  at depth intervals of 0-2 feet, 2-4 feet, and 4-6 feet bgs, respectively. Lower concentrations of BTEX were detected in the surface soil at sample locations SB25-3 (5,410  $\mu\text{g}/\text{Kg}$ ) and at SB25-4 (2,900  $\mu\text{g}/\text{Kg}$ ), respectively.

Impacts to soil located in the adjacent drainage swales at SEAD-25 were also noted and were mainly associated with SVOCs, pesticides, and heavy metals. The most significant impacts from SVOCs and metals were found in the drainage swale northwest of the pad. In the ditch that runs along the west side of Administration Ave/turns west along Ordnance Drive, the most significant SVOC impact was found in a single upgradient location. No COCs were identified in SEAD-25 surface water in concentrations that indicated remediation was required, and therefore remediation of surface water was not performed.

Based on the Final RI results, the primary groundwater impact was associated with two overlapping VOC plumes located in the overburden, both of which originated in the southwestern portion of the Fire Training and Demonstration Pad near the locations of the contaminated soil. Chlorinated ethenes and BTEX constituents were not detected in any of the bedrock wells at SEAD-25. The primary plume observed during the RI measured approximately 200 feet long and was composed of aromatic hydrocarbon compounds that are typically associated with gasoline (i.e., BTEX). The maximum concentration of total BTEX detected in the groundwater during the RI was 6,220 micrograms per liter ( $\mu\text{g}/\text{L}$ ) at well MW25-2. During the Expanded Site Investigation (ESI) (Parsons, December 1995), the maximum concentration of total chlorinated organics (96  $\mu\text{g}/\text{L}$ <sup>2</sup>) was also detected at well MW25-2.

### 2.3 Summary of the Remedial Action

The excavation of the BTEX-impacted soil at the SEAD-25 pad began on November 15, 2005 and was completed on December 1, 2005, with soil removal totaling 961 cy. The depth of excavation extended to the top of the competent shale bedrock, or approximately 4.5 feet bgs. Ten confirmatory soil samples (plus one duplicate sample) were collected from the sidewalls of the excavation area and analyzed for VOCs and SVOCs. The analytical results of the confirmatory soil sample analyses achieved the site-specific cleanup goals, and the Army determined that soils at SEAD-25 did not require further action. The EPA and NYSDEC concurred with this determination that the excavation of the soil at the pad removed the source of groundwater contamination.

Excavation of the SVOC-impacted soil in the swale at SEAD-25 began on November 7, 2005 and was completed on November 8, 2005. The soil excavation extended to bedrock from the toe of slope on one bank to the toe of slope on the other bank, resulting in the removal and off-site disposal of 761 cy of soil from SEAD-25. After the excavation, the swale bottom consisted of exposed competent bedrock, and

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<sup>2</sup> Total of 1,1,1-TCE, 1,1-dichloroethane, 1,1-DCE, 1,2-DCE, chloroform, tetrachloroethene, and TCE found in well MW25-2, February 5, 1994.



since no native overburden soil remained in the swale, no confirmatory samples were collected or analyzed.

A total of 1,722 cy (approximately 2,600 tons) of soil were excavated from the pad and the swale at SEAD-25 and disposed off-site at Ontario County Landfill. The pad excavation was backfilled with approximately 793 cy of on-site fill material and 168 cy of fill material obtained from an off-site source, and restored to the existing grade.

## 2.4 Natural Attenuation Process Evaluation

One of the purposes of long-term groundwater monitoring at SEAD-25 is to show that continued natural attenuation of the groundwater plumes is occurring. This section gives a brief overview of the natural attenuation process and how the process can be evaluated. Numerous natural processes contribute to the reduction in dissolved phase contaminant concentrations over distance and time and are referred to as natural attenuation. These processes include sorption, dilution, dispersion, volatilization, and biodegradation. Of these, biodegradation is of primary interest because this process destroys the contaminant, and because at many sites, it is the primary attenuation mechanism. The EPA's *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water* (USEPA, 1998) can be used as guidance to determine if natural attenuation is occurring at SEAD-25.

Numerous laboratory and field studies have shown that many organic compounds are readily biodegraded via naturally occurring processes. Benzene and other petroleum hydrocarbons biodegrade readily under aerobic (oxygen-rich) conditions, and have been shown at multiple sites to biodegrade under anaerobic (oxygen-poor) conditions as well. Chlorinated ethenes biodegrade under anaerobic conditions through a process referred to as reductive dechlorination. Some chlorinated ethenes can also be biodegraded via direct aerobic oxidation (aerobic conditions).

Geochemical data including potential electron acceptors, biodegradation byproducts, and related analytes can be used as an indirect measure to show that organic compounds are biodegrading in saturated soil and groundwater. Depressed concentrations, when compared to background levels, of electron acceptors such as nitrate, oxygen, and sulfate that are used by microorganisms to facilitate the oxidation of VOCs within groundwater are geochemical indicators that VOCs are biodegrading. Similarly, elevated concentrations of biodegradation byproducts, such as iron II (Fe 2+), in groundwater are also geochemical indicators that compounds are biodegrading. Depressed oxidation/reduction potential (ORP) may also indicate the occurrence of biodegradation.

Biodegradation of chlorinated organics requires the presence of natural or anthropogenic carbon to create the conditions (anaerobic, low redox potential) necessary to stimulate reductive dechlorination of the more chlorinated solvents such as tetrachloroethene or perchloroethene (PCE) and TCE. Daughter products of these compounds (dichloroethene, or DCE; and VC) can be reductively dechlorinated under reducing conditions or directly oxidized under aerobic (oxidizing) conditions. Therefore, indicators of conditions appropriate for chlorinated biodegradation includes those parameters, such as methane, already

identified for petroleum biodegradation, as well as the presence of chlorinated daughter products and chloride. It should be noted, however, that the presence of road salt applied during the winter months may interfere with chloride data interpretation.

Trends in natural attenuation parameters are more evident when higher concentrations of contaminants are present to naturally attenuate. At SEAD-25, trends in natural attenuation parameters are difficult to interpret since the contaminant concentrations are low, and have remained this way since the completion of the RA.

## 2.5 Well Decommissioning

The shallow saturated zone monitoring well MW25-11 and all of the deep saturated zone monitoring wells (MW25-4D, MW25-5D, MW25-7D, MW25-12D, MW25-14D, and MW25-16D) at SEAD-25 were removed in September 2010 as part of a SEDA-wide Well Decommissioning project; information pertinent to the Well Decommissioning project is provided in the *Draft Well Decommissioning Report* (Parsons, 2011). The location of decommissioned and existing SEAD-25 monitoring wells, including latitude/longitude and northing/easting coordinates, and well elevation information, are provided in **Table 2**.

## 2.6 Land Use Control Inspection

SEAD-25 was inspected during the 2012 LTM event for compliance with the Land Use Control (LUC) restrictions that are in effect for AOCs located within the Planned Industrial/ Office Development (PID) and Warehouse Area at the former Depot. Land Use Controls for the PID/Warehouse Area implement and maintain requirements to:

- Prohibit the development and use of property for residential housing, elementary and secondary schools, childcare facilities, and playgrounds; and
- Prohibit access to or use of the groundwater, other than for monitoring purposes, until the applicable NYSDEC Class GA Groundwater Standards are met.

No residential housing units, elementary or secondary schools, childcare facilities or playgrounds were observed at SEAD-25. The 10 LTM groundwater monitoring wells were identified at SEAD-25 during the site visit. As discussed previously, many of the wells on the SEAD-25 site were decommissioned in September 2010.

### Long-Term Monitoring Results

The 2012 sampling event was completed at SEAD-25 on February 27 through March 1, 2012. Field forms documenting the collection of groundwater samples are provided in **Appendix A**. Groundwater laboratory analytical reports for this event are provided as **Appendix B**. A summary of the groundwater analytical results for the nine LTM events is included as **Appendix C**. Sampling procedures, sample

handling and custody, holding times, and collection of field parameters were conducted in accordance with the *Final Sampling and Analysis Plan for Seneca Army Depot Activity* (SAP) (Parsons, 2005).

Groundwater measurements and samples were collected from the 10 monitoring wells (MW25-2, MW25-3, MW25-8, MW25-9, MW25-10, MW25-13, MW25-15, MW25-17, MW25-18, and MW25-19) during the 2012 sampling event. Groundwater samples were collected using low-flow sampling techniques during the February/March 2012 sampling event. A low-flow bladder pump was used to purge wells MW25-2, MW25-3, MW25-8, MW25-17, MW25-18, and MW25-19; following purging, samples were collected from each of these wells for analysis of VOCs, nitrate/nitrite, chloride, sodium, and iron, and methane, ethane, and ethene (MEE). A Hach<sup>®</sup> test kit was used in the field to perform sulfide analyses at each of these wells.

A peristaltic pump was used to complete purging via low-flow methods at wells MW25-9, MW25-10, MW25-13, and MW25-15. A bladder pump was initially used for the purging process of these four wells unless the water level fell below the intake of the bladder pump or if less than 2 feet of water was measured inside the well casing. Samples for VOCs, nitrate/nitrite, chloride, sodium, and iron, and MEE analyses were collected using a bailer due to limited remaining water volume following purging. Insufficient water volume prohibited performing a Hach<sup>®</sup> test for sulfide analysis for wells MW25-9, MW25-10, and MW25-13. A Hach<sup>®</sup> test for sulfide analysis was performed for MW25-15.

All groundwater samples collected during event 9 were analyzed for VOCs and natural attenuation parameters. Samples were submitted to Katahdin Analytical Services, Inc. (Katahdin) in Scarborough, Maine. Analytes and analysis methods used are summarized below:

- VOCs - EPA SW846 Method 8260B
- MEE - RSK-175
- Nitrate and Nitrite - EPA Method 353.2
- Chloride - EPA Method 300.1
- Sulfate - EPA Method 300.1
- Iron - EPA SW846 Method 6010C
- Sodium - EPA SW846 Method 6010C

Analytical results reported for the primary COCs (i.e., BTEX, and five chlorinated VOCs) and other detected VOCs were compared to groundwater cleanup goals, or New York's GA groundwater standards. Results of the other analyses conducted were used to assess if there is evidence that natural attenuation is occurring.

In addition, the following indicator and geochemical parameters were measured and recorded in the field:

- Sulfide
- Dissolved oxygen
- Temperature
- Turbidity
- pH
- Conductivity
- ORP

Indicator parameters including pH, ORP, conductivity, temperature, and turbidity of the groundwater were measured with a Horiba model U-52 water quality meter, and dissolved oxygen (DO) content was measured with an YSI Inc. (YSI) model 85 DO Meter. Sulfide concentration was measured in the field using a Hach<sup>®</sup> colorimeter test at well locations with sufficient water volume, including MW25-2, MW25-3, MW25-8, MW25-15, MW25-17, MW25-18, and MW25-19. There was not water volume

sufficient to perform the Hach® test for sulfide at wells MW25-9, MW25-10, or MW25-13, or to collect field parameters (including DO) at wells MW25-10 and MW25-13.

## 2.7 Groundwater Elevations

SEAD-25 groundwater elevation data were recorded on February 27, 2012. The 2012 groundwater elevation data (including events 7 and 8) and the historic post 2005 soil-removal action groundwater elevation range for the site are presented on **Table 3**. **Table D-1** in **Appendix D** provides all groundwater elevations recorded from 2006 to 2011, as well as groundwater elevation measurements performed between LTM sampling events. Groundwater elevation trends for SEAD-25 wells during the nine LTM events performed from 2006 through 2012 are summarized on **Figures 4A** (Northern profile) and **Figure 4B** (Southern Profile). Groundwater elevations measured on February 27, 2012 ranged from 735.51 feet above mean sea level (amsl) in well MW25-13 to 741.41 feet amsl in well MW25-3. Groundwater elevations observed during this event were generally two feet higher as compared to the February 2011 (event 8) groundwater elevations, with changes in groundwater elevations ranging from 0.05 foot in MW25-1 up to 2.83 feet as observed in MW25-19.

Groundwater contours shown in **Figure 5** were generated based on the groundwater elevation data collected on February 27, 2012, and are consistent with historic groundwater contour interpretation supporting the presence of a radial groundwater flow pattern beneath the pad. Contour interpretation indicates that shallow groundwater flow is radial, with the highest elevations located in the area of the former Fire Training and Demonstration Pad where soil removal was conducted in 2005.

## 2.8 2012 Analytical Data

The 2012 sampling consisted of the collection of 11 groundwater samples (including one duplicate sample) from the 10 wells for the analysis of VOCs. The analytical results are presented in **Table 4**, along with the applicable NYSDEC Class GA Groundwater Standards. Five VOCs, including 1,2-DCE (total), cis-1,2-DCE, TCE, benzene, and ethylbenzene, were detected in SEAD-25 groundwater during the 2012 sampling event. Cis-1,2-DCE, 1,2-DCE (total), TCE, benzene, and ethylbenzene were detected in well MW25-2. Benzene was also detected in wells MW25-3 and MW25-9. The laboratory analysis reports are provided in **Appendix B** and the data validation sheets are provided in **Appendix E**.

A summary of the range of concentrations for the primary COCs found during the SEAD-25 LTM monitoring event is presented below. None of the primary COCs exceeded the applicable groundwater cleanup goals during the 2012 sampling event.

<b>COCs</b>	<b>SEAD-25 2012 LTM Concentration Range (µg/L)</b>	<b>NYSDEC GA Groundwater Standard (µg/L)</b>
Benzene *	ND – 0.99 J	1
Toluene *	ND	5
Ethylbenzene *	ND – 0.47 J	5
Xylene (total) *	ND	5
Ortho Xylene	ND	5
Meta/Para Xylene	ND	5
1,1,1-Trichloroethane *	ND	5
1,1-Dichloroethane *	ND	5
1,2-DCE (total) *	ND – 0.76 J	5
Cis- DCE	ND – 0.76 J	5
Trans-DCE	ND	5
Chloroform *	ND	7
Trichloroethene *	ND - 0.45 J	5
Vinyl chloride	ND	2

Notes:

\* = Primary COCs, signified with \*, and other detected VOCs with concentrations in excess of GA groundwater standards during annual events, are reported.

NA = Not Analyzed; ND = non-detect; J = estimated value

**Figure 6** presents a summary of the historic groundwater sampling results for total BTEX and total chlorinated organics at SEAD-25 for the period from November 1995 (pre-RA) to Feb/March 2012. Total BTEX values were calculated using the following VOCs:

- benzene
- toluene
- ethyl benzene
- ortho xylene & meta/para xylene (if xylene total was not reported)
- xylene total (if meta/para and ortho xylenes were not reported)

Total chlorinated organics were calculated using the following VOCs:

- 1,1,1-trichloroethane
- 1,1-dichloroethane
- 1,2-dichloroethene
- 1,2-dichloroethene total (if reported in lieu of cis- and trans-)
- cis-1,2-dichloroethene (if 1,2-dichloroethene total was not reported)
- trichloroethene
- chloroform
- vinyl chloride

**Figure 6** indicates that BTEX compounds have generally only been observed in the three source wells at SEAD-25 (i.e., MW25-2, MW25-3, and MW25-9) since 1995, with the exception of total BTEX concentration of 0.2 µg/L observed in MW25-19 during event 3. Generally these data indicate that the pre-RA (1993-1996) groundwater concentrations of BTEX compounds decreased once the RA was completed in 2006. Since the RA was completed, BTEX contaminants identified at SEAD-25 have been primarily located in source wells MW25-2 and MW25-9. Total BTEX concentrations in groundwater collected from MW25-9 ranged from 124 µg/L (event 1) to a minimum of 0.4 µg/L (event 2012); and from 115.6 µg/L (event 7) to a minimum concentration of 1.46 µg/L (event 2012). Total chlorinated organics concentration of 5.44 µg/L was measured in groundwater collected from MW25-9 during event 1; all subsequent sampling events yielded ND values. Concentrations of total chlorinated organics in well MW25-2 ranged from 24.8 µg/L (event 7) to ND (event 4). Benzene and ethyl benzene historically are the contaminants most frequently detected in MW25-2, and historically are the contaminants that are found at levels above their respective GA standards in this well. Elevated detections of BTEX compounds have been observed in well MW25-9 five times, with four of these instances observed during the first post-RA sampling event, and the last exceedance of benzene occurring during event 4. Benzene was detected in the three source wells and ethylbenzene was detected only in one of the three source wells (MW25-2) during the 2012 event, but concentrations did not exceed the applicable GA standards. BTEX was non-detect in the other seven wells sampled during this sampling event.

**Figure 6** also indicates that the concentrations of total chlorinated organics found in the groundwater at SEAD-25 decreased once the RA was completed, and remained at non-detect to low aggregate part per billion (µg/L) concentrations in all wells until events 7 (2010Q3) and 8 (2011Q1). During events 7 and 8 higher chlorinated VOC concentrations were detected in MW25-2. Four chlorinated organics (1,1-dichloroethane, cis-1,2-DCE, TCE, and VC) were detected in the groundwater at well MW25-2 during sampling event 7; cis-1,2-DCE and VC were detected above the respective GA standards. Five chlorinated organic compounds (1,1-dichloroethane, cis-1,2-DCE (also reported as 1,2-DCE (total)), chloroform, TCE, and VC) were detected in MW25-2 during sampling event 8, and cis-1,2-DCE was detected above its GA standard. During 2012, chlorinated VOCs (1,2-DCE (total) and TCE) were only detected in one well, MW25-2 but the concentrations did not exceed the applicable GA standards.

## 2.9 Post Remedial Action Long-Term Monitoring Summary

Groundwater has been collected and analyzed from the source wells (i.e., MW25-2, MW-25-3 and MW25-9) and a majority or all of the designated LTM wells during seven of the nine attempted post-RA sampling events. **Table 5** summarizes which wells have been sampled during the nine LTM sampling events. Events 4 and 9 were the most comprehensive events as groundwater samples were able to be collected from the 10 LTM wells. Events 3 (2007Q3) and 7 were the least comprehensive events as groundwater was only obtained from four and five wells, respectively, and one or more of the source wells could not be sampled due to lack of water and poor well recharge characteristics.

**Table 6** summarizes all of the analytes detected during all of the groundwater sampling events; a complete summary of all analytical results for LTM events is included as **Appendix C**. Eighty-one

groundwater samples, including duplicate samples, have been collected and analyzed during the nine LTM sampling events. Select VOCs have been characterized in all 81 of the samples collected, while iron and sodium were each characterized in at least 74 of the samples; chloride and sulfate were each characterized in at least 75 of the samples. Methane, ethane, and ethane were characterized in at least 78 of the samples, and nitrate, nitrite, and other compounds were characterized less frequently. The lesser frequency observed for analytes other than VOCs are attributed to difficulties encountered during sampling.

Twenty-three VOCs were detected in one or more of the 81 samples characterized; and of the 23 VOCs detected, benzene has been detected most frequently in 22 samples (including four detections during 2012 in wells MW25-2, MW25-3 (sample and duplicate), and MW25-9), and at concentrations in excess of its GA groundwater standard of 1 µg/L most frequently (14 times). Ethyl benzene has been found at the second highest overall frequency (13 times, including one detection in well MW25-2 during event 9), and at the second highest frequency at concentrations above its GA standard (5 µg/L; 9 times). Toluene has been detected in eight samples, and found five times at concentrations above its GA standard (5 µg/L). Four of the noted exceedances of toluene were seen in the most recent two LTM events (events 7 and 8), including sample and duplicate pairs, collected at well MW25-2; the only prior exceedance was observed in MW25-9 during the first LTM event. Total xylene (or the ortho-, meta-, and para-isomers of xylene) have also been detected, with detections exceeding the respective GA standard of 5 µg/L. All of the noted BTEX compound exceedances were found in at least one of the three source wells ( MW25-2, MW25-3, or MW25-9).

Eight chlorinated VOCs, including either 1,2-DCE (total) or cis-1,2-DCE, have been detected in SEAD-25 wells since the inception of LTM sampling and analysis, with the majority of these (eight of nine) were detected at well MW25-2. Total 1,2-DCE or its isomer, cis-1,2-DCE, was detected in 13 samples, 10 of which were collected from well MW25-2. Six of the 11 MW25-2 detections for DCE exceeded its GA standard (5 µg/L). The other two detections of DCE were found in wells MW25-19 and MW25-9, and the concentrations measured in these two wells were below the applicable GA standard. Vinyl chloride has only been detected three times, with all three detections in samples collected from well MW25-2. Of these three detections, two (sample and duplicate) were at concentrations above the applicable GA standard (2 µg/L) during event 7 (2010Q3) sampling event. Other chlorinated VOCs detected in samples collected from MW25-2 included 1,1-dichloroethane, 1,2-dichloroethane, chloroethane, chloroform, and TCE, but none of these compounds were detected at concentrations above their respective GA standards. Trichloroethene (MW25-2 and MW25-9), cis-1,2-DCE (MW25-2, MW25-9, and MW25-19), 1,1-dichloroethane (MW25-9) and 1,1,1-trichloroethane (MW25-9 and MW25-10) were the only other chlorinated VOCs that were detected during the nine events of post-RA sampling completed at SEAD-25. None of the concentrations measured in any of the wells during the 2012 sampling event exceeded the applicable GA standards.

Iron, sodium, and bis(2-ethylhexyl)phthalate are the only other compounds that were detected at concentrations in excess of their respective GA standard levels; iron exceeded its 300 µg/L threshold in

67 of 74 samples analyzed, while sodium was detected in all 74 of the samples collected during all of the LTM events, and was above the applicable 20,000 µg/L GA standard 12 times (including two exceedances during the 2012 sampling event in MW25-9 at a concentration of 45,300 µg/L, and at MW25-18 at a concentration of 27,300 µg/L). Bis(2-ethylhexyl)phthalate was detected once above its standard of 5 µg/L at a concentration of 11 µg/L (MW25-18, event 2).

## 2.10 Data Trends and Natural Attenuation Evaluation

### 2.10.1 General Data Trends (VOCs)

There are two main lines of evidence to determine whether natural attenuation is occurring, listed below in order of significance:

1. Reduction in contaminant concentrations; and
2. Indirect geochemical indicators to assess the groundwater's assimilative capacity.

The primary line of evidence, reduction in VOC concentrations, is the only direct measure of the attenuation of a plume. Well locations and contaminant concentrations characterizing historic and recent conditions at SEAD-25 are shown in **Figure 6**. Current total BTEX concentrations in the three source wells (MW25-2, MW25-3, and MW25-9) have decreased from pre-RA levels as shown on **Figure 6** and on the time plots for these wells (**Figures 7A, 7B, and 7C**). Similarly, plots of chlorinated organics concentrations over time in MW25-2, MW25-3, and MW25-9 (**Figures 8A, 8B, and 8C**) demonstrate that chlorinated VOCs have been reduced to levels below the detection limits in MW25-3 and MW25-9.

Although event 7 and event 8 concentrations for total chlorinated VOCs in MW25-2 showed an increase over levels seen during events 1 through 6, a decrease in total chlorinated VOC concentrations was observed in the wells sampled during the 2012 event. Overall, the VOC analytical data indicate that the aromatic and chlorinated VOC plumes are attenuating. MW25-2 is considered the source well, since it generally has the highest concentrations of the aromatic and chlorinated VOCs. Concentrations of total BTEX compounds observed during 2012 sampling event ranged from non-detect to a total BTEX concentration of 1.46 µg/L (MW25-2); none of the individual BTEX compounds exceeded the applicable groundwater standards. Total BTEX levels have declined in well MW25-9 since the RA to levels ranging from non-detect to a high of 4.62 µg/L during event 4 (2008Q1). At MW25-3, total maximum BTEX concentrations have not exceeded 1.7 µg/L after the completion of the RA. BTEX concentration in the remaining wells after the completion of the RA has been non-detect.

The total chlorinated VOC concentrations at MW25-2 decreased after the completion of the RA to as low as 2.01 µg/L in event 3 (2007Q2) and non-detect in event 4 (2008Q1); total chlorinated VOC concentrations were observed ranging from non-detect in nine of the 10 wells sampled during the 2012 event, with a total chlorinated VOC concentration of 1.21 µg/L observed at MW25-2. Chlorinated VOCs



have typically not been seen in any other well at SEAD-25 since the removal action was completed, with only three detections noted in any of the other wells sampled since the soil removal was completed.

### 2.10.2 General Data Trends (Geochemical and Field Indicator Parameters)

Geochemical and field indicator parameters for the LTM wells for all sampling events are presented in **Table 7**. Geochemical parameters (iron, sodium, chloride, nitrate/nitrite, sulfate, and methane/ethane/ethene laboratory analysis, as well as in-field sulfide analysis) provide an indirect indication of the natural attenuation of the plume. Methane was detected in the 10 wells sampled during the 2012 sampling event at concentrations ranging from 0.92 ug/L (MW25-19) to 31 ug/L (MW25-2). During the 2012 sampling event, MW25-2 yielded the highest detection of methane as well as the highest detections of BTEX and total chlorinated solvents, although concentrations of BTEX and chlorinated solvents were below the applicable groundwater standards. The detection of methane in conjunction with BTEX and total chlorinated solvents is interpreted to indicate that reductive dechlorination is occurring.

A review of field indicator data shows that no clear trends of degradation are observed across SEAD-25. Parameters such as DO and ORP vary at each well location over time, and are below benchmark values (i.e., 0.5 mg/L for DO and -100 mV for ORP) at monitoring well MW25-2 for events 5 through 9. Dissolved oxygen levels in well MW25-3 are below benchmark values for events 5, 7, 8, and 9 while ORP levels in this well are below the -100 mV level in events 5 and 7. Field parameter data for monitoring well MW25-9 are inconclusive due to the sporadic nature of sampling that has been conducted at this location; during the 2012 event, DO and ORP were both measured above benchmark values at 1.77 mg/L and -129 mV, respectively). An assessment of other parameters like chloride requires comparison to background concentrations; because of the radial groundwater flow pattern that exists at the site and the fact that the most contaminated wells are located near the central portion of the flow, determination of background conditions at SEAD-25 is not currently feasible.

Overall, the review of the indicator parameters at well MW25-2 provide suggestive evidence that the VOCs are attenuating; indicator parameter results at the remaining monitoring wells are inconclusive due to the historic lack of VOC contamination at these wells and the sporadic sampling frequency. **Figure 9** presents MW25-2 benzene, chlorinated organic solvents, and geochemical indicator concentrations over the last nine events. Although chloride concentrations measured in MW25-2 have successively rebounded after event 4 (2008Q1) from non-detect to a level of 5.8 mg/L in event 8 (2011Q1), chloride was measured at 0.9 mg/L during 2012. The increase in chloride as well as the noted presence of detectable concentrations of 1,1-dichloroethane and VC since event 4, however, may suggest that TCE daughter products are being created under the anaerobic conditions. Chloride levels will be reevaluated during the event 10 (2013Q1) LTM. **Figure 10** highlights the chlorinated organic daughter product generation through the 2012 event.

Since the completion of the remedial action at SEAD-25, benzene and ethyl benzene are the two predominant aromatic VOCs detected in the groundwater at SEAD-25, and these are found exclusively at the three source wells (MW25-2, MW25-3, and MW25-9) with the overall majority of the noted benzene

and ethyl benzene detections and exceedances located at MW25-2. Benzene has been detected once at concentrations above its GA standard in one sample from MW25-3, and in two samples from MW25-9. Ethyl benzene was only detected at an elevated concentration in MW25-9 once. Toluene and xylene, either as ortho- and meta-/para-isomers or total xylenes, were less frequently detected in the three primary site wells, and again the majority of the noted exceedances for both of these aromatic VOCs are found in samples collected from well MW25-2. Chlorinated VOC contaminant distributions are similar to those observed for the aromatic VOCs; in this case, all of the noted exceedances of groundwater standards are seen at MW25-2.

The direct measurements of aromatic VOC concentrations in the three source wells (MW25-2, MW25-3, and MW25-9) generally indicate that the associated plume is attenuating (**Figures 11A, 11B, and 11C**). Comparison of the pre and post-RA groundwater concentrations at these wells show that the aromatic compound concentrations have decreased significantly since the removal of the source area in late 2005. Prior to the remedial action, the total aromatic COC concentration in well MW25-2 exceeded 5,000 µg/L, with total aromatic COC concentrations closer to 200 µg/L in wells MW25-3 and MW25-9. Since the completion of the SEAD-25 RA, the total aromatic COC concentrations in each of the source wells has fallen to 50 µg/L or less except for benzene in event 7 (2010Q2) at MW25-2. Further, MW25-2 is the only well at the site where aromatic COCs have been detected in all of the consecutive LTM events, suggesting that the overall groundwater impact has lessened and that aromatic COCs are not migrating.

Chlorinated VOC contaminant distributions are similar to those observed for the aromatic VOCs; in this case, all of the noted exceedances of GA standards for the applicable chlorinated VOCs historically have been observed at MW25-2.

### 2.10.3 MW25-2 – Influence of Saturated Thickness

A review of the data from MW25-2, MW-25-3, and MW25-9 indicates that the fluctuations in BTEX concentrations may be related to variations in groundwater levels (i.e., saturated thickness, or the vertical extent of the well column that is saturated with groundwater), with benzene concentrations in the shallow aquifer tending to decrease as the thickness of the saturated layer in the well increases indicating that the increase is not due to the release of additional contaminants. **Appendix F** provides figures summarizing data trends for benzene and total BTEX compounds for source wells MW25-2, MW-25-3, and MW25-9 for LTM events 1 through 8 (**Figure 13** through **Figure 15A**) and for events 1 through 2012 (**Figure 16** through **Figure 20**). Event 1 is excluded in some of the interpretations as the data collected during this LTM event is considered to be potentially anomalous due to a potential aquifer re-equilibration following the RA.

The removal of the source area present in SEAD-25 and the verification that residual site soils achieved cleanup objectives supports the interpretation that a continuous release of contaminants at SEAD-25 is no longer occurring. Other data supporting the theory that saturated thickness may affect contaminant concentrations found in the groundwater, and not due to the release of additional contaminants, is based on that the groundwater monitoring data does not indicate that the aromatic hydrocarbon plume is

expanding or migrating at the AOC. If warranted, further analysis of potential correlations between aquifer saturated thickness and contaminant concentrations will be made after future sampling events to determine whether this apparent correlation continues to be supported by the data collected from the source wells.

### 3.0 REMEDY EVALUATION

As discussed in Section 2.4, 961 cy of VOC-impacted soil was removed from the location of the Fire Training and Demonstration Pad at SEAD-25 as shown on **Figure 6**. The soil was removed to eliminate the source of VOCs which could have contributed to further groundwater degradation in the area. Long-term groundwater monitoring is now being performed at SEAD-25 to show that the soil removal remedy has effectively eliminated further VOC releases from the vicinity of the former pad, and that natural attenuation of the VOC plumes at SEAD-25 continues to improve the local groundwater quality.

The BTEX and chlorinated organics groundwater concentrations have decreased by more than 99% since the soil removal (shown in the time plots on **Figures 7 and 8**) due to the natural attenuation process and the removal of the source material during RA activities in 2005. Soil removal therefore is determined to be an effective remedy at SEAD-25.

The remedy for SEAD-25 required the implementation and maintenance of LUCs. The LUC requirements are detailed Addendum 1 in the *Land Use Control Remedial Design for SEAD 27, 66, 64A, Final* (2006). The selected LUCs for SEAD-25 are as follows:

- Prevent residential housing, elementary and secondary schools, childcare facilities and playground activities; and
- Prevent access to and use of groundwater at SEAD-25, for purposes other than required monitoring, until NYS Class GA Groundwater Standards are met.

The areas of SEAD-25 were inspected to determine if the LUCs are being maintained. While performing the groundwater sampling, it was confirmed that at SEAD-25 no facilities as described above have been constructed and no access to or use of groundwater, other than the collection of required LTM samples of groundwater from SEAD-25, was evident.

### 4.0 LONG-TERM MONITORING CONCLUSIONS AND RECOMMENDATIONS

#### 4.1 Conclusions

- The concentrations of BTEX in the groundwater at SEAD-25 have decreased by up to two orders of magnitude since 1994;
- Volatile Organic Compounds (including chlorinated and aromatic VOCs) were not detected above cleanup goals in the 10 wells sampled during the 2012 LTM event;

- The VOC plumes at SEAD-25 are attenuating to levels close to or lower than applicable groundwater standards;
- Groundwater impacts are not noted beyond the immediate area of the former Fire Training and Demonstration Pad, and downgradient wells (MW25-8, MW25-13, MW25-15 and MW25-19) have not shown evidence of BTEX or VOC contamination since the RA was completed;
- Based on evaluation of available LTM data, the soil excavation remedy at SEAD-25 has been effective; and
- Land and groundwater use restrictions imposed at SEAD-25 continue to be maintained, and there are no signs of unauthorized use or access.

#### **4.2 Recommendations**

Based on the historical data and the results of this annual LTM event at SEAD-25, the Army recommends that:

- The monitoring schedule for SEAD-25 should continue to be performed on an annual basis, and occur during a period when there is sufficient water to allow for sample collection at all wells (e.g., first or second quarter). Based on the 2012 LTM results, annual monitoring should focus only on wells where historic information indicates that primary COCs have been found, including source wells MW25-2, MW25-3, MW25-9, and wells MW25-10 and MW25-17. A complete effort of gauging at all well locations is recommended for each annual LTM event to evaluate the groundwater flow pattern across the site.

**TABLES**

Table 1	Summary of SEAD-25 Long-Term Monitoring Events
Table 2	Monitoring Well Locations
Table 3	SEAD-25 Groundwater Elevation Data
Table 4	SEAD-25 VOC Concentrations Detected in Groundwater (2012 Event)
Table 5	Summary of Wells Sampled
Table 6	Analytes Detected during SEAD-25 LTM (All Events through 2012)
Table 7	Summary of SEAD-25 Geochemical Parameters

**Table 1**  
**Summary of SEAD-25 Long-Term Monitoring Events**  
**2012 Annual Long-Term Monitoring**  
**Seneca Army Depot Activity**

LTM Event Number	Sampling Event Designation <sup>(1)</sup>	Sampling Begin Date	Sampling End Date	Report Date	Report Type	Notes
Event 1	2006Q1	01/24/06	01/31/06	05/31/06	Technical Memo	One sample collected 04/12/06
Event 2	2006Q3	08/07/06	08/14/06	12/07/06 & 02/02/07	Technical Memo and Annual Report	Recommendation to terminate sampling at SEAD-26
Event 3	2007Q2	06/07/07	07/07/07	09/10/07	Technical Memo	
Event 4	2008Q1	03/03/08	03/04/08	04/18/08 & 06/18/08	Technical Memo and Annual Report	
Event 5	2009Q2	04/28/09	04/29/09	06/17/09	Technical Memo	
Event 6	2010Q1	01/11/10	01/14/10	01/21/11	Annual Report	Includes Event 5
Event 7	2010Q3	08/03/10	08/06/10	01/21/11	Technical Memo	
Event 8	2011Q1	02/07/11	02/10/11	05/26/11	Annual Report	Includes Event 7. Recommended to reduce semi-annual sampling to annual sampling and reduce number of wells to be sampled from 10 to 5 wells.
Event 9	2012Q1	02/28/12	03/02/12	05/01/12	Annual Report	

**Notes:**

(1) Event designation defined by year (XXXX) and quarter (QX) when samples were collected

**Table 2**  
**Monitoring Well Locations**  
**2012 Annual Long-Term Monitoring**  
**Seneca Army Depot Activity**

Location ID	Northing <sup>(1)</sup>	Easting <sup>(1)</sup>	Loc_Elev <sup>(2)</sup>	Latitude <sup>(3)</sup>	Longitude <sup>(3)</sup>
MW25-1	998030.6639	751123.9323	740.3	42.73891679	-76.84050203
MW25-10	997966.2625	750999.2626	741.81	42.73873904	-76.84096538
MW25-11*	997865.7588	750955.8786	738.75	42.7384629	-76.84112574
MW25-12D*	997867.0397	750966.7103	738.89	42.7384665	-76.84108543
MW25-13	997864.8083	750869.3787	737.94	42.73845956	-76.84144772
MW25-14D*	997867.0994	750875.7165	738.23	42.7384659	-76.84142415
MW25-15	997972.6083	750764.5382	739.6	42.73875448	-76.84183921
MW25-16D*	997975.0098	750771.8704	739.75	42.73876113	-76.84181194
MW25-17	998188.4165	750964.1907	742.24	42.73934832	-76.84109846
MW25-18	998116.3641	751083.1527	743.05	42.73915161	-76.84065481
MW25-19	998136.6741	750763.1757	740.05	42.73920465	-76.84184615
MW25-2	998024.3007	750974.6108	743.76	42.73889808	-76.84105781
MW25-3	998079.4313	750926.4855	743.26	42.73904895	-76.84123758
MW25-4D*	998023.3883	750983.1189	743.81	42.73889565	-76.84102613
MW25-5D*	998081.3786	750938.3683	743.41	42.7390544	-76.84119337
MW25-6	998276.9972	751007.5574	742.24	42.73959174	-76.84093804
MW25-7D*	998279.0181	751016.2292	742.25	42.73959736	-76.84090578
MW25-8	998077.3072	750855.5452	741.36	42.73904253	-76.84150163
MW25-9	998004.1484	750898.1419	741.26	42.73884214	-76.84134223

Note:

- (1) Northing/Easting coordinates are based on New York State Plane NAD 83 coordinate system.
  - (2) Elevation measurements are based on New York State Plane NAD 83 coordinate system.
  - (3) Latitude and Longitude are in Universal Trans Mercator (UTM) system and were obtained by converting the State Plane coordinates using U.S. Army Corps of Engineers Corpscon 6 software.
- \* = Indicates well was decommissioned in September 2010.

**Table 3  
SEAD-25 Groundwater Elevation Data  
2012 Annual Long-Term Monitoring  
Seneca Army Depot Activity**

Monitoring Well	Top of Riser Elevation (ft) <sup>3</sup>	Event - August 2, 2010				Event 8 - February 7, 2011				Event 9 - February 27, 2012				LTM Events 7 through 9 Groundwater Elevation (ft) Max./Min Comparison and Range		
		Measured Well Depth (ft) <sup>4</sup>	Saturated Thickness (ft)	Depth to Groundwater (ft)	Water Level Elevation (ft)	Measured Well Depth (ft) <sup>4</sup>	Saturated Thickness (ft)	Depth to Groundwater (ft)	Water Level Elevation (ft)	Measured Well Depth (ft) <sup>4</sup>	Saturated Thickness (ft)	Depth to Groundwater (ft)	Water Level Elevation (ft)	Maximum	Minimum	Range
MW25-1	743.00	7.77	1.18	6.59	736.41	7.74	1.76	5.98	737.02	7.73	1.80	5.93	737.07	737.35	736.41	0.94
MW25-2	746.36	11.32	4.93	6.39	739.97	11.28	4.47	6.81	739.55	11.26	6.20	5.06	741.30	738.30	732.92	5.38
MW25-3	746.34	9.80	2.22	7.58	738.76	9.80	2.92	6.88	739.46	9.79	4.86	4.93	741.41	738.30	732.92	5.38
MW25-6	744.44	14.27	5.76	8.51	735.93	14.22	6.31	7.91	736.53	14.23	8.64	5.59	738.85	738.30	732.92	5.38
MW25-8	742.46	5.42	0.35	5.07	737.39	5.46	0.30	5.16	737.30	5.41	2.52	2.89	739.57	738.30	732.92	5.38
MW25-9	742.36	5.39	0.41	4.98	737.38	5.40	0.81	4.59	737.77	5.39	2.59	2.80	739.56	738.30	732.92	5.38
MW25-10	743.01	6.38	0.34	6.04	736.97	6.37	0.28	6.09	736.92	6.36	1.37	4.99	738.02	739.83	736.92	2.91
MW25-13	739.64	5.46	0.40	5.06	734.58	5.48	0.38	5.10	734.54	5.46	1.33	4.13	735.51	736.20	734.54	1.66
MW25-15	741.00	7.19	0.29	6.90	734.10	7.20	0.63	6.57	734.43	7.19	2.56	4.63	736.37	737.89	734.10	3.79
MW25-17	743.94	11.24	3.90	7.34	736.60	11.30	4.63	6.67	737.27	11.23	7.14	4.09	739.85	740.69	736.49	4.20
MW25-18	744.35	11.15	4.03	7.12	737.23	11.18	4.60	6.58	737.77	11.15	5.74	5.41	738.94	744.20	737.13	7.07
MW25-19	741.95	12.00	3.21	8.79	733.16	12.00	3.89	8.11	733.84	11.98	6.70	5.28	736.67	738.30	732.92	5.38

- Notes:
1. Groundwater levels were recorded in August 2010, February 2011, and February/March 2012
  2. The bedrock wells and well MW25-11 were decommissioned in September 2010 as part of the SEDA-wide Well Decommissioning Project .
  3. Well MW25-3 total depth increased from 9 feet on 8/27/2008 to 9.58 feet on 4/29/2009. Groundwater levels after 8/27/2008 have been adjusted to reflect the change in well total depth.
  4. If well depths were not recorded during an event then the previously recorded well depth was used.



**Table 4**  
**SEAD-25 VOC Concentrations Detected in Groundwater (2012 Event)**  
 2012 Annual Long-Term Monitoring  
 Seneca Army Depot Activity

Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25							
Loc ID	MW25-10	MW25-13	MW25-15	MW25-17	MW25-18	MW25-19							
Matrix	GW	GW	GW	GW	GW	GW							
Sample ID	25LM20083	25LM20085	25LM20065	25LM20076	25LM20066	25LM20077							
Sample Date	2/28/2012	2/28/2012	2/28/2012	2/28/2012	2/29/2012	2/28/2012							
QC Type	SA	SA	SA	SA	SA	SA							
Study ID	LTM	LTM	LTM	LTM	LTM	LTM							
Sample Round	9	9	9	9	9	9							
Parameter <sup>1</sup>	Units	Maximum Value	Frequency of Detection	Cleanup Goal <sup>2</sup>	Number of Exceedances	Number of Times Detected	Number of Samples Analyzed	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
1,1,1-Trichloroethane	UG/L	0	0%	5	0	0	11	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	UG/L	0	0%	5	0	0	11	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	UG/L	0	0%	0.6	0	0	11	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene (total)	UG/L	0.76	9%	5	0	1	11	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ
Chloroform	UG/L	0	0%	7	0	0	11	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Cis-1,2-Dichloroethene	UG/L	0.76	9%	5	0	1	11	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Trichloroethene	UG/L	0.45	9%	5	0	1	11	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Vinyl chloride	UG/L	0	0%	2	0	0	11	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
TOTAL Chlorinated Organics	UG/L						11	ND	ND	ND	ND	ND	ND
Benzene	UG/L	0.99	36%	1	0	4	11	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Ethyl benzene	UG/L	0.47	0%	5	0	1	11	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Meta/Para Xylene	UG/L	0	0%	5	0	0	11	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
Ortho Xylene	UG/L	0	0%	5	0	0	11	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Toluene	UG/L	0	0%	5	0	0	11	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Total Xylenes	UG/L	0	0%	5	0	0	11	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
TOTAL BTEX	UG/L						11	ND	ND	ND	ND	ND	ND

Notes:

1. Only parameters with site-specific cleanup goals are included.
2. Cleanup goal values are NYSDEC Class GA Groundwater Standards (TOGS 1.1.1, June 1998).
3. Shading indicates concentration above cleanup goal.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

ND = Non-Detect

**Table 4**  
**SEAD-25 VOC Concentrations Detected in Groundwater (2012 Event)**  
 2012 Annual Long-Term Monitoring  
 Seneca Army Depot Activity

Area								SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25
Loc ID								MW25-2	MW25-3	MW25-3	MW25-8	MW25-9
Matrix								GW	GW	GW	GW	GW
Sample ID								25LM20067	25LM20078	25LM20064	25LM20071	25LM20079
Sample Date								3/1/2012	2/29/2012	2/29/2012	2/29/2012	2/29/2012
QC Type								SA	SA	DU	SA	SA
Study ID								LTM	LTM	LTM	LTM	LTM
Sample Round								9	9	9	9	9
Parameter <sup>1</sup>	Units	Maximum Value	Frequency of Detection	Cleanup Goal <sup>2</sup>	Number of Exceedances	Number of Times Detected	Number of Samples Analyzed	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
1,1,1-Trichloroethane	UG/L	0	0%	5	0	0	11	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	UG/L	0	0%	5	0	0	11	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	UG/L	0	0%	0.6	0	0	11	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene (total)	UG/L	0.76	9%	5	0	1	11	0.76 J	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ
Chloroform	UG/L	0	0%	7	0	0	11	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Cis-1,2-Dichloroethene	UG/L	0.76	9%	5	0	1	11	0.76 J	0.21 U	0.21 U	0.21 U	0.21 U
Trichloroethene	UG/L	0.45	9%	5	0	1	11	0.45 J	0.28 U	0.28 U	0.28 U	0.28 U
Vinyl chloride	UG/L	0	0%	2	0	0	11	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
TOTAL Chlorinated Organics	UG/L						11	1.97 J	ND	ND	ND	ND
Benzene	UG/L	0.99	36%	1	0	4	11	0.99 J	0.68 J	0.68 J	0.26 U	0.4 J
Ethyl benzene	UG/L	0.47	0%	5	0	1	11	0.47 J	0.21 U	0.21 U	0.21 U	0.21 U
Meta/Para Xylene	UG/L	0	0%	5	0	0	11	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
Ortho Xylene	UG/L	0	0%	5	0	0	11	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Toluene	UG/L	0	0%	5	0	0	11	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Total Xylenes	UG/L	0	0%	5	0	0	11	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
TOTAL BTEX	UG/L						11	1.46	0.68	0.68	ND	0.4

Notes:

1. Only parameters with site-specific cleanup goals are included.
2. Cleanup goal values are NYSDEC Class GA Groundwater Standards (TOGS 1.1.1, June 1998).
3. Shading indicates concentration above cleanup goal.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

ND = Non-Detect

**Table 5**  
**Summary of Wells Sampled**  
**2012 Annual Long-Term Monitoring**  
**Seneca Army Depot Activity**

Well ID / Event	EVENT									Total for Wells
	1 2006Q1	2 2006Q3	3 2007Q2	4 2008Q1	5 2009Q2	6 2010Q1	7 2010Q2	8 2011Q1	9 2012Q1	
MW25-2 *	X	X	X	X	X	X	X	X	X	9
MW25-3 *	X	X	--	X	X	X	X	X	X	8
MW25-8	X	X	--	X	X	X	--	--	X	6
MW25-9 *	X	X	--	X	X	X	--	X	X	7
MW25-10	X	X	--	X	--	X	--	X	X	6
MW25-13	X	X	--	X	--	--	--	--	X	4
MW25-15	X	X	--	X	X	X	--	X	X	7
MW25-17	X	X	X	X	X	X	X	X	X	9
MW25-18	X	X	X	X	X	X	X	X	X	9
MW25-19	--	--	X	X	X	X	X	X	X	7
<b>Total for Round</b>	<b>9</b>	<b>9</b>	<b>4</b>	<b>10</b>	<b>8</b>	<b>9</b>	<b>5</b>	<b>8</b>	<b>10</b>	

**Notes:**  
X = Indicates well sampled for select analytes.  
-- = Indicates well could not be sampled.  
\* = Indicates primary or source well.

**Table 6**  
**Analytes Detected During SEAD-25 LTM (All Events through 2012)**  
**2012 Annual Long-Term Monitoring**  
**Seneca Army Depot Activity**

Criteria	LOWEST-GW								
	Parameter	Unit	Max Detected Value	Frequency of Detects	Num of Detects	Num of Analyses	Source Criteria	Action Level	Num of Detects Above Standard-1
<b>Volatile Organic Compounds</b>									
	1,1,1-Trichloroethane	UG/L	0.62	2%	2	81	GA	5	0
	1,1-Dichloroethane	UG/L	3.5	9%	7	81	GA	5	0
	1,2,4-Trimethylbenzene	UG/L	0.45	7%	2	30	GA	5	0
	1,2-Dichloroethane	UG/L	0.49	1%	1	81	GA	0.6	0
	1,2-Dichloroethene (total)	UG/L	15	15%	3	20	GA	5	2
	Acetone	UG/L	9.5	4%	3	81			
	Benzene	UG/L	62	27%	22	81	GA	1	14
	Carbon disulfide	UG/L	0.61	2%	2	81			
	Chloroethane	UG/L	0.67	2%	2	81	GA	5	0
	Chloroform	UG/L	0.32	1%	1	81	GA	7	0
	Cis-1,2-Dichloroethene	UG/L	19	15%	12	81	GA	5	4
	Cyclohexane	UG/L	8.6	11%	8	76			
	Ethyl benzene	UG/L	26	16%	13	81	GA	5	9
	Isopropylbenzene	UG/L	2.6	7%	6	81	GA	5	0
	Meta/Para Xylene	UG/L	19	11%	7	61	GA	5	4
	Methyl cyclohexane	UG/L	4.2	9%	6	65			
	Methyl ethyl ketone	UG/L	9	11%	9	81			
	Naphthalene	UG/L	0.23	4%	1	25			
	Ortho Xylene	UG/L	6.4	8%	5	61	GA	5	3
	Toluene	UG/L	14	10%	8	81	GA	5	5
	Total Xylenes	UG/L	62	8%	3	40	GA	5	3
	Trichloroethene	UG/L	2	9%	7	81	GA	5	0
	Vinyl chloride	UG/L	2.6	4%	3	81	GA	2	2
<b>Inorganics</b>									
	Iron	UG/L	15,700	91%	67	74	GA	300	44
	Sodium	UG/L	58,100	100%	74	74	GA	20,000	12
<b>Wet Chemistry</b>									
	Chloride	MG/L	97.9	80%	60	75	GA	250	0
	Ethane	UG/L	1.1	6%	5	78			
	Ethene	UG/L	4.6	6%	5	78			
	Methane	UG/L	170	54%	42	78			
	Nitrate	MG/L	6.4	51%	21	41	GA	10	0
	Nitrite	MG/L	0.73	46%	16	35			0
	Sulfate	MG/L	182	100%	75	75	GA	250	0
<b>Field Measurement</b>									
	Conductivity	S/m	1.26	100%	70	70			
	Dissolved Oxygen	MG/L	8.46	100%	66	66			
	ORP	mV	259	100%	70	70			
	pH	Std unit:	7.69	100%	70	70			
	Sulfide	MG/L	1.04	100%	63	63			
	Temperature	deg C	26.55	100%	73	73			
	Turbidity	NTU	195	100%	70	70			
Notes:									
1) Summary Statistics were obtained from Result Sheet(s) and reflect values for the whole dataset.									

**Table 7**  
**Summary of SEAD-25 Geochemical Parameters**  
**2012 Annual Long-Term Monitoring**  
**Seneca Army Depot Activity**

Well ID	Date	Event	Dissolved Oxygen (mg/L)	ORP (mV)	Temperature (°C)	Turbidity (NTU)	pH (Std units)	Conductivity (S/m)	Iron (ug/L)	Sodium (ug/L)	Chloride (mg/L)	Nitrate (mg/L-N)	Nitrite (mg/L-N)	Sulfate (mg/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	Sulfide (mg/L)
MW25-2	4/12/06 <sup>1</sup>	1	6.29	-11	10.5	16.1	7.17	0.551	2510 J	4730	6.5	0.05 U	0.05 U	39.6	2 U	2 U	80 J	0.01
	8/9/06 <sup>1</sup>	2	0.3	-82	26.55	2.3	6.93	0.562	666.5	5600 J	2.2 J	0.05 U	0.05 U	32.1	10 U	10 U	35.5	0.15
	6/6/07	3	0.07	-92	12.4	11	7.11	0.454	2600 J	6000 J	4	0.5 J	0.5	22	0.24	4.2	170	-
	3/4/08	4	1.35	-60	3.2	2.78	7.15	0.64	711	3460	0.2 U	0.305 J	0.305	31.1	1 U	1 U	3.2 J	0.01 U
	4/29/09 <sup>1</sup>	5	0.11	-115	8.1	0.9	6.84	0.702	15050	7100	2.2	0.05 U	0.01 U	79.2	1 U	1 U	66	0.04
	1/12/10 <sup>1</sup>	6	0.41	-151	6.3	1.06	7.25	0.573	2655	7800	2.8	0.199 J	0.007 UJ	64.6 J	0.16 U	0.17 U	21	0.16
	8/3/10 <sup>1,4</sup>	7	0.02	-230	21.2	3.4	6.79	1.09	1660	10300	2.9	0.013 UJ	-	42.8	0.16 U	0.17 U	125	-
	2/8/11 <sup>1,6</sup>	8	0.24	-148	5.08	0.6	6.98	0.806	13100	10200	5.8	0.0152 U	0.00321 U	45 J	0.58 U	0.69 U	45.5	-
	3/1/12	9	0.24	-106	5.3	5.38	6.79	0.681	3,780 J	9,320 J	0.9 J	0.0152 U	0.022 J	52 J	0.58 U	0.69 U	31 J	0.2
MW25-3	1/31/06 <sup>1</sup>	1	1.19	79	4.3	2.2	7.1	0.49	81.2 J	12150	2.2	0.05 U	0.05 U	39.85	2 U	2 U	2 U	0.04
	8/11/06	2	3.6	77.9	21.54	1.2	7.02	0.686	3820	11300 J	1.5 J	0.05 U	0.05 U	44.9	2 U	2 U	2 U	0.03
	3/4/08	4	0.87	124	3.5	2	7.15	0.675	107	5540	2.66	0.098 J	0.01 UJ	100	1 U	1 U	0.34 J	0.01
	4/29/09	5	0.19	-102	7.9	0.35	7.03	0.627	1570	9000	3.3	0.05 U	0.01 U	122	1 U	1 U	13	0.42
	1/12/10	6	1.78	-63	4.9	3	6.51	0.741	702	7370	2.8	0.05 UJ	0.007 UJ	182 J	0.16 U	0.17 U	0.14 U	0.04
	8/4/10 <sup>4,5</sup>	7	0	-124	20.6	2.37	6.84	1.26	-	-	-	-	-	0.16 U	0.17 U	12	-	
	2/8/11 <sup>6</sup>	8	0.37	-85	4.5	3.31	6.99	0.851	463	7990	3.2	0.057	0.00321 U	110 J	0.58 U	0.69 U	1.5 J	-
	2/29/12	9	0.1	-141	4.6	1.99	6.94	0.766	494 J	5,970	1.45 J	0.0152 U	0.0225 J	50 J	0.58 U	0.69 U	18 J	0.46
	MW25-8	1/31/06	1	0.84	-70	4.1	2.4	7.3	0.494	329 J	5110	1.4	0.05 U	0.05 U	19.5	2 U	2 U	2 U
8/11/06		2	2.92	33.4	25.01	8.7	6.97	0.72	667	7060 J	0.73 J	0.13	0.05 U	28.2	2 U	2 U	2 U	0.09
3/4/08		4	2.21	61	2.7	5.1	7.46	0.427	349	4180	0.2 U	0.607 J	0.01 UJ	17.3	1 U	1 U	0.36 J	0.03
4/29/09 <sup>2,3</sup>		5	-	-	-	-	-	-	620	6000	3.2	0.05 U	0.016	20.7	1 U	1 U	16	0.01
1/12/10		6	2.67	230	4.7	2.2	7.36	0.342	408	9740	0.5 U	0.05 UJ	0.007 UJ	35.2 J	0.16 U	0.17 U	0.14 U	0.03
2/29/12		9	0.16	-133	3.9	0.8	7.29	0.462	411 J	6,650	1.3 J	0.017 J	0.022 J	12 J	0.58 U	0.69 U	4.7 J	0.03
MW25-9		1/31/06	1	5.33	91	4.8	2.49	7.15	0.535	56.9 J	14500	1.1	0.05 U	0.05 U	21.8	2 U	2 U	29
	8/9/06	2	5.22	62.5	23.11	3.38	7.15	0.718	12 U	16400 J	0.99 J	0.1	0.05 U	25.3	2 U	2 U	2 U	0.45
	3/4/08	4	2.02	99	3.3	1.3	7.33	0.59	100 U	8380	0.2 U	0.05 UJ	0.01 UJ	24.8	1 U	1 U	2.4 J	0.01 U
	4/29/09 <sup>2,3</sup>	5	-	-	-	-	-	-	9440	26000	2.7	0.05 U	0.01 U	39.7	1 U	1 U	3.5	0.12
	1/12/10 <sup>3</sup>	6	-	-72	3.62	2.8	6.73	0.427	916	16500	0.5 U	0.05 UJ	0.007 UJ	35.3 J	0.16 U	0.17 U	0.14 U	0.01
	2/9/11 <sup>2,3</sup>	8	-	-	-	-	-	-	3580	29600	1.6 J	0.0152 U	0.00321 U	32 J	0.58 U	0.69 U	5.4 J	-
	2/29/12	9	1.77	-129	4.1	2.74	7.41	0.555	2,080 J	45,300	0.55 J	0.018 J	0.022 J	26 J	0.58 U	0.69 U	4 J	-
MW25-10	1/31/06	1	4.22	107	5	1.09	6.97	0.464	62.8 J	8870	0.73	0.05 U	0.05 U	18.1	2 U	2 U	2 U	0.1
	8/9/06	2	4.23	138.8	21.56	195	6.56	0.701	358	6530 J	0.71 J	0.05 U	0.05 U	18.4	2 U	2 U	2 U	0.28
	3/4/08	4	3.65	130	3.6	2.36	7.31	0.473	100 U	6090	0.2 U	0.102 J	0.01 UJ	12.9	1 U	1 U	2 U	0.02
	1/13/10 <sup>3</sup>	6	-	230	5.6	3.3	7.19	0.396	508	6420	2.1	0.05 UJ	0.007 UJ	27.1 J	0.21 U	0.22 U	0.14 U	0.09
	2/9/11 <sup>2,5</sup>	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/28/12	9	-	-	-	-	-	-	231 J	5,040	0.45 J	0.02 J	0.015 J	14 J	0.58 U	0.69 U	1.2 J	-
MW25-13	1/31/06	1	0.94	38	3.8	21	7.27	0.492	320 J	40600	2.5	0.05 U	0.05 U	15.6	2 U	2 U	2 U	0.02
	8/9/06 <sup>5</sup>	2	4.1	-22.2	23.42	100	6.98	0.699	-	-	-	-	-	-	-	-	-	-
	3/3/08 <sup>5</sup>	4	4.79	97	3	16.4	7.52	0.639	-	-	-	-	-	-	-	-	-	0.01 U
	2/28/12	9	-	-	-	-	-	-	2,320 J	16,100	0.54 J	0.051	0.015 J	18	0.58 U	0.69 U	1.2 J	-

**Table 7  
Summary of SEAD-25 Geochemical Parameters  
2012 Annual Long-Term Monitoring  
Seneca Army Depot Activity**

Well ID	Date	Event	Dissolved Oxygen (mg/L)	ORP (mV)	Temperature (°C)	Turbidity (NTU)	pH (Std units)	Conductivity (S/m)	Iron (ug/L)	Sodium (ug/L)	Chloride (mg/L)	Nitrate (mg/L-N)	Nitrite (mg/L-N)	Sulfate (mg/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	Sulfide (mg/L)	
MW25-15	1/31/06	1	2.93	82	5.3	1.1	7.2	0.36	56 J	3080	0.66	0.05 U	0.05 U	14.4	2 U	2 U	2 U	0.01 U	
	8/14/06	2	1.99	222.1	18.76	27.4	5.8	0.651	850	6630 J	1.4 J	0.05 U	0.087	17.9	2 U	2 U	2 U	0.8	
	3/3/08	4	4.57	139	4.7	3.58	7.25	0.477	100 U	6340	0.2 U	0.16 J	0.01 UJ	13.3	1 U	1 U	2 U	0.01 U	
	4/29/09 <sup>3</sup>	5	-	-	-	-	-	-	30 J	3500	0.2 U	0.05 U	0.01 U	20.3	1 U	1 U	2 U	0.01 U	
	1/13/10 <sup>3</sup>	6	-	213	6.1	1.5	7.23	0.38	769	3620	0.5 U	0.05 UJ	0.007 UJ	24.8 J	0.16 U	0.17 U	0.14 U	0.17	
	2/9/11 <sup>2,5</sup>	8	-	-	-	-	-	-	-	-	-	-	-	-	0.58 U	0.69 U	2.1 J	-	
	2/28/12	9	1.55	97	5.1	4.2	7	0.419	3,840 J	3,130	0.56 J	0.018 J	0.02 J	14 J	0.58 U	0.69 U	1.2 J	0.05	
	MW25-17	1/31/06	1	8.46	68	6.3	3.4	7.69	0.462	46.1	4240	0.7	0.05 U	0.05 U	17.2	2 U	2 U	2 U	0.01
		8/11/06	2	5.31	157	18.27	1.7	6.72	0.593	8.8 U	5170 J	1.4 J	0.11	0.05 U	16.3	2 U	2 U	2 U	0.01 U
6/7/07 <sup>1</sup>		3	0.31	134	13.2	12	7.2	0.418	440 J	8500 J	3.6	3.44 J	0.73 J	18.5	0.23	1.3	6.55	0.06	
3/4/08 <sup>1</sup>		4	8.24	155	6	2.03	7.3	0.532	100 U	4550	0.2 U	0.899 J	0.01 UJ	19.35	1 U	1 U	2 U	0.01	
4/28/09		5	7.45	192	7.2	1.2	7.31	0.379	160	4700	0.2 U	0.05 U	0.01 U	17.3	1 U	1 U	2 U	0.01 U	
1/14/10		6	6.79	211	8.1	1.4	7.29	0.418	86.9 J	4450	2.5	0.245 J	0.007 UJ	16.7 J	0.21 U	0.22 U	0.14 U	0.01 U	
8/5/10 <sup>4</sup>		7	4.1	61	17.6	2.45	7.25	0.584	56.4 J	5650	5.3	0.484 J	-	21.7	0.16 U	0.17 U	0.14 U	0.01 U	
2/10/11		8	5.36	193	6.4	0	7.38	0.547	15.9 J	4470	2.3	0.27	0.00321 U	16 J	0.58 U	0.69 U	0.98 J	0.01 U	
2/28/12		9	6.91	196	6.5	3.47	7.48	0.423	22.4 J	4,370	0.47 J	0.12	0.015 J	11 J	0.58 U	0.69 U	0.93 J	-	
MW25-18	1/31/06	1	3.99	63	7.2	31.8	7.62	0.494	462 J	22300	18.6	0.05 U	0.05 U	24.8	2 U	2 U	2 U	0.12	
	8/14/06	2	6.21	46	24.41	6.22	7.32	0.858	357	41900 J	55.6	0.32	0.05 U	30.1	2 U	2 U	2 U	0.02	
	6/6/07	3	0.96	98	13	11	7.15	0.54	500 J	37000 J	59	1.5 J	0.5	31	0.024 J	2	2	1.04	
	3/5/08	4	4.68	144	4.9	5.04	7.31	0.713	107	20400	18	0.199 J	0.01 UJ	16.8	1 U	1 U	2 U	0.01	
	4/28/09	5	4.43	150	7.1	11	7.3	0.385	100 J	19000	16.3	0.05 U	0.01 U	22.8	1 U	1 U	2 U	0.01 U	
	1/14/10	6	4.39	237	8	2.78	7.28	0.544	122	28400	51.7	0.2 J	0.007 UJ	26.8 J	0.16 U	0.17 U	0.14 U	0.06	
	8/5/10 <sup>4</sup>	7	2.1	123	19.3	3.12	7.21	0.893	83.8 J	58100	97.9	0.18 J	-	40.2	0.16 U	0.17 U	0.14 U	0.01	
	2/10/11	8	3.52	187	6.3	0	7.3	0.83	250	41900	72	0.18	0.00321 U	32 J	0.58 U	0.69 U	1.3 J	0.03	
	2/29/12	9	3.89	70	6.7	3.66	7.16	0.548	446 J	27,300	20 J	0.13	0.022 J	21 J	0.58 U	0.69 U	1.9 J	0.01	
MW25-19	6/7/07	3	0.05	117	13.4	17	7.04	0.427	1200 J	3800 J	4.5	1.4 J	0.72 J	23	1.1	4.6	29	0.1	
	3/3/08	4	5.84	161	5.8	16.4	7.23	0.478	515	4520	0.2 U	0.194 J	0.01 UJ	24.3	1 U	1 U	2 U	0.01	
	4/28/09	5	3.75	134	7.1	1.3	7.15	0.379	20 J	3500	0.2 U	0.05 U	0.01 U	30.1	1 U	1 U	2 U	0.02	
	1/13/10	6	4.01	259	8	6.1	7.08	0.445	204	4350	2.3	0.113 J	0.007 UJ	31 J	0.16 U	0.17 U	0.14 U	0.02	
	8/4/10 <sup>4</sup>	7	0.03	63	17.7	1.4	6.94	0.662	1310	4140	3.6	0.072 J	-	36.7	0.16 U	0.17 U	0.14 U	0.18	
	2/9/11	8	2.84	174	6.9	5.7	7.22	0.588	152	3340	1.7 J	0.064	0.00321 U	31 J	0.58 U	0.69 U	1.2 J	0.03	
	2/28/12	9	2.3	70	6.6	2.35	6.95	0.477	53.8 J	3,980	0.72 J	0.094	0.015 J	22 J	0.58 U	0.69 U	0.92 J	0.016	

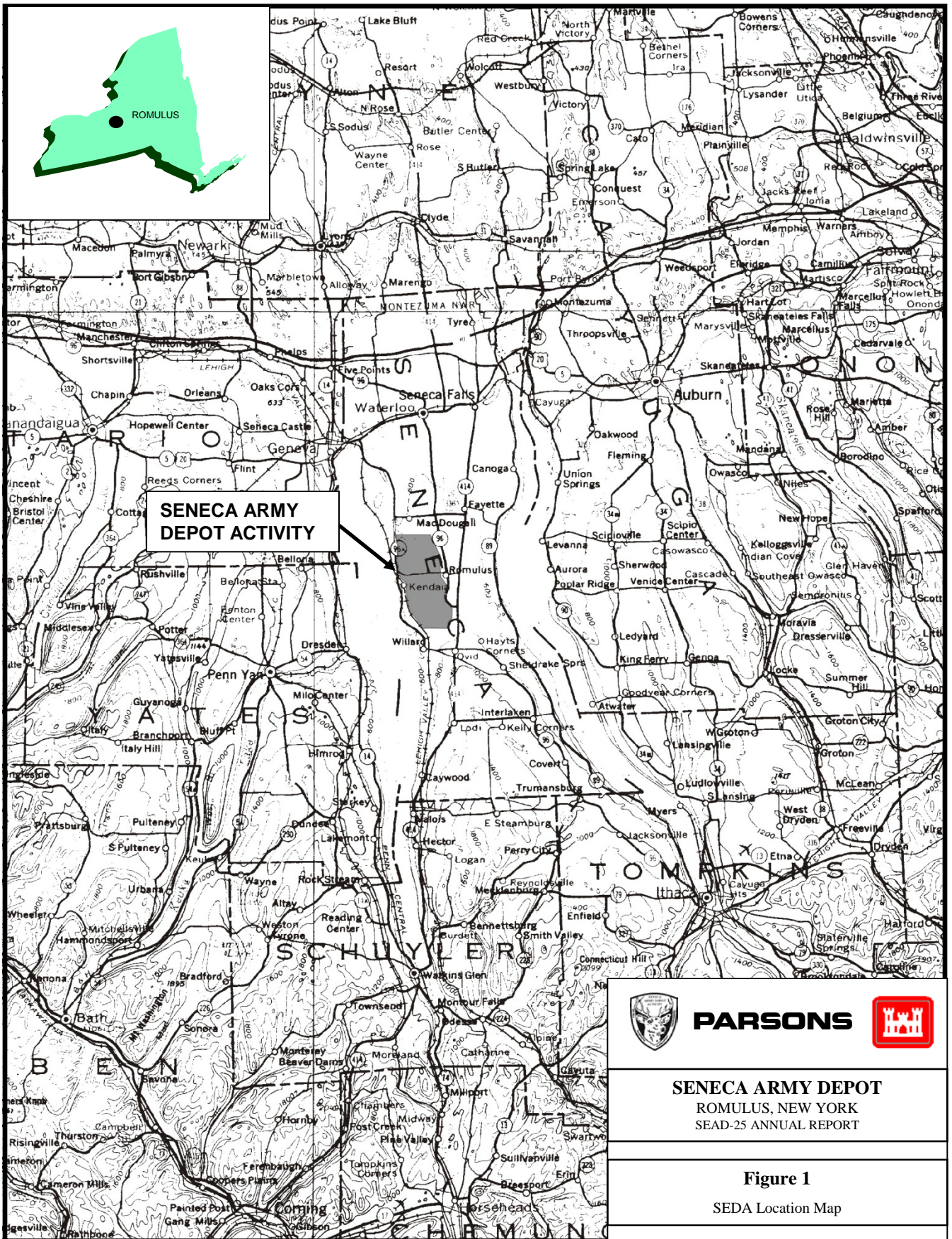
Note:

- = geo parameter was not measured or sampled
- 1. Duplicate samples have been averaged for available parameters.
- 2. Insufficient water volume to fill flow cell prior to sample collection.
- 3. Well was pumped dry and sampled the following day after recharge.
- 4. Lab analyzed for only combined Nitrate/Nitrite Nitrogen.
- 5. Insufficient water to fill all the sample bottles; VOCs were collected and if additional water remained MEE was collected.
- 6. Well ran dry during sampling, allowed well to recharge overnight, and remaining samples were collected the next day.

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Figure 11B	Concentrations of Detected COCs in MW25-3
Figure 11C	Concentrations of Detected COCs in MW25-9





**PARSONS**

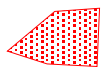
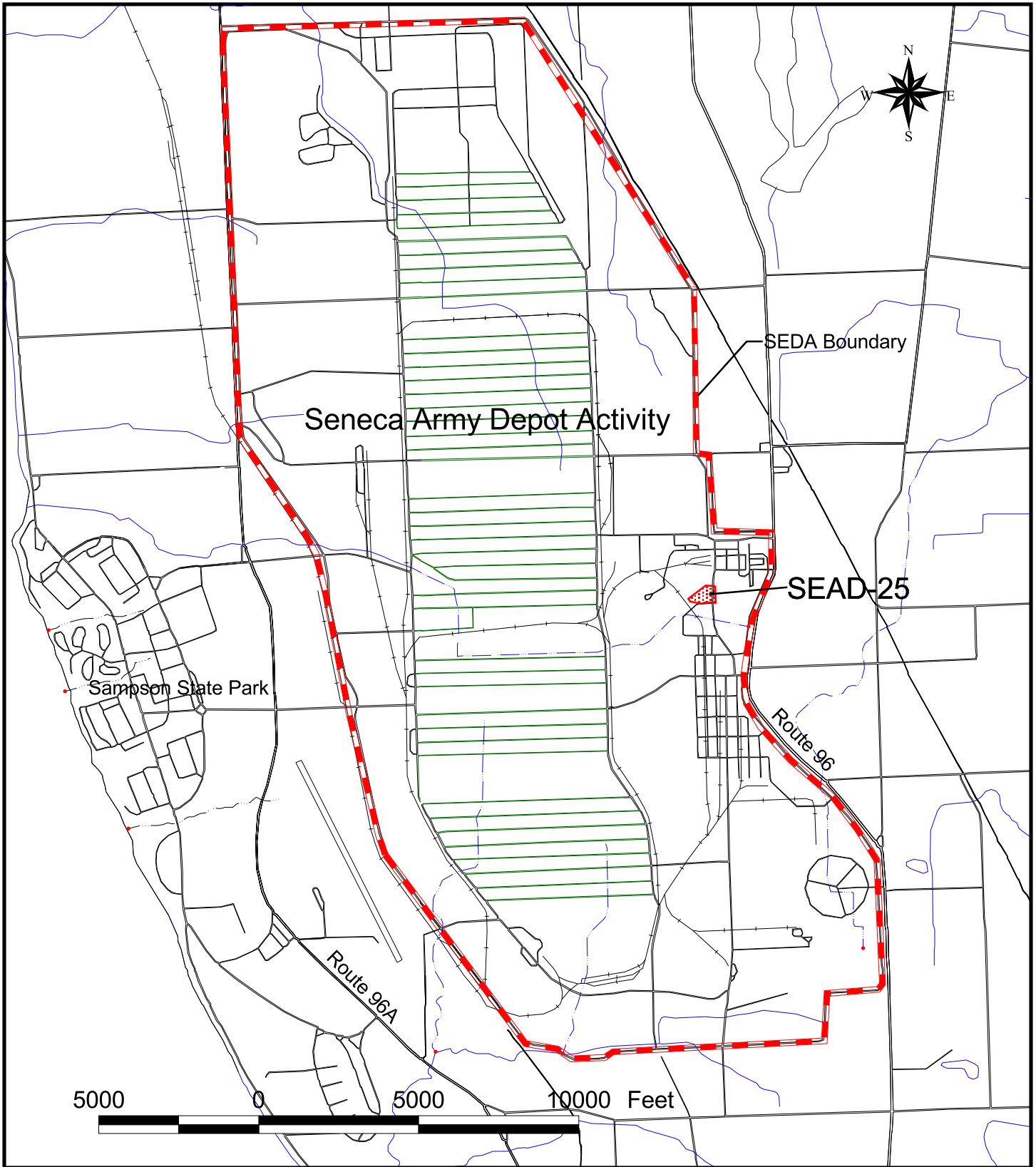


**SENECA ARMY DEPOT**  
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 SEAD-25 ANNUAL REPORT

**Figure 1**

SEDA Location Map





Approximate Boundary and extent of SEDA-25



Approximate Boundary of SEDA Site



**PARSONS**



CLIENT / PROJECT TITLE

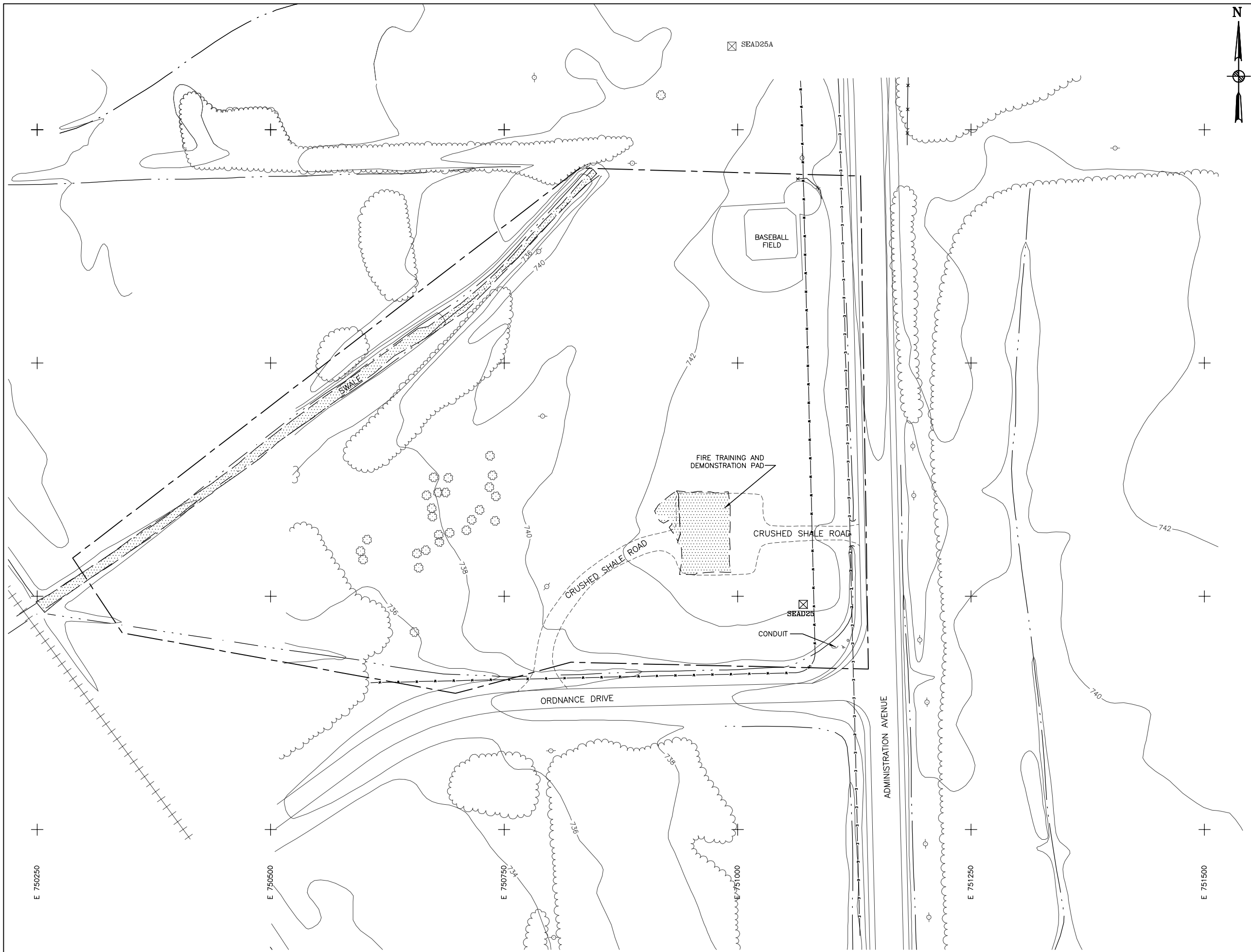
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DEPT: ENVIRONMENTAL REMEDIATION

**Figure 2**

SEDA Site Map and AOC Location

DATE MARCH 2011

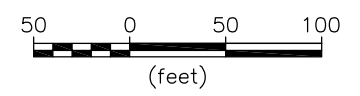


**LEGEND**

- DRAINAGE DITCH
- FENCE
- UNPAVED ROAD
- SEAD 25 BOUNDARY
- 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
- SURVEY MONUMENT
- NOV/DEC 2005 REMEDIATED AREAS

**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 25A MONUMENTS SURVEY CONTROL COORDINATES DATED 1994.
3. VERTICAL DATUM IS BASED ON NAD88.



**PARSONS**



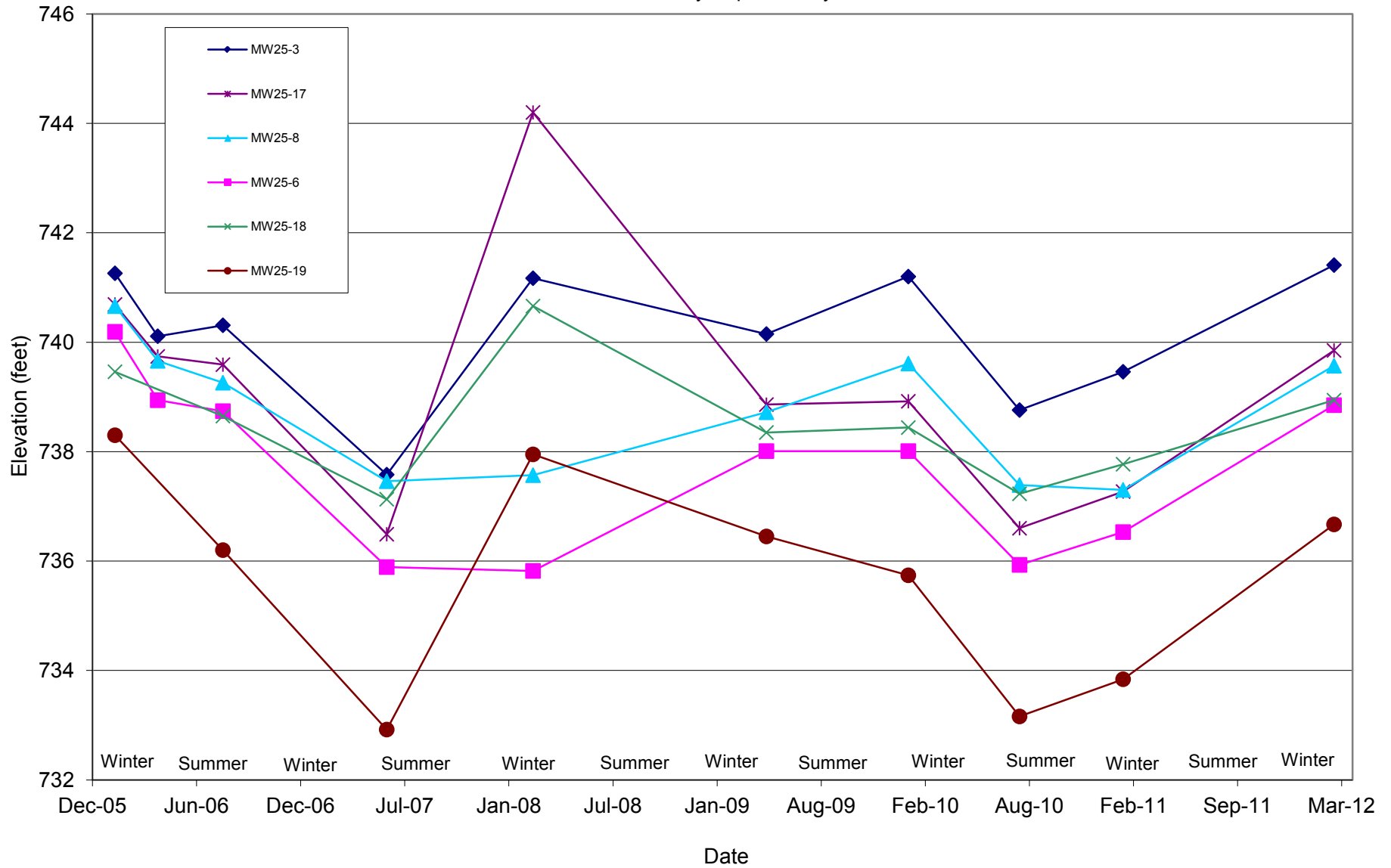
CLIENT/PROJECT TITLE  
**SENECA ARMY DEPOT**  
ROMULUS, NEW YORK  
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DEPT. ENVIRONMENTAL ENGINEERING Dwg. No.

**FIGURE 3**  
SEAD-25 SITE PLAN

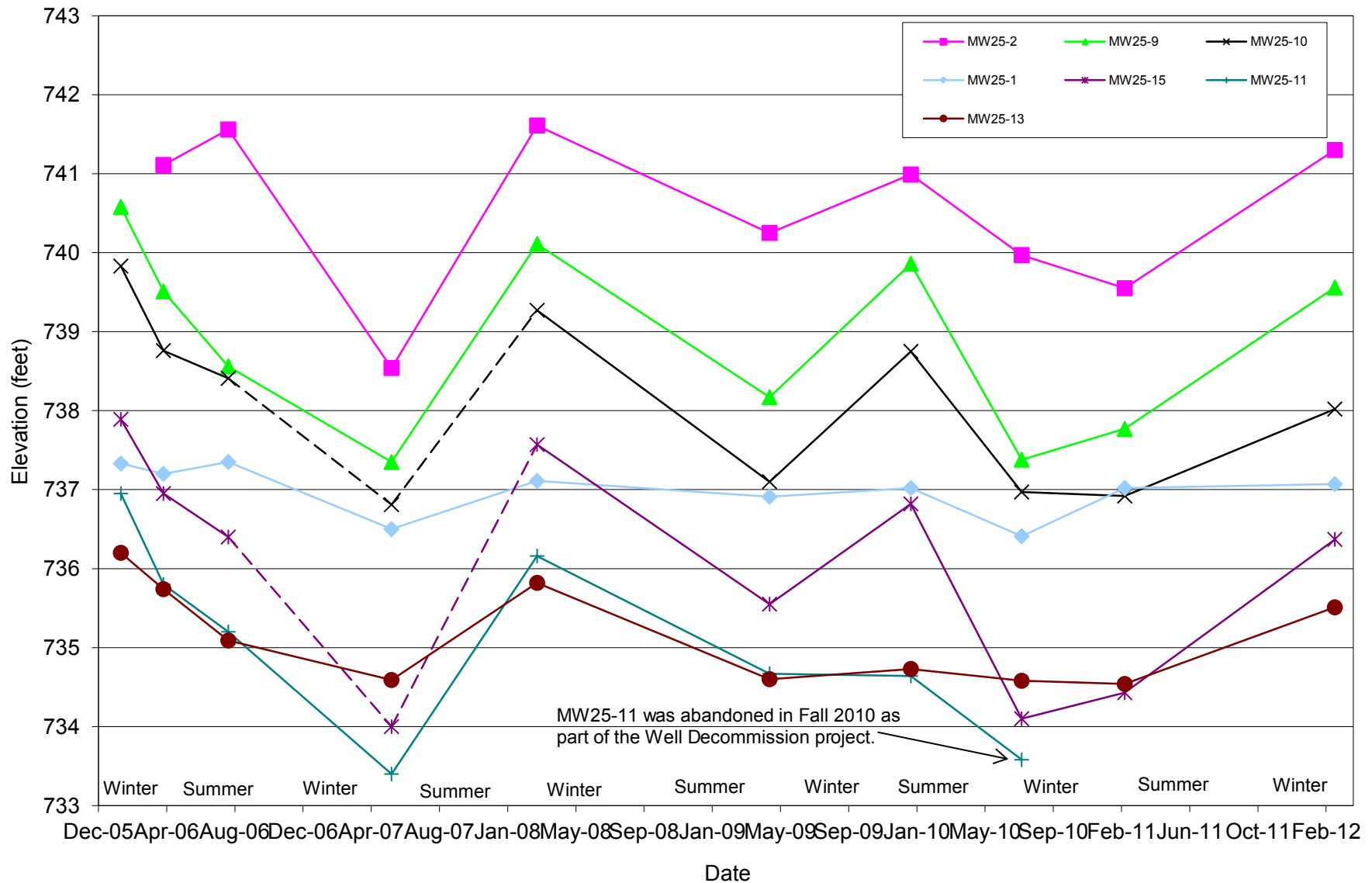
SCALE AS SHOWN DATE MARCH 2011 REV

Figure 4A  
 SEAD-25 Groundwater Elevation - Northern Profile  
 SEAD-25 Annual Report  
 Seneca Army Depot Activity

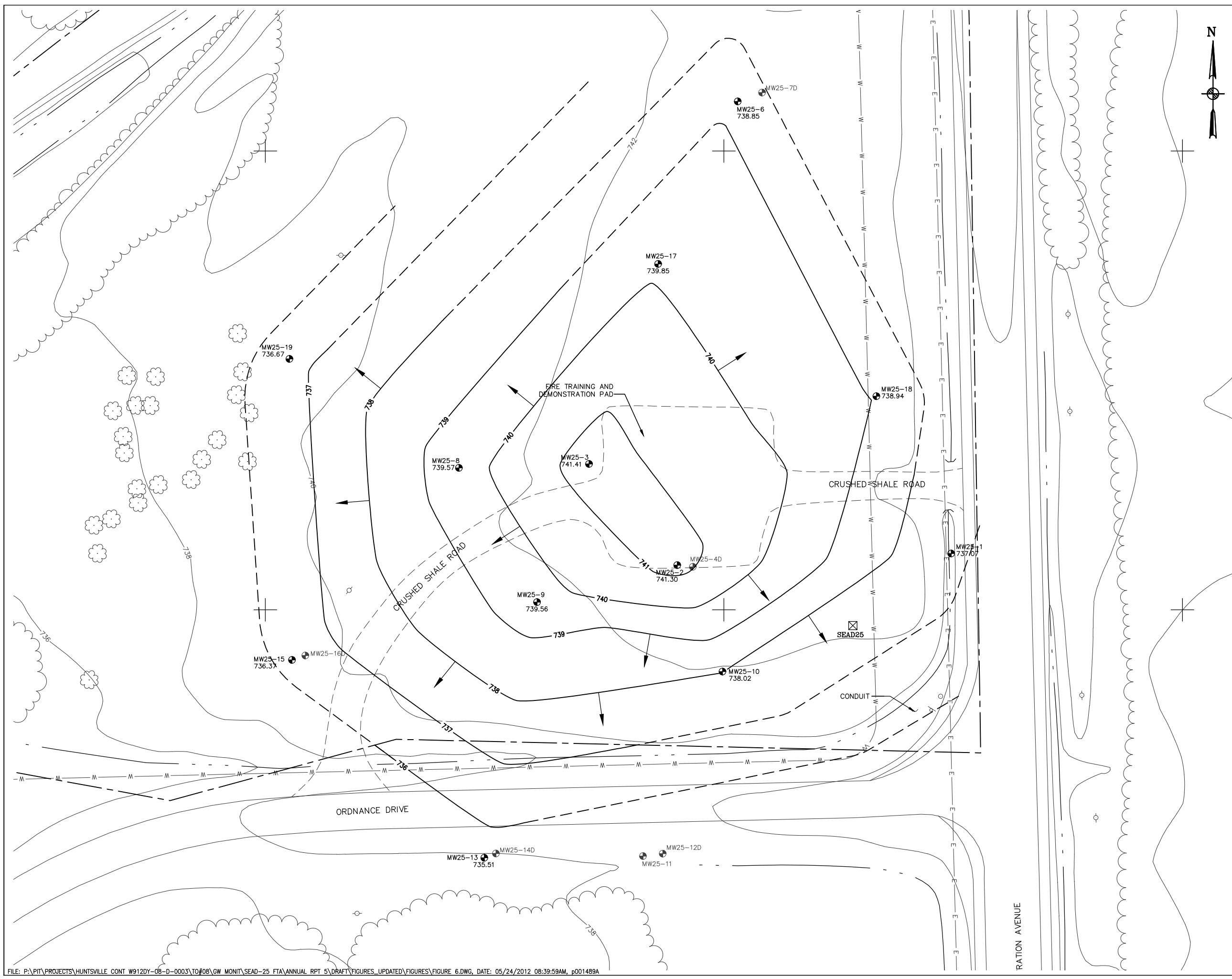


Notes: Groundwater elevation was measured on the following dates: January 24, 2006; April 4, 2006; August 9, 2006; June 4, 2007; February 26, 2008, April 27, 2009; January 11, 2010; August 2, 2010; and February 7, 2011.  
 MW25-18 and MW25-19 groundwater elevations were not measured on April 4, 2006.

Figure 4B  
 SEAD-25 Groundwater Elevation - Southern Profile  
 SEAD-25 Annual Report  
 Seneca Army Depot Activity



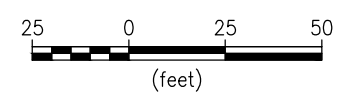
Notes: Groundwater elevation was measured on the following dates: January 24, 2006; April 4, 2006; August 9, 2006; June 4, 2007; February 26, 2008; April 27, 2009; January 11, 2010; August 2, 2010; and February 7, 2011  
 MW25-10 and MW25-15 were dry during the June 6, 2007 sampling event and the bottom of the well elevation are ~736.8 ft and ~734 ft, respectively.



**LEGEND**

	DRAINAGE DITCH
	FENCE
	UNPAVED ROAD
	SEAD 25 BOUNDARY
	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
	FORMER MONITORING WELL LOCATION
	GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
	INDICATES PREDOMINANT FLOW DIRECTION

**NOTE:**  
 FORMER MONITORING WELLS WERE REMOVED IN SEPTEMBER 2010 AS PART OF THE WELL DECOMMISSIONING PROJECT.



CLIENT/PROJECT TITLE  
**SENECA ARMY DEPOT**  
 ROMULUS, NEW YORK  
 SEAD-25 ANNUAL REPORT

DEPT. ENVIRONMENTAL ENGINEERING Dwg. No.

**FIGURE 5**  
 SEAD-25 GROUNDWATER CONTOURS  
 TILL/WEATHERED SHALE SATURATED ZONE  
 FEBRUARY 2012

SCALE AS SHOWN DATE APRIL 2012 REV





Figure 7A  
 Concentrations of BTEX over Time at MW25-2  
 SEAD-25 Annual Report  
 Seneca Army Depot Activity

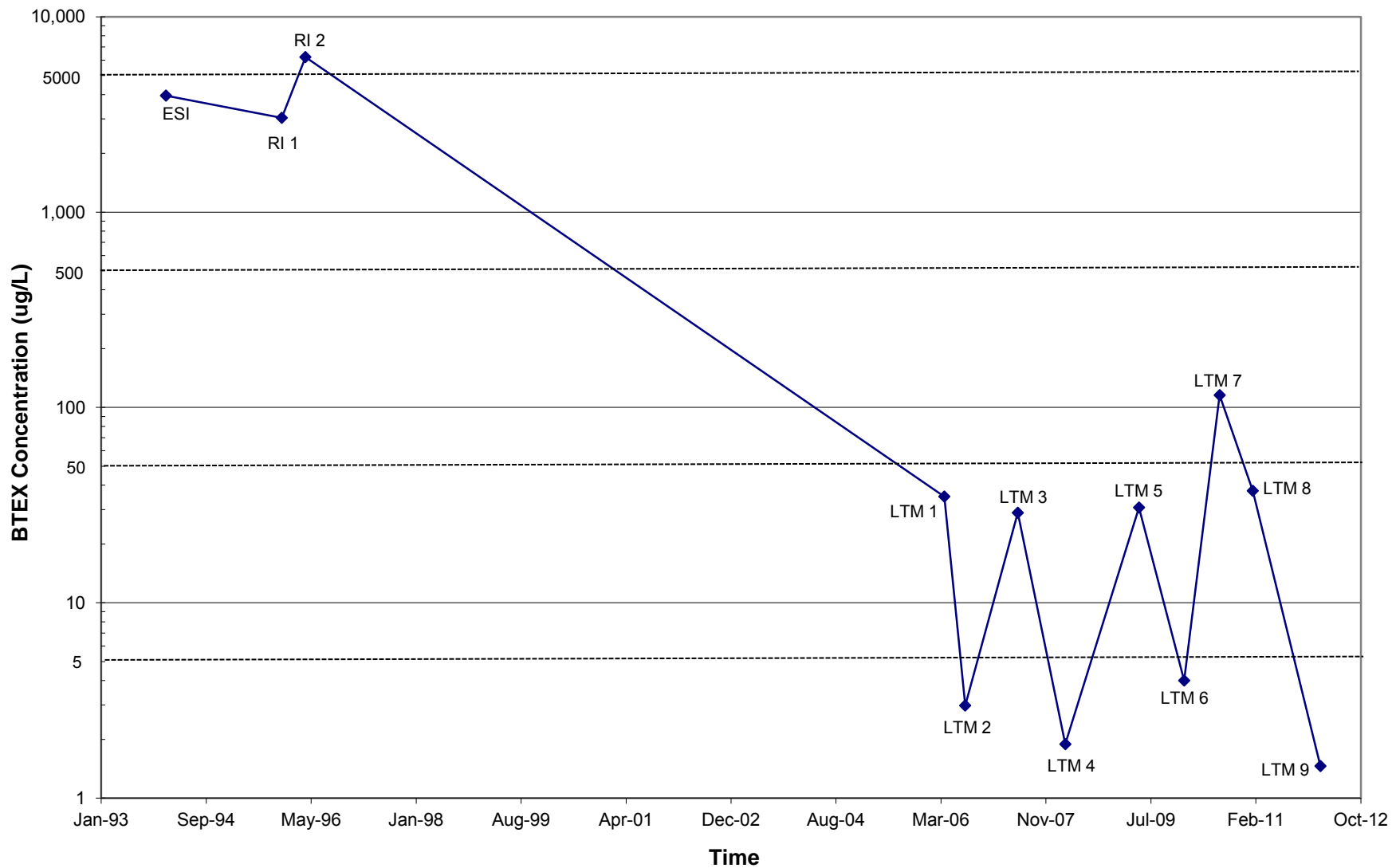


Figure 7B  
 Concentrations of BTEX over Time at MW25-3  
 SEAD-25 Annual Report  
 Seneca Army Depot Activity

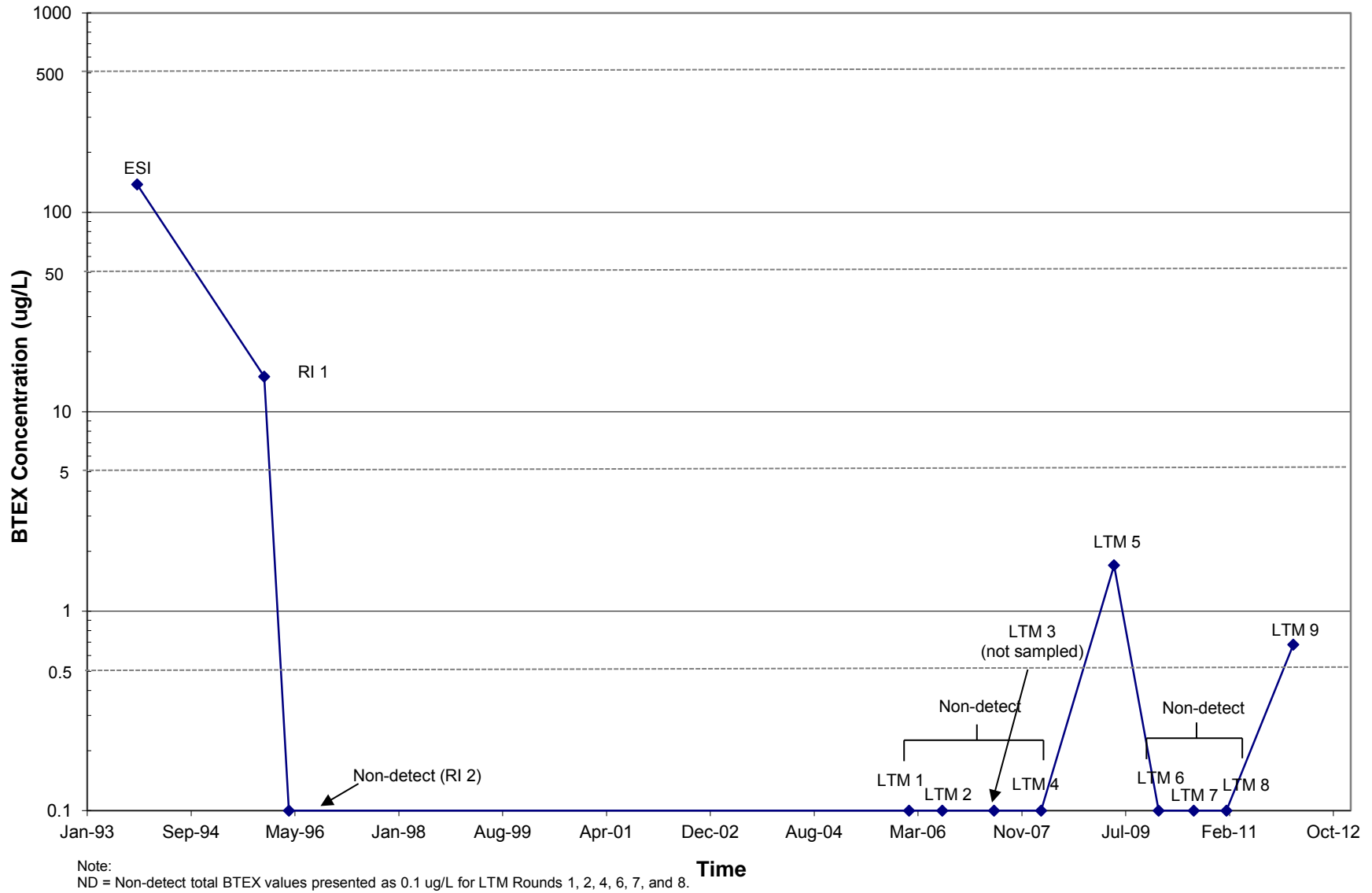
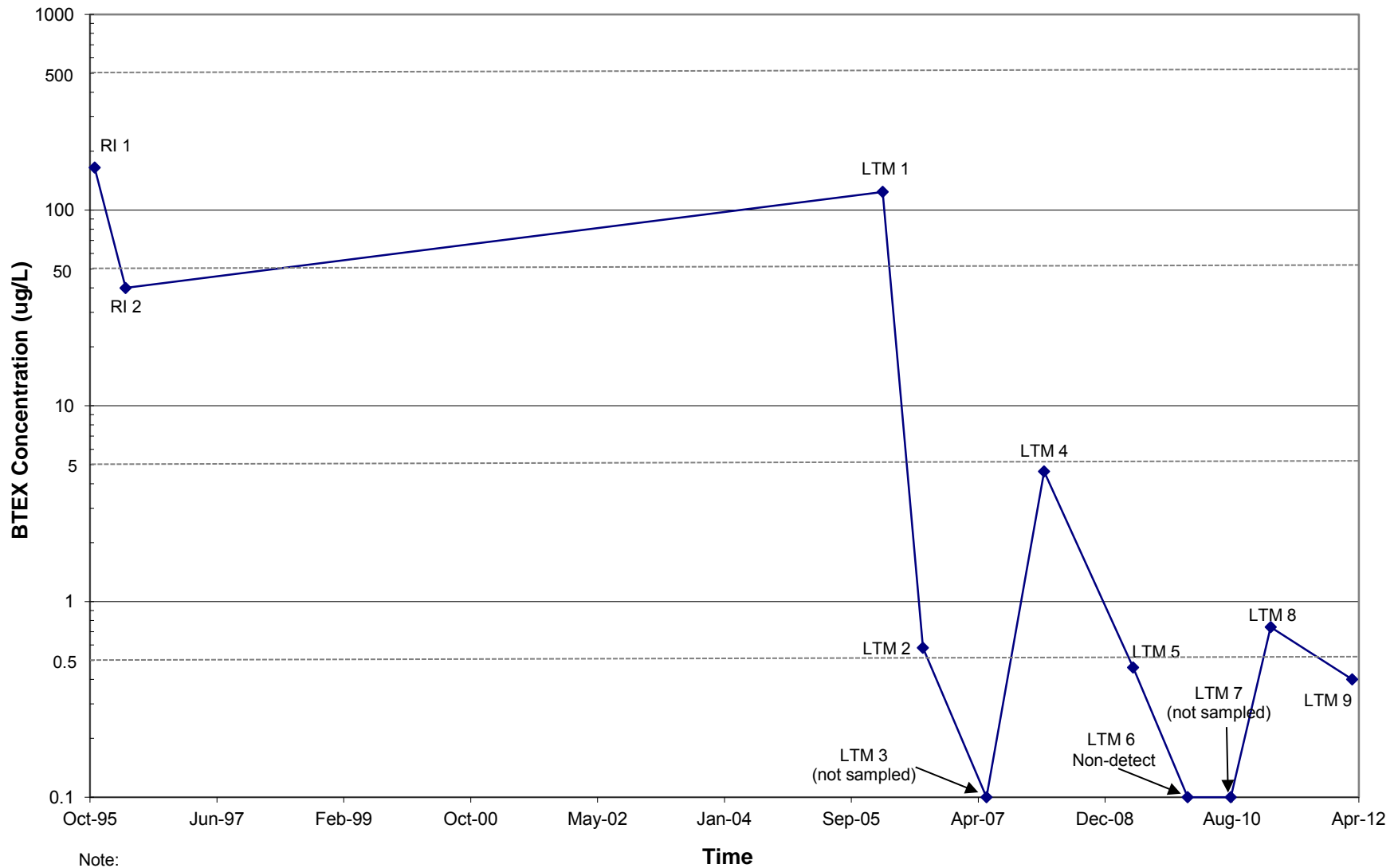


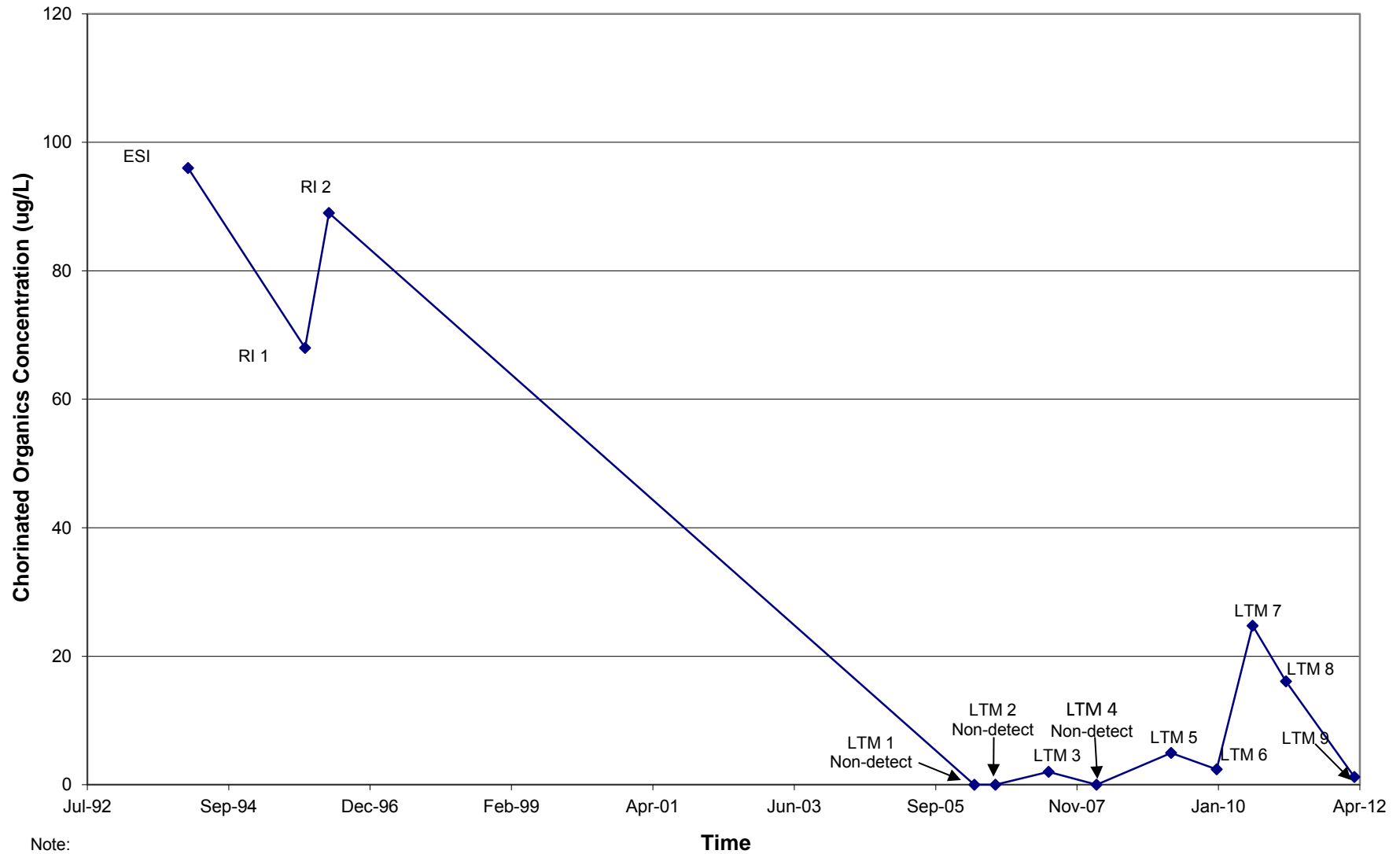


Figure 7C  
 Concentrations of BTEX over Time at MW25-9  
 SEAD-25 Annual Report  
 Seneca Army Depot Activity



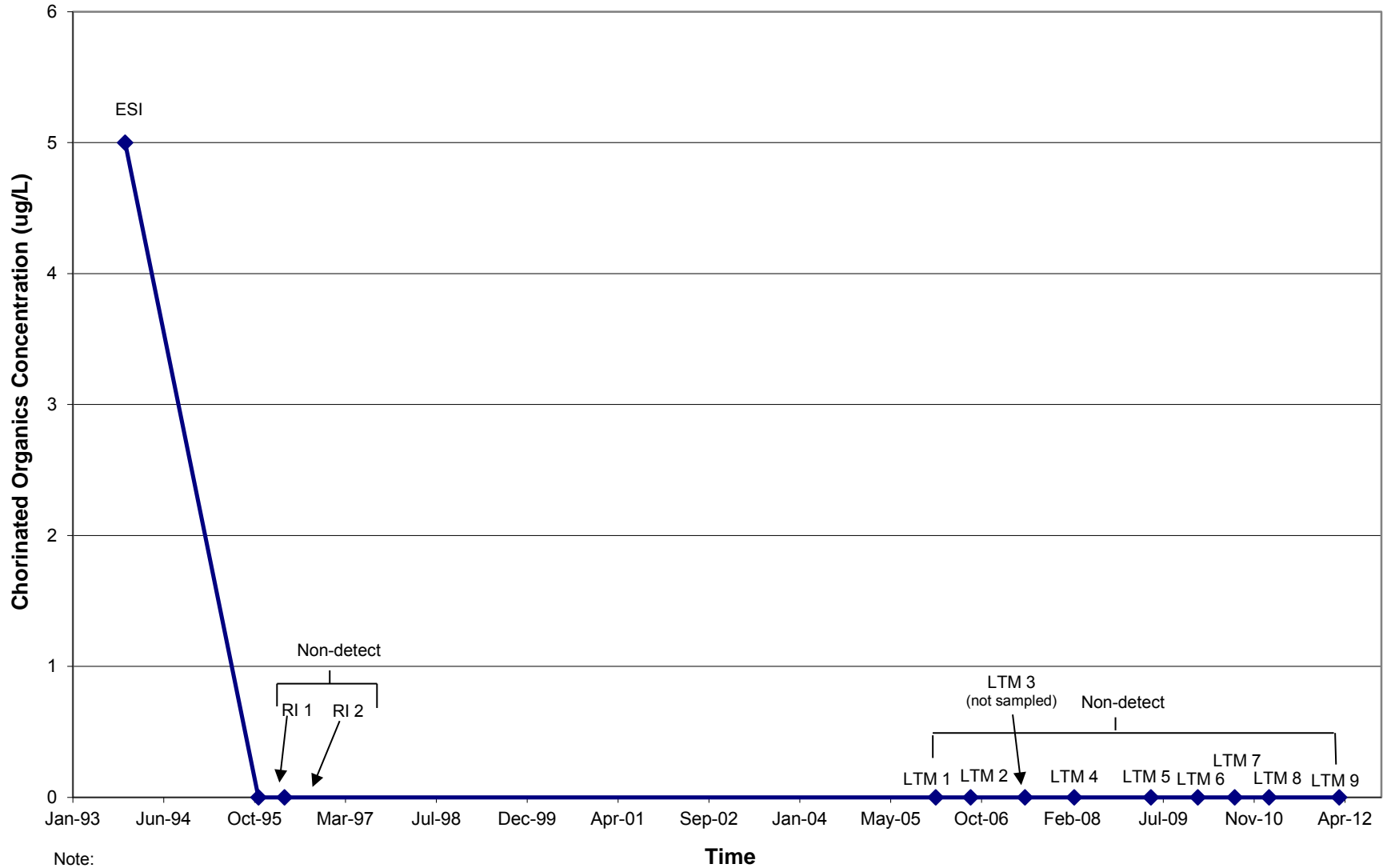
Note:  
 ND = Non-detect total BTEX values presented as 0.1 ug/L for LTM Rounds 6 and 7.

Figure 8A  
 Chlorinated VOC Concentrations at MW25-2  
 SEAD-25 Annual Report  
 Seneca Army Depot Activity



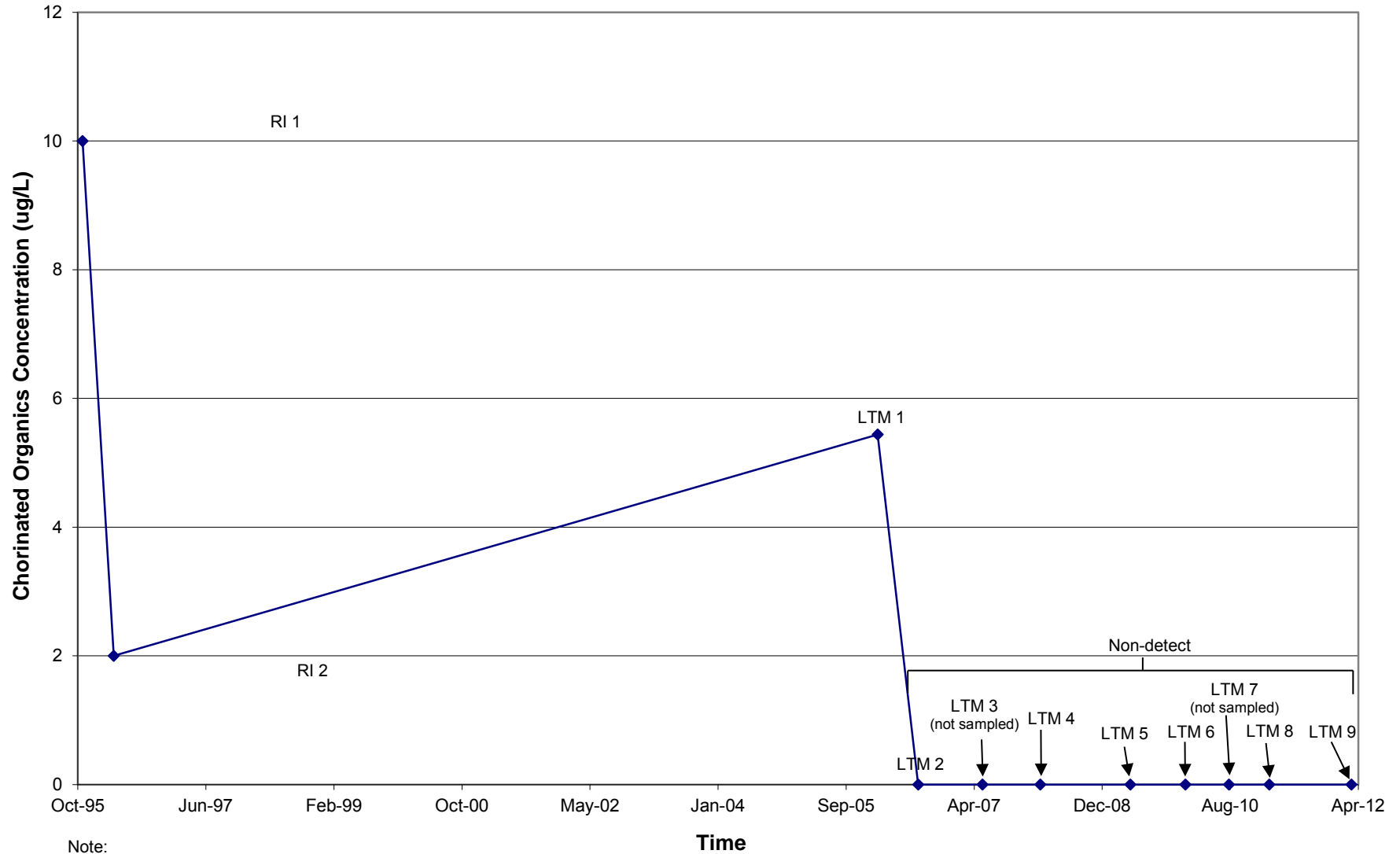
Note:  
 Non-detect values presented as 0.0 ug/L as multiple analytes with varying detection levels constitute the total Chlorinated Organic concentrations.

Figure 8B  
 Chlorinated VOC Concentrations at MW25-3  
 SEAD-25 Annual Report  
 Seneca Army Depot Activity



Note:  
 Non-detect values presented as 0.0 ug/L as multiple analytes with varying detection levels constitute the total Chlorinated Organic concentrations.

Figure 8C  
 Chlorinated VOC Concentrations at MW25-9  
 SEAD-25 Annual Report  
 Seneca Army Depot Activity



Note:  
 Non-detect values presented as 0.0 ug/L as multiple analytes with varying detection levels constitute the total Chlorinated Organic concentrations.

Note: LTM 3 and 7 were not sampled

Figure 9  
 MW25-2 Benzene, Chlorinated Organic Solvents, and Geochemical Indicator Concentrations Post-Removal Action  
 SEAD-25 Annual Report  
 Seneca Army Depot Activity

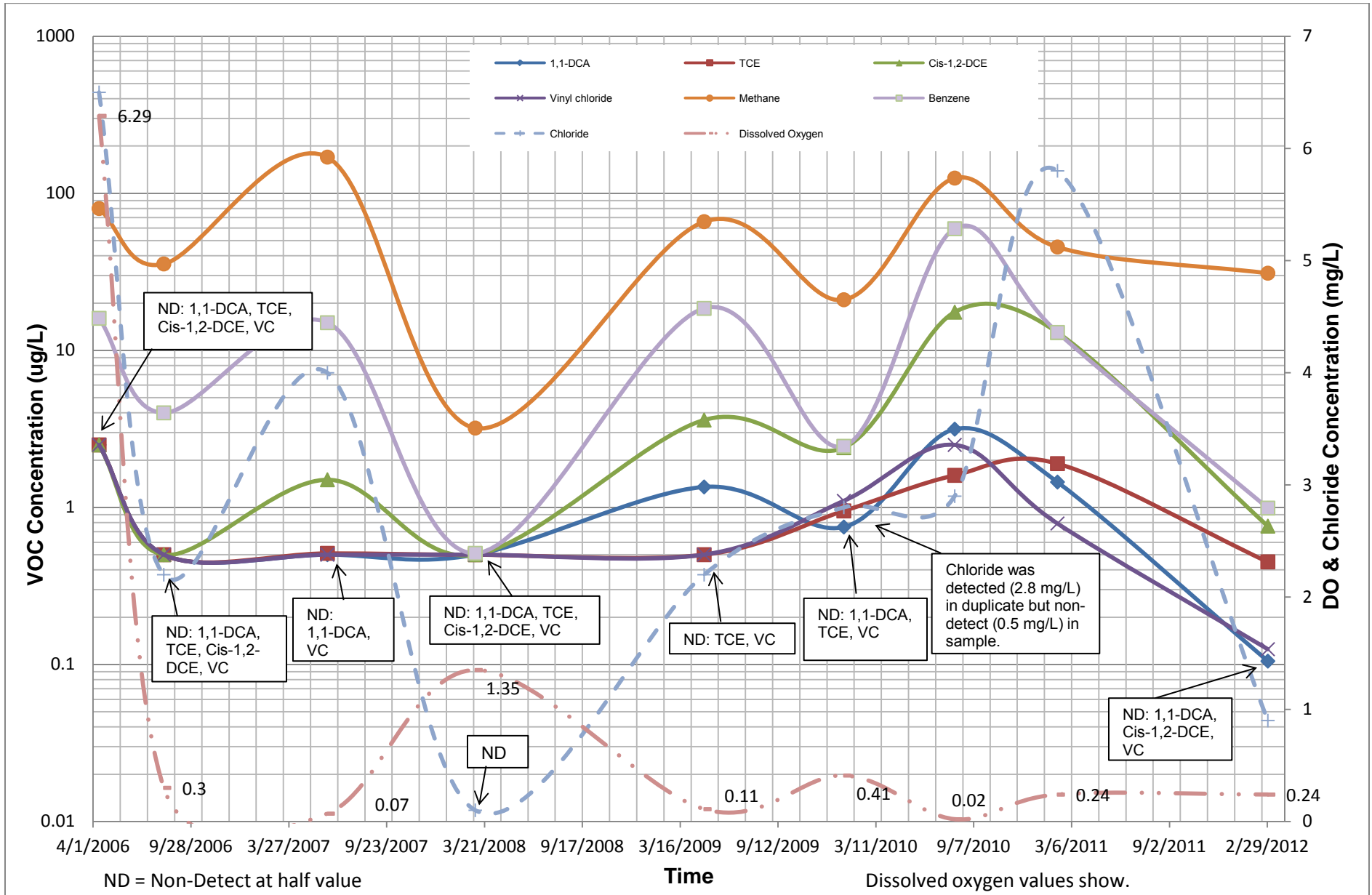


Figure 10  
 MW25-2 Chlorinated Organic Concentrations Post-Removal Action  
 SEAD-25 Annual Report  
 Seneca Army Depot Activity

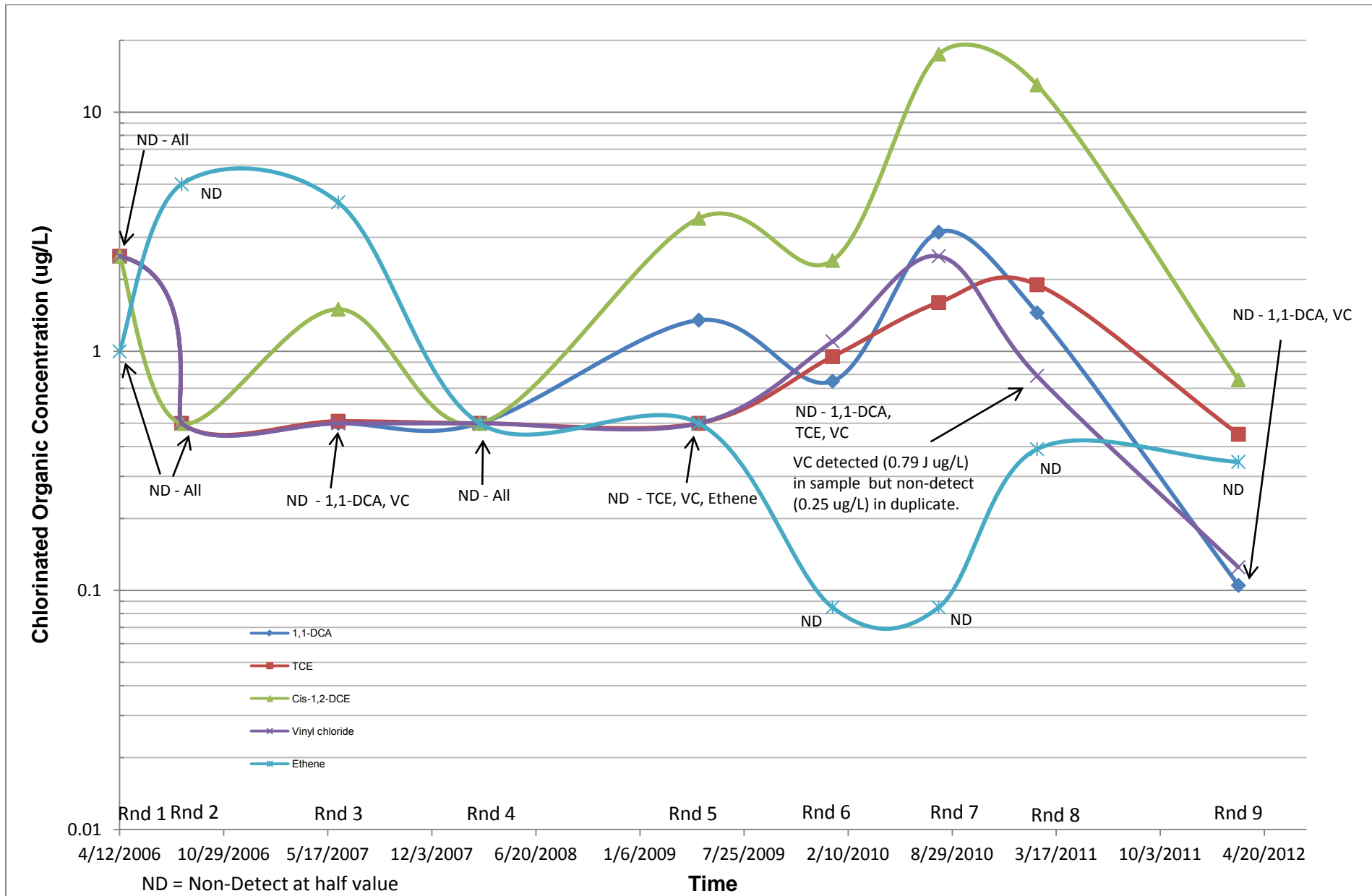


Figure 11A  
 Concentrations of Detected Chemicals of Concern in MW25-2  
 SEAD-25 Annual Report  
 Seneca Army Depot Activiy

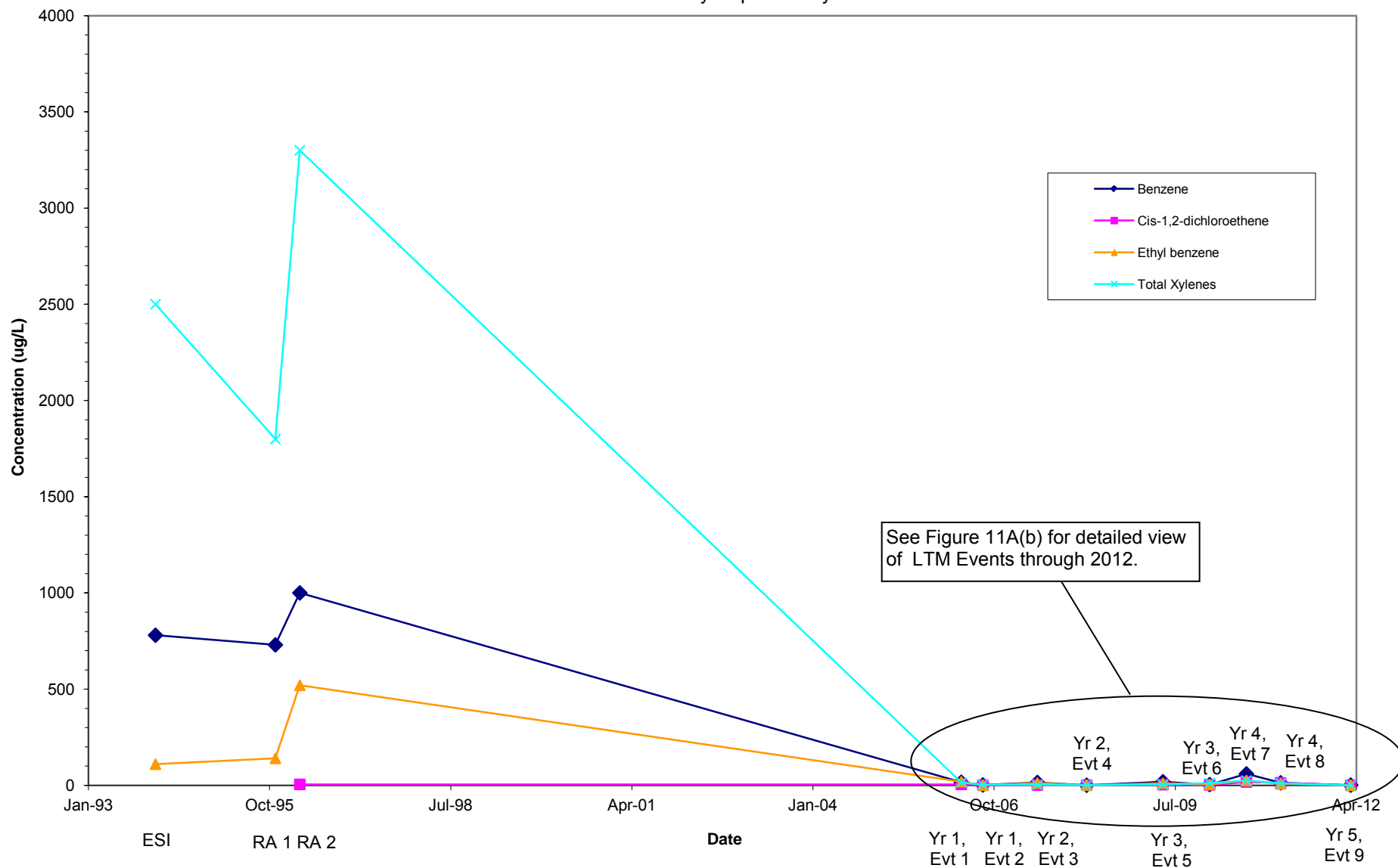


Figure 11A(b)  
 Concentrations of Detected Chemicals of Concern in MW25-2  
 SEAD-25 Annual Report  
 Seneca Army Depot Activiy

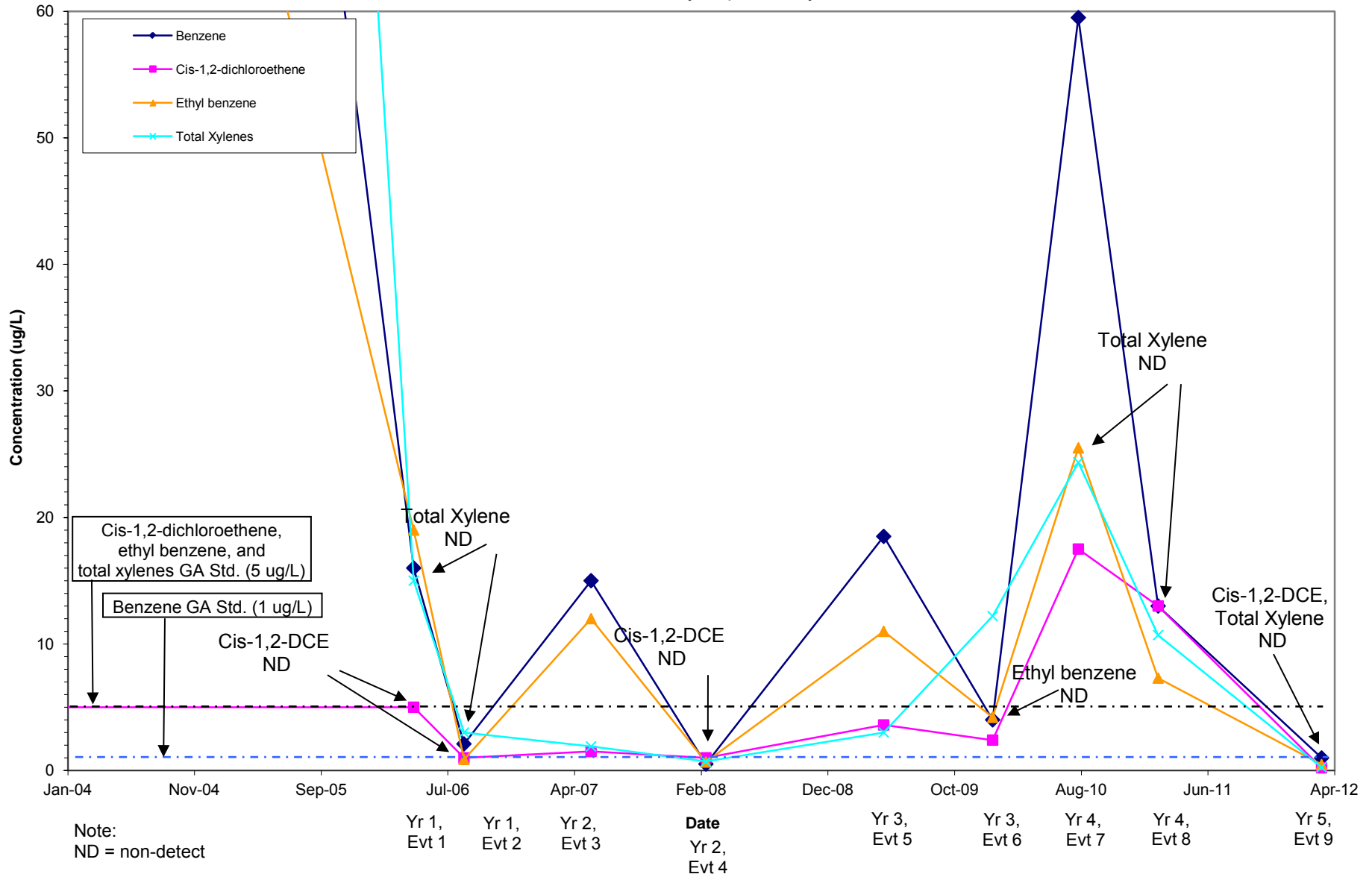




Figure 11B  
 Concentrations of Detected Chemicals of Concern in MW25-3  
 SEAD-25 Annual Report  
 Seneca Army Depot Activiy

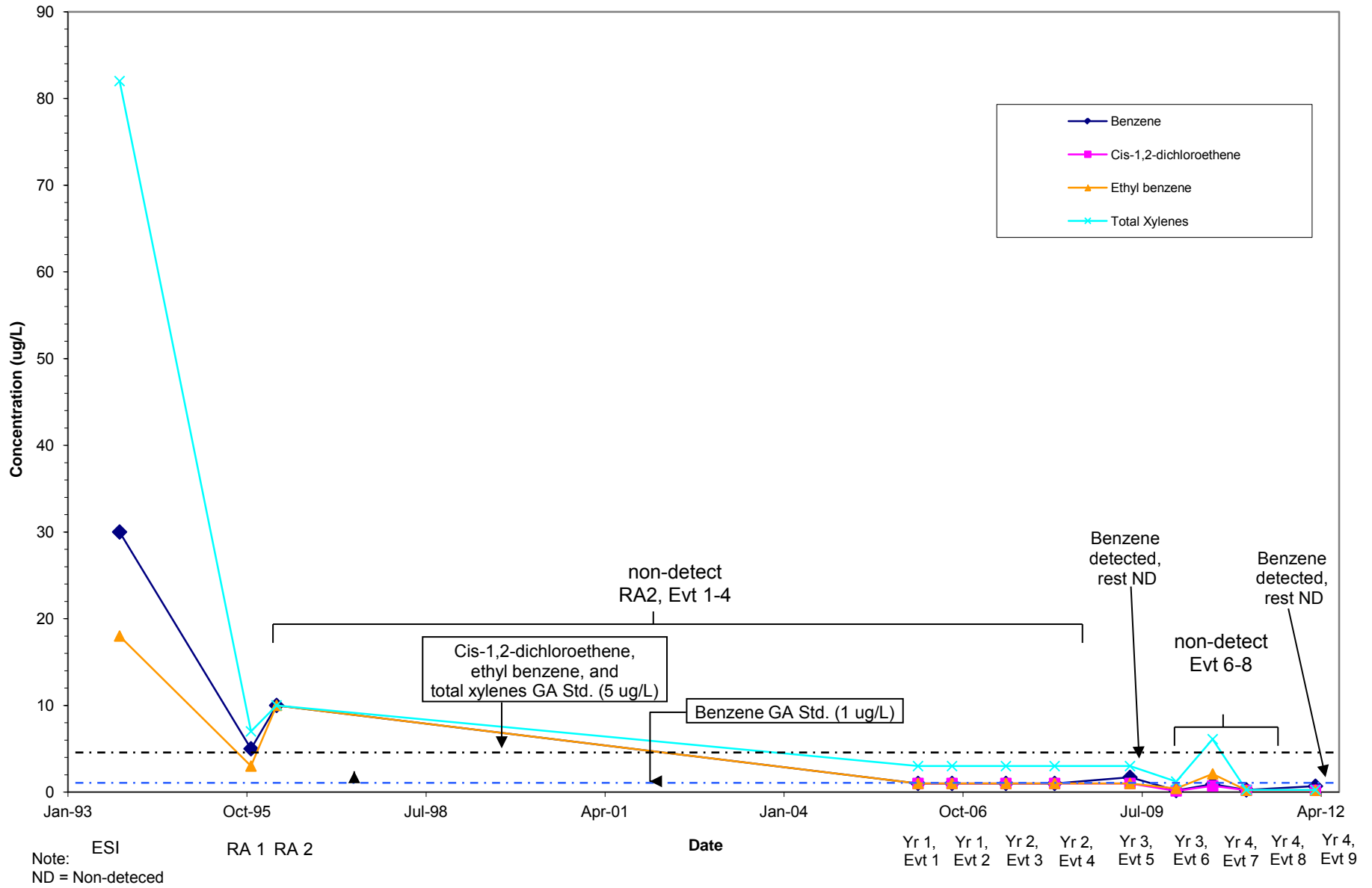
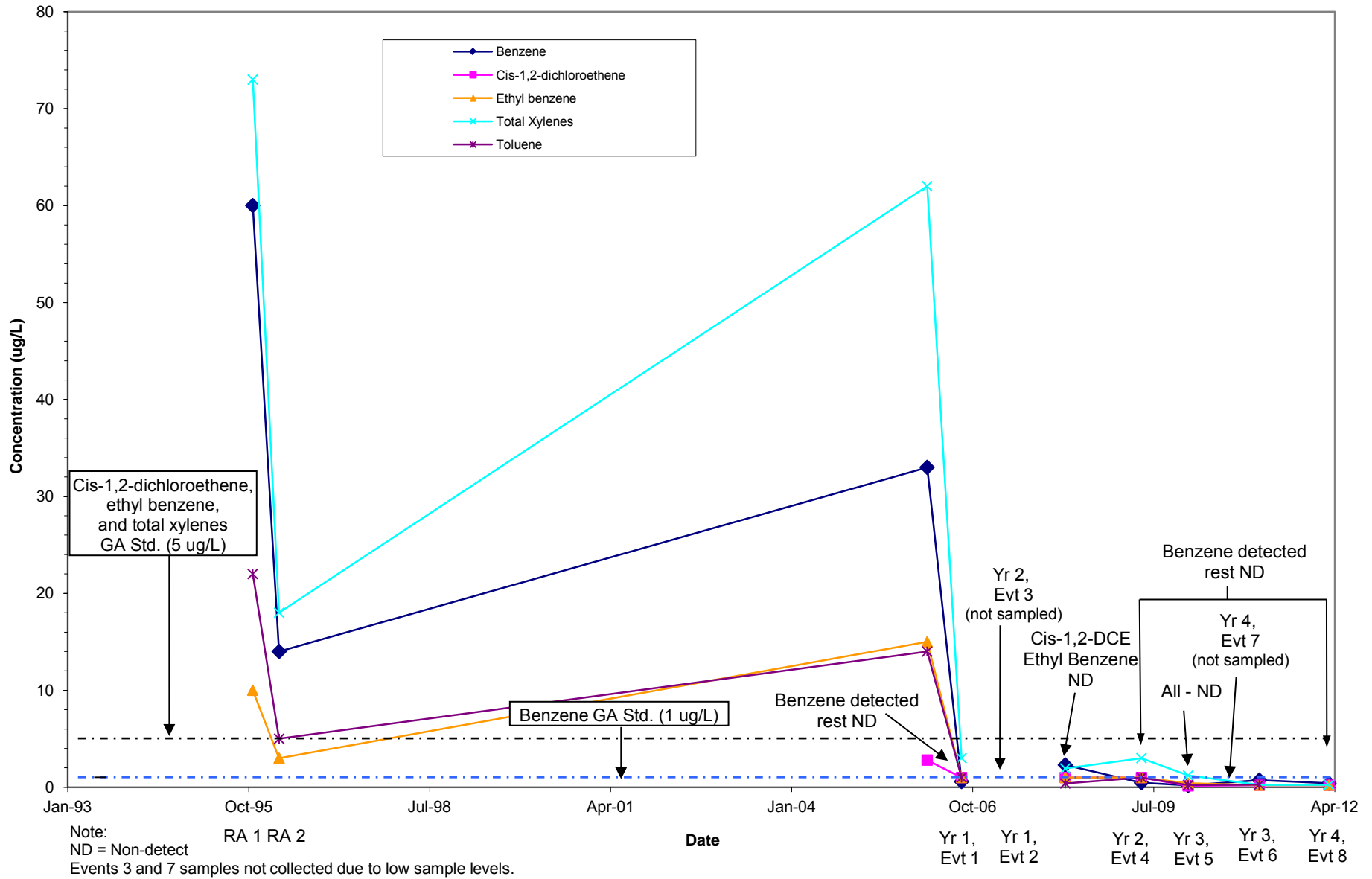


Figure 11C  
 Concentrations of Detected Chemicals of Concern in MW25-9  
 SEAD-25 Annual Report  
 Seneca Army Depot Activiy



## **APPENDICES**

- A Long Term Monitoring Event 2012 Field Forms
- B Long Term Monitoring Event 2012 Laboratory Reports
- C Complete LTM Groundwater Data (Events 1 through 2012)
- D Historic Groundwater Elevations (Events 1 through 2012)
- E Long Term Monitoring Event 2012 Data Validation Sheets
- F Saturated Thickness Trends (MW25-2, MW25-3, MW25-9)

**APPENDIX A**

**LONG TERM MONITORING EVENT 2012 FIELD FORMS**

# SAMPLING RECORD - GROUNDWATER

SENECA ARMY DEPOT ACTIVITY **PARSONS** WELL #: MW25-2

PROJECT: SEAD-25 LTM Groundwater Sampling - Round 9  
 LOCATION: ROMULUS, NY

DATE: 3/1/12  
 INSPECTORS: BBO/SO  
 PUMP #: 18731  
 SAMPLE ID #: 25LW20091

WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)

TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND (FROM)		GROUND / SITE SURFACE CONDITIONS
				VELOCITY (APPRX)	DIRECTION (0 - 360)	
1007	41	overcast		0-5	NW-75E	vet
1120	44	overcast		5-10	NW-75E	

MONITORING	
INSTRUMENT	DETECTOR
OVM-580	PID

**WELL VOLUME CALCULATION FACTORS**

DIAMETER (INCHES):	0.25	1	2	3	4	6
GALLONS / FOOT:	0.0026	0.041	0.165	0.367	0.654	1.47
LITERS/FOOT	0.010	0.151	0.617	1.389	2.475	5.564

ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]

HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)	DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC COND
		11.26'				
DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)	DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME	
			5.23		1022	
RADIATION SCREENING DATA	PUMP PRIOR TO SAMPLING (cps)		PUMP AFTER SAMPLING (cps)			

**MONITORING DATA COLLECTED DURING PURGING OPERATIONS**

TIME (min)	WATER LEVEL	PUMPING RATE (gal/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (umhos)	pH	ORP (mv)	TURBIDITY (NTU)
1020	4.89	Pump # DO probe in well							
1022		Bladder pump started			48	Horiba			High
1048	5.29	80		0.59	6.3	0.709	7.56	-18	132
1053	5.88	120		0.38	6.0	0.710	6.96	-83	75.2
1058	6.06	100		0.42	5.8	0.705	6.91	-85	58.3
1104	6.24	106	~1/2 gal	0.46	5.6	0.705	6.87	-81	36.9
1109	6.37	108		0.54	5.5	0.704	6.87	-83	30.6
1114	6.46	106	~0.75 gal	0.52	5.4	0.706	6.87	-87	27.1
1119	6.54	110		0.52	5.4	0.706	6.86	-89	21.9
1129	6.71	112	~1.0 gal	0.35	5.3	0.691	6.84	-91	13.0
1129	6.85	110		0.26	5.3	0.677	6.79	-97	9.21
1134	6.94	112	~1.25 gal	0.24	5.3	0.676	6.80	-100	8.55
1139	7.15	120		0.24	5.3	0.678	6.76	-101	5.17
1144	7.29	114		0.24	5.3	0.681	6.79	-106	5.38
			~2.0 gals purged						
1156		Sample Collect				0.20 mg/L			
		3x VOA for VOC							
		2x VOA for MEE							
		1x Plastoc NO <sub>2</sub> /NO <sub>3</sub>							
		1x Plastoc Na/Fe							
		1x Plastoc SO <sub>4</sub> /CR							

S-25 GW SAMPLING RECORD

MW25-2  
3/1/12

SAMPLING ORDER	PRESERVATIVES	BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
		COUNT	VOLUME			
1	VOC 8260B 4 deg C	HCL	3/40 ml	VOA	25LA 20091	1156 BBO 3/1/12
2	MIBZ (RSK-175) 4 deg C	HCL	2/40 ml	VOA	"	"
3	Nitrite/Nitrate (EPA 353.2) 4 deg C		1 x 500 mL	HDPE	"	"
4	Sulfate/Chloride (EPA 300.1) 4 deg C		1 x 500 mL	HDPE	"	"
5	METALS 6010B - Fe & Na 4 deg C	HNO3	1 x 500 mL	HDPE	"	"
6	Sulfide (Hach 8131) field test				0.20 mg/L	
7						

COMMENTS: (QA/QC?)

Harbue U-52 # 15085  
YSE 85 DO # 3210  
Hach Turbidity # 18979

Water Level # 15773  
Compressor/ Controller # 16250  
Bladder Pump # 18731

IDW INFORMATION:

# SAMPLING RECORD - GROUNDWATER

SENECA ARMY DEPOT ACTIVITY			<b>PARSONS</b>				WELL #: <u>MW25-3</u>		
PROJECT: <u>SEAD-25 LTM Groundwater Sampling - Round 9</u>						DATE: <u>2/29/12</u>			
LOCATION: <u>ROMULUS, NY</u>						INSPECTORS: <u>SD/BBO</u>			
						PUMP #: <u>8135</u>			
WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)						SAMPLE ID #: <u>25LM20086/87</u>			
TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND (FROM)		GROUND / SITE SURFACE CONDITIONS	MONITORING		
				VELOCITY (APPRX)	DIRECTION (0 - 360)		INSTRUMENT	DETECTOR	
<u>1258</u>	<u>32</u>	<u>snow showers</u>		<u>5-10</u>	<u>S-7N</u>	<u>dust of snow</u>	<u>OVM-580</u>	<u>PID</u>	
WELL VOLUME CALCULATION FACTORS						ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]			
DIAMETER (INCHES):		0.25	1	<u>2</u>	3	4	6		
GALLONS/FOOT:		0.026	0.041	<u>0.163</u>	0.367	0.654	1.47		
LITERS/FOOT:		0.010	0.151	<u>0.617</u>	1.389	2.475	5.564		
HISTORIC DATA		DEPTH TO POINT OF WELL (TOC)		DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC COND	
		<u>9.79'</u>							
DATA COLLECTED AT WELL SITE		PID READING (OPENING WELL)		DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME		
				<u>4.88'</u>				<u>1312</u>	
RADIATION SCREENING DATA		PUMP PRIOR TO SAMPLING (cps)		<u>4.51'</u>	PUMP AFTER SAMPLING (cps)				
MONITORING DATA COLLECTED DURING PURGING OPERATIONS									
TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (umhos)	pH	ORP (mv)	TURBIDITY (NTU)
<u>1312</u>	<u>4.51</u>	<u>Pump &amp; DO Probe in well YSI</u>		<u>YSI</u>	<u>YSI</u>	<u>Horiz</u>			<u>Hach</u>
<u>1312</u>		<u>Bladder pump started</u>							
<u>1314</u>	<u>5.22</u>	<u>175</u>		<u>2.49</u>	<u>3.7</u>	<u>0.824</u>	<u>7.13</u>	<u>-114</u>	<u>-</u>
<u>1319</u>	<u>5.72</u>	<u>75</u>		<u>2.97</u>	<u>3.6</u>	<u>0.837</u>	<u>7.09</u>	<u>-129</u>	<u>8.14</u>
<u>1324</u>	<u>5.78</u>	<u>130</u>		<u>0.47</u>	<u>4.5</u>	<u>0.840</u>	<u>7.05</u>	<u>-132</u>	<u>7.05</u>
<u>1331</u>	<u>5.88</u>	<u>90</u>		<u>0.21</u>	<u>4.6</u>	<u>0.834</u>	<u>7.02</u>	<u>-139</u>	<u>6.77</u>
<u>1336</u>	<u>5.74</u>			<u>0.22</u>	<u>4.6</u>	<u>0.828</u>	<u>7.00</u>	<u>-143</u>	<u>6.08</u>
<u>1341</u>	<u>5.89</u>	<u>99</u>		<u>0.33</u>	<u>4.6</u>	<u>0.820</u>	<u>6.98</u>	<u>-146</u>	<u>5.95</u>
<u>1346</u>	<u>5.94</u>	<u>120</u>		<u>0.37</u>	<u>4.5</u>	<u>0.817</u>	<u>6.97</u>	<u>-147</u>	<u>5.72</u>
<u>1351</u>	<u>5.98</u>	<u>95</u>		<u>0.32</u>	<u>4.5</u>	<u>0.813</u>	<u>6.96</u>	<u>-149</u>	<u>4.49</u>
<u>1357</u>	<u>6.03</u>			<u>0.23</u>	<u>4.5</u>	<u>0.806</u>	<u>6.96</u>	<u>-149</u>	<u>4.68</u>
<u>1403</u>	<u>6.02</u>	<u>98</u>		<u>0.19</u>	<u>4.6</u>	<u>0.798</u>	<u>6.95</u>	<u>-148</u>	<u>3.98</u>
<u>1408</u>	<u>5.48</u>			<u>0.14</u>	<u>4.6</u>	<u>0.790</u>	<u>6.95</u>	<u>-147</u>	<u>3.19</u>
<u>1413</u>	<u>5.48</u>			<u>0.13</u>	<u>4.6</u>	<u>0.782</u>	<u>6.95</u>	<u>-145</u>	<u>3.15</u>
<u>1418</u>	<u>5.49</u>		<u>~2 gals</u>	<u>0.11</u>	<u>4.6</u>	<u>0.772</u>	<u>6.94</u>	<u>-143</u>	<u>2.09</u>
<u>1423</u>	<u>5.49</u>	<u>90</u>		<u>0.10</u>	<u>4.6</u>	<u>0.766</u>	<u>6.94</u>	<u>-141</u>	<u>1.99</u>
			<u>~2.5 gals</u>						
<u>1427</u>			<u>Sample Collected</u>	<u>SA, DU, MS, MSD</u>				<u>0.46 mg/L</u>	
<u>1437</u>	<u>DU</u>		<u>Collected the following for each sample</u>					<u>sulfide HACH</u>	
			<u>3x VOA for VOC</u>					<u>FIELD TEST</u>	
			<u>2x VOA for MEE</u>						

1x Plastrac NO<sub>2</sub>/NO<sub>3</sub>  
 1x Plastrac CR/SO<sub>4</sub>  
 1x Plastrac Na/Fe

S-25 GW SAMPLING RECORD

MW25-3  
2/29/12

SAMPLING ORDER		PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
				COUNT	VOLUME			
1	VOC 8260B	4 deg C	HCL	3/40 ml	VOA	25LA20086 " 77	1427 1437	BBO 2/29/12
2	MEE (RSK-175)	4 deg C	HCL	2/40 ml	VOA	"	"	"
3	Nitrite/Nitrate (EPA 353.2)	4 deg C		1 x 500 mL	HDPE	"	"	"
4	Sulfate/Chloride (EPA 300.1)	4 deg C		1 x 500 mL	HDPE	"	"	"
5	METALS 60105 - Fe & Na	4 deg C	HNO3	1 x 500 mL	HDPE	"	"	"
6	Sulfide (Hach 8131)	field test				0.46 mg/L		
7								

COMMENTS: (QA/QC?)  
 Horizon U-52 # 14411  
 YSI 85 DO # 3217  
 Hach Turbidity # 18978  
 Compressor / Controller # 16250  
 Water Level # A01585  
 Bladder Pump # 8135

IDW INFORMATION:



# SAMPLING RECORD - GROUNDWATER

SENECA ARMY DEPOT ACTIVITY **PARSONS** WELL #: 1625-8

PROJECT: SEAD-25 LTM Groundwater Sampling - Round 9  
 LOCATION: ROMULUS, NY

DATE: 2/29/12  
 INSPECTORS: B60  
 PUMP #: 10298  
 SAMPLE ID #: 25LW20092

WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)

TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND (FROM)		GROUND / SITE SURFACE CONDITIONS
				VELOCITY (APPRX)	DIRECTION (0 - 360)	
719	40	overcast snow expected		SE → NW @ 5		
741		snow started				

MONITORING

INSTRUMENT	DETECTOR
OVM-580	PID

WELL VOLUME CALCULATION FACTORS

DIAMETER (INCHES):	0.25	1	2	3	4	6
GALLONS/FOOT:	0.0026	0.041	0.167	0.367	0.654	1.47
LITERS/FOOT:	0.010	0.151	0.617	1.389	2.475	5.564

ONE WELL VOLUME (GAL) = [(P.W. - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]

HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)	DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC COND
		5.41'				
DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)	DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME	
			3.03'			

RADIATION SCREENING DATA	PUMP PRIOR TO SAMPLING (cpm)	PUMP AFTER SAMPLING (cpm)

MONITORING DATA COLLECTED DURING PURGING OPERATIONS

TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (umhos)	pH	ORP (mV)	TURBIDITY (NTU)
741	2.61	Bladder Pump & DC		Probe in well					
745		Pump Started		YSI	YSI	Horiba			High
758	3.64	120		2.01	3.9	0.437	7.58	-85	3.37
1003	3.74	80		1.06	3.9	0.446	7.35	-110	2.04
1008	3.80	94		0.50	3.9	0.453	7.28	-124	1.52
1013	3.83	96		0.14	3.9	0.459	7.25	-131	1.16
1018	3.88	90		0.72	3.9	0.462	7.24	-134	1.02
1023	3.90	104		0.28	3.9	0.461	7.24	-135	1.10
1028	3.85	108	~0.5 gal	0.37	4.0	0.460	7.28	-135	0.80
1033	3.91	100		0.25	4.0	0.460	7.27	-135	1.05
1038	3.91	106		0.19	3.9	0.462	7.28	-134	0.82
1043	3.92	98	~1.1 gal	0.16	3.9	0.462	7.29	-133	0.80
1054		Sample Collected							
		~1.5 gals purged							
		Collected the following							
		3x VOAs VOC							
		2x VOAs MEE							
		1x Plastic NO <sub>2</sub> /NO <sub>3</sub>							
		1x Plastic SO <sub>4</sub> /CL							
		1x Plastic Na/Fe							

S-25 GW SAMPLING RECORD

MW25-2  
2/29/12

SAMPLING ORDER	PRESERVATIVES	BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
		COUNT	VOLUME			
1	VOC 8260B	4 deg. C	HCL	3/40 ml	VOA	25LA 2009Z 1054 BIBO 2/24/12
2	MPE (RSK-175)	4 deg. C	HCL	2/40 ml	VOA	"
3	Nitrite/Nitrate (EPA 353.2)	4 deg. C		1 x 500 mL	HDPE	"
4	Sulfate/Chloride (EPA 300.1)	4 deg. C		1 x 500 mL	HDPE	"
5	METALS 60107 - Fe & Na	4 deg. C	HNO3	1 x 500 mL	HDPE	"
6	Sulfide (Hach 8131)	field test				0003 2/29/12
7						

COMMENTS: (QA/QC?)  
 Honibe U-52 # 15085  
 YSI 85 DO # 3210  
 Hach Turb.ometer # 18979  
 Compressor/Controller # 15720  
 Water Level # 15773  
 Bladder Pump # 10298

IDW INFORMATION:

SAMPLING RECORD - GROUNDWATER									
SENECA ARMY DEPOT ACTIVITY				PARSONS			WELL #: <u>MU25-9</u>		
PROJECT: <u>SEAD-25 LTM Groundwater Sampling - Round 9</u>				DATE: <u>2/29/12</u>			INSPECTORS: <u>BDO</u>		
LOCATION: <u>ROMULUS, NY</u>				PUMP #: <u>18133 / Barrel</u>			SAMPLE ID #: <u>25LM20093</u>		
WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)							MONITORING		
TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND VELOCITY (APPRX)	WIND DIRECTION (FROM) (0 - 360)	GROUND / SURFACE CONDITIONS	INSTRUMENT	DETECTOR	
<u>1148</u>	<u>36</u>	<u>snow showers</u>		<u>0-5</u>	<u>SE-NW</u>	<u>Industrial area</u>	<u>OVM-580</u>	<u>PID</u>	
WELL VOLUME CALCULATION FACTORS						ONE WELL VOLUME (GAL) = [(PWP - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]			
DIAMETER (INCHES):	0.25	1	2	3	4	6			
GALLONS / FOOT:	0.0026	0.041	0.165	0.367	0.654	1.47			
LITERS / FOOT:	0.010	0.151	0.617	1.389	2.475	5.564			
HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)		DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT PI	WELL DEVELOPMENT SPEC COND		
	<u>5.39'</u>								
DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)		DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME			
			<u>2.93'</u>		<u>1203</u>				
RADIATION SCREENING DATA		PUMP PRIOR TO SAMPLING (cpm)		PUMP AFTER SAMPLING (cpm)					
MONITORING DATA COLLECTED DURING PURGING OPERATIONS									
TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (umhos)	pH	ORP (mV)	TURBIDITY (NTU)
<u>1202</u>	<u>2.34</u>	<u>Pump &amp; DO Probe in well</u>							
<u>1203</u>		<u>Pump started</u>							
<u>1209</u>	<u>3.15</u>	<u>100</u>		<u>1.31</u>	<u>4.5</u>	<u>0.547</u>	<u>7.19</u>	<u>-110</u>	<u>5.39</u>
<u>1214</u>	<u>3.6</u>	<u>88</u>		<u>1.52</u>	<u>4.2</u>	<u>0.549</u>	<u>7.38</u>	<u>-116</u>	<u>4.56</u>
<u>1219</u>	<u>3.91</u>	<u>90</u>		<u>1.48</u>	<u>4.1</u>	<u>0.551</u>	<u>7.41</u>	<u>-121</u>	<u>4.04</u>
<u>1224</u>	<u>4.14</u>	<u>86</u>		<u>1.77</u>	<u>4.1</u>	<u>0.555</u>	<u>7.41</u>	<u>-129</u>	<u>2.74</u>
<u>1226</u>	<u>4.2</u>	<u>DO Probe exposed, water level at top of pump head. w/ will pull up pump &amp; purge well day w/ Peristaltic</u>							
		<u>Purged ~ 1/4 gals</u>							
<u>1237</u>	<u>4.28</u>	<u>Setup Peristaltic pump</u>							
<u>1238</u>		<u>Peristaltic started</u>							
<u>1242</u>		<u>Pump stopped, well day. Additional 0.5 gals purged</u>							
		<u>w/ will check well later for recharge.</u>							
<u>1500</u>	<u>2.89</u>	<u>Water level has recharged to static level</u>							
<u>1604</u>		<u>Samples collected via bailer</u>							
		<u>3x VOC for VOC</u>							
		<u>2x VOC for MEE</u>							
		<u>1x Plastic NO<sub>2</sub>/NO<sub>3</sub></u>							
		<u>1x Plastic SO<sub>4</sub>/Cl</u>							
		<u>1x Plastic Ni/Fc</u>							

→ DO tube exposed on top of Pump head

S-25 GW SAMPLING RECORD

MW25-9  
2/29/12

SAMPLING ORDER	PRESERVATIVES	BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
		COUNT	VOLUME			
1	VOC 8260B	4 deg C	HCl	3/40 ml	VOA	25LA 20093 1604 BBO 2/29/12
2	MERCURY (RSK-175)	4 deg C	HCl	2/40 ml	VOA	" " "
3	Nitrite/Nitrate (EPA 3532)	4 deg C		1 x 500 mL	HDPE	" " "
4	Sulfate/Chloride (EPA 309.1)	4 deg C		1 x 500 mL	HDPE	" " "
5	METALS 6010A - Fe & Na	4 deg C	HNO3	1 x 500 mL	HDPE	" " "
6	Sulfide (Hach 8131)	field test				insufficient water
7						

COMMENTS: (QA/QC?)

Horiba U-5Z #15085  
YSI 85 DO #3210  
Hach Turbidity #18979

Compressor/Controller #15720  
Water Level #15773  
Bladder Pump #18133

IDW INFORMATION:

SAMPLING RECORD - GROUNDWATER									
SENECA ARMY DEPOT ACTIVITY				PARSONS			WELL #: MW25-10		
PROJECT: SEAD-25 LTM Groundwater Sampling - Round 9				DATE: 2/28/12			INSPECTORS: BBO		
LOCATION: ROMULUS, NY				PUMP #: 8135 / Peristaltic Beder			SAMPLE ID #: 25LM20094		
WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)									
TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND VELOCITY (APPRX)	(FROM) DIRECTION (0-360)	GROUND / SITE SURFACE CONDITIONS	MONITORING		
1244	29°	overcast		5-10	W → E		INSTRUMENT	DETECTOR	
							OVM-580	PID	
WELL VOLUME CALCULATION FACTORS				ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]					
DIAMETER (INCHES):	0.25	1	2	3	4	6			
GALLONS/FOOT:	0.0026	0.041	0.165	0.367	0.654	1.47			
LITERS/FOOT:	0.010	0.151	0.617	1.380	2.475	5.564			
HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)		DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC COND		
	6.36'								
DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)		DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME			
			5.14'		25.36'	1256			
RADIATION SCREENING DATA		PUMP PRIOR TO SAMPLING (cps)		PUMP AFTER SAMPLING (cps)					
MONITORING DATA COLLECTED DURING PURGING OPERATIONS									
TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (umhos)	pH	ORP (mV)	TURBIDITY (NTU)
	5.1								
1255	4.89	Pump & DO Probe in well							
1256		Pump started							
1303	5.12	Water level not detectable, on top of pump.							
		↳ well pull up bladder pump & purge well dry w/ peristaltic pump Flowcell never filled. ~275 ml in flow cell							
1315	5.33	Peristaltic pump set setup							
1316		Pump started							
1323	5.36	Well purged dry ~0.25 gals purged							
		↳ will check later for recharge.							
1548	5.16	Water level has recharged							
1557		Sampled well with Beder							
		3x VOA's							
		2x MPE							
		1x Plastic NO <sub>2</sub> /NO <sub>3</sub>							
		1x Plastic Cl/SO <sub>4</sub>							
		1x Plastic Na/Fc							
		→ insufficient water to perform Hach Test							

S-25 GW SAMPLING RECORD

MW25-10  
2/28/12

SAMPLING ORDER	PRESERVATIVES	BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
		COUNT	VOLUME			
1	VOC 8260B	4 deg C	HCL	3/40 ml	VOA	25LA 20094 1557 BBO 2/28/12
2	MEE (RSK-175)	4 deg C	HCL	2/40 ml	VOA	" " "
3	Nitrite/Nitrate (EPA 353.2)	4 deg C		1 x 500 mL	HDPE	" " "
4	Sulfate/Chloride (EPA 300.1)	4 deg C		1 x 500 mL	HDPE	" " "
5	METALS 60106 - Fe & Na	4 deg C	HNO3	1 x 500 mL	HDPE	" " "
6	Sulfide (Hach 8131)	field test				insufficient water
7						

COMMENTS: (QA/QC?)

Horiba U-52 #15085  
Hach Turbiditymeter #18979  
YSI 85 DO #3210

Bladder Pump #8135  
Compressor/Controller #15720  
Water Level #15773

IDW INFORMATION:

SAMPLING RECORD - GROUNDWATER									
SENECA ARMY DEPOT ACTIVITY				PARSONS			WELL #: MW25-13		
PROJECT: SEAD-25 LTM Groundwater Sampling - Round 9				DATE: 2/28/12			INSPECTORS: BBO		
LOCATION: ROMULUS, NY				PUMP #: 19095/Bailer			SAMPLE ID #: 25LM20095		
WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)							MONITORING		
TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND VELOCITY (APPRX)	WIND DIRECTION (FROM) (0-360)	GROUND/SITE SURFACE CONDITIONS	INSTRUMENT	DETECTOR	
1059	34F	overcast		5-10	S-7N		OVM-580	PID	
WELL VOLUME CALCULATION FACTORS						ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]			
DIAMETER (INCHES):		0.25	1	2	3	4	6		
GALLONS/FOOT:		0.0026	0.041	0.165	0.367	0.654	1.47		
LITERS/FOOT:		0.010	0.151	0.617	1.389	2.475	5.564		
HISTORIC DATA		DEPTH TO POINT OF WELL (TOC)	DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC COND		
		5.46'							
DATA COLLECTED AT WELL SITE		PID READING (OPENING WELL)	DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME			
			4.3'		~4.46'	1116			
RADIATION SCREENING DATA		PUMP PRIOR TO SAMPLING (cps)			PUMP AFTER SAMPLING (cps)				
MONITORING DATA COLLECTED DURING PURGING OPERATIONS									
TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (umhos)	pH	ORP (mV)	TURBIDITY (NTU)
1115	4.18'	Pump	4 DO Probe in well						
1116		Pump started							
1119		DO Probe exposed to air, Water level below top of pump. Will remove pump from well & purge well dry w/ peristaltic pump and allow to recharge. 82ml purged into flowcell, flowcell never filled up completely.							
1133	4.48'	peristaltic pump started							
1140		well dry purged	1360 ml						
		→ will check well later for recharge.							
1337	4.3'	well recharged to static level							
1415	4.32'	water level has recharged							
1620		Samples collected via Bailer		Solids in		Substrate 0.05 mg/L		BBO 2/28/12 intended for MW25-15 field form	
		3x VOA's	VOC	2	Some of VOA	vals			
		2x MEE	VOA's						
		1x Plastic	NO <sup>2</sup> /NO <sup>3</sup>						
		1x Plastic	SO <sup>4</sup> /CL						
		1x Plastic	Na/Fe						
		→ insufficient water to perform Hach field test.							

1615  
1620

S-25 GW SAMPLING RECORD

MW25-13  
2/26/12

SAMPLING ORDER	PRESERVATIVES	BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
		COUNT	VOLUME			
1 - VOC #260B	4 deg C HCL		3/40 ml	VOA	ZSLM 20095	1620 BBO 2/26/12
2 METABSK-175)	4 deg C HCL		2/40 ml	VOA	"	"
3 Nitrite/Nitrate (EPA 353.2)	4 deg C		1 x 500 ml.	HDPE	"	"
4 Sulfate/Chloride (EPA 300.1)	4 deg C		1 x 500 ml.	HDPE	"	"
5 METALS 60101 - Fe & Na	4 deg C HNO3		1 x 500 ml.	HDPE	"	"
6 Sulfide (Hach 8131)	field test				insufficient water	BBO
7						

COMMENTS: (QA/QC?)  
 Horiba U-SZ # 15085  
 Hach Turbidometer # 18979  
 YSI 85 DO # 3210  
 Bladder Pump # 19095  
 Compressor / Controller # 15720  
 Water Level # 15773

IDW INFORMATION:



# SAMPLING RECORD - GROUNDWATER

SENECA ARMY DEPOT ACTIVITY			<b>PARSONS</b>			WELL #: <b>MW25-15</b>			
PROJECT: <b>SEAD-25 LTM Groundwater Sampling - Round 9</b>						DATE: <b>2/28/12</b>			
LOCATION: <b>ROMULUS, NY</b>						INSPECTORS: <b>SD/BSO</b>			
						PUMP #: <b>19096/Bailer</b>			
WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)						SAMPLE ID #: <b>25LM20096</b>			
TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND (FROM) VELOCITY (APPRX)	DIRECTION (0 - 360)				GROUND / SITE SURFACE CONDITIONS
<b>1147</b>	<b>29F</b>	<b>overcast</b>		<b>5-10</b>	<b>S→N</b>				
WELL VOLUME CALCULATION FACTORS						ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) × WELL DIAMETER FACTOR (GAL/FT)]			
DIAMETER (INCHES):	0.25	1	2	3	4				6
GALLONS/FOOT:	0.0026	0.041	0.163	0.367	0.654	1.47			
LITERS/FOOT:	0.010	0.151	0.617	1.389	2.475	5.564			
HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)		DEPTH TO TOP OF SCREEN (TOC)		SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC COND	
	<b>7.19'</b>								
DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)		DEPTH TO STATIC WATER LEVEL (TOC)		DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME		
			<b>4.78'</b>						
RADIATION SCREENING DATA		PUMP PRIOR TO SAMPLING (cps)			PUMP AFTER SAMPLING (cps)				
MONITORING DATA COLLECTED DURING PURGING OPERATIONS									
TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (umhos)	pH	ORP (mv)	TURBIDITY (NTU)
<b>1020</b>		<b>Pump started</b>		<b>YSI</b>	<b>YSI</b>	<b>Hanna</b>			<b>Hach</b>
<b>1027</b>	<b>5.8</b>	<b>115</b>		<b>2.21</b>	<b>5.1</b>	<b>0.413</b>	<b>7.24</b>	<b>226</b>	<b>10.9</b>
<b>1030</b>	<b>5.88</b>	<b>94</b>		<b>1.55</b>	<b>5.1</b>	<b>0.412</b>	<b>7.14</b>	<b>223</b>	<b>11.4</b>
<b>1036</b>	<b>?</b>	<b>80</b>		<b>11.88</b>	<b>5.1</b>	<b>0.411</b>	<b>7.06</b>	<b>215</b>	<b>7.4</b>
<b>1042</b>	<b>?</b>	<b>92</b>		<b>DO Probe exposed</b>		<b>0.417</b>	<b>7.03</b>	<b>191</b>	<b>6.7</b>
<b>1048</b>	<b>?</b>	<b>46</b>	<b>~1 gal</b>			<b>0.419</b>	<b>7.00</b>	<b>97</b>	<b>4.2</b>
<b>Well water at pump intake / basically dry, pull Bladder Pump</b>									
<b>1148</b>	<b>5.63</b>	<b>Peristaltic pump setup</b>							
<b>1153</b>	<b>5.6</b>	<b>Pump started</b>							
<b>1205</b>	<b>7.19</b>	<b>Well dry, water level not detectable</b>							
<b>~0.5 gals purged</b>									
<b>→ will check for recharge later</b>									
<b>1348</b>	<b>5.45</b>	<b>water level check</b>							
<b>1614</b>	<b>4.80</b>	<b>water level has recharged to static level.</b>							
<b>1637</b>	<b>Samples collected via bailer</b>								
	<b>3x VOA VOC</b>								
	<b>2x VOA AEE</b>								
	<b>Sulfide = 0.05 mg/L</b>								
	<b>1x Plator NO2/NO3</b>								
	<b>1x Plator SO4/CL</b>								
	<b>1x Plator Na/Fe</b>								

? water level below Probe + sp

S-25 GW SAMPLING RECORD

M025-15  
2/28/12

SAMPLING ORDER	PRESERVATIVES	BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
		COUNT	VOLUME			
1	VOC 8260B	4 deg C	HCL	3/40 ml	VOA	25LA 20096 1637 BBO 2/28/12
2	MFE (RSK-175)	4 deg C	HCL	2/40 ml	VOA	" " "
3	Nitrite/Nitrate (EPA 353.2)	4 deg C		1 x 500 mL	HDPE	" " "
4	Sulfate/Chloride (EPA 300.1)	4 deg C		1 x 500 mL	HDPE	" " "
5	METALS 60107 - Fe & Na	4 deg C	HNO3	1 x 500 mL	HDPE	" " "
6	Sulfide (Hach 8131)	field test				0.05 mg/L
7						

COMMENTS: (QA/QC?)

Hor. bar U-52 # 14411  
 YSI 25 DO Meter # 3217  
 Hach Turbidity # 18978  
 Bladder Pump # 19096  
 Water Level # A04525  
 Compressor / Controller # PA250

IDW INFORMATION:

SAMPLING RECORD - GROUNDWATER										
SENECA ARMY DEPOT ACTIVITY				PARSONS			WELL #: MW25-17			
PROJECT: SEAD-25 LTM Groundwater Sampling - Round 9				DATE: 2/27/12			INSPECTORS: BBG/SD			
LOCATION: ROMULUS, NY				PUMP #: 10298			SAMPLE ID #: 25LM2008788			
WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)							MONITORING			
TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND (FROM)		GROUND / SITE SURFACE CONDITIONS	INSTRUMENT	DETECTOR	OVM-580	PID
				VELOCITY (APPRX)	DIRECTION (0 - 360)					
WELL VOLUME CALCULATION FACTORS						ONE WELL VOLUME (GAL) = [(PWP - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]				
DIAMETER (INCHES):		0.25	1	2	3	4	6			
GALLONS / FOOT:		0.0026	0.041	0.163	0.367	0.654	1.47			
LITERS / FOOT:		0.010	0.151	0.617	1.389	2.475	5.564			
HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)		DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC COND			
	11.23'									
DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)		DEPTH TO STATIC WATER LEVEL (TOC)		DEPTH TO STABILIZED WATER LEVEL (TOC)		DEPTH TO PUMP INTAKE (TOC)		PUMPING START TIME	
			4.60						1409	
RADIATION SCREENING DATA		PUMP PRIOR TO SAMPLING (cps)			PUMP AFTER SAMPLING (cps)					
MONITORING DATA COLLECTED DURING PURGING OPERATIONS										
TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL. (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (µS/cm)	pH	ORP (mV)	TURBIDITY (NTU)	
1407	4.16	Pump	8 DO Meters in well							
1409		Pump	Started	YSI	YSI	Hanna	Hanna	Hanna	Hach	
1431	5.15	88		7.50	6.2	0.448	8.00	211	7.72	
1436	5.14	109		7.06	6.4	0.425	7.74	208	6.70	
1441	5.22	100		5.36	6.6	0.425	7.54	207	5.15	
1446	5.23		~ 1/4 gal	5.65	6.6	0.424	7.53	205	3.29	
1451	5.22	110	~ 1/2 gal	5.86	6.6	0.424	7.49	202	3.59	
1456	5.28			6.24	6.5	0.424	7.48	200	3.54	
1501	5.31	120	~ 0.8 gal	6.48	6.5	0.424	7.47	198	3.91	
1506	5.31			6.91	6.5	0.423	7.48	196	3.47	
1516			Sample Collected						Sulfide = 0.0 mg/L	
			3x VOC VOA's							
			2x VOA's MEE							
			1x Plastic NO <sub>2</sub> /NO <sub>3</sub>							
			1x Plastic SO <sub>4</sub> /CR							
			1x Plastic Na/Fc							

BBG 2/28/12

S-25 GW SAMPLING RECORD

MU25-17  
2/28/12

SAMPLING ORDER	PRESERVATIVES	BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
		COUNT	VOLUME			
1 VOC 8260B	4 deg C HCL	3	40 ml	VOA 25LA 20088	1516	DBO 2/28/12
2 MEE (RSK-175)	4 deg C HCL	2	40 ml	VOA	"	"
3 Nitrite/Nitrate (EPA 353.2)	4 deg C	1	x 500 mL	HDPE	"	"
4 Sulfate/Chloride (EPA 300.1)	4 deg C	1	x 500 mL	HDPE	"	"
5 METALS 60101 - Fe & Na	4 deg C HNO3	1	x 500 mL	HDPE	"	"
6 Sulfide (Hach 8131)	field test				0.0 mg/L	
7						

COMMENTS: (QA/QC?)

Horiba U-52 # 15085  
Hach Turbiditymeter # 18979  
YSI 85 DO # 3210

Bladder Pump # ~~19075~~ 16298  
Compressor/Controller # 15720  
Water Level # 15773

IDW INFORMATION:

SAMPLING RECORD - GROUNDWATER									
SENECA ARMY DEPOT ACTIVITY				PARSONS			WELL #: MW25-18		
PROJECT: SEAD-25 LTM Groundwater Sampling - Round 9				DATE: 2/29/12			INSPECTORS: <i>Dillon</i>		
LOCATION: ROMULUS, NY				PUMP #: 18731			SAMPLE ID #: 25LM20089		
WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)							MONITORING		
TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND VELOCITY (APPRX)	WIND DIRECTION (0-360)	GROUND/SITE SURFACE CONDITIONS	INSTRUMENT	DETECTOR	
							OVM-580	PID	
WELL VOLUME CALCULATION FACTORS						ONE WELL VOLUME (GAL) = (POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)			
DIAMETER (INCHES):		0.25	1	2	3	4	6		
GALLONS / FOOT:		0.0026	0.041	0.163	0.367	0.654	1.47		
LITERS / FOOT:		0.010	0.151	0.617	1.380	2.475	5.564		
HISTORIC DATA		DEPTH TO POINT OF WELL (TOC)	DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC COND		
		11.15'							
DATA COLLECTED AT WELL SITE		PID READING (OPENING WELL)	DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME			
			5.63						
RADIATION SCREENING DATA		PUMP PRIOR TO SAMPLING (cps)			PUMP AFTER SAMPLING (cps)				
MONITORING DATA COLLECTED DURING PURGING OPERATIONS									
TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (umhos)	pH	ORP (mV)	TURBIDITY (NTU)
9:43		start pump		YSI	YSI	Horiba			Hatch
9:55	5.93	155		7.85	6.6	0.542	7.09	239	32
10:03	6.07			5.03	6.2	0.540	7.05	232	↑
10:12	6.48	135		4.61	6.3	0.540	7.13	245	↑
10:16		98		4.44	6.3	0.541	7.16	248	765
10:28	6.65	100		4.58	6.3	0.546	7.21	210	765
10:33	6.75	100		4.44	6.4	0.549	7.19	179	55.103
10:39	6.85	90		4.32	6.4	0.550	7.18	121	29.6
10:44	6.92	92		4.32	6.4	0.551	7.18	97	21.2
10:51	6.99	92		4.31	6.5	0.549	7.16	83	16.3
10:58	7.05	90		4.31	6.6	0.549	7.16	85	11.9
11:03	7.16	90		4.09	6.6	0.549	7.17	73	11.0
11:09	7.22	92		4.17	6.6	0.549	7.17	71	7.78
11:18	7.33	92		3.91	6.6	0.549	7.17	70	7.02
11:23	7.37	90		4.17	6.7	0.548	7.17	69	5.83
11:28	7.38	92		3.98	6.7	0.549	7.16	69	4.94
11:33	7.40	94		3.91	6.7	0.549	7.17	69	4.69
11:38	7.42	92		3.85	6.7	0.548	7.16	70	4.00
11:43	7.44	92		3.91	6.7	0.548	7.16	69	3.82
11:48	7.47	92	3.6 gal	3.89	6.7	0.548	7.16	70	3.66
11:55	collect samples							0.01 Sulfide	mg/L

*Noted pump checked for air lock. OK. purge all*

*↑ off scale - high*

*3x VOC VOC  
2x VOC MEE  
1x Plaster NO2/NO3  
1x Plaster SO4/CL  
1x Plaster Na/K*

*Field HATCH kit*

S-25 GW SAMPLING RECORD

MW25-18  
2/29/12

SAMPLING ORDER		PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
				COUNT	VOLUME			
1	VOC 8260B	4 deg C	HCL	3	40 ml	VOA	25 LM 20089	1155 BBO 2/29/12
2	MEE (RSK-175)	4 deg C	HCL	2	40 ml	VOA	"	"
3	Nitrite/Nitrate (EPA 373.2)	4 deg C		1	x 500 mL	HDPE	"	"
4	Sulfate/Chloride (EPA 300.1)	4 deg C		1	x 500 mL	HDPE	"	"
5	METALS 60107 - Fe & Na	4 deg C	HNO3	1	x 500 mL	HDPE	"	"
6	Sulfide (Hach 8131)	field test					0.01 mg/L	
7								

COMMENTS: (QA/QC?)

Horiba U-52 # 14411

YSI 85 DO # 3217

Hach Turbidity # 18978

Compressor/Controller # 16250

Water Level # A01585

Bladder Pump # 18731

IDW INFORMATION:

SAMPLING RECORD - GROUNDWATER									
SENECA ARMY DEPOT ACTIVITY				PARSONS			WELL #: <u>MU25-19</u>		
PROJECT: <u>SEAD-25 LTM Groundwater Sampling - Round 9</u>				DATE: <u>2/28/12</u>			INSPECTORS: <u>SD</u>		
LOCATION: <u>ROMULUS, NY</u>				PUMP #: <u>18731</u>			SAMPLE ID #: <u>25LM20090</u>		
WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)							MONITORING		
TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND VELOCITY (APPRX)	(FROM) DIRECTION (0 - 360)	GROUND / SITE SURFACE CONDITIONS	INSTRUMENT		DETECTOR
							OVM-580		PID
WELL VOLUME CALCULATION FACTORS				ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]					
DIAMETER (INCHES):	0.25	1	2	3	4	6			
GALLONS/FOOT:	0.0026	0.041	0.163	0.367	0.654	1.47			
LITERS/FOOT	0.010	0.151	0.617	1.389	2.475	5.564			
HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)		DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC COND		
	11.98'								
DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)		DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME			
			11175.48'			11:28			
RADIATION SCREENING DATA		PUMP PRIOR TO SAMPLING (cps)			PUMP AFTER SAMPLING (cps)				
MONITORING DATA COLLECTED DURING PURGING OPERATIONS									
TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (umhos)	pH	ORP (mV)	TURBIDITY (NTU)
1128	5.46	Pump started							
		220		YSF	YSF	Horiba			
1140	5.65	130		2.06	6.7	0.476	6.99	108	-
1152	5.65	130		2.05	6.7	0.476	7.00	107	-
1158	5.62	100		1.95	6.7	0.475	7.00	103	9.54
1203	5.63	90		1.95	6.7	0.475	6.98	99	9.15
1208	5.63	105		2.05	6.7	0.476	6.98	89	5.78
1213	5.64	105		2.07	6.7	0.476	6.98	84	5.85
1223	5.64	105	2 gals	2.22	6.7	0.476	6.96	76	4.26
1227	5.64	105		2.18	6.6	0.476	6.96	75	4.12
1232	5.66	104		2.23	6.6	0.476	6.96	73	4.51
1238	5.63	105		2.26	6.5	0.476	6.95	72	4.76
1243	5.64	105		2.27	6.5	0.477	6.96	73	3.23
1248	5.63	105		2.26	6.5	0.477	6.95	72	3.79
1253	5.64	105	3.3 gals	2.30	6.5	0.477	6.95	70	3.41
1259	5.64	105		2.31	6.6	0.476	6.95	70	2.88
1303	5.63	105		2.30	6.6	0.477	6.95	70	2.35
1310		Samples Collected							
		3x VOA VOC		Sulfide = 0.016 mg/L					
		2x VOA MEE							
		1x Plastic NO <sup>2</sup> /NO <sup>3</sup>							
		1x Plastic SO <sup>4</sup> /CL							
		1x Plastic Na/Fe							

S-25 GW SAMPLING RECORD

MW25-19  
2/28/12

SAMPLING ORDER	PRESERVATIVES	BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
		COUNT	VOLUME			
1	VOC 8260B	4 deg C	HCL	3/ 40 ml	VOA	25LA 200910
2	MEE (RSK-175)	4 deg C	HCL	2/ 40 ml	VOA	"
3	Nitrite/Nitrate (EPA 359.2)	4 deg C		1 x 500 mL	HDPE	"
4	Sulfate/Chloride (EPA 300.1)	4 deg C		1 x 500 mL	HDPE	"
5	METALS 6010B - Fe & Na	4 deg C	HNO3	1 x 500 mL	HDPE	"
6	Sulfide (Hach 8131)	field test				0.016 mg/L
7						

COMMENTS: (QA/QC?)

Horiba U-52 # 14411  
YSI 85 DO # 3217  
Hach turbidimeter # 18978  
Bladder Pump # 18731  
Water Level # A01585  
Compressor/Controller # 16250

IDW INFORMATION:

25.5	201	86.2	81.5	201	86.2	81.5
25.5	201	86.2	81.5	201	86.2	81.5
25.5	201	86.2	81.5	201	86.2	81.5
25.5	201	86.2	81.5	201	86.2	81.5
25.5	201	86.2	81.5	201	86.2	81.5
25.5	201	86.2	81.5	201	86.2	81.5
25.5	201	86.2	81.5	201	86.2	81.5
25.5	201	86.2	81.5	201	86.2	81.5
25.5	201	86.2	81.5	201	86.2	81.5
25.5	201	86.2	81.5	201	86.2	81.5



## **APPENDIX B**

### **LONG TERM MONITORING EVENT 2012 LABORATORY REPORTS**

Laboratory Reports have been provided on the CD version of this report.

## **APPENDIX C**

### **COMPLETE LTM GROUNDWATER DATA (EVENTS 1 THROUGH 2012)**

**Appendix C Table C-1**  
**SEAD-25 Groundwater Elevation Data**  
**SEAD-25 Fourth Annual Report**  
**Seneca Army Depot Activity**

Monitoring Well	Top of Risor Elevation (ft)	Well Depth (ft)	4/29/09 Revised Top of Risor Elevation (ft) <sup>3</sup>	Well Depth (ft)	Round 1 - January 2006				Round 1 - April 2006				Round 2 - August 2006			
					Date Measured	Saturated Thickness (ft)	Depth to Groundwater (ft)	Water Level Elevation (ft)	Date Measured	Saturated Thickness (ft)	Depth to Groundwater (ft)	Water Level Elevation (ft)	Date Measured	Saturated Thickness (ft)	Depth to Groundwater (ft)	Water Level Elevation (ft)
MW25-1	743.00	7.77	743.00	7.77	1/20/06	2.10	5.67	737.33	4/12/06	1.97	5.80	737.20	8/9/06	2.12	5.65	737.35
MW25-2	746.36	11.31	746.36	11.31	1/20/06		frozen?		4/12/06	6.06	5.25	741.11	8/9/06	6.51	4.8	741.56
MW25-3	745.76	9.00	746.34	9.58	1/20/06	4.50	4.50	741.26	4/12/06	3.35	5.65	740.11	8/9/06	3.55	5.45	740.31
MW25-6	744.44	14.27	744.44	14.27	1/20/06	10.02	4.25	740.19	4/12/06	8.77	5.50	738.94	8/9/06	8.57	5.7	738.74
MW25-8	742.46	5.47	742.46	5.47	1/20/06	3.67	1.80	740.66	4/12/06	2.67	2.80	739.66	8/9/06	2.27	3.2	739.26
MW25-9	742.36	5.42	742.36	5.42	1/20/06	3.64	1.78	740.58	4/12/06	2.57	2.85	739.51	8/9/06	1.62	3.8	738.56
MW25-10	743.01	6.20	743.01	6.20	1/20/06	3.02	3.18	739.83	4/12/06	1.95	4.25	738.76	8/9/06	1.60	4.6	738.41
MW25-11	740.25	7.00	740.25	7.00	1/20/06	3.70	3.30	736.95	4/12/06	2.55	4.45	735.80	8/9/06	1.95	5.05	735.20
MW25-13	739.64	5.53	739.64	5.53	1/20/06	2.09	3.44	736.20	4/12/06	1.63	3.90	735.74	8/9/06	0.98	4.55	735.09
MW25-15	741.00	7.20	741.00	7.20	1/20/06	4.09	3.11	737.89	4/12/06	3.15	4.05	736.95	8/9/06	2.60	4.6	736.40
MW25-17	743.94	11.27	743.94	11.27	1/20/06	8.02	3.25	740.69	4/12/06	7.07	4.20	739.74	8/9/06	6.92	4.35	739.59
MW25-18	744.35	11.22	744.35	11.22	1/20/06	6.33	4.89	739.46	4/12/06				8/9/06	5.52	5.7	738.65
MW25-19	741.95	12.00	741.95	12.00	1/20/06	8.35	3.65	738.30	4/12/06				8/9/06	6.25	5.75	736.20

Notes:

1. Groundwater levels were recorded in January 2006, April 2006, August 2006, June 2007, February 2008, April 2009, January 2010, August 2010, and February 2011.
2. The bedrock wells are not included as part of the LTM program and are not included in this table
3. Well MW25-3 total depth increased from 9 feet on 8/27/2008 to 9.58 feet on 4/29/2009. Groundwater levels after 8/27/2008 have been adjusted to reflect the change in well total depth.

**Appendix C Table C-1**  
**SEAD-25 Groundwater Elevation Data**  
**SEAD-25 Fourth Annual Report**  
**Seneca Army Depot Activity**

Monitoring Well	Top of Risor Elevation (ft)	Well Depth (ft)	4/29/09 Revised Top of Risor Elevation (ft) <sup>3</sup>	Well Depth (ft)	Round 3 - June 2007				Round 4 - February 2008				Year 3, Round 5 - April 2009			
					Date Measured	Saturated Thickness (ft)	Depth to Groundwater (ft)	Water Level Elevation (ft)	Date Measured	Saturated Thickness (ft)	Depth to Groundwater (ft)	Water Level Elevation (ft)	Date Measured	Saturated Thickness (ft)	Depth to Groundwater (ft)	Water Level Elevation (ft)
MW25-1	743.00	7.77	743.00	7.77	6/4/07	1.27	6.50	736.50	2/26/08	1.88	5.89	737.11	4/27/09	1.68	6.09	736.91
MW25-2	746.36	11.31	746.36	11.31	6/4/07	3.49	7.82	738.54	2/26/08	6.56	4.75	741.61	4/27/09	5.20	6.11	740.25
MW25-3	745.76	9.00	746.34	9.58	6/4/07	0.82	8.18	737.58	2/26/08	4.41	4.59	741.17	4/27/09	3.39	6.19	740.15
MW25-6	744.44	14.27	744.44	14.27	6/4/07	5.72	8.55	735.89	2/26/08	9.73	4.54	739.90	4/27/09	7.84	6.43	738.01
MW25-8	742.46	5.47	742.46	5.47	6/4/07	0.47	5.00	737.46	2/26/08	3.15	2.32	740.14	4/27/09	1.73	3.74	738.72
MW25-9	742.36	5.42	742.36	5.42	6/4/07	0.41	5.01	737.35	2/26/08	3.17	2.25	740.11	4/27/09	1.23	4.19	738.17
MW25-10	743.01	6.20	743.01	6.20	6/4/07		dry		2/26/08	2.46	3.74	739.27	4/27/09	0.29	5.91	737.10
MW25-11	740.25	7.00	740.25	7.00	6/4/07	0.15	6.85	733.40	2/26/08	2.91	4.09	736.16	4/27/09	1.42	5.58	734.67
MW25-13	739.64	5.53	739.64	5.53	6/4/07	0.48	5.05	734.59	2/26/08	1.71	3.82	735.82	4/27/09	0.49	5.04	734.60
MW25-15	741.00	7.20	741.00	7.20	6/4/07		dry		2/26/08	3.77	3.43	737.57	4/27/09	1.75	5.45	735.55
MW25-17	743.94	11.27	743.94	11.27	6/4/07	3.82	7.45	736.49	2/26/08	7.99	3.28	740.66	4/27/09	6.19	5.08	738.86
MW25-18	744.35	11.22	744.35	11.22	6/4/07	4.00	7.22	737.13	2/26/08	11.07	0.15	744.20	4/27/09	5.22	6.00	738.35
MW25-19	741.95	12.00	741.95	12.00	6/4/07	2.97	9.03	732.92	2/26/08	8.00	4.00	737.95	4/27/09	6.50	5.50	736.45

Notes:

1. Groundwater levels were recorded in January 2006, April 2006, August 2006, June 2007, February 2008, April 2009, January 2010, August 2010, and February 2011.
2. The bedrock wells are not included as part of the LTM program and are not included in this table
3. Well MW25-3 total depth increased from 9 feet on 8/27/2008 to 9.58 feet on 4/29/2009. Groundwater levels after 8/27/2008 have been adjusted to reflect the change in well total depth.

**Appendix C Table C-1**  
**SEAD-25 Groundwater Elevation Data**  
**SEAD-25 Fourth Annual Report**  
**Seneca Army Depot Activity**

Monitoring Well	Top of Risor Elevation (ft)	Well Depth (ft)	4/29/09 Revised Top of Risor Elevation (ft) <sup>3</sup>	Well Depth (ft)	Round 6 - January 2010				Round 7 - August 2010				Round 8 - February 2011			
					Date Measured	Saturated Thickness (ft)	Depth to Groundwater (ft)	Water Level Elevation (ft)	Date Measured	Saturated Thickness (ft)	Depth to Groundwater (ft)	Water Level Elevation (ft)	Date Measured	Saturated Thickness (ft)	Depth to Groundwater (ft)	Water Level Elevation (ft)
MW25-1	743.00	7.77	743.00	7.77	1/11/10	1.79	5.98	737.02	8/2/10	1.18	6.59	736.41	2/7/11	1.79	5.98	737.02
MW25-2	746.36	11.31	746.36	11.31	1/11/10	5.94	5.37	740.99	8/2/10	4.92	6.39	739.97	2/7/11	4.50	6.81	739.55
MW25-3	745.76	9.00	746.34	9.58	1/11/10	4.44	5.14	741.20	8/2/10	2.00	7.58	738.76	2/7/11	2.70	6.88	739.46
MW25-6	744.44	14.27	744.44	14.27	1/11/10	7.84	6.43	738.01	8/2/10	5.76	8.51	735.93	2/7/11	6.36	7.91	736.53
MW25-8	742.46	5.47	742.46	5.47	1/11/10	2.62	2.85	739.61	8/2/10	0.40	5.07	737.39	2/7/11	0.31	5.16	737.30
MW25-9	742.36	5.42	742.36	5.42	1/11/10	2.92	2.50	739.86	8/2/10	0.44	4.98	737.38	2/7/11	0.83	4.59	737.77
MW25-10	743.01	6.20	743.01	6.20	1/11/10	1.94	4.26	738.75	8/2/10	0.16	6.04	736.97	2/7/11	0.11	6.09	736.92
MW25-11	740.25	7.00	740.25	7.00	1/11/10	1.39	5.61	734.64	8/2/10	0.33	6.67	733.58	(removed during Well Abandonment Fall 2010)			
MW25-13	739.64	5.53	739.64	5.53	1/11/10	0.62	4.91	734.73	8/2/10	0.47	5.06	734.58	2/7/11	0.43	5.10	734.54
MW25-15	741.00	7.20	741.00	7.20	1/11/10	3.02	4.18	736.82	8/2/10	0.30	6.90	734.10	2/7/11	0.63	6.57	734.43
MW25-17	743.94	11.27	743.94	11.27	1/11/10	6.25	5.02	738.92	8/2/10	3.93	7.34	736.60	2/7/11	4.60	6.67	737.27
MW25-18	744.35	11.22	744.35	11.22	1/11/10	5.31	5.91	738.44	8/2/10	4.10	7.12	737.23	2/7/11	4.64	6.58	737.77
MW25-19	741.95	12.00	741.95	12.00	1/11/10	5.79	6.21	735.74	8/2/10	3.21	8.79	733.16	2/7/11	3.89	8.11	733.84

Notes:

1. Groundwater levels were recorded in January 2006, April 2006, August 2006, June 2007, February 2008, April 2009, January 2010, August 2010, and February 2011.
2. The bedrock wells are not included as part of the LTM program and are not included in this table
3. Well MW25-3 total depth increased from 9 feet on 8/27/2008 to 9.58 feet on 4/29/2009. Groundwater levels after 8/27/2008 have been adjusted to reflect the change in well total depth.

**Appendix C Table C-1  
SEAD-25 Groundwater Elevation Data  
SEAD-25 Fourth Annual Report  
Seneca Army Depot Activity**

Monitoring Well	Top of Risor Elevation (ft)	Well Depth (ft)	4/29/09 Revised Top of Risor Elevation (ft) <sup>3</sup>	Well Depth (ft)	Historical Data <sup>1</sup>		
					Groundwater Elevation (ft)		
					Maximum	Minimum	Range
MW25-1	743.00	7.77	743.00	7.77	737.35	736.41	0.94
MW25-2	746.36	11.31	746.36	11.31	741.61	738.54	3.07
MW25-3	745.76	9.00	746.34	9.58	741.26	737.58	3.68
MW25-6	744.44	14.27	744.44	14.27	740.19	735.89	4.30
MW25-8	742.46	5.47	742.46	5.47	740.66	737.30	3.36
MW25-9	742.36	5.42	742.36	5.42	740.58	737.35	3.23
MW25-10	743.01	6.20	743.01	6.20	739.83	736.92	2.91
MW25-11	740.25	7.00	740.25	7.00	736.95	733.40	3.55
MW25-13	739.64	5.53	739.64	5.53	736.20	734.54	1.66
MW25-15	741.00	7.20	741.00	7.20	737.89	734.10	3.79
MW25-17	743.94	11.27	743.94	11.27	740.69	736.49	4.20
MW25-18	744.35	11.22	744.35	11.22	744.20	737.13	7.07
MW25-19	741.95	12.00	741.95	12.00	738.30	732.92	5.38



# GROUNDWATER ELEVATION REPORT

<b>PARSONS</b>		CLIENT:				DATE: 8/2/10			
PROJECT: SEAD-25 LTM Round 7		LOCATION:				PROJECT NO:			
MONITORING EQUIPMENT:		WATER LEVEL INDICATOR:				INSPECTOR: EBO/SD			
INSTRUMENT	DETECTOR	BGD	TIME	REMARKS	INSTRUMENT	CORRECTION FACTOR			
WELL	TIME	DEPTH TO WATER	DEPTH TO PRODUCT	CORRECTED WATER LEVEL	MEASURED POW	INSTALLED POW	PRODUCT SPEC	GRAV	WELL STATUS / COMMENTS
MW25-1	8:44	6.59							
MW25-11	8:47	6.67							
MW25-13	8:48	5.06							
MW25-15	8:50	6.90							
MW25-19	8:52	8.79							
MW25-6	8:54	8.51							
MW25-17	8:56	7.34							
MW25-18	8:57	7.12							
25-8	8:58	5.07							
25-9	9:00	4.98							
25-10	9:02	6.04							no well cap
25-3	9:03	7.58							
25-2	9:05	6.39							no well cap

(ALL DEPTH MEASUREMENTS FROM MARKED LOCATION ON RISER)



GROUNDWATER ELEVATION REPORT									
PARSONS					CLIENT:			DATE: 12/20/16	
PROJECT: SEAD-25 LTA							PROJECT NO:		
LOCATION: SEDA							INSPECTOR: EBO		
MONITORING EQUIPMENT:					WATER LEVEL INDICATOR:			COMMENTS: Snowy, wetty dusty, of sacc on ground Temp 33°F	
INSTRUMENT	DETECTOR	BGD	TIME	REMARKS	INSTRUMENT	CORRECTION FACTOR			
WELL	TIME	DEPTH TO WATER	DEPTH TO PRODUCT	CORRECTED WATER LEVEL	MEASURED POW	INSTALLED POW	PRODUCT SPEC GRAV	WELL STATUS / COMMENTS <small>(Lock?, Well #?, Surface Disturbance?, Riser marked?, Condition of riser, concrete, protective casing, etc.)</small>	
MW25-1	934	5.99							
25-13	938	4.18'							
25-15	939	4.45'							
25-19	940	5.39							
25-6	941	6.09'							
25-18	942	5.67							
25-17	945	4.69						south of MW25-6, west of MW25-18	
25-8	946	2.75						west of MW25-3, PVC lofted?	
25-9	948	3.03							
25-10	949	4.81						no well cap	
25-3	950	5.11							
25-2	951	5.09							

(ALL DEPTH MEASUREMENTS FROM MARKED LOCATION ON RISER)

GROUNDWATER ELEVATION REPORT									
PARSONS			CLIENT:				DATE: 2/7/2011		
PROJECT: SEAD-25 LTM Round 8						PROJECT NO:			
LOCATION: Seneca Army Depot						INSPECTOR: BBO/SD			
MONITORING EQUIPMENT:					WATER LEVEL INDICATOR:			COMMENTS:	
INSTRUMENT	DETECTOR	BGD	TIME	REMARKS	INSTRUMENT	CORRECTION FACTOR			
					Pr # 14043			~8 inches of snow over whole site	
WELL	TIME	WELL WATER	DEPTH TO WELL PRODUCT	CORRECTED WATER LEVEL	MEASURED POW	INSTALLED POW	PRODUCT SPEC GRAV	WELL STATUS / COMMENTS <small>(Leak?, Well #?, Surface Disturbance?, Riser marked?, Condition of riser, concrete, protective casing, etc.)</small>	
25-1	1539	5.98	7.74						
25-13	1542	5.10	5.48						
25-15	1544	6.57	7.20						
25-9	1546	4.57	5.40						
25-19	1549	8.11	12.0						
25-8	1552	5.16	5.46						
25-6	1554	7.91	14.22						
25-17	1556	6.67	11.30'						
25-10	1558	6.09'	6.37'						
25-2	1600	6.81	11.28					no well cap	
25-3	1601	6.88	9.80						
25-18	1602	6.58	11.18						

(ALL DEPTH MEASUREMENTS FROM MARKED LOCATION ON RISER)

## **APPENDIX D**

### **HISTORIC GROUNDWATER ELEVATIONS (EVENTS 1 THROUGH 2012)**

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
 2012 Annual Report  
 Seneca Army Depot Activity

Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-10		MW25-10		MW25-10	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20039		25LM20061		25LM20083	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		6.13-6.13	
Sample Date	1/31/2006		8/9/2006		3/4/2008		1/13/2010		2/9/2011	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		4		6		8	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	1 U	0.32 U	0.2 UJ	0.2 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	1 U	0.09 U	0.38 UJ	0.38 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	1 U	0.4 U	0.31 U	0.31 UJ
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	1 U	0.2 U	0.33 UJ	0.33 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	1 U	0.14 U	0.21 UJ	0.21 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	0.37 U	0.35 UJ	0.35 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	0.19 U	0.37 UJ	0.37 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5	1 U	1 U			0.19 UJ	0.19 U
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	2 U	0.43 U	0.5 U	0.5 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	1 U	0.18 U	0.22 UJ	0.22 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	0.4 U	0.15 UJ	0.15 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	1 U	0.14 U	0.2 UJ	0.2 U
1,2-Dichloroethene (total)	UG/L	100	GA	5					0.21 UJ	0.21 UJ
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	1 U	0.15 U	0.25 UJ	0.25 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U			0.2 UJ	0.2 U
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	0.36 U	0.26 UJ	0.26 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	0.34 U	0.24 UJ	0.24 U
Acetone	UG/L	100			5 U	5 U	10 UJ	5 U	2.2 U	2.2 U
Benzene	UG/L	100	GA	1	1 U	1 U	1 U	0.18 U	0.26 UJ	0.26 U
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	1 U	0.17 U	0.33 UJ	0.33 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	1 UJ	0.2 U	0.23 UJ	0.23 U
Carbon disulfide	UG/L	100			1 U	1 U	1 U	0.36 U	0.25 U	0.25 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	1 U	0.36 U	0.22 UJ	0.22 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	0.26 U	0.22 UJ	0.22 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	1 U	0.11 U	0.3 UJ	0.3 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	2 U	0.21 U	0.55 U	0.55 U
Chloroform	UG/L	100	GA	7	1 U	1 U	1 U	0.16 U	0.32 UJ	0.32 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	0.14 U	0.21 UJ	0.21 U
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	0.14 U	0.19 UJ	0.19 UJ
Cyclohexane	UG/L	100			1 U	1 U	1 U	0.14 U	0.31 UJ	0.31 U
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 UJ	0.18 U		
Diisopropyl Ether	UG/L	100							0.21 U	0.21 U
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	1 U	0.42 U	0.21 UJ	0.21 U
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	1 U	0.34 U	0.23 UJ	0.23 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
 2012 Annual Report  
 Seneca Army Depot Activity

Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-10		MW25-10		MW25-10	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20039		25LM20061		25LM20083	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		6.13-6.13	
Sample Date	1/31/2006		8/9/2006		3/4/2008		1/13/2010		2/9/2011	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		4		6		8	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5			1 U	0.81 U	0.59 UJ	0.59 U
Methyl Acetate	UG/L	100			1 U	1 U	10 U	0.48 U	0.53 U	0.53 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	2 U	0.4 U	0.49 U	0.49 UJ
Methyl butyl ketone	UG/L	100			5 U	5 U	5 U	0.4 U	1.7 U	1.7 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	2 U	0.18 U	0.36 U	0.36 UJ
Methyl cyclohexane	UG/L	100			1 U	1 U	1 U	0.16 U	0.3 U	0.3 U
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	5 U	1 U	1.3 U	1.3 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	5 U	0.34 U	1.3 U	1.3 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	1 U	0.13 U	0.36 U	0.36 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	1 U	0.13 U	1.1 U	1.1 U
Naphthalene	UG/L	100							0.3 UJ	0.3 U
n-Butylbenzene	UG/L	100	GA	5					0.23 UJ	0.23 U
Ortho Xylene	UG/L	100	GA	5			1 U	0.4 U	0.25 UJ	0.25 U
p-Isopropyltoluene	UG/L	100	GA	5		1 U				
Propylbenzene	UG/L	100	GA	5		1 U				
sec-Butylbenzene	UG/L	100	GA	5					0.21 UJ	0.21 U
Styrene	UG/L	100	GA	5	1 U	1 U	1 U	0.36 U	0.23 UJ	0.23 U
tert-Butylbenzene	UG/L	100	GA	5					0.31 UJ	0.31 U
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	1 U	0.42 U	0.4 U	0.4 U
Toluene	UG/L	100	GA	5	1 U	1 U	1 U	0.21 U	0.27 UJ	0.27 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U			0.25 UJ	0.25 U
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	0.16 U	0.25 U	0.25 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	0.17 U	0.2 UJ	0.2 UJ
Trichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	0.19 U	0.28 UJ	0.28 U
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 U	0.16 U	0.24 U	0.24 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	1 U	0.22 U	0.25 U	0.25 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U				
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U				
2,4-Dimethylphenol	UG/L	400			10 U	10 U				
2,4-Dinitrophenol	UG/L	400			48 U	48 U				
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-10		MW25-10		MW25-10	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20039		25LM20061		25LM20083	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		6.13-6.13	
Sample Date	1/31/2006		8/9/2006		3/4/2008		1/13/2010		2/9/2011	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		4		6		8	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400			10 U	10 U				
2-Chlorophenol	UG/L	400			10 U	10 U				
2-Methylnaphthalene	UG/L	400			10 U	10 U				
2-Methylphenol	UG/L	400			10 U	10 U				
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U				
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U				
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U				
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U				
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U				
4-Bromophenyl phenyl ether	UG/L	400			10 U	10 U				
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U				
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U				
4-Chlorophenyl phenyl ether	UG/L	400			10 U	10 U				
4-Methylphenol	UG/L	400			10 U	10 U				
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U				
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U				
Acenaphthene	UG/L	400			10 U	10 U				
Acenaphthylene	UG/L	400			1 J	10 U				
Acetophenone	UG/L	400			10 U	10 U				
Anthracene	UG/L	400			10 U	10 U				
Atrazine	UG/L	400	GA	7.5	10 U	10 U				
Benzaldehyde	UG/L	400			48 U	48 U				
Benzo(a)anthracene	UG/L	400			10 U	10 U				
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U				
Benzo(b)fluoranthene	UG/L	400			10 U	10 U				
Benzo(ghi)perylene	UG/L	400			10 U	10 U				
Benzo(k)fluoranthene	UG/L	400			10 U	10 U				
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U				
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U				
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U				
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U				
Butylbenzylphthalate	UG/L	400			10 U	10 U				
Caprolactam	UG/L	400			10 U	10 U				
Carbazole	UG/L	400			10 U	10 U				

**Appendix D Table D-1**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-10		MW25-10		MW25-10	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20039		25LM20061		25LM20083	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		6.13-6.13	
Sample Date	1/31/2006		8/9/2006		3/4/2008		1/13/2010		2/9/2011	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		4		6		8	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Chrysene	UG/L	400			10 U	10 U				
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U				
Dibenzofuran	UG/L	400			10 U	10 U				
Diethyl phthalate	UG/L	400			10 U	10 U				
Dimethylphthalate	UG/L	400			10 U	10 U				
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U				
Di-n-octylphthalate	UG/L	400			10 U	10 U				
Fluoranthene	UG/L	400			10 U	10 U				
Fluorene	UG/L	400			10 U	10 UJ				
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U				
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U				
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U				
Hexachloroethane	UG/L	400	GA	5	10 U	10 U				
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U				
Isophorone	UG/L	400			10 U	10 U				
Naphthalene	UG/L	400			10 U	10 U				
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U				
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U				
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U				
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U				
Phenanthrene	UG/L	400			10 U	10 U				
Phenol	UG/L	400	GA	1	10 U	10 U				
Pyrene	UG/L	400			10 U	10 U				
Iron	UG/L	600	GA	300	62.8 J	358	100 U	508		231 J
Sodium	UG/L	600	GA	20000	8870	6530 J	6090	6420		5040
Chloride	MG/L	700	GA	250	0.73	0.71 J	0.2 U	2.1		0.45 J
Ethane	UG/L	700			2 U	2 U	1 U	0.21 U		0.58 U
Ethene	UG/L	700			2 U	2 U	1 U	0.22 U		0.69 U
Methane	UG/L	700			2 U	2 U	2 U	0.14 U		1.2 J
Nitrate	MG/L	700	GA	10				0.05 UJ		0.02 J
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U	0.102 J			
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10			0.102	0.003 UJ		
NITRITE	MG/L	700						0.007 UJ		
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U	0.01 UJ			

**Appendix D Table D-1**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25			
Loc ID	MW25-10	MW25-10	MW25-10	MW25-10	MW25-10	MW25-10			
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER			
Sample ID	25LM20005	25LM20015	25LM20039	25LM20061	25LM20083	25LM20094			
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	6.13-6.13	5.16-5.16			
Sample Date	1/31/2006	8/9/2006	3/4/2008	1/13/2010	2/9/2011	2/28/2012			
QC Type	SA	SA	SA	SA	SA	SA			
Study ID	LTM	LTM	LTM	LTM	LTM	LTM			
Sample Round	1	2	4	6	8	9			
Filtered	N	N	N	N	N	N			
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Sulfate	MG/L	700	GA	250	18.1	18.4	12.9	27.1 J	14 J
Conductivity	S/m	750			0.464	0.701	0.473	0.396	
Conductivity (post)	S/m	750							
Conductivity (pre)	S/m	750							
Dissolved Oxygen	MG/L	750			4.22	4.23	3.65		
Dissolved Oxygen (post)	MG/L	750							
Dissolved Oxygen (pre)	MG/L	750							
Nitrate Nitrogen	MG/L	750							
Nitrite Nitrogen	MG/L	750							
ORP	mV	750			107	138.8	130	230	
ORP (post)	mV	750							
ORP (pre)	mV	750							
pH	Std units	750			6.97	6.56	7.31	7.19	
pH (post)	Std units	750							
pH (pre)	Std units	750							
Sulfide	MG/L	750			0.1	0.28	0.02	0.09	
Temperature	deg C	750			5	21.56	3.6	5.6	
Turbidity	NTU	750			1.09	195	2.36	3.3	
Turbidity (post)	NTU	750							
Turbidity (pre)	NTU	750							



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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-13		MW25-13		MW25-13	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20006		25LM20016		25LM20040	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		4.32-4.32	
Sample Date	1/31/2006		8/9/2006		1/30/2006		8/9/2006		3/3/2008	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		1		2		4	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	1 U	1 U	1 U	0.2 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.38 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	0.31 UJ
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	1 U	0.33 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.21 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.35 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.37 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.19 U
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	1 U	1 U	2 U	0.5 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	1 U	1 U	1 U	0.22 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	1 U	0.15 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	1 U	1 U	1 U	0.2 U
1,2-Dichloroethene (total)	UG/L	100	GA	5						0.21 UJ
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	1 U	0.25 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U		1 U		0.2 U
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	1 U	0.26 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	1 U	0.24 U
Acetone	UG/L	100			5 U	5 U	5 U	7.8 UJ	10 UJ	2.2 U
Benzene	UG/L	100	GA	1	1 U	1 U	1 U	1 U	1 U	0.26 U
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	1 U	0.33 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	1 UJ	0.23 U
Carbon disulfide	UG/L	100			1 U	1 U	1 U	1 U	1 U	0.25 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.22 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.22 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	1 U	0.3 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	1 U	1 UJ	2 U	0.55 U
Chloroform	UG/L	100	GA	7	1 U	1 U	1 U	1 U	1 U	0.32 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.21 U
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	1 U	0.19 UJ
Cyclohexane	UG/L	100			1 U	1 U	1 UJ	1 U	1 U	0.31 U
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 U	1 U	1 UJ	
Diisopropyl Ether	UG/L	100								0.21 U
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.21 U
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.23 U

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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-13		MW25-13		MW25-13	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20006		25LM20016		25LM20040	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		4.32-4.32	
Sample Date	1/31/2006		8/9/2006		1/30/2006		8/9/2006		3/3/2008	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		1		2		4	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5					1 U	0.59 U
Methyl Acetate	UG/L	100			1 U	1 U	1 U	1 U	10 U	0.53 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	1 U	1 U	2 U	0.49 UJ
Methyl butyl ketone	UG/L	100			5 U	5 U	5 U	5 U	5 U	1.7 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	2 U	0.36 UJ
Methyl cyclohexane	UG/L	100			1 U	1 U	1 U	1 U	1 U	0.3 U
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	5 U	5 UJ	5 U	1.3 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	5 U	5 U	5 U	1.3 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	1 U	1 U	1 U	0.36 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	1 U	1 UJ	1 U	1.1 U
Naphthalene	UG/L	100								0.3 U
n-Butylbenzene	UG/L	100	GA	5						0.23 U
Ortho Xylene	UG/L	100	GA	5					1 U	0.25 U
p-Isopropyltoluene	UG/L	100	GA	5		1 U		1 U		
Propylbenzene	UG/L	100	GA	5		1 U		1 U		
sec-Butylbenzene	UG/L	100	GA	5						0.21 U
Styrene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.23 U
tert-Butylbenzene	UG/L	100	GA	5						0.31 U
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.4 U
Toluene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.27 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U	3 U	3 U		0.25 U
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.25 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	1 U	0.2 UJ
Trichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	0.28 U
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 U	1 U	1 U	0.24 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	1 U	1 U	1 U	0.25 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U	9 U			
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U	9 U			
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U	9 U			
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U	9 U			
2,4-Dimethylphenol	UG/L	400			10 U	10 U	9 U			
2,4-Dinitrophenol	UG/L	400			48 U	48 U	47 U			
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U	9 U			
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U	9 U			

**Appendix D Table D-1**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-13	MW25-13	MW25-13	MW25-13				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20006	25LM20016	25LM20040	25LM20095				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	4.32-4.32				
Sample Date	1/31/2006	8/9/2006	1/30/2006	8/9/2006	3/3/2008	2/28/2012				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	1	2	4	9				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400			10 U	10 U	9 U			
2-Chlorophenol	UG/L	400			10 U	10 U	9 U			
2-Methylnaphthalene	UG/L	400			10 U	10 U	9 U			
2-Methylphenol	UG/L	400			10 U	10 U	9 U			
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U	47 U			
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U	9 U			
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U	19 U			
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U	47 U			
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U	47 U			
4-Bromophenyl phenyl ether	UG/L	400			10 U	10 U	9 U			
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U	9 U			
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U	9 U			
4-Chlorophenyl phenyl ether	UG/L	400			10 U	10 U	9 U			
4-Methylphenol	UG/L	400			10 U	10 U	9 U			
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U	47 U			
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U	47 U			
Acenaphthene	UG/L	400			10 U	10 U	9 U			
Acenaphthylene	UG/L	400			1 J	10 U	9 U			
Acetophenone	UG/L	400			10 U	10 U	9 U			
Anthracene	UG/L	400			10 U	10 U	9 U			
Atrazine	UG/L	400	GA	7.5	10 U	10 U	9 U			
Benzaldehyde	UG/L	400			48 U	48 U	47 U			
Benzo(a)anthracene	UG/L	400			10 U	10 U	9 U			
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U	9 U			
Benzo(b)fluoranthene	UG/L	400			10 U	10 U	9 U			
Benzo(ghi)perylene	UG/L	400			10 U	10 U	9 U			
Benzo(k)fluoranthene	UG/L	400			10 U	10 U	9 U			
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U	9 U			
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U	9 U			
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U	9 U			
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U	9 U			
Butylbenzylphthalate	UG/L	400			10 U	10 U	9 U			
Caprolactam	UG/L	400			10 U	10 U	9 U			
Carbazole	UG/L	400			10 U	10 U	9 U			

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-13	MW25-13	MW25-13	MW25-13				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20006	25LM20016	25LM20040	25LM20095				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	4.32-4.32				
Sample Date	1/31/2006	8/9/2006	1/30/2006	8/9/2006	3/3/2008	2/28/2012				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	1	2	4	9				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Chrysene	UG/L	400			10 U	10 U	9 U			
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U	9 U			
Dibenzofuran	UG/L	400			10 U	10 U	9 U			
Diethyl phthalate	UG/L	400			10 U	10 U	9 U			
Dimethylphthalate	UG/L	400			10 U	10 U	9 U			
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U	9 U			
Di-n-octylphthalate	UG/L	400			10 U	10 U	9 U			
Fluoranthene	UG/L	400			10 U	10 U	9 U			
Fluorene	UG/L	400			10 U	10 UJ	9 U			
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U	9 U			
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U	9 U			
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U	42 U			
Hexachloroethane	UG/L	400	GA	5	10 U	10 U	9 U			
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U	9 U			
Isophorone	UG/L	400			10 U	10 U	9 U			
Naphthalene	UG/L	400			10 U	10 U	9 U			
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U	9 U			
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U	9 U			
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U	9 U			
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U	47 U			
Phenanthrene	UG/L	400			10 U	10 U	9 U			
Phenol	UG/L	400	GA	1	10 U	10 U	9 U			
Pyrene	UG/L	400			10 U	10 U	9 U			
Iron	UG/L	600	GA	300	62.8 J	358	320 J			2320 J
Sodium	UG/L	600	GA	20000	8870	6530 J	40600			16100
Chloride	MG/L	700	GA	250	0.73	0.71 J	2.5			0.54 J
Ethane	UG/L	700			2 U	2 U	2 U			0.58 U
Ethene	UG/L	700			2 U	2 U	2 U			0.69 U
Methane	UG/L	700			2 U	2 U	2 U			1.2 J
Nitrate	MG/L	700	GA	10						0.051
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U	0.05 U			
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10						
NITRITE	MG/L	700								
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U	0.05 U			

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25			
Loc ID	MW25-10	MW25-10	MW25-13	MW25-13	MW25-13	MW25-13			
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER			
Sample ID	25LM20005	25LM20015	25LM20006	25LM20016	25LM20040	25LM20095			
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	4.32-4.32			
Sample Date	1/31/2006	8/9/2006	1/30/2006	8/9/2006	3/3/2008	2/28/2012			
QC Type	SA	SA	SA	SA	SA	SA			
Study ID	LTM	LTM	LTM	LTM	LTM	LTM			
Sample Round	1	2	1	2	4	9			
Filtered	N	N	N	N	N	N			
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Sulfate	MG/L	700	GA	250	18.1	18.4	15.6		18 J
Conductivity	S/m	750			0.464	0.701	0.492	0.699	0.639
Conductivity (post)	S/m	750							
Conductivity (pre)	S/m	750							
Dissolved Oxygen	MG/L	750			4.22	4.23	0.94	4.1	4.79
Dissolved Oxygen (post)	MG/L	750							
Dissolved Oxygen (pre)	MG/L	750							
Nitrate Nitrogen	MG/L	750							
Nitrite Nitrogen	MG/L	750							
ORP	mV	750			107	138.8	38	-22.2	97
ORP (post)	mV	750							
ORP (pre)	mV	750							
pH	Std units	750			6.97	6.56	7.27	6.98	7.52
pH (post)	Std units	750							
pH (pre)	Std units	750							
Sulfide	MG/L	750			0.1	0.28	0.02		0.01 U
Temperature	deg C	750			5	21.56	3.8	23.42	3
Turbidity	NTU	750			1.09	195	21	100	16.4
Turbidity (post)	NTU	750							
Turbidity (pre)	NTU	750							

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-15		MW25-15		MW25-15	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20007		25LM20017		25LM20041	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0.1	
Sample Date	1/31/2006		8/9/2006		1/31/2006		8/14/2006		3/3/2008	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		1		2		4	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	1 U	1 U	2 U	2 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene (total)	UG/L	100	GA	5						
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U		1 U		
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	1 U	1 U
Acetone	UG/L	100			5 U	5 U	5 U	12 UJ	10 UJ	5 U
Benzene	UG/L	100	GA	1	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	1 UJ	1.2 U
Carbon disulfide	UG/L	100			1 U	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	1 U	1 U	2 U	1 U
Chloroform	UG/L	100	GA	7	1 U	1 U	1 U	1 U	1 U	1 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	UG/L	100			1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 UJ	1 U	1 UJ	1 U
Diisopropyl Ether	UG/L	100								
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-15	MW25-15	MW25-15	MW25-15				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20007	25LM20017	25LM20041	25LM20052				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	1/31/2006	8/14/2006	3/3/2008	4/29/2009				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	1	2	4	5				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5					1 U	2 U
Methyl Acetate	UG/L	100			1 U	1 U	1 U	1 U	10 U	2 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	1 U	1 U	2 U	1 U
Methyl butyl ketone	UG/L	100			5 U	5 U	5 U	5 U	5 U	5 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	2 U	1 U
Methyl cyclohexane	UG/L	100			1 U	1 U	1 U	1 U	1 U	1 U
Methyl ethyl ketone	UG/L	100			5 U	5 U	5 U	5 U	5 U	5 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	5 U	5 U	5 U	5 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	UG/L	100								
n-Butylbenzene	UG/L	100	GA	5						
Ortho Xylene	UG/L	100	GA	5					1 U	1 U
p-Isopropyltoluene	UG/L	100	GA	5		1 U		1 U		
Propylbenzene	UG/L	100	GA	5		1 U		1 U		
sec-Butylbenzene	UG/L	100	GA	5						
Styrene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	UG/L	100	GA	5						
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U	3 U	3 U		
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	1 U	1 U	1 U	1 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U	9 U			
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U	9 U			
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U	9 U			
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U	9 U			
2,4-Dimethylphenol	UG/L	400			10 U	10 U	9 U			
2,4-Dinitrophenol	UG/L	400			48 U	48 U	47 U			
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U	9 U			
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U	9 U			

**Appendix D Table D-1**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-15	MW25-15	MW25-15	MW25-15				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20007	25LM20017	25LM20041	25LM20052				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	1/31/2006	8/14/2006	3/3/2008	4/29/2009				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	1	2	4	5				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400			10 U	10 U	9 U			
2-Chlorophenol	UG/L	400			10 U	10 U	9 U			
2-Methylnaphthalene	UG/L	400			10 U	10 U	9 U			
2-Methylphenol	UG/L	400			10 U	10 U	9 U			
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U	47 U			
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U	9 U			
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U	19 U			
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U	47 U			
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U	47 U			
4-Bromophenyl phenyl ether	UG/L	400			10 U	10 U	9 U			
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U	9 U			
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U	9 U			
4-Chlorophenyl phenyl ether	UG/L	400			10 U	10 U	9 U			
4-Methylphenol	UG/L	400			10 U	10 U	9 U			
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U	47 U			
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U	47 U			
Acenaphthene	UG/L	400			10 U	10 U	9 U			
Acenaphthylene	UG/L	400			1 J	10 U	0.7 J			
Acetophenone	UG/L	400			10 U	10 U	9 U			
Anthracene	UG/L	400			10 U	10 U	9 U			
Atrazine	UG/L	400	GA	7.5	10 U	10 U	9 U			
Benzaldehyde	UG/L	400			48 U	48 U	47 U			
Benzo(a)anthracene	UG/L	400			10 U	10 U	9 U			
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U	9 U			
Benzo(b)fluoranthene	UG/L	400			10 U	10 U	9 U			
Benzo(ghi)perylene	UG/L	400			10 U	10 U	9 U			
Benzo(k)fluoranthene	UG/L	400			10 U	10 U	9 U			
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U	9 U			
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U	9 U			
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U	9 U			
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U	9 U			
Butylbenzylphthalate	UG/L	400			10 U	10 U	9 U			
Caprolactam	UG/L	400			10 U	10 U	9 U			
Carbazole	UG/L	400			10 U	10 U	9 U			



**Appendix D Table D-1**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-15		MW25-15		MW25-15	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20007		25LM20017		25LM20041	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0.1	
Sample Date	1/31/2006		8/9/2006		1/31/2006		8/14/2006		3/3/2008	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		1		2		4	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Chrysene	UG/L	400			10 U	10 U	9 U			
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U	9 U			
Dibenzofuran	UG/L	400			10 U	10 U	9 U			
Diethyl phthalate	UG/L	400			10 U	10 U	9 U			
Dimethylphthalate	UG/L	400			10 U	10 U	9 U			
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U	9 U			
Di-n-octylphthalate	UG/L	400			10 U	10 U	9 U			
Fluoranthene	UG/L	400			10 U	10 U	9 U			
Fluorene	UG/L	400			10 U	10 UJ	9 U			
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U	9 U			
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U	9 U			
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U	42 U			
Hexachloroethane	UG/L	400	GA	5	10 U	10 U	9 U			
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U	9 U			
Isophorone	UG/L	400			10 U	10 U	9 U			
Naphthalene	UG/L	400			10 U	10 U	9 U			
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U	9 U			
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U	9 U			
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U	9 U			
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U	47 U			
Phenanthrene	UG/L	400			10 U	10 U	9 U			
Phenol	UG/L	400	GA	1	10 U	10 U	9 U			
Pyrene	UG/L	400			10 U	10 U	9 U			
Iron	UG/L	600	GA	300	62.8 J	358	56 J	850	100 U	30 J
Sodium	UG/L	600	GA	20000	8870	6530 J	3080	6630 J	6340	3500
Chloride	MG/L	700	GA	250	0.73	0.71 J	0.66	1.4 J	0.2 U	0.2 U
Ethane	UG/L	700			2 U	2 U	2 U	2 U	1 U	1 U
Ethene	UG/L	700			2 U	2 U	2 U	2 U	1 U	1 U
Methane	UG/L	700			2 U	2 U	2 U	2 U	2 U	2 U
Nitrate	MG/L	700	GA	10						0.05 U
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U	0.05 U	0.05 U	0.16 J	
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10					0.16	
NITRITE	MG/L	700								0.01 U
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U	0.05 U	0.087	0.01 UJ	

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-15	MW25-15	MW25-15	MW25-15				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20007	25LM20017	25LM20041	25LM20052				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	1/31/2006	8/14/2006	3/3/2008	4/29/2009				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	1	2	4	5				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
Sulfate	MG/L	700	GA	250	18.1	18.4	14.4	17.9	13.3	20.3
Conductivity	S/m	750			0.464	0.701	0.36	0.651	0.477	
Conductivity (post)	S/m	750								
Conductivity (pre)	S/m	750								
Dissolved Oxygen	MG/L	750			4.22	4.23	2.93	1.99	4.57	
Dissolved Oxygen (post)	MG/L	750								
Dissolved Oxygen (pre)	MG/L	750								
Nitrate Nitrogen	MG/L	750								
Nitrite Nitrogen	MG/L	750								
ORP	mV	750			107	138.8	82	222.1	139	
ORP (post)	mV	750								
ORP (pre)	mV	750								
pH	Std units	750			6.97	6.56	7.2	5.8	7.25	
pH (post)	Std units	750								
pH (pre)	Std units	750								
Sulfide	MG/L	750			0.1	0.28	0.01 U	0.8	0.01 U	0.01 U
Temperature	deg C	750			5	21.56	5.3	18.76	4.7	
Turbidity	NTU	750			1.09	195	1.1	27.4	3.58	
Turbidity (post)	NTU	750								
Turbidity (pre)	NTU	750								

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-15		MW25-15		MW25-17	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20063		25LM20085		25LM20096	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		6.53-6.53		4.8-4.8	
Sample Date	1/31/2006		8/9/2006		1/13/2010		2/9/2011		2/28/2012	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		6		8		9	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	0.32 U	0.2 UJ	0.2 U	1 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	0.09 U	0.38 UJ	0.38 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	0.4 U	0.31 U	0.31 UJ	1 UJ
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	0.2 U	0.33 UJ	0.33 U	1 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	0.14 U	0.21 UJ	0.21 U	1 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.37 U	0.35 UJ	0.35 U	1 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	0.19 U	0.37 UJ	0.37 U	1 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5	1 U	1 U	0.19 U	0.19 UJ	0.19 U	
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	0.43 U	0.5 U	0.5 U	1 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	0.18 U	0.22 UJ	0.22 U	1 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.4 U	0.15 UJ	0.15 U	1 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	0.14 U	0.2 UJ	0.2 U	1 U
1,2-Dichloroethene (total)	UG/L	100	GA	5				0.21 UJ	0.21 UJ	
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	0.15 U	0.25 UJ	0.25 U	1 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U		0.2 UJ	0.2 U	
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.36 U	0.26 UJ	0.26 U	1 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.34 U	0.24 UJ	0.24 U	1 U
Acetone	UG/L	100			5 U	5 U	5 U	2.2 U	2.2 U	5 U
Benzene	UG/L	100	GA	1	1 U	1 U	0.18 U	0.26 UJ	0.26 U	1 U
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	0.17 U	0.33 UJ	0.33 U	1 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	0.2 U	0.23 UJ	0.23 U	1 U
Carbon disulfide	UG/L	100			1 U	1 U	0.36 U	0.25 U	0.25 U	1 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	0.36 U	0.22 UJ	0.22 U	1 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	0.26 U	0.22 UJ	0.22 U	1 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	0.11 U	0.3 UJ	0.3 U	1 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	0.21 U	0.55 U	0.55 U	1 U
Chloroform	UG/L	100	GA	7	1 U	1 U	0.16 U	0.32 UJ	0.32 U	1 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.14 U	0.21 UJ	0.21 U	1 U
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	0.14 U	0.19 UJ	0.19 UJ	1 U
Cyclohexane	UG/L	100			1 U	1 U	0.14 U	0.31 UJ	0.31 U	1 UJ
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	0.18 U			1 U
Diisopropyl Ether	UG/L	100						0.21 U	0.21 U	
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	0.42 U	0.21 UJ	0.21 U	1 U
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	0.34 U	0.23 UJ	0.23 U	1 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-15		MW25-15		MW25-17	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20063		25LM20085		25LM20096	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		6.53-6.53		4.8-4.8	
Sample Date	1/31/2006		8/9/2006		1/13/2010		2/9/2011		2/28/2012	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		6		8		9	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5			0.81 U	0.59 UJ	0.59 U	
Methyl Acetate	UG/L	100			1 U	1 U	0.48 U	0.53 U	0.53 U	1 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	0.4 U	0.49 U	0.49 UJ	1 U
Methyl butyl ketone	UG/L	100			5 U	5 U	0.4 U	1.7 U	1.7 U	5 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	0.18 U	0.36 U	0.36 UJ	1 U
Methyl cyclohexane	UG/L	100			1 U	1 U	0.16 U	0.3 U	0.3 U	1 U
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	1 U	1.3 U	1.3 U	5 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	0.34 U	1.3 U	1.3 U	5 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	0.13 U	0.36 U	0.36 U	1 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	0.13 U	1.1 U	1.1 U	1 U
Naphthalene	UG/L	100						0.3 UJ	0.3 U	
n-Butylbenzene	UG/L	100	GA	5				0.23 UJ	0.23 U	
Ortho Xylene	UG/L	100	GA	5			0.4 U	0.25 UJ	0.25 U	
p-Isopropyltoluene	UG/L	100	GA	5		1 U				
Propylbenzene	UG/L	100	GA	5		1 U				
sec-Butylbenzene	UG/L	100	GA	5				0.21 UJ	0.21 U	
Styrene	UG/L	100	GA	5	1 U	1 U	0.36 U	0.23 UJ	0.23 U	1 U
tert-Butylbenzene	UG/L	100	GA	5				0.31 UJ	0.31 U	
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	0.42 U	0.4 U	0.4 U	1 U
Toluene	UG/L	100	GA	5	1 U	1 U	0.21 U	0.27 UJ	0.27 U	1 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U		0.25 UJ	0.25 U	3 U
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.16 U	0.25 U	0.25 U	1 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	0.17 U	0.2 UJ	0.2 UJ	1 U
Trichloroethene	UG/L	100	GA	5	1 U	1 U	0.19 U	0.28 UJ	0.28 U	1 U
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	0.16 U	0.24 U	0.24 U	1 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	0.22 U	0.25 U	0.25 U	1 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U				9 U
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				9 U
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				9 U
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U				9 U
2,4-Dimethylphenol	UG/L	400			10 U	10 U				9 U
2,4-Dinitrophenol	UG/L	400			48 U	48 U				47 U
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				9 U
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				9 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25			
Loc ID	MW25-10	MW25-10	MW25-15	MW25-15	MW25-15	MW25-17			
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER			
Sample ID	25LM20005	25LM20015	25LM20063	25LM20085	25LM20096	25LM20008			
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	6.53-6.53	4.8-4.8	0-0.1			
Sample Date	1/31/2006	8/9/2006	1/13/2010	2/9/2011	2/28/2012	1/30/2006			
QC Type	SA	SA	SA	SA	SA	SA			
Study ID	LTM	LTM	LTM	LTM	LTM	LTM			
Sample Round	1	2	6	8	9	1			
Filtered	N	N	N	N	N	N			
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400		10 U	10 U				9 U
2-Chlorophenol	UG/L	400		10 U	10 U				9 U
2-Methylnaphthalene	UG/L	400		10 U	10 U				9 U
2-Methylphenol	UG/L	400		10 U	10 U				9 U
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U			47 U
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U			9 U
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U			19 U
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U			47 U
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U			47 U
4-Bromophenyl phenyl ether	UG/L	400			10 U	10 U			9 U
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U			9 U
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U			9 U
4-Chlorophenyl phenyl ether	UG/L	400			10 U	10 U			9 U
4-Methylphenol	UG/L	400			10 U	10 U			9 U
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U			47 U
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U			47 U
Acenaphthene	UG/L	400			10 U	10 U			9 U
Acenaphthylene	UG/L	400			1 J	10 U			9 U
Acetophenone	UG/L	400			10 U	10 U			9 U
Anthracene	UG/L	400			10 U	10 U			9 U
Atrazine	UG/L	400	GA	7.5	10 U	10 U			9 U
Benzaldehyde	UG/L	400			48 U	48 U			47 U
Benzo(a)anthracene	UG/L	400			10 U	10 U			9 U
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U			9 U
Benzo(b)fluoranthene	UG/L	400			10 U	10 U			9 U
Benzo(ghi)perylene	UG/L	400			10 U	10 U			9 U
Benzo(k)fluoranthene	UG/L	400			10 U	10 U			9 U
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U			9 U
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U			9 U
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U			9 U
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U			9 U
Butylbenzylphthalate	UG/L	400			10 U	10 U			9 U
Caprolactam	UG/L	400			10 U	10 U			9 U
Carbazole	UG/L	400			10 U	10 U			9 U

**Appendix D Table D-1**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25			
Loc ID	MW25-10	MW25-10	MW25-15	MW25-15	MW25-15	MW25-17			
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER			
Sample ID	25LM20005	25LM20015	25LM20063	25LM20085	25LM20096	25LM20008			
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	6.53-6.53	4.8-4.8	0-0.1			
Sample Date	1/31/2006	8/9/2006	1/13/2010	2/9/2011	2/28/2012	1/30/2006			
QC Type	SA	SA	SA	SA	SA	SA			
Study ID	LTM	LTM	LTM	LTM	LTM	LTM			
Sample Round	1	2	6	8	9	1			
Filtered	N	N	N	N	N	N			
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Chrysene	UG/L	400		10 U	10 U				9 U
Dibenz(a,h)anthracene	UG/L	400		10 U	10 U				9 U
Dibenzofuran	UG/L	400		10 U	10 U				9 U
Diethyl phthalate	UG/L	400		10 U	10 U				9 U
Dimethylphthalate	UG/L	400		10 U	10 U				9 U
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U			9 U
Di-n-octylphthalate	UG/L	400		10 U	10 U				9 U
Fluoranthene	UG/L	400		10 U	10 U				9 U
Fluorene	UG/L	400		10 U	10 UJ				9 U
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U			9 U
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U			9 U
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U			42 U
Hexachloroethane	UG/L	400	GA	5	10 U	10 U			9 U
Indeno(1,2,3-cd)pyrene	UG/L	400		10 U	10 U				9 U
Isophorone	UG/L	400		10 U	10 U				9 U
Naphthalene	UG/L	400		10 U	10 U				9 U
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U			9 U
N-Nitroso-di-n-propylamine	UG/L	400		10 U	10 U				9 U
N-Nitrosodiphenylamine	UG/L	400		10 U	10 U				9 U
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U			47 U
Phenanthrene	UG/L	400		10 U	10 U				9 U
Phenol	UG/L	400	GA	1	10 U	10 U			9 U
Pyrene	UG/L	400		10 U	10 U				9 U
Iron	UG/L	600	GA	300	62.8 J	358	769	3840 J	46.1
Sodium	UG/L	600	GA	20000	8870	6530 J	3620	3130	4240
Chloride	MG/L	700	GA	250	0.73	0.71 J	0.5 U	0.56 J	0.7
Ethane	UG/L	700			2 U	2 U	0.16 U	0.58 U	0.58 U
Ethene	UG/L	700			2 U	2 U	0.17 U	0.69 U	0.69 U
Methane	UG/L	700			2 U	2 U	0.14 U	2.1 J	1.2 J
Nitrate	MG/L	700	GA	10			0.05 UJ	0.018 J	
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U			0.05 U
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10			0.003 UJ		
NITRITE	MG/L	700					0.007 UJ		
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U			0.05 U

**Appendix D Table D-1**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25			
Loc ID	MW25-10	MW25-10	MW25-15	MW25-15	MW25-15	MW25-17			
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER			
Sample ID	25LM20005	25LM20015	25LM20063	25LM20085	25LM20096	25LM20008			
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	6.53-6.53	4.8-4.8	0-0.1			
Sample Date	1/31/2006	8/9/2006	1/13/2010	2/9/2011	2/28/2012	1/30/2006			
QC Type	SA	SA	SA	SA	SA	SA			
Study ID	LTM	LTM	LTM	LTM	LTM	LTM			
Sample Round	1	2	6	8	9	1			
Filtered	N	N	N	N	N	N			
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Sulfate	MG/L	700	GA	250	18.1	18.4	24.8 J	14 J	17.2
Conductivity	S/m	750			0.464	0.701	0.38	0.419	0.462
Conductivity (post)	S/m	750							
Conductivity (pre)	S/m	750							
Dissolved Oxygen	MG/L	750			4.22	4.23		1.55	8.46
Dissolved Oxygen (post)	MG/L	750							
Dissolved Oxygen (pre)	MG/L	750							
Nitrate Nitrogen	MG/L	750							
Nitrite Nitrogen	MG/L	750							
ORP	mV	750			107	138.8	213	97	68
ORP (post)	mV	750							
ORP (pre)	mV	750							
pH	Std units	750			6.97	6.56	7.23	7	7.69
pH (post)	Std units	750							
pH (pre)	Std units	750							
Sulfide	MG/L	750			0.1	0.28	0.17	0.05	0.01
Temperature	deg C	750			5	21.56	6.1	5.1	6.3
Turbidity	NTU	750			1.09	195	1.5	4.2	3.4
Turbidity (post)	NTU	750							
Turbidity (pre)	NTU	750							

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-17		MW25-17		MW25-17	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20018		25LM20024		25LM20028	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0.1	
Sample Date	1/31/2006		8/9/2006		8/11/2006		6/7/2007		6/7/2007	
QC Type	SA		SA		SA		DU		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		2		3		3	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	1 U			1 U
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U			1 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5		1 U	1 U			
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	1 U			2 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U			1 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene (total)	UG/L	100	GA	5						
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U	1 U			
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U			1 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U			1 U
Acetone	UG/L	100			5 U	5 U	5 U	5 U	5 U	10 UJ
Benzene	UG/L	100	GA	1	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	1 U	2 U	2 U	1 UJ
Carbon disulfide	UG/L	100			1 U	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	1 U	1 U	1 U	2 U
Chloroform	UG/L	100	GA	7	1 U	1 U	1 U	1 U	1 U	1 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	UG/L	100			1 U	1 U	1 U			1 U
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 U			1 UJ
Diisopropyl Ether	UG/L	100								
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U



**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-17	MW25-17	MW25-17	MW25-17				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20018	25LM20024	25LM20028	25LM20032				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	8/11/2006	6/7/2007	6/7/2007	3/4/2008				
QC Type	SA	SA	SA	DU	SA	DU				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	2	3	3	4				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5				2 U	2 U	1 U
Methyl Acetate	UG/L	100			1 U	1 U	1 U			10 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	2 U
Methyl butyl ketone	UG/L	100			5 U	5 U	5 U	2 U	2 U	5 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	2 U
Methyl cyclohexane	UG/L	100			1 U	1 U	1 U			1 U
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	5 U	2 U	2 U	0.75 J
Methyl isobutyl ketone	UG/L	100			5 U	5 U	5 U	1 U	1 U	5 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	1 U	1 U	1 U	1 U
Naphthalene	UG/L	100						1 U	1 U	
n-Butylbenzene	UG/L	100	GA	5						
Ortho Xylene	UG/L	100	GA	5				1 U	1 U	1 U
p-Isopropyltoluene	UG/L	100	GA	5		1 U	1 U			
Propylbenzene	UG/L	100	GA	5		1 U	1 U			
sec-Butylbenzene	UG/L	100	GA	5						
Styrene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	UG/L	100	GA	5						
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U	3 U			
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 U			1 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	1 U	1 U	1 U	1 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U	10 U			
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U	10 U			
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U	10 U			
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U	10 U			
2,4-Dimethylphenol	UG/L	400			10 U	10 U	10 U			
2,4-Dinitrophenol	UG/L	400			48 U	48 U	49 U			
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U	10 U			
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U	10 U			

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25			
Loc ID	MW25-10	MW25-10	MW25-17	MW25-17	MW25-17	MW25-17			
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER			
Sample ID	25LM20005	25LM20015	25LM20018	25LM20024	25LM20028	25LM20032			
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1			
Sample Date	1/31/2006	8/9/2006	8/11/2006	6/7/2007	6/7/2007	3/4/2008			
QC Type	SA	SA	SA	DU	SA	DU			
Study ID	LTM	LTM	LTM	LTM	LTM	LTM			
Sample Round	1	2	2	3	3	4			
Filtered	N	N	N	N	N	N			
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400		10 U	10 U	10 U			
2-Chlorophenol	UG/L	400		10 U	10 U	10 U			
2-Methylnaphthalene	UG/L	400		10 U	10 U	10 U			
2-Methylphenol	UG/L	400		10 U	10 U	10 U			
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U	49 U		
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U	10 U		
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U	20 U		
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U	49 U		
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U	49 U		
4-Bromophenyl phenyl ether	UG/L	400			10 U	10 U	10 U		
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U	10 U		
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U	10 U		
4-Chlorophenyl phenyl ether	UG/L	400			10 U	10 U	10 U		
4-Methylphenol	UG/L	400			10 U	10 U	10 U		
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U	49 U		
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U	49 U		
Acenaphthene	UG/L	400			10 U	10 U	10 U		
Acenaphthylene	UG/L	400			1 J	10 U	10 U		
Acetophenone	UG/L	400			10 U	10 U	10 U		
Anthracene	UG/L	400			10 U	10 U	10 U		
Atrazine	UG/L	400	GA	7.5	10 U	10 U	10 U		
Benzaldehyde	UG/L	400			48 U	48 U	49 U		
Benzo(a)anthracene	UG/L	400			10 U	10 U	10 U		
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U	10 U		
Benzo(b)fluoranthene	UG/L	400			10 U	10 U	10 U		
Benzo(ghi)perylene	UG/L	400			10 U	10 U	10 U		
Benzo(k)fluoranthene	UG/L	400			10 U	10 U	10 U		
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U	10 U		
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U	10 U		
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U	10 U		
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U	10 U		
Butylbenzylphthalate	UG/L	400			10 U	10 U	10 U		
Caprolactam	UG/L	400			10 U	10 U	10 U		
Carbazole	UG/L	400			10 U	10 U	10 U		

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-17	MW25-17	MW25-17	MW25-17				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20018	25LM20024	25LM20028	25LM20032				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	8/11/2006	6/7/2007	6/7/2007	3/4/2008				
QC Type	SA	SA	SA	DU	SA	DU				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	2	3	3	4				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Chrysene	UG/L	400			10 U	10 U	10 U			
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U	10 U			
Dibenzofuran	UG/L	400			10 U	10 U	10 U			
Diethyl phthalate	UG/L	400			10 U	10 U	10 U			
Dimethylphthalate	UG/L	400			10 U	10 U	10 U			
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U	10 U			
Di-n-octylphthalate	UG/L	400			10 U	10 U	10 U			
Fluoranthene	UG/L	400			10 U	10 U	10 U			
Fluorene	UG/L	400			10 U	10 UJ	10 U			
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U	10 U			
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U	10 U			
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U	44 U			
Hexachloroethane	UG/L	400	GA	5	10 U	10 U	10 U			
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U	10 U			
Isophorone	UG/L	400			10 U	10 U	10 U			
Naphthalene	UG/L	400			10 U	10 U	10 U			
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U	10 U			
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U	10 U			
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U	10 U			
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U	49 U			
Phenanthrene	UG/L	400			10 U	10 U	10 U			
Phenol	UG/L	400	GA	1	10 U	10 U	10 U			
Pyrene	UG/L	400			10 U	10 U	10 U			
Iron	UG/L	600	GA	300	62.8 J	358	8.8 U	390 J	490 J	100 U
Sodium	UG/L	600	GA	20000	8870	6530 J	5170 J	7700 J	9300 J	4690
Chloride	MG/L	700	GA	250	0.73	0.71 J	1.4 J	3.5	3.7	0.2 U
Ethane	UG/L	700			2 U	2 U	2 U	0.21	0.25	1 U
Ethene	UG/L	700			2 U	2 U	2 U	1.2	1.4	1 U
Methane	UG/L	700			2 U	2 U	2 U	6.1	7	2 U
Nitrate	MG/L	700	GA	10				6.4 J	0.48 J	
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U	0.11			0.798 J
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10						0.798
NITRITE	MG/L	700						0.73 J	0.5 UJ	
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U	0.05 U			0.01 UJ

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-17	MW25-17	MW25-17	MW25-17				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20018	25LM20024	25LM20028	25LM20032				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	8/11/2006	6/7/2007	6/7/2007	3/4/2008				
QC Type	SA	SA	SA	DU	SA	DU				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	2	3	3	4				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
Sulfate	MG/L	700	GA	250	18.1	18.4	16.3	19	18	19.6
Conductivity	S/m	750			0.464	0.701	0.593	0.418	0.418	0.532
Conductivity (post)	S/m	750								
Conductivity (pre)	S/m	750								
Dissolved Oxygen	MG/L	750			4.22	4.23	5.31	0.31	0.31	8.24
Dissolved Oxygen (post)	MG/L	750								
Dissolved Oxygen (pre)	MG/L	750								
Nitrate Nitrogen	MG/L	750								
Nitrite Nitrogen	MG/L	750								
ORP	mV	750			107	138.8	157	134	134	155
ORP (post)	mV	750								
ORP (pre)	mV	750								
pH	Std units	750			6.97	6.56	6.72	7.2	7.2	7.3
pH (post)	Std units	750								
pH (pre)	Std units	750								
Sulfide	MG/L	750			0.1	0.28	0.01 U	0.06	0.06	0.01
Temperature	deg C	750			5	21.56	18.27	13.2	13.2	6
Turbidity	NTU	750			1.09	195	1.7	12	12	2.03
Turbidity (post)	NTU	750								
Turbidity (pre)	NTU	750								

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-17		MW25-17		MW25-17	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20033		25LM20043		25LM20055	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0	
Sample Date	1/31/2006		8/9/2006		3/4/2008		4/28/2009		1/14/2010	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		4		5		6	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	1 U	1 U	0.32 U	0.32 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.09 U	0.09 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.4 U	0.4 U
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	0.2 U	0.2 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.14 U	0.14 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.37 U	0.37 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.19 U	0.19 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5		1 U				
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	2 U	2 U	0.43 U	0.43 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	1 U	1 U	0.18 U	0.18 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	0.4 U	0.4 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	1 U	1 U	0.14 U	0.14 U
1,2-Dichloroethene (total)	UG/L	100	GA	5						
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	0.15 U	0.15 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U				
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	0.36 U	0.36 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	0.34 U	0.34 U
Acetone	UG/L	100			5 U	5 U	10 UJ	5 U	5 U	1.6 U
Benzene	UG/L	100	GA	1	1 U	1 U	1 U	1 U	0.18 U	0.18 U
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	0.17 U	0.17 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	1 UJ	1.1 U	0.2 U	0.2 U
Carbon disulfide	UG/L	100			1 U	1 U	1 U	1 U	0.36 U	0.35 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.36 U	0.36 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.26 U	0.26 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	0.11 U	0.11 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	2 U	1 U	0.21 U	0.21 U
Chloroform	UG/L	100	GA	7	1 U	1 U	1 U	1 U	0.16 U	0.16 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.14 U	0.14 U
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	0.14 U	0.14 U
Cyclohexane	UG/L	100			1 U	1 U	1 U	1 U	0.14 U	0.14 U
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 UJ	1 U	0.18 U	0.18 U
Diisopropyl Ether	UG/L	100								
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.42 U	0.42 U
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.34 U	0.34 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-17		MW25-17		MW25-17	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20033		25LM20043		25LM20055	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0	
Sample Date	1/31/2006		8/9/2006		3/4/2008		4/28/2009		1/14/2010	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		4		5		6	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5			1 U	2 U	0.81 U	0.81 U
Methyl Acetate	UG/L	100			1 U	1 U	10 U	2 U	0.48 U	0.47 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	2 U	1 U	0.4 U	0.4 U
Methyl butyl ketone	UG/L	100			5 U	5 U	5 U	5 U	0.4 U	0.4 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	2 U	1 U	0.18 U	0.18 U
Methyl cyclohexane	UG/L	100			1 U	1 U	1 U	1 U	0.16 U	0.16 U
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	0.93 J	5 U	1 U	1 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	5 U	5 U	0.34 U	0.34 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	1 U	1 U	0.13 U	0.13 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	1 U	1 U	0.13 U	0.13 U
Naphthalene	UG/L	100								
n-Butylbenzene	UG/L	100	GA	5						
Ortho Xylene	UG/L	100	GA	5			1 U	1 U	0.4 U	0.4 U
p-Isopropyltoluene	UG/L	100	GA	5		1 U				
Propylbenzene	UG/L	100	GA	5		1 U				
sec-Butylbenzene	UG/L	100	GA	5						
Styrene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.36 U	0.35 U
tert-Butylbenzene	UG/L	100	GA	5						
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.42 U	0.42 U
Toluene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.21 U	0.21 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U				
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.16 U	0.16 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	0.17 U	0.17 U
Trichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.19 U	0.19 U
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 U	1 U	0.16 U	0.16 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	1 U	1 U	0.22 U	0.22 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U				
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U				
2,4-Dimethylphenol	UG/L	400			10 U	10 U				
2,4-Dinitrophenol	UG/L	400			48 U	48 U				
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25
Loc ID	MW25-10	MW25-10	MW25-17	MW25-17	MW25-17	MW25-17
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample ID	25LM20005	25LM20015	25LM20033	25LM20043	25LM20055	25LM20065
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0
Sample Date	1/31/2006	8/9/2006	3/4/2008	4/28/2009	1/14/2010	8/5/2010
QC Type	SA	SA	SA	SA	SA	SA
Study ID	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round	1	2	4	5	6	7
Filtered	N	N	N	N	N	N
Criteria	Source Criteria LOWEST-GW					
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400		10 U	10 U	
2-Chlorophenol	UG/L	400		10 U	10 U	
2-Methylnaphthalene	UG/L	400		10 U	10 U	
2-Methylphenol	UG/L	400		10 U	10 U	
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U
4-Bromophenyl phenyl ether	UG/L	400		10 U	10 U	
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U
4-Chlorophenyl phenyl ether	UG/L	400		10 U	10 U	
4-Methylphenol	UG/L	400		10 U	10 U	
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U
Acenaphthene	UG/L	400		10 U	10 U	
Acenaphthylene	UG/L	400		1 J	10 U	
Acetophenone	UG/L	400		10 U	10 U	
Anthracene	UG/L	400		10 U	10 U	
Atrazine	UG/L	400	GA	7.5	10 U	10 U
Benzaldehyde	UG/L	400		48 U	48 U	
Benzo(a)anthracene	UG/L	400		10 U	10 U	
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U
Benzo(b)fluoranthene	UG/L	400		10 U	10 U	
Benzo(ghi)perylene	UG/L	400		10 U	10 U	
Benzo(k)fluoranthene	UG/L	400		10 U	10 U	
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U
Butylbenzylphthalate	UG/L	400		10 U	10 U	
Caprolactam	UG/L	400		10 U	10 U	
Carbazole	UG/L	400		10 U	10 U	

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-17		MW25-17		MW25-17	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20033		25LM20043		25LM20055	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0	
Sample Date	1/31/2006		8/9/2006		3/4/2008		4/28/2009		1/14/2010	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		4		5		6	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Chrysene	UG/L	400			10 U	10 U				
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U				
Dibenzofuran	UG/L	400			10 U	10 U				
Diethyl phthalate	UG/L	400			10 U	10 U				
Dimethylphthalate	UG/L	400			10 U	10 U				
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U				
Di-n-octylphthalate	UG/L	400			10 U	10 U				
Fluoranthene	UG/L	400			10 U	10 U				
Fluorene	UG/L	400			10 U	10 UJ				
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U				
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U				
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U				
Hexachloroethane	UG/L	400	GA	5	10 U	10 U				
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U				
Isophorone	UG/L	400			10 U	10 U				
Naphthalene	UG/L	400			10 U	10 U				
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U				
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U				
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U				
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U				
Phenanthrene	UG/L	400			10 U	10 U				
Phenol	UG/L	400	GA	1	10 U	10 U				
Pyrene	UG/L	400			10 U	10 U				
Iron	UG/L	600	GA	300	62.8 J	358	100 U	160	86.9 J	56.4 J
Sodium	UG/L	600	GA	20000	8870	6530 J	4410	4700	4450	5650
Chloride	MG/L	700	GA	250	0.73	0.71 J	0.2 U	0.2 U	2.5	5.3
Ethane	UG/L	700			2 U	2 U	1 U	1 U	0.21 U	0.16 U
Ethene	UG/L	700			2 U	2 U	1 U	1 U	0.22 U	0.17 U
Methane	UG/L	700			2 U	2 U	2 U	2 U	0.14 U	0.14 U
Nitrate	MG/L	700	GA	10				0.05 U	0.245 J	
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U	1 J			
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10			1		0.245 J	0.484 J
NITRITE	MG/L	700						0.01 U	0.007 UJ	
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U	0.01 UJ			



**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-17	MW25-17	MW25-17	MW25-17				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20033	25LM20043	25LM20055	25LM20065				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0				
Sample Date	1/31/2006	8/9/2006	3/4/2008	4/28/2009	1/14/2010	8/5/2010				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	4	5	6	7				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
Sulfate	MG/L	700	GA	250	18.1	18.4	19.1	17.3	16.7 J	21.7
Conductivity	S/m	750			0.464	0.701	0.532	0.379	0.418	0.584
Conductivity (post)	S/m	750								
Conductivity (pre)	S/m	750								
Dissolved Oxygen	MG/L	750			4.22	4.23	8.24	7.45	6.79	4.1
Dissolved Oxygen (post)	MG/L	750								
Dissolved Oxygen (pre)	MG/L	750								
Nitrate Nitrogen	MG/L	750								
Nitrite Nitrogen	MG/L	750								
ORP	mV	750			107	138.8	155	192	211	61
ORP (post)	mV	750								
ORP (pre)	mV	750								
pH	Std units	750			6.97	6.56	7.3	7.31	7.29	7.25
pH (post)	Std units	750								
pH (pre)	Std units	750								
Sulfide	MG/L	750			0.1	0.28	0.01	0.01 U	0	0
Temperature	deg C	750			5	21.56	6	7.2	8.1	17.6
Turbidity	NTU	750			1.09	195	2.03	1.2	1.4	2.45
Turbidity (post)	NTU	750								
Turbidity (pre)	NTU	750								

**Appendix D Table D-1**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-17		MW25-17		MW25-18	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20076		25LM20088		25LM20009	
Sample Depth Interval (FT)	0-0.1		0-0.1		10.3-10.3		10.23-10.23		0-0.1	
Sample Date	1/31/2006		8/9/2006		2/10/2011		2/28/2012		1/30/2006	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		8		9		1	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	0.2 UJ	0.2 U	1 U	1 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	0.38 UJ	0.38 U	1 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	0.31 U	0.31 UJ	1 UJ	1 U
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	0.33 UJ	0.33 U	1 U	1 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	0.21 UJ	0.21 U	1 U	1 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.35 UJ	0.35 U	1 U	1 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	0.37 UJ	0.37 U	1 U	1 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5	1 U	1 U	0.19 UJ	0.19 U		1 U
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	0.5 U	0.5 U	1 U	1 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	0.22 UJ	0.22 U	1 U	1 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.15 UJ	0.15 U	1 U	1 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	0.2 UJ	0.2 U	1 U	1 U
1,2-Dichloroethene (total)	UG/L	100	GA	5			0.21 UJ	0.21 UJ		
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	0.25 UJ	0.25 U	1 U	1 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U	0.2 UJ	0.2 U		1 U
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.26 UJ	0.26 U	1 U	1 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.24 UJ	0.24 U	1 U	1 U
Acetone	UG/L	100			5 U	5 U	2.2 U	2.2 U	5 U	5 U
Benzene	UG/L	100	GA	1	1 U	1 U	0.26 UJ	0.26 U	1 U	1 U
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	0.33 UJ	0.33 U	1 U	1 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	0.23 UJ	0.23 U	1 U	1 U
Carbon disulfide	UG/L	100			1 U	1 U	0.25 U	0.25 U	1 U	1 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	0.22 UJ	0.22 U	1 U	1 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	0.22 UJ	0.22 U	1 U	1 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	0.3 UJ	0.3 U	1 U	1 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	0.55 U	0.55 U	1 U	1 U
Chloroform	UG/L	100	GA	7	1 U	1 U	0.32 UJ	0.32 U	1 U	1 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.21 UJ	0.21 U	1 U	1 U
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	0.19 UJ	0.19 UJ	1 U	1 U
Cyclohexane	UG/L	100			1 U	1 U	0.31 UJ	0.31 U	1 UJ	1 U
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U			1 U	1 U
Diisopropyl Ether	UG/L	100					0.21 U	0.21 U		
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	0.21 UJ	0.21 U	1 U	1 U
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	0.23 UJ	0.23 U	1 U	1 U

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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-17	MW25-17	MW25-18	MW25-18				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20076	25LM20088	25LM20009	25LM20019				
Sample Depth Interval (FT)	0-0.1	0-0.1	10.3-10.3	10.23-10.23	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	2/10/2011	2/28/2012	1/30/2006	8/14/2006				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	8	9	1	2				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5			0.59 UJ	0.59 U		
Methyl Acetate	UG/L	100			1 U	1 U	0.53 U	0.53 U	1 U	1 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	0.49 U	0.49 UJ	1 U	1 U
Methyl butyl ketone	UG/L	100			5 U	5 U	1.7 U	1.7 U	5 U	5 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	0.36 U	0.36 UJ	1 U	1 U
Methyl cyclohexane	UG/L	100			1 U	1 U	0.3 U	0.3 U	1 U	1 U
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	1.3 U	1.3 U	5 U	5 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	1.3 U	1.3 U	5 U	5 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	0.36 U	0.36 U	1 U	1 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	1.1 U	1.1 U	1 U	1 U
Naphthalene	UG/L	100					0.3 UJ	0.3 U		
n-Butylbenzene	UG/L	100	GA	5			0.23 UJ	0.23 U		
Ortho Xylene	UG/L	100	GA	5			0.25 UJ	0.25 U		
p-Isopropyltoluene	UG/L	100	GA	5		1 U				1 U
Propylbenzene	UG/L	100	GA	5		1 U				1 U
sec-Butylbenzene	UG/L	100	GA	5			0.21 UJ	0.21 U		
Styrene	UG/L	100	GA	5	1 U	1 U	0.23 UJ	0.23 U	1 U	1 U
tert-Butylbenzene	UG/L	100	GA	5			0.31 UJ	0.31 U		
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	0.4 U	0.4 U	1 U	1 U
Toluene	UG/L	100	GA	5	1 U	1 U	0.27 UJ	0.27 U	1 U	1 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U	0.25 UJ	0.25 U	3 U	3 U
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.25 U	0.25 U	1 U	1 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	0.2 UJ	0.2 UJ	1 U	1 U
Trichloroethene	UG/L	100	GA	5	1 U	1 U	0.28 UJ	0.28 U	1 U	1 U
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	0.24 U	0.24 U	1 U	1 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	0.25 U	0.25 U	1 U	1 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U			10 U	10 U
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U			10 U	10 U
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U			10 U	10 U
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U			10 U	10 U
2,4-Dimethylphenol	UG/L	400			10 U	10 U			10 U	10 U
2,4-Dinitrophenol	UG/L	400			48 U	48 U			48 U	48 UJ
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U			10 U	10 U
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U			10 U	10 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-17		MW25-17		MW25-18	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20076		25LM20088		25LM20009	
Sample Depth Interval (FT)	0-0.1		0-0.1		10.3-10.3		10.23-10.23		0-0.1	
Sample Date	1/31/2006		8/9/2006		2/10/2011		2/28/2012		1/30/2006	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		8		9		1	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400			10 U	10 U			10 U	10 U
2-Chlorophenol	UG/L	400			10 U	10 U			10 U	10 U
2-Methylnaphthalene	UG/L	400			10 U	10 U			10 U	10 U
2-Methylphenol	UG/L	400			10 U	10 U			10 U	10 U
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U			48 U	48 U
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U			10 U	10 U
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U			19 U	19 U
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U			48 U	48 U
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U			48 U	48 U
4-Bromophenyl phenyl ether	UG/L	400			10 U	10 U			10 U	10 U
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U			10 U	10 U
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U			10 U	10 U
4-Chlorophenyl phenyl ether	UG/L	400			10 U	10 U			10 U	10 U
4-Methylphenol	UG/L	400			10 U	10 U			10 U	10 U
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U			48 U	48 U
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U			48 U	48 U
Acenaphthene	UG/L	400			10 U	10 U			10 U	10 U
Acenaphthylene	UG/L	400			1 J	10 U			10 U	10 U
Acetophenone	UG/L	400			10 U	10 U			10 U	10 U
Anthracene	UG/L	400			10 U	10 U			10 U	10 U
Atrazine	UG/L	400	GA	7.5	10 U	10 U			10 U	10 U
Benzaldehyde	UG/L	400			48 U	48 U			48 U	48 U
Benzo(a)anthracene	UG/L	400			10 U	10 U			10 U	10 U
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U			10 U	10 U
Benzo(b)fluoranthene	UG/L	400			10 U	10 U			10 U	10 U
Benzo(ghi)perylene	UG/L	400			10 U	10 U			10 U	10 U
Benzo(k)fluoranthene	UG/L	400			10 U	10 U			10 U	10 U
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U			10 U	10 U
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U			10 U	10 U
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U			10 U	10 U
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U			10 U	11
Butylbenzylphthalate	UG/L	400			10 U	10 U			10 U	2 J
Caprolactam	UG/L	400			10 U	10 U			10 U	10 U
Carbazole	UG/L	400			10 U	10 U			10 U	10 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-17	MW25-17	MW25-18	MW25-18				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20076	25LM20088	25LM20009	25LM20019				
Sample Depth Interval (FT)	0-0.1	0-0.1	10.3-10.3	10.23-10.23	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	2/10/2011	2/28/2012	1/30/2006	8/14/2006				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	8	9	1	2				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
Chrysene	UG/L	400		10 U	10 U			10 U	10 U	
Dibenz(a,h)anthracene	UG/L	400		10 U	10 U			10 U	10 U	
Dibenzofuran	UG/L	400		10 U	10 U			10 U	10 U	
Diethyl phthalate	UG/L	400		10 U	10 U			10 U	10 U	
Dimethylphthalate	UG/L	400		10 U	10 U			10 U	10 U	
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U		10 U	10 U	
Di-n-octylphthalate	UG/L	400			10 U	10 U		10 U	10 UJ	
Fluoranthene	UG/L	400			10 U	10 U		10 U	10 U	
Fluorene	UG/L	400			10 U	10 UJ		10 U	10 U	
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U		10 U	10 U	
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U		10 U	10 U	
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U		43 U	44 U	
Hexachloroethane	UG/L	400	GA	5	10 U	10 U		10 U	10 U	
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U		10 U	10 U	
Isophorone	UG/L	400			10 U	10 U		10 U	10 U	
Naphthalene	UG/L	400			10 U	10 U		10 U	10 U	
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U		10 U	10 U	
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U		10 U	10 U	
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U		10 U	10 U	
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U		48 U	48 U	
Phenanthrene	UG/L	400			10 U	10 U		10 U	10 U	
Phenol	UG/L	400	GA	1	10 U	10 U		10 U	10 U	
Pyrene	UG/L	400			10 U	10 U		10 U	10 U	
Iron	UG/L	600	GA	300	62.8 J	358	15.9 J	22.4 J	462 J	357
Sodium	UG/L	600	GA	20000	8870	6530 J	4470	4370	22300	41900 J
Chloride	MG/L	700	GA	250	0.73	0.71 J	2.3	0.47 J	18.6	55.6
Ethane	UG/L	700			2 U	2 U	0.58 U	0.58 U	2 U	2 U
Ethene	UG/L	700			2 U	2 U	0.69 U	0.69 U	2 U	2 U
Methane	UG/L	700			2 U	2 U	0.98 J	0.93 J	2 U	2 U
Nitrate	MG/L	700	GA	10			0.27	0.12		
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U			0.05 U	0.32
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10						
NITRITE	MG/L	700								
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U			0.05 U	0.05 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-17	MW25-17	MW25-18	MW25-18				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20076	25LM20088	25LM20009	25LM20019				
Sample Depth Interval (FT)	0-0.1	0-0.1	10.3-10.3	10.23-10.23	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	2/10/2011	2/28/2012	1/30/2006	8/14/2006				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	8	9	1	2				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
Sulfate	MG/L	700	GA	250	18.1	18.4	16 J	11 J	24.8	30.1
Conductivity	S/m	750			0.464	0.701		0.423	0.494	0.858
Conductivity (post)	S/m	750					0.599			
Conductivity (pre)	S/m	750					0.547			
Dissolved Oxygen	MG/L	750			4.22	4.23		6.91	3.99	6.21
Dissolved Oxygen (post)	MG/L	750					5.17			
Dissolved Oxygen (pre)	MG/L	750					5.36			
Nitrate Nitrogen	MG/L	750					0.1			
Nitrite Nitrogen	MG/L	750					0.004			
ORP	mV	750			107	138.8		196	63	46
ORP (post)	mV	750					192			
ORP (pre)	mV	750					193			
pH	Std units	750			6.97	6.56		7.48	7.62	7.32
pH (post)	Std units	750					7.38			
pH (pre)	Std units	750					7.38			
Sulfide	MG/L	750			0.1	0.28	0	0	0.12	0.02
Temperature	deg C	750			5	21.56	6.4	6.5	7.2	24.41
Turbidity	NTU	750			1.09	195		3.47	31.8	6.22
Turbidity (post)	NTU	750					0			
Turbidity (pre)	NTU	750					0			

**Appendix D Table D-1**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-18		MW25-18		MW25-18	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20029		25LM20034		25LM20044	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0.1	
Sample Date	1/31/2006		8/9/2006		6/6/2007		3/5/2008		4/28/2009	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		3		4		5	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	1 UJ	1 U	1 U	0.32 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	0.09 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U		1 U	1 U	0.4 U
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	1 UJ	1 U	1 U	0.2 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	0.14 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	0.37 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U		1 U	1 U	0.19 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5		1 U				
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U		2 U	2 U	0.43 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	1 UJ	1 U	1 U	0.18 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U		1 U	1 U	0.4 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	1 UJ	1 U	1 U	0.14 U
1,2-Dichloroethene (total)	UG/L	100	GA	5						
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	1 UJ	1 U	1 U	0.15 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U				
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U		1 U	1 U	0.36 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U		1 U	1 U	0.34 U
Acetone	UG/L	100			5 U	5 U	5 UJ	10 UJ	5 U	5 U
Benzene	UG/L	100	GA	1	1 U	1 U	1 UJ	1 U	1 U	0.18 U
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	1 UJ	1 U	1 U	0.17 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	2 UJ	1 UJ	1.1 U	0.2 U
Carbon disulfide	UG/L	100			1 U	1 U	1 UJ	1 U	1 U	0.36 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	0.36 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	0.26 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	1 UJ	1 U	1 U	0.11 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	1 UJ	2 U	1 U	0.21 U
Chloroform	UG/L	100	GA	7	1 U	1 U	1 UJ	1 U	1 U	0.16 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	0.14 U
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 UJ	1 U	1 U	0.14 U
Cyclohexane	UG/L	100			1 U	1 U		1 U	1 U	0.14 U
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U		1 UJ	1 U	0.18 U
Diisopropyl Ether	UG/L	100								
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	0.42 U
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	0.34 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-18		MW25-18		MW25-18	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20029		25LM20034		25LM20044	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0.1	
Sample Date	1/31/2006		8/9/2006		6/6/2007		3/5/2008		4/28/2009	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		3		4		5	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5			2 UJ	1 U	2 U	0.81 U
Methyl Acetate	UG/L	100			1 U	1 U		10 U	2 U	0.48 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	1 UJ	2 U	1 U	0.4 U
Methyl butyl ketone	UG/L	100			5 U	5 U	2 U	5 U	5 U	0.4 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	1 UJ	2 U	1 U	0.18 U
Methyl cyclohexane	UG/L	100			1 U	1 U		1 U	1 U	0.16 U
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	2 UJ	0.5 J	5 U	1 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	1 UJ	5 U	5 U	0.34 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	1 UJ	1 U	1 U	0.13 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	1 UJ	1 U	1 U	0.13 U
Naphthalene	UG/L	100					1 UJ			
n-Butylbenzene	UG/L	100	GA	5						
Ortho Xylene	UG/L	100	GA	5			1 UJ	1 U	1 U	0.4 U
p-Isopropyltoluene	UG/L	100	GA	5		1 U				
Propylbenzene	UG/L	100	GA	5		1 U				
sec-Butylbenzene	UG/L	100	GA	5						
Styrene	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	0.36 U
tert-Butylbenzene	UG/L	100	GA	5						
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	0.42 U
Toluene	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	0.21 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U				
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	0.16 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 UJ	1 U	1 U	0.17 U
Trichloroethene	UG/L	100	GA	5	1 U	1 U	1 UJ	1 U	1 U	0.19 U
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U		1 U	1 U	0.16 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	1 UJ	1 U	1 U	0.22 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U				
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U				
2,4-Dimethylphenol	UG/L	400			10 U	10 U				
2,4-Dinitrophenol	UG/L	400			48 U	48 U				
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				



**Appendix D Table D-1**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25
Loc ID	MW25-10	MW25-10	MW25-18	MW25-18	MW25-18	MW25-18
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample ID	25LM20005	25LM20015	25LM20029	25LM20034	25LM20044	25LM20056
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Sample Date	1/31/2006	8/9/2006	6/6/2007	3/5/2008	4/28/2009	1/14/2010
QC Type	SA	SA	SA	SA	SA	SA
Study ID	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round	1	2	3	4	5	6
Filtered	N	N	N	N	N	N
Criteria	Source Criteria LOWEST-GW					
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400		10 U	10 U	
2-Chlorophenol	UG/L	400		10 U	10 U	
2-Methylnaphthalene	UG/L	400		10 U	10 U	
2-Methylphenol	UG/L	400		10 U	10 U	
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U
4-Bromophenyl phenyl ether	UG/L	400		10 U	10 U	
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U
4-Chlorophenyl phenyl ether	UG/L	400		10 U	10 U	
4-Methylphenol	UG/L	400		10 U	10 U	
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U
Acenaphthene	UG/L	400		10 U	10 U	
Acenaphthylene	UG/L	400		1 J	10 U	
Acetophenone	UG/L	400		10 U	10 U	
Anthracene	UG/L	400		10 U	10 U	
Atrazine	UG/L	400	GA	7.5	10 U	10 U
Benzaldehyde	UG/L	400		48 U	48 U	
Benzo(a)anthracene	UG/L	400		10 U	10 U	
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U
Benzo(b)fluoranthene	UG/L	400		10 U	10 U	
Benzo(ghi)perylene	UG/L	400		10 U	10 U	
Benzo(k)fluoranthene	UG/L	400		10 U	10 U	
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U
Butylbenzylphthalate	UG/L	400		10 U	10 U	
Caprolactam	UG/L	400		10 U	10 U	
Carbazole	UG/L	400		10 U	10 U	

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-18		MW25-18		MW25-18	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20029		25LM20034		25LM20044	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0.1	
Sample Date	1/31/2006		8/9/2006		6/6/2007		3/5/2008		4/28/2009	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		3		4		5	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Chrysene	UG/L	400			10 U	10 U				
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U				
Dibenzofuran	UG/L	400			10 U	10 U				
Diethyl phthalate	UG/L	400			10 U	10 U				
Dimethylphthalate	UG/L	400			10 U	10 U				
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U				
Di-n-octylphthalate	UG/L	400			10 U	10 U				
Fluoranthene	UG/L	400			10 U	10 U				
Fluorene	UG/L	400			10 U	10 UJ				
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U				
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U				
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U				
Hexachloroethane	UG/L	400	GA	5	10 U	10 U				
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U				
Isophorone	UG/L	400			10 U	10 U				
Naphthalene	UG/L	400			10 U	10 U				
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U				
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U				
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U				
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U				
Phenanthrene	UG/L	400			10 U	10 U				
Phenol	UG/L	400	GA	1	10 U	10 U				
Pyrene	UG/L	400			10 U	10 U				
Iron	UG/L	600	GA	300	62.8 J	358	500 J	107	100 J	122
Sodium	UG/L	600	GA	20000	8870	6530 J	37000 J	20400	19000	28400
Chloride	MG/L	700	GA	250	0.73	0.71 J	59	18	16.3	51.7
Ethane	UG/L	700			2 U	2 U	0.024 J	1 U	1 U	0.16 U
Ethene	UG/L	700			2 U	2 U	2	1 U	1 U	0.17 U
Methane	UG/L	700			2 U	2 U	2	2 U	2 U	0.14 U
Nitrate	MG/L	700	GA	10			1.5 J		0.05 U	0.2 J
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U		0.199 J		
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10				0.199		0.2 J
NITRITE	MG/L	700					0.5		0.01 U	0.007 UJ
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U		0.01 UJ		

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-18	MW25-18	MW25-18	MW25-18				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20029	25LM20034	25LM20044	25LM20056				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	6/6/2007	3/5/2008	4/28/2009	1/14/2010				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	3	4	5	6				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
Sulfate	MG/L	700	GA	250	18.1	18.4	31	16.8	22.8	26.8 J
Conductivity	S/m	750			0.464	0.701	0.54	0.713	0.385	0.544
Conductivity (post)	S/m	750								
Conductivity (pre)	S/m	750								
Dissolved Oxygen	MG/L	750			4.22	4.23	0.96	4.68	4.43	4.39
Dissolved Oxygen (post)	MG/L	750								
Dissolved Oxygen (pre)	MG/L	750								
Nitrate Nitrogen	MG/L	750								
Nitrite Nitrogen	MG/L	750								
ORP	mV	750			107	138.8	98	144	150	237
ORP (post)	mV	750								
ORP (pre)	mV	750								
pH	Std units	750			6.97	6.56	7.15	7.31	7.3	7.28
pH (post)	Std units	750								
pH (pre)	Std units	750								
Sulfide	MG/L	750			0.1	0.28	1.04	0.01	0.01 U	0.06
Temperature	deg C	750			5	21.56	13	4.9	7.1	8
Turbidity	NTU	750			1.09	195	11	5.04	11	2.78
Turbidity (post)	NTU	750								
Turbidity (pre)	NTU	750								

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25		
Loc ID	MW25-10		MW25-10		MW25-18		MW25-18		MW25-19		
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		
Sample ID	25LM20005		25LM20015		25LM20066		25LM20077		25LM20089		
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0		10.18-10.18		10.15-10.15		
Sample Date	1/31/2006		8/9/2006		8/5/2010		2/10/2011		2/29/2012		
QC Type	SA		SA		SA		SA		SA		
Study ID	LTM		LTM		LTM		LTM		LTM		
Sample Round	1		2		7		8		9		
Filtered	N		N		N		N		N		
Criteria	Source Criteria LOWEST-GW										
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	0.32 U	0.2 UJ	0.2 U	1 U	
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	0.09 U	0.38 UJ	0.38 U	1 U	
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	0.4 U	0.31 U	0.31 UJ		
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	0.2 U	0.33 UJ	0.33 U	1 U	
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	0.14 U	0.21 UJ	0.21 U	1 U	
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.37 U	0.35 UJ	0.35 U	1 U	
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	0.19 U	0.37 UJ	0.37 U		
1,2,4-Trimethylbenzene	UG/L	100	GA	5	1 U	1 U		0.19 UJ	0.19 U		
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	0.43 U	0.5 U	0.5 U		
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	0.18 U	0.22 UJ	0.22 U	1 U	
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.4 U	0.15 UJ	0.15 U		
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	0.14 U	0.2 UJ	0.2 U	1 U	
1,2-Dichloroethene (total)	UG/L	100	GA	5				0.21 UJ	0.21 UJ		
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	0.15 U	0.25 UJ	0.25 U	1 U	
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U		0.2 UJ	0.2 U		
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.36 U	0.26 UJ	0.26 U		
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.34 U	0.24 UJ	0.24 U		
Acetone	UG/L	100			5 U	5 U	1.6 U	2.2 U	2.2 U	5 U	
Benzene	UG/L	100	GA	1	1 U	1 U	0.18 U	0.26 UJ	0.26 U	1 U	
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	0.17 U	0.33 UJ	0.33 U	1 U	
Bromoform	UG/L	100	MCL	80	1 U	1 U	0.2 U	0.23 UJ	0.23 U	2 U	
Carbon disulfide	UG/L	100			1 U	1 U	0.35 U	0.25 U	0.25 U	1 U	
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	0.36 U	0.22 UJ	0.22 U	1 U	
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	0.26 U	0.22 UJ	0.22 U	1 U	
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	0.11 U	0.3 UJ	0.3 U	1 U	
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	0.21 U	0.55 U	0.55 U	1 U	
Chloroform	UG/L	100	GA	7	1 U	1 U	0.16 U	0.32 UJ	0.32 U	1 U	
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.14 U	0.21 UJ	0.21 U	0.2 J	
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	0.14 U	0.19 UJ	0.19 UJ	1 U	
Cyclohexane	UG/L	100			1 U	1 U	0.14 U	0.31 UJ	0.31 U		
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	0.18 U				
Diisopropyl Ether	UG/L	100						0.21 U	0.21 U		
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	0.42 U	0.21 UJ	0.21 U	1 U	
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	0.34 U	0.23 UJ	0.23 U	1 U	

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25		
Loc ID	MW25-10		MW25-10		MW25-18		MW25-18		MW25-19		
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		
Sample ID	25LM20005		25LM20015		25LM20066		25LM20077		25LM20089		
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0		10.18-10.18		10.15-10.15		
Sample Date	1/31/2006		8/9/2006		8/5/2010		2/10/2011		2/29/2012		
QC Type	SA		SA		SA		SA		SA		
Study ID	LTM		LTM		LTM		LTM		LTM		
Sample Round	1		2		7		8		9		
Filtered	N		N		N		N		N		
Criteria	Source Criteria LOWEST-GW										
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
Meta/Para Xylene	UG/L	100	GA	5			0.81 U	0.59 UJ	0.59 U	2 U	
Methyl Acetate	UG/L	100			1 U	1 U	0.47 U	0.53 U	0.53 U		
Methyl bromide	UG/L	100	GA	5	1 U	1 U	0.4 U	0.49 U	0.49 UJ	1 U	
Methyl butyl ketone	UG/L	100			5 U	5 U	0.4 U	1.7 U	1.7 U	2 U	
Methyl chloride	UG/L	100	GA	5	1 U	1 U	0.18 U	0.36 U	0.36 U	1 U	
Methyl cyclohexane	UG/L	100			1 U	1 U	0.16 U	0.3 U	0.3 U		
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	1 U	1.3 U	1.3 U	2 U	
Methyl isobutyl ketone	UG/L	100			5 U	5 U	0.34 U	1.3 U	1.3 U	1 U	
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	0.13 U	0.36 U	0.36 U	1 U	
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	0.13 U	1.1 U	1.1 U	1 U	
Naphthalene	UG/L	100						0.3 UJ	0.3 U	1 U	
n-Butylbenzene	UG/L	100	GA	5				0.23 UJ	0.23 U		
Ortho Xylene	UG/L	100	GA	5			0.4 U	0.25 UJ	0.25 U	1 U	
p-Isopropyltoluene	UG/L	100	GA	5		1 U					
Propylbenzene	UG/L	100	GA	5		1 U					
sec-Butylbenzene	UG/L	100	GA	5				0.21 UJ	0.21 U		
Styrene	UG/L	100	GA	5	1 U	1 U	0.35 U	0.23 UJ	0.23 U	1 U	
tert-Butylbenzene	UG/L	100	GA	5				0.31 UJ	0.31 U		
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	0.42 U	0.4 U	0.4 U	1 U	
Toluene	UG/L	100	GA	5	1 U	1 U	0.21 U	0.27 UJ	0.27 U	1 U	
Total Xylenes	UG/L	100	GA	5	3 U	3 U		0.25 UJ	0.25 U		
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.16 U	0.25 U	0.25 U	1 U	
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	0.17 U	0.2 UJ	0.2 UJ	1 U	
Trichloroethene	UG/L	100	GA	5	1 U	1 U	0.19 U	0.28 UJ	0.28 U	1 U	
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	0.16 U	0.24 U	0.24 U		
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	0.22 U	0.25 U	0.25 U	1 U	
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U					
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U					
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U					
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U					
2,4-Dimethylphenol	UG/L	400			10 U	10 U					
2,4-Dinitrophenol	UG/L	400			48 U	48 U					
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U					
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U					

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25
Loc ID	MW25-10	MW25-10	MW25-18	MW25-18	MW25-18	MW25-19
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample ID	25LM20005	25LM20015	25LM20066	25LM20077	25LM20089	25LM20030
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0	10.18-10.18	10.15-10.15	0-0.1
Sample Date	1/31/2006	8/9/2006	8/5/2010	2/10/2011	2/29/2012	6/7/2007
QC Type	SA	SA	SA	SA	SA	SA
Study ID	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round	1	2	7	8	9	3
Filtered	N	N	N	N	N	N
Criteria	Source Criteria LOWEST-GW					
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400		10 U	10 U	
2-Chlorophenol	UG/L	400		10 U	10 U	
2-Methylnaphthalene	UG/L	400		10 U	10 U	
2-Methylphenol	UG/L	400		10 U	10 U	
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U
4-Bromophenyl phenyl ether	UG/L	400		10 U	10 U	
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U
4-Chlorophenyl phenyl ether	UG/L	400		10 U	10 U	
4-Methylphenol	UG/L	400		10 U	10 U	
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U
Acenaphthene	UG/L	400		10 U	10 U	
Acenaphthylene	UG/L	400		1 J	10 U	
Acetophenone	UG/L	400		10 U	10 U	
Anthracene	UG/L	400		10 U	10 U	
Atrazine	UG/L	400	GA	7.5	10 U	10 U
Benzaldehyde	UG/L	400		48 U	48 U	
Benzo(a)anthracene	UG/L	400		10 U	10 U	
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U
Benzo(b)fluoranthene	UG/L	400		10 U	10 U	
Benzo(ghi)perylene	UG/L	400		10 U	10 U	
Benzo(k)fluoranthene	UG/L	400		10 U	10 U	
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U
Butylbenzylphthalate	UG/L	400		10 U	10 U	
Caprolactam	UG/L	400		10 U	10 U	
Carbazole	UG/L	400		10 U	10 U	

**Appendix D Table D-1**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-18		MW25-18		MW25-19	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20066		25LM20077		25LM20089	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0		10.18-10.18		10.15-10.15	
Sample Date	1/31/2006		8/9/2006		8/5/2010		2/10/2011		2/29/2012	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		7		8		9	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Chrysene	UG/L	400			10 U	10 U				
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U				
Dibenzofuran	UG/L	400			10 U	10 U				
Diethyl phthalate	UG/L	400			10 U	10 U				
Dimethylphthalate	UG/L	400			10 U	10 U				
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U				
Di-n-octylphthalate	UG/L	400			10 U	10 U				
Fluoranthene	UG/L	400			10 U	10 U				
Fluorene	UG/L	400			10 U	10 UJ				
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U				
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U				
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U				
Hexachloroethane	UG/L	400	GA	5	10 U	10 U				
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U				
Isophorone	UG/L	400			10 U	10 U				
Naphthalene	UG/L	400			10 U	10 U				
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U				
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U				
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U				
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U				
Phenanthrene	UG/L	400			10 U	10 U				
Phenol	UG/L	400	GA	1	10 U	10 U				
Pyrene	UG/L	400			10 U	10 U				
Iron	UG/L	600	GA	300	62.8 J	358	83.8 J	250	446 J	1200 J
Sodium	UG/L	600	GA	20000	8870	6530 J	58100	41900	27300	3800 J
Chloride	MG/L	700	GA	250	0.73	0.71 J	97.9	72	20 J	4.5
Ethane	UG/L	700			2 U	2 U	0.16 U	0.58 U	0.58 U	1.1
Ethene	UG/L	700			2 U	2 U	0.17 U	0.69 U	0.69 U	4.6
Methane	UG/L	700			2 U	2 U	0.14 U	1.3 J	1.9 J	29
Nitrate	MG/L	700	GA	10				0.18	0.13	1.4 J
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U				
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10			0.18 J			
NITRITE	MG/L	700								0.72 J
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U				

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-18	MW25-18	MW25-18	MW25-19				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20066	25LM20077	25LM20089	25LM20030				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0	10.18-10.18	10.15-10.15	0-0.1				
Sample Date	1/31/2006	8/9/2006	8/5/2010	2/10/2011	2/29/2012	6/7/2007				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	7	8	9	3				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Sulfate	MG/L	700	GA	250	18.1	18.4	40.2	32 J	21 J	23
Conductivity	S/m	750			0.464	0.701	0.893		0.548	0.427
Conductivity (post)	S/m	750						0.844		
Conductivity (pre)	S/m	750						0.83		
Dissolved Oxygen	MG/L	750			4.22	4.23	2.1		3.89	0.05
Dissolved Oxygen (post)	MG/L	750						2.99		
Dissolved Oxygen (pre)	MG/L	750						3.52		
Nitrate Nitrogen	MG/L	750						0.5		
Nitrite Nitrogen	MG/L	750						0.2		
ORP	mV	750			107	138.8	123		70	117
ORP (post)	mV	750						185		
ORP (pre)	mV	750						187		
pH	Std units	750			6.97	6.56	7.21		7.16	7.04
pH (post)	Std units	750						7.29		
pH (pre)	Std units	750						7.3		
Sulfide	MG/L	750			0.1	0.28	0.01	0.03	0.01	0.1
Temperature	deg C	750			5	21.56	19.3	6.3	6.7	13.4
Turbidity	NTU	750			1.09	195	3.12		3.66	17
Turbidity (post)	NTU	750						7.6		
Turbidity (pre)	NTU	750						0		



**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-19		MW25-19		MW25-19	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20035		25LM20045		25LM20057	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0	
Sample Date	1/31/2006		8/9/2006		3/3/2008		4/28/2009		1/13/2010	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		4		5		6	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	1 U	1 U	0.32 U	0.8 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.09 U	0.23 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.4 U	1 U
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	0.2 U	0.5 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.14 U	0.36 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.37 U	0.93 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.19 U	0.48 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5		1 U				
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	2 U	2 U	0.43 U	1.1 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	1 U	1 U	0.18 U	0.45 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	0.4 U	1 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	1 U	1 U	0.14 U	0.36 U
1,2-Dichloroethene (total)	UG/L	100	GA	5						
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	0.15 U	0.38 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U				
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	0.36 U	0.9 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	0.34 U	0.86 U
Acetone	UG/L	100			5 U	5 U	10 UJ	1.4 J	5 U	4 U
Benzene	UG/L	100	GA	1	1 U	1 U	1 U	1 U	0.18 U	0.45 U
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	0.17 U	0.43 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	1 UJ	1 U	0.2 U	0.5 U
Carbon disulfide	UG/L	100			1 U	1 U	1 U	1 U	0.36 U	0.88 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.36 U	0.9 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.26 U	0.65 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	0.11 U	0.28 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	2 U	1 U	0.21 U	0.53 U
Chloroform	UG/L	100	GA	7	1 U	1 U	1 U	1 U	0.16 U	0.4 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.14 U	0.36 U
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	0.14 U	0.36 U
Cyclohexane	UG/L	100			1 U	1 U	1 U	1 U	0.14 U	0.36 U
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 UJ	1 U	0.18 U	0.45 U
Diisopropyl Ether	UG/L	100								
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.42 U	1.1 U
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.34 U	0.86 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-19		MW25-19		MW25-19	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20035		25LM20045		25LM20057	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0	
Sample Date	1/31/2006		8/9/2006		3/3/2008		4/28/2009		1/13/2010	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		4		5		6	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5			1 U	2 U	0.81 U	2.1 U
Methyl Acetate	UG/L	100			1 U	1 U	10 U	2 U	0.48 U	1.2 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	2 U	1 U	0.4 U	1 U
Methyl butyl ketone	UG/L	100			5 U	5 U	5 U	5 U	0.4 U	1 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	2 U	1 U	0.18 U	0.45 U
Methyl cyclohexane	UG/L	100			1 U	1 U	1 U	1 U	0.16 U	0.4 U
Methyl ethyl ketone	UG/L	100			5 U	5 U	5 U	5 U	1 U	2.5 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	5 U	5 U	0.34 U	0.86 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	1 U	1 U	0.13 U	0.33 U
Methylene chloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.13 U	0.33 U
Naphthalene	UG/L	100								
n-Butylbenzene	UG/L	100	GA	5						
Ortho Xylene	UG/L	100	GA	5			1 U	1 U	0.4 U	1 U
p-Isopropyltoluene	UG/L	100	GA	5		1 U				
Propylbenzene	UG/L	100	GA	5		1 U				
sec-Butylbenzene	UG/L	100	GA	5						
Styrene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.36 U	0.88 U
tert-Butylbenzene	UG/L	100	GA	5						
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.42 U	1.1 U
Toluene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.21 U	0.53 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U				
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.16 U	0.4 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	0.17 U	0.43 U
Trichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.19 U	0.48 U
Trichlorofluoromethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.16 U	0.4 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	1 U	1 U	0.22 U	0.55 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U				
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U				
2,4-Dimethylphenol	UG/L	400			10 U	10 U				
2,4-Dinitrophenol	UG/L	400			48 U	48 U				
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				

**Appendix D Table D-1**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25			
Loc ID	MW25-10	MW25-10	MW25-19	MW25-19	MW25-19	MW25-19			
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER			
Sample ID	25LM20005	25LM20015	25LM20035	25LM20045	25LM20057	25LM20067			
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0			
Sample Date	1/31/2006	8/9/2006	3/3/2008	4/28/2009	1/13/2010	8/4/2010			
QC Type	SA	SA	SA	SA	SA	SA			
Study ID	LTM	LTM	LTM	LTM	LTM	LTM			
Sample Round	1	2	4	5	6	7			
Filtered	N	N	N	N	N	N			
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400		10 U	10 U				
2-Chlorophenol	UG/L	400		10 U	10 U				
2-Methylnaphthalene	UG/L	400		10 U	10 U				
2-Methylphenol	UG/L	400		10 U	10 U				
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U			
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U			
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U			
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U			
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U			
4-Bromophenyl phenyl ether	UG/L	400			10 U	10 U			
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U			
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U			
4-Chlorophenyl phenyl ether	UG/L	400			10 U	10 U			
4-Methylphenol	UG/L	400			10 U	10 U			
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U			
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U			
Acenaphthene	UG/L	400			10 U	10 U			
Acenaphthylene	UG/L	400			1 J	10 U			
Acetophenone	UG/L	400			10 U	10 U			
Anthracene	UG/L	400			10 U	10 U			
Atrazine	UG/L	400	GA	7.5	10 U	10 U			
Benzaldehyde	UG/L	400			48 U	48 U			
Benzo(a)anthracene	UG/L	400			10 U	10 U			
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U			
Benzo(b)fluoranthene	UG/L	400			10 U	10 U			
Benzo(ghi)perylene	UG/L	400			10 U	10 U			
Benzo(k)fluoranthene	UG/L	400			10 U	10 U			
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U			
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U			
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U			
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U			
Butylbenzylphthalate	UG/L	400			10 U	10 U			
Caprolactam	UG/L	400			10 U	10 U			
Carbazole	UG/L	400			10 U	10 U			

**Appendix D Table D-1**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-19		MW25-19		MW25-19	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20035		25LM20045		25LM20057	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0	
Sample Date	1/31/2006		8/9/2006		3/3/2008		4/28/2009		1/13/2010	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		4		5		6	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Chrysene	UG/L	400			10 U	10 U				
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U				
Dibenzofuran	UG/L	400			10 U	10 U				
Diethyl phthalate	UG/L	400			10 U	10 U				
Dimethylphthalate	UG/L	400			10 U	10 U				
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U				
Di-n-octylphthalate	UG/L	400			10 U	10 U				
Fluoranthene	UG/L	400			10 U	10 U				
Fluorene	UG/L	400			10 U	10 UJ				
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U				
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U				
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U				
Hexachloroethane	UG/L	400	GA	5	10 U	10 U				
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U				
Isophorone	UG/L	400			10 U	10 U				
Naphthalene	UG/L	400			10 U	10 U				
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U				
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U				
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U				
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U				
Phenanthrene	UG/L	400			10 U	10 U				
Phenol	UG/L	400	GA	1	10 U	10 U				
Pyrene	UG/L	400			10 U	10 U				
Iron	UG/L	600	GA	300	62.8 J	358	515	20 J	204	1310
Sodium	UG/L	600	GA	20000	8870	6530 J	4520	3500	4350	4140
Chloride	MG/L	700	GA	250	0.73	0.71 J	0.2 U	0.2 U	2.3	3.6
Ethane	UG/L	700			2 U	2 U	1 U	1 U	0.16 U	0.16 U
Ethene	UG/L	700			2 U	2 U	1 U	1 U	0.17 U	0.17 U
Methane	UG/L	700			2 U	2 U	2 U	2 U	0.14 U	0.14 U
Nitrate	MG/L	700	GA	10				0.05 U	0.113 J	
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U	0.194 J			
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10			0.194		0.113 J	0.072 J
NITRITE	MG/L	700						0.01 U	0.007 UJ	
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U	0.01 UJ			

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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-19	MW25-19	MW25-19	MW25-19				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20035	25LM20045	25LM20057	25LM20067				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0				
Sample Date	1/31/2006	8/9/2006	3/3/2008	4/28/2009	1/13/2010	8/4/2010				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	4	5	6	7				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
Sulfate	MG/L	700	GA	250	18.1	18.4	24.3	30.1	31 J	36.7
Conductivity	S/m	750			0.464	0.701	0.478	0.379	0.445	0.662
Conductivity (post)	S/m	750								
Conductivity (pre)	S/m	750								
Dissolved Oxygen	MG/L	750			4.22	4.23	5.84	3.75	4.01	0.03
Dissolved Oxygen (post)	MG/L	750								
Dissolved Oxygen (pre)	MG/L	750								
Nitrate Nitrogen	MG/L	750								
Nitrite Nitrogen	MG/L	750								
ORP	mV	750			107	138.8	161	134	259	63
ORP (post)	mV	750								
ORP (pre)	mV	750								
pH	Std units	750			6.97	6.56	7.23	7.15	7.08	6.94
pH (post)	Std units	750								
pH (pre)	Std units	750								
Sulfide	MG/L	750			0.1	0.28	0.01	0.02	0.02	0.18
Temperature	deg C	750			5	21.56	5.8	7.1	8	17.7
Turbidity	NTU	750			1.09	195	16.4	1.3	6.1	1.4
Turbidity (post)	NTU	750								
Turbidity (pre)	NTU	750								

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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-19		MW25-19		MW25-2	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20078		25LM20090		25LM20000	
Sample Depth Interval (FT)	0-0.1		0-0.1		11-11		10.98-10.98		0-0.1	
Sample Date	1/31/2006		8/9/2006		2/9/2011		2/28/2012		4/12/2006	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		8		9		1	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	0.2 UJ	0.2 U	5 U	1 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	0.38 UJ	0.38 U	5 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	0.31 U	0.31 UJ	5 U	1 U
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	0.33 UJ	0.33 U	5 U	1 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	0.21 UJ	0.21 U	5 U	1 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.35 UJ	0.35 U	5 U	1 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	0.37 UJ	0.37 U	5 UJ	1 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5	1 U	1 U	0.19 UJ	0.19 U		1 U
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	0.5 U	0.5 U	5 UJ	1 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	0.22 UJ	0.22 U	5 U	1 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.15 UJ	0.15 U	5 U	1 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	0.2 UJ	0.2 U	5 U	1 U
1,2-Dichloroethene (total)	UG/L	100	GA	5			0.21 UJ	0.21 UJ		
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	0.25 UJ	0.25 U	5 U	1 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U	0.2 UJ	0.2 U		1 U
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.26 UJ	0.26 U	5 U	1 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.24 UJ	0.24 U	5 U	1 U
Acetone	UG/L	100			5 U	5 U	2.2 U	2.2 U	25 U	10 UJ
Benzene	UG/L	100	GA	1	1 U	1 U	0.26 UJ	0.26 U	16	2
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	0.33 UJ	0.33 U	5 U	1 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	0.23 UJ	0.23 U	5 U	1 U
Carbon disulfide	UG/L	100			1 U	1 U	0.25 U	0.25 U	5 U	1 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	0.22 UJ	0.22 U	5 U	1 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	0.22 UJ	0.22 U	5 U	1 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	0.3 UJ	0.3 U	5 U	1 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	0.55 U	0.55 U	5 UJ	1 UJ
Chloroform	UG/L	100	GA	7	1 U	1 U	0.32 UJ	0.32 U	5 U	1 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.21 UJ	0.21 U	5 U	1 U
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	0.19 UJ	0.19 UJ	5 U	1 U
Cyclohexane	UG/L	100			1 U	1 U	0.31 UJ	0.31 U	8.6	1 U
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U			5 U	1 U
Diisopropyl Ether	UG/L	100					0.21 U	0.21 U		
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	0.21 UJ	0.21 U	19	0.77 J
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	0.23 UJ	0.23 U	5 U	1 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-19		MW25-19		MW25-2	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20078		25LM20090		25LM20000	
Sample Depth Interval (FT)	0-0.1		0-0.1		11-11		10.98-10.98		0-0.1	
Sample Date	1/31/2006		8/9/2006		2/9/2011		2/28/2012		4/12/2006	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		8		9		1	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5			0.59 UJ	0.59 U		
Methyl Acetate	UG/L	100			1 U	1 U	0.53 U	0.53 U	5 UJ	1 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	0.49 U	0.49 UJ	5 U	1 U
Methyl butyl ketone	UG/L	100			5 U	5 U	1.7 U	1.7 U	25 U	5 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	0.36 U	0.36 UJ	5 U	1 U
Methyl cyclohexane	UG/L	100			1 U	1 U	0.3 U	0.3 U	4.2 J	1 U
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	1.3 U	1.3 U	25 U	5 UJ
Methyl isobutyl ketone	UG/L	100			5 U	5 U	1.3 U	1.3 U	25 U	5 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	0.36 U	0.36 U	5 U	1 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	1.1 U	1.1 U	5 U	1 UJ
Naphthalene	UG/L	100					0.3 UJ	0.3 U		
n-Butylbenzene	UG/L	100	GA	5			0.23 UJ	0.23 U		
Ortho Xylene	UG/L	100	GA	5			0.25 UJ	0.25 U		
p-Isopropyltoluene	UG/L	100	GA	5		1 U				1 U
Propylbenzene	UG/L	100	GA	5		1 U				1 U
sec-Butylbenzene	UG/L	100	GA	5			0.21 UJ	0.21 U		
Styrene	UG/L	100	GA	5	1 U	1 U	0.23 UJ	0.23 U	5 U	1 U
tert-Butylbenzene	UG/L	100	GA	5			0.31 UJ	0.31 U		
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	0.4 U	0.4 U	5 U	1 U
Toluene	UG/L	100	GA	5	1 U	1 U	0.27 UJ	0.27 U	5 U	1 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U	0.25 UJ	0.25 U	15 U	3 U
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.25 U	0.25 U	5 U	1 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	0.2 UJ	0.2 UJ	5 U	1 U
Trichloroethene	UG/L	100	GA	5	1 U	1 U	0.28 UJ	0.28 U	5 U	1 U
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	0.24 U	0.24 U	5 U	1 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	0.25 U	0.25 U	5 U	1 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U			10 U	10 U
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U			10 U	10 U
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U			10 U	10 U
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U			10 U	10 U
2,4-Dimethylphenol	UG/L	400			10 U	10 U			10 U	10 U
2,4-Dinitrophenol	UG/L	400			48 U	48 U			49 U	48 U
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U			10 U	10 U
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U			10 U	10 U

**Appendix D Table D-1**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-19		MW25-19		MW25-2	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20078		25LM20090		25LM20000	
Sample Depth Interval (FT)	0-0.1		0-0.1		11-11		10.98-10.98		0-0.1	
Sample Date	1/31/2006		8/9/2006		2/9/2011		2/28/2012		4/12/2006	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		8		9		1	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400			10 U	10 U			10 U	10 U
2-Chlorophenol	UG/L	400			10 U	10 U			10 U	10 U
2-Methylnaphthalene	UG/L	400			10 U	10 U			10 U	10 U
2-Methylphenol	UG/L	400			10 U	10 U			10 U	10 U
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U			49 U	48 U
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U			10 U	10 U
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U			20 U	19 U
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U			49 U	48 U
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U			49 U	48 U
4-Bromophenyl phenyl ether	UG/L	400			10 U	10 U			10 U	10 U
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U			10 U	10 U
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U			10 U	10 U
4-Chlorophenyl phenyl ether	UG/L	400			10 U	10 U			10 U	10 U
4-Methylphenol	UG/L	400			10 U	10 U			10 U	10 U
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U			49 U	48 U
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U			49 U	48 U
Acenaphthene	UG/L	400			10 U	10 U			10 U	10 U
Acenaphthylene	UG/L	400			1 J	10 U			10 U	10 U
Acetophenone	UG/L	400			10 U	10 U			10 U	10 U
Anthracene	UG/L	400			10 U	10 U			10 U	10 U
Atrazine	UG/L	400	GA	7.5	10 U	10 U			10 U	10 U
Benzaldehyde	UG/L	400			48 U	48 U			49 U	48 U
Benzo(a)anthracene	UG/L	400			10 U	10 U			10 U	10 U
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U			10 U	10 U
Benzo(b)fluoranthene	UG/L	400			10 U	10 U			10 U	10 U
Benzo(ghi)perylene	UG/L	400			10 U	10 U			10 U	10 U
Benzo(k)fluoranthene	UG/L	400			10 U	10 U			10 U	10 U
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U			10 U	10 U
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U			10 U	10 U
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U			10 U	10 U
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U			10 U	10 U
Butylbenzylphthalate	UG/L	400			10 U	10 U			10 U	10 U
Caprolactam	UG/L	400			10 U	10 U			10 U	10 U
Carbazole	UG/L	400			10 U	10 U			10 U	10 U



**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-19		MW25-19		MW25-2	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20078		25LM20090		25LM20000	
Sample Depth Interval (FT)	0-0.1		0-0.1		11-11		10.98-10.98		0-0.1	
Sample Date	1/31/2006		8/9/2006		2/9/2011		2/28/2012		4/12/2006	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		8		9		1	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Chrysene	UG/L	400			10 U	10 U			10 U	10 U
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U			10 U	10 U
Dibenzofuran	UG/L	400			10 U	10 U			10 U	10 U
Diethyl phthalate	UG/L	400			10 U	10 U			10 U	10 U
Dimethylphthalate	UG/L	400			10 U	10 U			10 U	10 U
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U			10 U	10 U
Di-n-octylphthalate	UG/L	400			10 U	10 U			10 U	10 U
Fluoranthene	UG/L	400			10 U	10 U			10 U	10 U
Fluorene	UG/L	400			10 U	10 UJ			10 U	10 UJ
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U			10 U	10 U
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U			10 U	10 U
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U			44 U	43 U
Hexachloroethane	UG/L	400	GA	5	10 U	10 U			10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U			10 U	10 U
Isophorone	UG/L	400			10 U	10 U			10 U	10 U
Naphthalene	UG/L	400			10 U	10 U			10 U	10 U
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U			10 U	10 U
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U			10 U	10 U
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U			10 U	10 U
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U			49 U	48 U
Phenanthrene	UG/L	400			10 U	10 U			10 U	10 U
Phenol	UG/L	400	GA	1	10 U	10 U			10 U	10 U
Pyrene	UG/L	400			10 U	10 U			10 U	10 U
Iron	UG/L	600	GA	300	62.8 J	358	152	53.8 J	2510 J	606
Sodium	UG/L	600	GA	20000	8870	6530 J	3340	3980	4730	5690 J
Chloride	MG/L	700	GA	250	0.73	0.71 J	1.7 J	0.72 J	6.5	2.2 J
Ethane	UG/L	700			2 U	2 U	0.58 U	0.58 U	2 U	10 U
Ethene	UG/L	700			2 U	2 U	0.69 U	0.69 U	2 U	10 U
Methane	UG/L	700			2 U	2 U	1.2 J	0.92 J	80 J	36
Nitrate	MG/L	700	GA	10			0.064	0.094		
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U			0.05 U	0.05 U
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10						
NITRITE	MG/L	700								
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U			0.05 U	0.05 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-19	MW25-19	MW25-2	MW25-2				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20078	25LM20090	25LM20000	25LM20010				
Sample Depth Interval (FT)	0-0.1	0-0.1	11-11	10.98-10.98	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	2/9/2011	2/28/2012	4/12/2006	8/9/2006				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	8	9	1	2				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
Sulfate	MG/L	700	GA	250	18.1	18.4	31 J	22 J	39.6	33.2
Conductivity	S/m	750			0.464	0.701		0.477	0.551	0.562
Conductivity (post)	S/m	750					0.592			
Conductivity (pre)	S/m	750					0.588			
Dissolved Oxygen	MG/L	750			4.22	4.23		2.3	6.29	0.3
Dissolved Oxygen (post)	MG/L	750					2.25			
Dissolved Oxygen (pre)	MG/L	750					2.84			
Nitrate Nitrogen	MG/L	750					0.008			
Nitrite Nitrogen	MG/L	750					0.5			
ORP	mV	750			107	138.8		70	-11	-82
ORP (post)	mV	750					197			
ORP (pre)	mV	750					174			
pH	Std units	750			6.97	6.56		6.95	7.17	6.93
pH (post)	Std units	750					7.22			
pH (pre)	Std units	750					7.22			
Sulfide	MG/L	750			0.1	0.28	0.03	0.016	0.01	0.15
Temperature	deg C	750			5	21.56	6.9	6.6	10.5	26.55
Turbidity	NTU	750			1.09	195		2.35	16.1	2.3
Turbidity (post)	NTU	750					1.2			
Turbidity (pre)	NTU	750					5.7			

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-2		MW25-2		MW25-2	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20014		25LM20020		25LM20031	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0.1	
Sample Date	1/31/2006		8/9/2006		8/9/2006		6/6/2007		3/4/2008	
QC Type	SA		SA		DU		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		2		3		4	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	1 U	1 UJ	1 U	1 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 UJ	1 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	1 U		1 U	1 U
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	1 U	1 UJ	1 U	1 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 UJ	1 U	1.3
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 UJ	1 U	1 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U		1 U	1 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5		1 U	1 U			
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	1 U		2 U	2 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	1 U	1 UJ	1 U	1 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U		1 U	1 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	1 U	1 UJ	1 U	1 U
1,2-Dichloroethene (total)	UG/L	100	GA	5						
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	1 U	1 UJ	1 U	1 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U	1 U			
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U		1 U	1 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U		1 U	1 U
Acetone	UG/L	100			5 U	5 U	7.6 UJ	5 UJ	10 UJ	35 UJ
Benzene	UG/L	100	GA	1	1 U	1 U	2.2	15 J	0.51 J	17
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 UJ	1 U	1 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	1 U	2 UJ	1 UJ	1 U
Carbon disulfide	UG/L	100			1 U	1 U	1 U	1 UJ	1 U	1 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	1 U	1 UJ	1 U	1 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 UJ	1 U	1 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 UJ	1 U	1 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	1 UJ	1 UJ	2 U	0.51 J
Chloroform	UG/L	100	GA	7	1 U	1 U	1 U	1 UJ	1 U	1 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1.5 J	1 U	3.6
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 UJ	1 U	1 U
Cyclohexane	UG/L	100			1 U	1 U	1 U		1 U	6.7 J
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 U		1 UJ	1 U
Diisopropyl Ether	UG/L	100								
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	0.98 J	12 J	0.67 J	11
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	1 U	0.45 J	1 U	1.8 J

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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-2	MW25-2	MW25-2	MW25-2				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20014	25LM20020	25LM20031	25LM20042				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	8/9/2006	6/6/2007	3/4/2008	4/29/2009				
QC Type	SA	SA	DU	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	2	3	4	5				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5				1.9 J	0.71 J	2 U
Methyl Acetate	UG/L	100			1 U	1 U	1 U		10 U	2 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	1 U	1 U	2 U	1 UJ
Methyl butyl ketone	UG/L	100			5 U	5 U	5 U	2 U	5 U	5 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	1 U	1 UJ	2 U	1 U
Methyl cyclohexane	UG/L	100			1 U	1 U	1 U		1 U	3.9 J
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	5 UJ	2 UJ	0.59 J	9 J
Methyl isobutyl ketone	UG/L	100			5 U	5 U	5 U	1 UJ	5 U	5 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	1 U	1 UJ	1 U	1 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U
Naphthalene	UG/L	100						0.23 J		
n-Butylbenzene	UG/L	100	GA	5						
Ortho Xylene	UG/L	100	GA	5				1 UJ	1 U	1 U
p-Isopropyltoluene	UG/L	100	GA	5		1 U	1 U			
Propylbenzene	UG/L	100	GA	5		1 U	1 U			
sec-Butylbenzene	UG/L	100	GA	5						
Styrene	UG/L	100	GA	5	1 U	1 U	1 U	1 UJ	1 U	1 UJ
tert-Butylbenzene	UG/L	100	GA	5						
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 UJ	1 U	1 U
Toluene	UG/L	100	GA	5	1 U	1 U	1 U	1.6 U	1 U	1.2
Total Xylenes	UG/L	100	GA	5	3 U	3 U	3 U			
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 UJ	1 U	1 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 UJ	1 U	1 U
Trichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	0.51 J	1 U	1 U
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 U		1 U	1 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	1 U	1 UJ	1 U	1 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U	10 U			
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U	10 U			
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U	10 U			
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U	10 U			
2,4-Dimethylphenol	UG/L	400			10 U	10 U	10 U			
2,4-Dinitrophenol	UG/L	400			48 U	48 U	49 U			
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U	10 U			
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U	10 U			

**Appendix D Table D-1**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25			
Loc ID	MW25-10	MW25-10	MW25-2	MW25-2	MW25-2	MW25-2			
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER			
Sample ID	25LM20005	25LM20015	25LM20014	25LM20020	25LM20031	25LM20042			
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1			
Sample Date	1/31/2006	8/9/2006	8/9/2006	6/6/2007	3/4/2008	4/29/2009			
QC Type	SA	SA	DU	SA	SA	SA			
Study ID	LTM	LTM	LTM	LTM	LTM	LTM			
Sample Round	1	2	2	3	4	5			
Filtered	N	N	N	N	N	N			
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400		10 U	10 U	10 U			
2-Chlorophenol	UG/L	400		10 U	10 U	10 U			
2-Methylnaphthalene	UG/L	400		10 U	10 U	10 U			
2-Methylphenol	UG/L	400		10 U	10 U	10 U			
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U	49 U		
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U	10 U		
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U	20 U		
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U	49 U		
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U	49 U		
4-Bromophenyl phenyl ether	UG/L	400			10 U	10 U	10 U		
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U	10 U		
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U	10 U		
4-Chlorophenyl phenyl ether	UG/L	400			10 U	10 U	10 U		
4-Methylphenol	UG/L	400			10 U	10 U	10 U		
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U	49 U		
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U	49 U		
Acenaphthene	UG/L	400			10 U	10 U	10 U		
Acenaphthylene	UG/L	400			1 J	10 U	10 U		
Acetophenone	UG/L	400			10 U	10 U	10 U		
Anthracene	UG/L	400			10 U	10 U	10 U		
Atrazine	UG/L	400	GA	7.5	10 U	10 U	10 U		
Benzaldehyde	UG/L	400			48 U	48 U	49 U		
Benzo(a)anthracene	UG/L	400			10 U	10 U	10 U		
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U	10 U		
Benzo(b)fluoranthene	UG/L	400			10 U	10 U	10 U		
Benzo(ghi)perylene	UG/L	400			10 U	10 U	10 U		
Benzo(k)fluoranthene	UG/L	400			10 U	10 U	10 U		
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U	10 U		
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U	10 U		
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U	10 U		
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U	10 U		
Butylbenzylphthalate	UG/L	400			10 U	10 U	10 U		
Caprolactam	UG/L	400			10 U	10 U	10 U		
Carbazole	UG/L	400			10 U	10 U	10 U		

**Appendix D Table D-1**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-2	MW25-2	MW25-2	MW25-2				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20014	25LM20020	25LM20031	25LM20042				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	8/9/2006	6/6/2007	3/4/2008	4/29/2009				
QC Type	SA	SA	DU	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	2	3	4	5				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
Chrysene	UG/L	400		10 U	10 U	10 U				
Dibenz(a,h)anthracene	UG/L	400		10 U	10 U	10 U				
Dibenzofuran	UG/L	400		10 U	10 U	10 U				
Diethyl phthalate	UG/L	400		10 U	10 U	10 U				
Dimethylphthalate	UG/L	400		10 U	10 U	10 U				
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U	10 U			
Di-n-octylphthalate	UG/L	400		10 U	10 U	10 U				
Fluoranthene	UG/L	400		10 U	10 U	10 U				
Fluorene	UG/L	400		10 U	10 UJ	10 UJ				
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U	10 U			
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U	10 U			
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U	44 U			
Hexachloroethane	UG/L	400	GA	5	10 U	10 U	10 U			
Indeno(1,2,3-cd)pyrene	UG/L	400		10 U	10 U	10 U				
Isophorone	UG/L	400		10 U	10 U	10 U				
Naphthalene	UG/L	400		10 U	10 U	10 U				
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U	10 U			
N-Nitroso-di-n-propylamine	UG/L	400		10 U	10 U	10 U				
N-Nitrosodiphenylamine	UG/L	400		10 U	10 U	10 U				
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U	49 U			
Phenanthrene	UG/L	400		10 U	10 U	10 U				
Phenol	UG/L	400	GA	1	10 U	10 U	10 U			
Pyrene	UG/L	400		10 U	10 U	10 U				
Iron	UG/L	600	GA	300	62.8 J	358	727	2600 J	711	14400
Sodium	UG/L	600	GA	20000	8870	6530 J	5510 J	6000 J	3460	7100
Chloride	MG/L	700	GA	250	0.73	0.71 J	2.2 J	4	0.2 U	2.2
Ethane	UG/L	700		2 U	2 U	10 U	0.24	1 U	1 U	
Ethene	UG/L	700		2 U	2 U	10 U	4.2	1 U	1 U	
Methane	UG/L	700		2 U	2 U	35	170	3.2 J	68	
Nitrate	MG/L	700	GA	10			0.5 J			0.05 U
Nitrate Nitrogen	MG/L	700		0.05 U	0.05 U	0.05 U			0.305 J	
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10					0.305	
NITRITE	MG/L	700					0.5			0.01 U
Nitrite Nitrogen	MG/L	700		0.05 U	0.05 U	0.05 U			0.01 UJ	

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-2	MW25-2	MW25-2	MW25-2				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20014	25LM20020	25LM20031	25LM20042				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	8/9/2006	6/6/2007	3/4/2008	4/29/2009				
QC Type	SA	SA	DU	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	2	3	4	5				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
Sulfate	MG/L	700	GA	250	18.1	18.4	31	22	31.1	75.8
Conductivity	S/m	750			0.464	0.701	0.562	0.454	0.64	0.702
Conductivity (post)	S/m	750								
Conductivity (pre)	S/m	750								
Dissolved Oxygen	MG/L	750			4.22	4.23	0.3	0.07	1.35	0.11
Dissolved Oxygen (post)	MG/L	750								
Dissolved Oxygen (pre)	MG/L	750								
Nitrate Nitrogen	MG/L	750								
Nitrite Nitrogen	MG/L	750								
ORP	mV	750			107	138.8	-82	-92	-60	-115
ORP (post)	mV	750								
ORP (pre)	mV	750								
pH	Std units	750			6.97	6.56	6.93	7.11	7.15	6.84
pH (post)	Std units	750								
pH (pre)	Std units	750								
Sulfide	MG/L	750			0.1	0.28	0.15		0.01 U	0.04
Temperature	deg C	750			5	21.56	26.55	12.4	3.2	8.1
Turbidity	NTU	750			1.09	195	2.3	11	2.78	0.9
Turbidity (post)	NTU	750								
Turbidity (pre)	NTU	750								

**Appendix D Table D-1**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-2		MW25-2		MW25-2	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20048		25LM20053		25LM20054	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0	
Sample Date	1/31/2006		8/9/2006		4/29/2009		1/11/2010		1/11/2010	
QC Type	SA		SA		DU		SA		DU	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		5		6		6	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	1 U	3.2 U	3.2 U	1.6 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	1 U	0.9 U	0.9 U	0.45 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	1 U	4 U	4 U	2 U
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	1 U	2 U	2 U	1 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	1.4	1.5 U	1.5 U	3.5 J
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	3.7 U	3.7 U	1.9 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1.9 U	1.9 U	0.95 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5		1 U				
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	2 U	4.3 U	4.3 U	2.2 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	1 U	1.8 U	1.8 U	0.9 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	4 U	4 U	2 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	1 U	1.5 U	1.5 U	0.71 U
1,2-Dichloroethene (total)	UG/L	100	GA	5						
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	1 U	1.5 U	1.5 U	0.75 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U				
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	3.6 U	3.6 U	1.8 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	3.5 U	3.5 U	1.8 U
Acetone	UG/L	100			5 U	5 U	20 UJ	50 U	50 U	8 U
Benzene	UG/L	100	GA	1	1 U	1 U	20	1.8 U	4 J	62 J
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	1 U	1.8 U	1.8 U	0.86 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	1 U	2 U	2 U	1 U
Carbon disulfide	UG/L	100			1 U	1 U	1 U	3.6 UJ	3.6 U	1.8 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	1 U	3.6 U	3.6 U	1.8 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	2.6 U	2.6 U	1.3 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	1 U	1.1 U	1.1 U	0.55 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	0.67 J	2.1 U	2.1 U	1.1 U
Chloroform	UG/L	100	GA	7	1 U	1 U	1 U	1.6 U	1.6 U	0.8 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	3.6	2 J	2.8 J	19 J
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1.5 U	1.5 U	0.71 U
Cyclohexane	UG/L	100			1 U	1 U	4.8 J	1.5 U	1.5 U	2.1 J
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 U	1.8 U	1.8 U	0.9 U
Diisopropyl Ether	UG/L	100								
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	11	4.2 U	4.2 U	26 J
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	1.3 J	3.5 U	3.5 U	1.8 U



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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-2	MW25-2	MW25-2	MW25-2				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20048	25LM20053	25LM20054	25LM20064				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0				
Sample Date	1/31/2006	8/9/2006	4/29/2009	1/11/2010	1/11/2010	8/3/2010				
QC Type	SA	SA	DU	SA	DU	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	5	6	6	7				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5			2 U	8.2 U	8.2 U	18
Methyl Acetate	UG/L	100			1 U	1 U	2 U	4.7 U	4.7 U	2.4 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	1 UJ	4 U	4 U	2 U
Methyl butyl ketone	UG/L	100			5 U	5 U	5 U	4 U	4 U	2 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	1 U	1.8 U	1.8 U	0.9 U
Methyl cyclohexane	UG/L	100			1 U	1 U	2 J	1.6 U	1.6 U	0.8 U
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	4.3 J	10 U	10 U	5 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	5 U	3.5 U	3.5 U	1.8 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	1 U	1.3 U	1.3 U	0.65 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	1 U	1.3 U	1.3 U	0.65 U
Naphthalene	UG/L	100								
n-Butylbenzene	UG/L	100	GA	5						
Ortho Xylene	UG/L	100	GA	5			1 U	4 U	4 U	5.3
p-Isopropyltoluene	UG/L	100	GA	5		1 U				
Propylbenzene	UG/L	100	GA	5		1 U				
sec-Butylbenzene	UG/L	100	GA	5						
Styrene	UG/L	100	GA	5	1 U	1 U	1 U	3.6 U	3.6 U	1.8 U
tert-Butylbenzene	UG/L	100	GA	5						
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	1 U	4.2 U	4.2 U	2.1 U
Toluene	UG/L	100	GA	5	1 U	1 U	1.3	2.1 U	2.1 U	6.1
Total Xylenes	UG/L	100	GA	5	3 U	3 U				
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1.6 U	1.6 U	0.8 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1.8 U	1.8 U	0.86 U
Trichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1.9 U	1.9 U	1.6 J
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 U	1.6 U	1.6 U	0.8 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	1 U	2.2 U	2.2 U	2.6 J
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U				
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U				
2,4-Dimethylphenol	UG/L	400			10 U	10 U				
2,4-Dinitrophenol	UG/L	400			48 U	48 U				
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				

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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25			
Loc ID	MW25-10	MW25-10	MW25-2	MW25-2	MW25-2	MW25-2			
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER			
Sample ID	25LM20005	25LM20015	25LM20048	25LM20053	25LM20054	25LM20064			
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0			
Sample Date	1/31/2006	8/9/2006	4/29/2009	1/11/2010	1/11/2010	8/3/2010			
QC Type	SA	SA	DU	SA	DU	SA			
Study ID	LTM	LTM	LTM	LTM	LTM	LTM			
Sample Round	1	2	5	6	6	7			
Filtered	N	N	N	N	N	N			
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400		10 U	10 U				
2-Chlorophenol	UG/L	400		10 U	10 U				
2-Methylnaphthalene	UG/L	400		10 U	10 U				
2-Methylphenol	UG/L	400		10 U	10 U				
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U			
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U			
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U			
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U			
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U			
4-Bromophenyl phenyl ether	UG/L	400		10 U	10 U				
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U			
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U			
4-Chlorophenyl phenyl ether	UG/L	400		10 U	10 U				
4-Methylphenol	UG/L	400		10 U	10 U				
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U			
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U			
Acenaphthene	UG/L	400		10 U	10 U				
Acenaphthylene	UG/L	400		1 J	10 U				
Acetophenone	UG/L	400		10 U	10 U				
Anthracene	UG/L	400		10 U	10 U				
Atrazine	UG/L	400	GA	7.5	10 U	10 U			
Benzaldehyde	UG/L	400		48 U	48 U				
Benzo(a)anthracene	UG/L	400		10 U	10 U				
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U			
Benzo(b)fluoranthene	UG/L	400		10 U	10 U				
Benzo(ghi)perylene	UG/L	400		10 U	10 U				
Benzo(k)fluoranthene	UG/L	400		10 U	10 U				
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U			
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U			
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U			
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U			
Butylbenzylphthalate	UG/L	400		10 U	10 U				
Caprolactam	UG/L	400		10 U	10 U				
Carbazole	UG/L	400		10 U	10 U				

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-2	MW25-2	MW25-2	MW25-2				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20048	25LM20053	25LM20054	25LM20064				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0				
Sample Date	1/31/2006	8/9/2006	4/29/2009	1/11/2010	1/11/2010	8/3/2010				
QC Type	SA	SA	DU	SA	DU	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	5	6	6	7				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
Chrysene	UG/L	400		10 U	10 U					
Dibenz(a,h)anthracene	UG/L	400		10 U	10 U					
Dibenzofuran	UG/L	400		10 U	10 U					
Diethyl phthalate	UG/L	400		10 U	10 U					
Dimethylphthalate	UG/L	400		10 U	10 U					
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U				
Di-n-octylphthalate	UG/L	400		10 U	10 U					
Fluoranthene	UG/L	400		10 U	10 U					
Fluorene	UG/L	400		10 U	10 UJ					
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U				
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U				
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U				
Hexachloroethane	UG/L	400	GA	5	10 U	10 U				
Indeno(1,2,3-cd)pyrene	UG/L	400		10 U	10 U					
Isophorone	UG/L	400		10 U	10 U					
Naphthalene	UG/L	400		10 U	10 U					
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U				
N-Nitroso-di-n-propylamine	UG/L	400		10 U	10 U					
N-Nitrosodiphenylamine	UG/L	400		10 U	10 U					
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U				
Phenanthrene	UG/L	400		10 U	10 U					
Phenol	UG/L	400	GA	1	10 U	10 U				
Pyrene	UG/L	400		10 U	10 U					
Iron	UG/L	600	GA	300	62.8 J	358	15700	2900	2410	1660
Sodium	UG/L	600	GA	20000	8870	6530 J	7100	7880	7720	10300
Chloride	MG/L	700	GA	250	0.73	0.71 J	2.2	0.5 U	2.8	3
Ethane	UG/L	700			2 U	2 U	1 U	0.16 U	0.16 U	0.16 U
Ethene	UG/L	700			2 U	2 U	1 U	0.17 U	0.17 U	0.17 U
Methane	UG/L	700			2 U	2 U	64	20	22	120
Nitrate	MG/L	700	GA	10			0.05 U	0.199 J	0.05 UJ	
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U				
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10				0.199 J	0.003 UJ	0.013 UJ
NITRITE	MG/L	700					0.01 U	0.007 UJ	0.007 UJ	
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U				

**Appendix D Table D-1**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25			
Loc ID	MW25-10	MW25-10	MW25-2	MW25-2	MW25-2	MW25-2			
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER			
Sample ID	25LM20005	25LM20015	25LM20048	25LM20053	25LM20054	25LM20064			
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0			
Sample Date	1/31/2006	8/9/2006	4/29/2009	1/11/2010	1/11/2010	8/3/2010			
QC Type	SA	SA	DU	SA	DU	SA			
Study ID	LTM	LTM	LTM	LTM	LTM	LTM			
Sample Round	1	2	5	6	6	7			
Filtered	N	N	N	N	N	N			
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Sulfate	MG/L	700	GA 250	18.1	18.4	82.6	64.4 J	64.8 J	40.3
Conductivity	S/m	750		0.464	0.701	0.702	0.573	0.573	1.09
Conductivity (post)	S/m	750							
Conductivity (pre)	S/m	750							
Dissolved Oxygen	MG/L	750		4.22	4.23	0.11	0.41	0.41	0.02
Dissolved Oxygen (post)	MG/L	750							
Dissolved Oxygen (pre)	MG/L	750							
Nitrate Nitrogen	MG/L	750							
Nitrite Nitrogen	MG/L	750							
ORP	mV	750		107	138.8	-115	-151	-151	-230
ORP (post)	mV	750							
ORP (pre)	mV	750							
pH	Std units	750		6.97	6.56	6.84	7.25	7.25	6.79
pH (post)	Std units	750							
pH (pre)	Std units	750							
Sulfide	MG/L	750		0.1	0.28	0.04	0.16	0.16	
Temperature	deg C	750		5	21.56	8.1	6.3	6.3	21.2
Turbidity	NTU	750		1.09	195	0.9	1.06	1.06	3.4
Turbidity (post)	NTU	750							
Turbidity (pre)	NTU	750							

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-2	MW25-2	MW25-2	MW25-2				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20071	25LM20079	25LM20080	25LM20091				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0	10.25-10.25	10.25-10.25	10.26-10.26				
Sample Date	1/31/2006	8/9/2006	8/3/2010	2/8/2011	2/8/2011	3/1/2012				
QC Type	SA	SA	DU	SA	DU	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	7	8	8	9				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	1.6 U	0.2 UJ	0.2 UJ	0.2 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	0.45 U	0.38 UJ	0.38 UJ	0.38 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	2 U	0.31 U	0.31 U	0.31 UJ
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	1 U	0.33 UJ	0.33 UJ	0.33 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	2.8 J	1.5 J	1.4 J	0.21 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1.9 U	0.35 UJ	0.35 UJ	0.35 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	0.95 U	0.37 UJ	0.37 UJ	0.37 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5	1 U	1 U	0.4 J	0.45 J	0.45 J	0.19 U
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	2.2 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	0.9 U	0.22 UJ	0.22 UJ	0.22 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	2 U	0.15 UJ	0.15 UJ	0.15 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	0.71 U	0.2 UJ	0.2 UJ	0.2 U
1,2-Dichloroethene (total)	UG/L	100	GA	5				15 J	11 J	0.76 J
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	0.75 U	0.25 UJ	0.25 UJ	0.25 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U		0.2 UJ	0.2 UJ	0.2 U
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1.8 U	0.26 UJ	0.26 UJ	0.26 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1.8 U	0.24 UJ	0.24 UJ	0.24 U
Acetone	UG/L	100			5 U	5 U	8 U	9.5	8.6	2.2 U
Benzene	UG/L	100	GA	1	1 U	1 U	57 J	14 J	12 J	0.99 J
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	0.86 U	0.33 UJ	0.33 UJ	0.33 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	1 U	0.23 UJ	0.23 UJ	0.23 U
Carbon disulfide	UG/L	100			1 U	1 U	1.8 U	0.61 J	0.56 J	0.25 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	1.8 U	0.22 UJ	0.22 UJ	0.22 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	1.3 U	0.22 UJ	0.22 UJ	0.22 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	0.55 U	0.3 UJ	0.3 UJ	0.3 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	1.1 U	0.55 U	0.55 U	0.55 U
Chloroform	UG/L	100	GA	7	1 U	1 U	0.8 U	0.32 J	0.32 UJ	0.32 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	16 J	15 J	11 J	0.76 J
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	0.71 U	0.19 UJ	0.19 UJ	0.19 UJ
Cyclohexane	UG/L	100			1 U	1 U	2.2 J	1.9 J	1.8 J	0.31 U
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	0.9 U			
Diisopropyl Ether	UG/L	100						0.21 U	0.21 U	0.21 U
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	25 J	8.1 J	6.5 J	0.47 J
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	1.8 U	0.49 J	0.4 J	0.23 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25		
Loc ID	MW25-10		MW25-10		MW25-2		MW25-2		MW25-2		
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		
Sample ID	25LM20005		25LM20015		25LM20071		25LM20079		25LM20080		
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0		10.25-10.25		10.25-10.25		
Sample Date	1/31/2006		8/9/2006		8/3/2010		2/8/2011		2/8/2011		
QC Type	SA		SA		DU		SA		DU		
Study ID	LTM		LTM		LTM		LTM		LTM		
Sample Round	1		2		7		8		8		
Filtered	N		N		N		N		N		
Criteria	Source Criteria LOWEST-GW										
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5			19	6.5 J	5.1 J	0.59 U	
Methyl Acetate	UG/L	100			1 U	1 U	2.4 U	0.53 U	0.53 U	0.53 U	
Methyl bromide	UG/L	100	GA	5	1 U	1 U	2 U	0.49 U	0.49 U	0.49 UJ	
Methyl butyl ketone	UG/L	100			5 U	5 U	2 U	1.7 U	1.7 U	1.7 U	
Methyl chloride	UG/L	100	GA	5	1 U	1 U	0.9 U	0.36 U	0.36 U	0.36 U	
Methyl cyclohexane	UG/L	100			1 U	1 U	0.8 U	0.52 J	0.46 J	0.3 U	
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	5 U	3.2 J	2.3 J	1.3 U	
Methyl isobutyl ketone	UG/L	100			5 U	5 U	1.8 U	1.3 U	1.3 U	1.3 U	
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	0.65 U	0.36 U	0.36 U	0.36 U	
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	0.65 U	1.1 U	1.1 U	1.1 U	
Naphthalene	UG/L	100						0.3 UJ	0.3 UJ	0.3 U	
n-Butylbenzene	UG/L	100	GA	5				0.23 UJ	0.23 UJ	0.23 U	
Ortho Xylene	UG/L	100	GA	5			6.4	5.6 J	4.3 J	0.25 U	
p-Isopropyltoluene	UG/L	100	GA	5		1 U					
Propylbenzene	UG/L	100	GA	5		1 U					
sec-Butylbenzene	UG/L	100	GA	5				0.21 UJ	0.21 UJ	0.21 U	
Styrene	UG/L	100	GA	5	1 U	1 U	1.8 U	0.23 UJ	0.23 UJ	0.23 U	
tert-Butylbenzene	UG/L	100	GA	5				0.31 UJ	0.31 UJ	0.31 U	
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	2.1 U	0.4 U	0.4 U	0.4 U	
Toluene	UG/L	100	GA	5	1 U	1 U	6.5	7.4 J	5.4 J	0.27 U	
Total Xylenes	UG/L	100	GA	5	3 U	3 U		12 J	9.4 J	0.25 U	
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.8 U	0.25 U	0.25 U	0.25 U	
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	0.86 U	0.2 UJ	0.2 UJ	0.2 UJ	
Trichloroethene	UG/L	100	GA	5	1 U	1 U	1.6 J	2 J	1.8 J	0.45 J	
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	0.8 U	0.24 U	0.24 U	0.24 U	
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	2.4 J	0.79 J	0.25 U	0.25 U	
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U					
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U					
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U					
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U					
2,4-Dimethylphenol	UG/L	400			10 U	10 U					
2,4-Dinitrophenol	UG/L	400			48 U	48 U					
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U					
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U					

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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25
Loc ID	MW25-10	MW25-10	MW25-2	MW25-2	MW25-2	MW25-2
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample ID	25LM20005	25LM20015	25LM20071	25LM20079	25LM20080	25LM20091
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0	10.25-10.25	10.25-10.25	10.26-10.26
Sample Date	1/31/2006	8/9/2006	8/3/2010	2/8/2011	2/8/2011	3/1/2012
QC Type	SA	SA	DU	SA	DU	SA
Study ID	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round	1	2	7	8	8	9
Filtered	N	N	N	N	N	N
Criteria	Source Criteria LOWEST-GW					
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400		10 U	10 U	
2-Chlorophenol	UG/L	400		10 U	10 U	
2-Methylnaphthalene	UG/L	400		10 U	10 U	
2-Methylphenol	UG/L	400		10 U	10 U	
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U
4-Bromophenyl phenyl ether	UG/L	400		10 U	10 U	
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U
4-Chlorophenyl phenyl ether	UG/L	400		10 U	10 U	
4-Methylphenol	UG/L	400		10 U	10 U	
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U
Acenaphthene	UG/L	400		10 U	10 U	
Acenaphthylene	UG/L	400		1 J	10 U	
Acetophenone	UG/L	400		10 U	10 U	
Anthracene	UG/L	400		10 U	10 U	
Atrazine	UG/L	400	GA	7.5	10 U	10 U
Benzaldehyde	UG/L	400		48 U	48 U	
Benzo(a)anthracene	UG/L	400		10 U	10 U	
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U
Benzo(b)fluoranthene	UG/L	400		10 U	10 U	
Benzo(ghi)perylene	UG/L	400		10 U	10 U	
Benzo(k)fluoranthene	UG/L	400		10 U	10 U	
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U
Butylbenzylphthalate	UG/L	400		10 U	10 U	
Caprolactam	UG/L	400		10 U	10 U	
Carbazole	UG/L	400		10 U	10 U	

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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-2		MW25-2		MW25-2	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20071		25LM20079		25LM20080	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0		10.25-10.25		10.25-10.25	
Sample Date	1/31/2006		8/9/2006		8/3/2010		2/8/2011		2/8/2011	
QC Type	SA		SA		DU		SA		DU	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		7		8		8	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Chrysene	UG/L	400			10 U	10 U				
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U				
Dibenzofuran	UG/L	400			10 U	10 U				
Diethyl phthalate	UG/L	400			10 U	10 U				
Dimethylphthalate	UG/L	400			10 U	10 U				
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U				
Di-n-octylphthalate	UG/L	400			10 U	10 U				
Fluoranthene	UG/L	400			10 U	10 U				
Fluorene	UG/L	400			10 U	10 UJ				
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U				
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U				
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U				
Hexachloroethane	UG/L	400	GA	5	10 U	10 U				
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U				
Isophorone	UG/L	400			10 U	10 U				
Naphthalene	UG/L	400			10 U	10 U				
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U				
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U				
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U				
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U				
Phenanthrene	UG/L	400			10 U	10 U				
Phenol	UG/L	400	GA	1	10 U	10 U				
Pyrene	UG/L	400			10 U	10 U				
Iron	UG/L	600	GA	300	62.8 J	358		13100		3780 J
Sodium	UG/L	600	GA	20000	8870	6530 J		10200		9320 J
Chloride	MG/L	700	GA	250	0.73	0.71 J	2.8	5.8		0.9 J
Ethane	UG/L	700			2 U	2 U	0.16 U	0.58 U	0.58 U	0.58 U
Ethene	UG/L	700			2 U	2 U	0.17 U	0.69 U	0.69 U	0.69 U
Methane	UG/L	700			2 U	2 U	130	32	59	31 J
Nitrate	MG/L	700	GA	10				0.0152 U		0.0152 U
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U				
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10			0.013 UJ			
NITRITE	MG/L	700								
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U				



**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25			
Loc ID	MW25-10	MW25-10	MW25-2	MW25-2	MW25-2	MW25-2			
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER			
Sample ID	25LM20005	25LM20015	25LM20071	25LM20079	25LM20080	25LM20091			
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0	10.25-10.25	10.25-10.25	10.26-10.26			
Sample Date	1/31/2006	8/9/2006	8/3/2010	2/8/2011	2/8/2011	3/1/2012			
QC Type	SA	SA	DU	SA	DU	SA			
Study ID	LTM	LTM	LTM	LTM	LTM	LTM			
Sample Round	1	2	7	8	8	9			
Filtered	N	N	N	N	N	N			
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Sulfate	MG/L	700	GA	250	18.1	18.4	45.3	45 J	52 J
Conductivity	S/m	750			0.464	0.701	1.09	0.806	0.806
Conductivity (post)	S/m	750							
Conductivity (pre)	S/m	750							
Dissolved Oxygen	MG/L	750			4.22	4.23	0.02	0.24	0.24
Dissolved Oxygen (post)	MG/L	750							
Dissolved Oxygen (pre)	MG/L	750							
Nitrate Nitrogen	MG/L	750							
Nitrite Nitrogen	MG/L	750							
ORP	mV	750			107	138.8	-230	-148	-148
ORP (post)	mV	750							
ORP (pre)	mV	750							
pH	Std units	750			6.97	6.56	6.79	6.98	6.98
pH (post)	Std units	750							
pH (pre)	Std units	750							
Sulfide	MG/L	750			0.1	0.28			0.2
Temperature	deg C	750			5	21.56	21.2	5.08	5.08
Turbidity	NTU	750			1.09	195	3.4	0.6	0.6
Turbidity (post)	NTU	750							
Turbidity (pre)	NTU	750							

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-3		MW25-3		MW25-3	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20001		25LM20002		25LM20011	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0.1	
Sample Date	1/31/2006		8/9/2006		1/31/2006		1/31/2006		8/11/2006	
QC Type	SA		SA		DU		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		1		1		2	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5		1 U			1 U	
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	1 U	1 U	1 U	2 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene (total)	UG/L	100	GA	5						
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U			1 U	
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	1 U	1 U
Acetone	UG/L	100			5 U	5 U	5 U	5 U	5.9 UJ	10 UJ
Benzene	UG/L	100	GA	1	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	1 U	1 UJ
Carbon disulfide	UG/L	100			1 U	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	1 U	1 U	1 U	2 U
Chloroform	UG/L	100	GA	7	1 U	1 U	1 U	1 U	1 U	1 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	UG/L	100			1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 UJ	1 UJ	1 U	1 UJ
Diisopropyl Ether	UG/L	100								
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-3	MW25-3	MW25-3	MW25-3				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20001	25LM20002	25LM20011	25LM20036				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	1/31/2006	1/31/2006	8/11/2006	3/4/2008				
QC Type	SA	SA	DU	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	1	1	2	4				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5						1 U
Methyl Acetate	UG/L	100			1 U	1 U	1 U	1 U	1 U	10 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	2 U
Methyl butyl ketone	UG/L	100			5 U	5 U	5 U	5 U	5 U	5 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	2 U
Methyl cyclohexane	UG/L	100			1 U	1 U	1 U	1 U	1 U	1 U
Methyl ethyl ketone	UG/L	100			5 U	5 U	5 U	5 U	5 U	5 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	5 U	5 U	5 U	5 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	UG/L	100								
n-Butylbenzene	UG/L	100	GA	5						
Ortho Xylene	UG/L	100	GA	5						1 U
p-Isopropyltoluene	UG/L	100	GA	5		1 U			1 U	
Propylbenzene	UG/L	100	GA	5		1 U			1 U	
sec-Butylbenzene	UG/L	100	GA	5						
Styrene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	UG/L	100	GA	5						
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U	3 U	3 U	3 U	3 U
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	1 U	1 U	1 U	1 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U	9 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U	9 U	10 U	10 U	10 U
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U	9 U	10 U	10 U	10 U
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U	9 U	10 U	10 U	10 U
2,4-Dimethylphenol	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
2,4-Dinitrophenol	UG/L	400			48 U	48 U	47 U	48 U	48 U	48 U
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U	9 U	10 U	10 U	10 U
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U	9 U	10 U	10 U	10 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-3	MW25-3	MW25-3	MW25-3				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20001	25LM20002	25LM20011	25LM20036				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	1/31/2006	1/31/2006	8/11/2006	3/4/2008				
QC Type	SA	SA	DU	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	1	1	2	4				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
2-Chlorophenol	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
2-Methylnaphthalene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
2-Methylphenol	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U	47 U	48 U	48 U	48 U
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U	9 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U	19 U	19 U	19 U	19 U
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U	47 U	48 U	48 U	48 U
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U	47 U	48 U	48 U	48 U
4-Bromophenyl phenyl ether	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U	9 U	10 U	10 U	10 U
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U	9 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
4-Methylphenol	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U	47 U	48 U	48 U	48 U
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U	47 U	48 U	48 U	48 U
Acenaphthene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
Acenaphthylene	UG/L	400			1 J	10 U	9 U	10 U	10 U	10 U
Acetophenone	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
Anthracene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
Atrazine	UG/L	400	GA	7.5	10 U	10 U	9 U	10 U	10 U	10 U
Benzaldehyde	UG/L	400			48 U	48 U	47 U	48 U	48 U	48 U
Benzo(a)anthracene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U	9 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
Benzo(ghi)perylene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U	9 U	10 U	10 U	10 U
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U	9 U	10 U	10 U	10 U
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U	9 U	10 U	10 U	10 U
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U	9 U	10 U	10 U	10 U
Butylbenzylphthalate	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
Caprolactam	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U
Carbazole	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U

**Appendix D Table D-1**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25		
Loc ID	MW25-10		MW25-10		MW25-3		MW25-3		MW25-3		
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		
Sample ID	25LM20005		25LM20015		25LM20001		25LM20002		25LM20011		
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0.1		
Sample Date	1/31/2006		8/9/2006		1/31/2006		1/31/2006		8/11/2006		
QC Type	SA		SA		DU		SA		SA		
Study ID	LTM		LTM		LTM		LTM		LTM		
Sample Round	1		2		1		1		2		
Filtered	N		N		N		N		N		
Criteria	Source Criteria LOWEST-GW										
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Chrysene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U	
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U	
Dibenzofuran	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U	
Diethyl phthalate	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U	
Dimethylphthalate	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U	
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U	9 U	10 U	10 U	10 U	
Di-n-octylphthalate	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U	
Fluoranthene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U	
Fluorene	UG/L	400			10 U	10 UJ	9 U	10 U	10 U	10 U	
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U	9 U	10 U	10 U	10 U	
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U	9 U	10 U	10 U	10 U	
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U	42 U	44 U	43 U	43 U	
Hexachloroethane	UG/L	400	GA	5	10 U	10 U	9 U	10 U	10 U	10 U	
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U	
Isophorone	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U	
Naphthalene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U	
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U	9 U	10 U	10 U	10 U	
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U	
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U	
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U	47 U	48 U	48 U	48 U	
Phenanthrene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U	
Phenol	UG/L	400	GA	1	10 U	10 U	9 U	10 U	10 U	10 U	
Pyrene	UG/L	400			10 U	10 U	9 U	10 U	10 U	10 U	
Iron	UG/L	600	GA	300	62.8 J	358	86 J	76.4 J	3820	107	
Sodium	UG/L	600	GA	20000	8870	6530 J	12300	12000	11300 J	5540	
Chloride	MG/L	700	GA	250	0.73	0.71 J	2.1	2.3	1.5 J	2.66	
Ethane	UG/L	700			2 U	2 U	2 U	2 U	2 U	1 U	
Ethene	UG/L	700			2 U	2 U	2 U	2 U	2 U	1 U	
Methane	UG/L	700			2 U	2 U	2 U	2 U	2 U	0.34 J	
Nitrate	MG/L	700	GA	10							
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.098 J	
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10						0.098	
NITRITE	MG/L	700									
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 UJ	

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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-3	MW25-3	MW25-3	MW25-3				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20001	25LM20002	25LM20011	25LM20036				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	1/31/2006	1/31/2006	8/11/2006	3/4/2008				
QC Type	SA	SA	DU	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	1	1	2	4				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Sulfate	MG/L	700	GA	250	18.1	18.4	39.9	39.8	44.9	100
Conductivity	S/m	750			0.464	0.701	0.49	0.49	0.686	0.675
Conductivity (post)	S/m	750								
Conductivity (pre)	S/m	750								
Dissolved Oxygen	MG/L	750			4.22	4.23	1.19	1.19	3.6	0.87
Dissolved Oxygen (post)	MG/L	750								
Dissolved Oxygen (pre)	MG/L	750								
Nitrate Nitrogen	MG/L	750								
Nitrite Nitrogen	MG/L	750								
ORP	mV	750			107	138.8	79	79	77.9	124
ORP (post)	mV	750								
ORP (pre)	mV	750								
pH	Std units	750			6.97	6.56	7.1	7.1	7.02	7.15
pH (post)	Std units	750								
pH (pre)	Std units	750								
Sulfide	MG/L	750			0.1	0.28	0.04	0.04	0.03	0.01
Temperature	deg C	750			5	21.56	4.3	4.3	21.54	3.5
Turbidity	NTU	750			1.09	195	2.2	2.2	1.2	2
Turbidity (post)	NTU	750								
Turbidity (pre)	NTU	750								

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-3		MW25-3		MW25-3	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20046		25LM20060		25LM20068	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		8.8-8.8	
Sample Date	1/31/2006		8/9/2006		4/29/2009		1/12/2010		8/4/2010	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		5		6		7	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	1 U	0.32 U	1.6 U	0.2 UJ
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	1 U	0.09 U	0.45 U	0.38 UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	1 U	0.4 U	2 U	0.31 U
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	1 U	0.2 U	1 U	0.33 UJ
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	1 U	0.14 U	0.71 U	0.21 UJ
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	0.37 U	1.9 U	0.35 UJ
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	0.19 U	0.95 U	0.37 UJ
1,2,4-Trimethylbenzene	UG/L	100	GA	5		1 U				0.19 UJ
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	2 U	0.43 U	2.2 U	0.5 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	1 U	0.18 U	0.9 U	0.22 UJ
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	0.4 U	2 U	0.15 UJ
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	1 U	0.14 U	0.71 U	0.2 UJ
1,2-Dichloroethene (total)	UG/L	100	GA	5						0.21 UJ
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	1 U	0.15 U	0.75 U	0.25 UJ
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U				0.2 UJ
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	0.36 U	1.8 U	0.26 UJ
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	0.34 U	1.8 U	0.24 UJ
Acetone	UG/L	100			5 U	5 U	5 U	5 U	8 U	2.2 U
Benzene	UG/L	100	GA	1	1 U	1 U	1.7	0.18 U	0.9 U	0.26 UJ
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	1 U	0.17 U	0.86 U	0.33 UJ
Bromoform	UG/L	100	MCL	80	1 U	1 U	1 U	0.2 U	1 U	0.23 UJ
Carbon disulfide	UG/L	100			1 U	1 U	1 U	0.36 U	1.8 U	0.25 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	1 U	0.36 U	1.8 U	0.22 UJ
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	0.26 U	1.3 U	0.22 UJ
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	1 U	0.11 U	0.55 U	0.3 UJ
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	1 U	0.21 U	1.1 U	0.55 U
Chloroform	UG/L	100	GA	7	1 U	1 U	1 U	0.16 U	0.8 U	0.32 UJ
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	0.14 U	0.71 U	0.21 UJ
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	0.14 U	0.71 U	0.19 UJ
Cyclohexane	UG/L	100			1 U	1 U	1 U	0.14 U	0.71 U	0.31 UJ
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 U	0.18 U	0.9 U	
Diisopropyl Ether	UG/L	100								0.21 U
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	1 U	0.42 U	2.1 U	0.21 UJ
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	1 U	0.34 U	1.8 U	0.23 UJ

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-3		MW25-3		MW25-3	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20046		25LM20060		25LM20068	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		8.8-8.8	
Sample Date	1/31/2006		8/9/2006		4/29/2009		1/12/2010		8/4/2010	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		5		6		7	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5			2 U	0.81 U	4.1 U	0.59 UJ
Methyl Acetate	UG/L	100			1 U	1 U	2 U	0.48 U	2.4 U	0.53 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	1 UJ	0.4 U	2 U	0.49 U
Methyl butyl ketone	UG/L	100			5 U	5 U	5 U	0.4 U	2 U	1.7 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	1 U	0.18 U	0.9 U	0.36 U
Methyl cyclohexane	UG/L	100			1 U	1 U	1 U	0.16 U	0.8 U	0.3 U
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	5 U	1 U	5 U	1.3 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	5 U	0.34 U	1.8 U	1.3 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	1 U	0.13 U	0.65 U	0.36 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	1 U	0.13 U	0.65 U	1.1 U
Naphthalene	UG/L	100								0.3 UJ
n-Butylbenzene	UG/L	100	GA	5						0.23 UJ
Ortho Xylene	UG/L	100	GA	5			1 U	0.4 U	2 U	0.25 UJ
p-Isopropyltoluene	UG/L	100	GA	5		1 U				
Propylbenzene	UG/L	100	GA	5		1 U				
sec-Butylbenzene	UG/L	100	GA	5						0.21 UJ
Styrene	UG/L	100	GA	5	1 U	1 U	1 U	0.36 U	1.8 U	0.23 UJ
tert-Butylbenzene	UG/L	100	GA	5						0.31 UJ
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	1 U	0.42 U	2.1 U	0.4 U
Toluene	UG/L	100	GA	5	1 U	1 U	1 U	0.21 U	1.1 U	0.27 UJ
Total Xylenes	UG/L	100	GA	5	3 U	3 U				0.25 UJ
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	0.16 U	0.8 U	0.25 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	0.17 U	0.86 U	0.2 UJ
Trichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	0.19 U	0.95 U	0.28 UJ
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 U	0.16 U	0.8 U	0.24 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	1 U	0.22 U	1.1 U	0.25 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U				
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U				
2,4-Dimethylphenol	UG/L	400			10 U	10 U				
2,4-Dinitrophenol	UG/L	400			48 U	48 U				
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				



**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25
Loc ID	MW25-10	MW25-10	MW25-3	MW25-3	MW25-3	MW25-3
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample ID	25LM20005	25LM20015	25LM20046	25LM20060	25LM20068	25LM20075
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0	8.8-8.8
Sample Date	1/31/2006	8/9/2006	4/29/2009	1/12/2010	8/4/2010	2/8/2011
QC Type	SA	SA	SA	SA	SA	SA
Study ID	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round	1	2	5	6	7	8
Filtered	N	N	N	N	N	N
Criteria	Source Criteria LOWEST-GW					
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400		10 U	10 U	
2-Chlorophenol	UG/L	400		10 U	10 U	
2-Methylnaphthalene	UG/L	400		10 U	10 U	
2-Methylphenol	UG/L	400		10 U	10 U	
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U
4-Bromophenyl phenyl ether	UG/L	400		10 U	10 U	
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U
4-Chlorophenyl phenyl ether	UG/L	400		10 U	10 U	
4-Methylphenol	UG/L	400		10 U	10 U	
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U
Acenaphthene	UG/L	400		10 U	10 U	
Acenaphthylene	UG/L	400		1 J	10 U	
Acetophenone	UG/L	400		10 U	10 U	
Anthracene	UG/L	400		10 U	10 U	
Atrazine	UG/L	400	GA	7.5	10 U	10 U
Benzaldehyde	UG/L	400		48 U	48 U	
Benzo(a)anthracene	UG/L	400		10 U	10 U	
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U
Benzo(b)fluoranthene	UG/L	400		10 U	10 U	
Benzo(ghi)perylene	UG/L	400		10 U	10 U	
Benzo(k)fluoranthene	UG/L	400		10 U	10 U	
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U
Butylbenzylphthalate	UG/L	400		10 U	10 U	
Caprolactam	UG/L	400		10 U	10 U	
Carbazole	UG/L	400		10 U	10 U	

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-3	MW25-3	MW25-3	MW25-3				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20046	25LM20060	25LM20068	25LM20075				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0	8.8-8.8				
Sample Date	1/31/2006	8/9/2006	4/29/2009	1/12/2010	8/4/2010	2/8/2011				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	5	6	7	8				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
Chrysene	UG/L	400		10 U	10 U					
Dibenz(a,h)anthracene	UG/L	400		10 U	10 U					
Dibenzofuran	UG/L	400		10 U	10 U					
Diethyl phthalate	UG/L	400		10 U	10 U					
Dimethylphthalate	UG/L	400		10 U	10 U					
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U				
Di-n-octylphthalate	UG/L	400		10 U	10 U					
Fluoranthene	UG/L	400		10 U	10 U					
Fluorene	UG/L	400		10 U	10 UJ					
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U				
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U				
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U				
Hexachloroethane	UG/L	400	GA	5	10 U	10 U				
Indeno(1,2,3-cd)pyrene	UG/L	400		10 U	10 U					
Isophorone	UG/L	400		10 U	10 U					
Naphthalene	UG/L	400		10 U	10 U					
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U				
N-Nitroso-di-n-propylamine	UG/L	400		10 U	10 U					
N-Nitrosodiphenylamine	UG/L	400		10 U	10 U					
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U				
Phenanthrene	UG/L	400		10 U	10 U					
Phenol	UG/L	400	GA	1	10 U	10 U				
Pyrene	UG/L	400		10 U	10 U					
Iron	UG/L	600	GA	300	62.8 J	358	1570	702	463	
Sodium	UG/L	600	GA	20000	8870	6530 J	9000	7370	7990	
Chloride	MG/L	700	GA	250	0.73	0.71 J	3.3	2.8	3.2	
Ethane	UG/L	700			2 U	2 U	1 U	0.16 U	0.16 U	0.58 U
Ethene	UG/L	700			2 U	2 U	1 U	0.17 U	0.17 U	0.69 U
Methane	UG/L	700			2 U	2 U	13	0.14 U	12	1.5 J
Nitrate	MG/L	700	GA	10			0.05 U	0.05 UJ		0.057
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U				
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10				0.003 UJ		
NITRITE	MG/L	700					0.01 U	0.007 UJ		
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U				

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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-3	MW25-3	MW25-3	MW25-3				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20046	25LM20060	25LM20068	25LM20075				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0	8.8-8.8				
Sample Date	1/31/2006	8/9/2006	4/29/2009	1/12/2010	8/4/2010	2/8/2011				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	5	6	7	8				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
Sulfate	MG/L	700	GA	250	18.1	18.4	122	182 J	110 J	
Conductivity	S/m	750			0.464	0.701	0.627	0.741	1.26	0.851
Conductivity (post)	S/m	750								
Conductivity (pre)	S/m	750								
Dissolved Oxygen	MG/L	750			4.22	4.23	0.19	1.78	0	0.37
Dissolved Oxygen (post)	MG/L	750								
Dissolved Oxygen (pre)	MG/L	750								
Nitrate Nitrogen	MG/L	750								
Nitrite Nitrogen	MG/L	750								
ORP	mV	750			107	138.8	-102	-63	-124	-85
ORP (post)	mV	750								
ORP (pre)	mV	750								
pH	Std units	750			6.97	6.56	7.03	6.51	6.84	6.99
pH (post)	Std units	750								
pH (pre)	Std units	750								
Sulfide	MG/L	750			0.1	0.28	0.42	0.04		
Temperature	deg C	750			5	21.56	7.9	4.9	20.6	4.5
Turbidity	NTU	750			1.09	195	0.35	3	2.37	3.31
Turbidity (post)	NTU	750								
Turbidity (pre)	NTU	750								

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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-3	MW25-3	MW25-8	MW25-8				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20086	25LM20087	25LM20003	25LM20012				
Sample Depth Interval (FT)	0-0.1	0-0.1	8.79-8.79	8.79-8.79	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	2/29/2012	2/29/2012	1/31/2006	8/11/2006				
QC Type	SA	SA	SA	DU	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	9	9	1	2				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	0.2 U	0.2 U	1 U	1 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	0.38 U	0.38 U	1 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	0.31 UJ	0.31 UJ	1 U	1 U
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	0.33 U	0.33 U	1 U	1 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	0.21 U	0.21 U	1 U	1 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.35 U	0.35 U	1 U	1 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	0.37 U	0.37 U	1 U	1 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5	1 U	1 U	0.19 U	0.19 U	1 U	1 U
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	0.5 U	0.5 U	1 U	1 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	0.22 U	0.22 U	1 U	1 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.15 U	0.15 U	1 U	1 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	0.2 U	0.2 U	1 U	1 U
1,2-Dichloroethene (total)	UG/L	100	GA	5			0.21 UJ	0.21 UJ		
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	0.25 U	0.25 U	1 U	1 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U	0.2 U	0.2 U		1 U
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.26 U	0.26 U	1 U	1 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.24 U	0.24 U	1 U	1 U
Acetone	UG/L	100			5 U	5 U	2.2 U	2.2 U	5 U	5 U
Benzene	UG/L	100	GA	1	1 U	1 U	0.68 J	0.68 J	1 U	1 U
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	0.33 U	0.33 U	1 U	1 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	0.23 U	0.23 U	1 U	1 U
Carbon disulfide	UG/L	100			1 U	1 U	0.25 U	0.25 U	1 U	1 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	0.22 U	0.22 U	1 U	1 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	0.22 U	0.22 U	1 U	1 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	0.3 U	0.3 U	1 U	1 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	0.55 U	0.55 U	1 U	1 U
Chloroform	UG/L	100	GA	7	1 U	1 U	0.32 U	0.32 U	1 U	1 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.21 U	0.21 U	1 U	1 U
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	0.19 UJ	0.19 UJ	1 U	1 U
Cyclohexane	UG/L	100			1 U	1 U	0.31 U	0.31 U	1 U	1 U
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U			1 UJ	1 U
Diisopropyl Ether	UG/L	100					0.21 U	0.21 U		
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	0.21 U	0.21 U	1 U	1 U
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	0.23 U	0.23 U	1 U	1 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-3	MW25-3	MW25-8	MW25-8				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20086	25LM20087	25LM20003	25LM20012				
Sample Depth Interval (FT)	0-0.1	0-0.1	8.79-8.79	8.79-8.79	0-0.1	0-0.1				
Sample Date	1/31/2006	8/9/2006	2/29/2012	2/29/2012	1/31/2006	8/11/2006				
QC Type	SA	SA	SA	DU	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	9	9	1	2				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Meta/Para Xylene	UG/L	100	GA	5			0.59 U	0.59 U		
Methyl Acetate	UG/L	100			1 U	1 U	0.53 U	0.53 U	1 U	1 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	0.49 UJ	0.49 UJ	1 U	1 UJ
Methyl butyl ketone	UG/L	100			5 U	5 U	1.7 U	1.7 U	5 U	5 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	0.36 U	0.36 U	1 U	1 U
Methyl cyclohexane	UG/L	100			1 U	1 U	0.3 U	0.3 U	1 U	1 U
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	1.3 U	1.3 U	5 U	5 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	1.3 U	1.3 U	5 U	5 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	0.36 U	0.36 U	1 U	1 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	1.1 U	1.1 U	1 U	1 U
Naphthalene	UG/L	100					0.3 U	0.3 U		
n-Butylbenzene	UG/L	100	GA	5			0.23 U	0.23 U		
Ortho Xylene	UG/L	100	GA	5			0.25 U	0.25 U		
p-Isopropyltoluene	UG/L	100	GA	5		1 U				1 U
Propylbenzene	UG/L	100	GA	5		1 U				1 U
sec-Butylbenzene	UG/L	100	GA	5			0.21 U	0.21 U		
Styrene	UG/L	100	GA	5	1 U	1 U	0.23 U	0.23 U	1 U	1 U
tert-Butylbenzene	UG/L	100	GA	5			0.31 U	0.31 U		
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	0.4 U	0.4 U	1 U	1 U
Toluene	UG/L	100	GA	5	1 U	1 U	0.27 U	0.27 U	1 U	1 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U	0.25 U	0.25 U	3 U	3 U
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.25 U	0.25 U	1 U	1 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	0.2 UJ	0.2 UJ	1 U	1 U
Trichloroethene	UG/L	100	GA	5	1 U	1 U	0.28 U	0.28 U	1 U	1 U
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	0.24 U	0.24 U	1 UJ	1 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	0.25 U	0.25 U	1 U	1 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U			9 U	10 U
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U			9 U	10 U
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U			9 U	10 U
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U			9 U	10 U
2,4-Dimethylphenol	UG/L	400			10 U	10 U			9 U	10 U
2,4-Dinitrophenol	UG/L	400			48 U	48 U			47 U	49 U
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U			9 U	10 U
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U			9 U	10 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-3		MW25-3		MW25-8	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20086		25LM20087		25LM20003	
Sample Depth Interval (FT)	0-0.1		0-0.1		8.79-8.79		8.79-8.79		0-0.1	
Sample Date	1/31/2006		8/9/2006		2/29/2012		2/29/2012		1/31/2006	
QC Type	SA		SA		SA		DU		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		9		9		1	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400			10 U	10 U			9 U	10 U
2-Chlorophenol	UG/L	400			10 U	10 U			9 U	10 U
2-Methylnaphthalene	UG/L	400			10 U	10 U			9 U	10 U
2-Methylphenol	UG/L	400			10 U	10 U			9 U	10 U
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U			47 U	49 U
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U			9 U	10 U
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U			19 U	20 U
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U			47 U	49 U
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U			47 U	49 U
4-Bromophenyl phenyl ether	UG/L	400			10 U	10 U			9 U	10 U
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U			9 U	10 U
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U			9 U	10 U
4-Chlorophenyl phenyl ether	UG/L	400			10 U	10 U			9 U	10 U
4-Methylphenol	UG/L	400			10 U	10 U			9 U	10 U
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U			47 U	49 U
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U			47 U	49 U
Acenaphthene	UG/L	400			10 U	10 U			0.5 J	10 U
Acenaphthylene	UG/L	400			1 J	10 U			2 J	10 U
Acetophenone	UG/L	400			10 U	10 U			9 U	10 U
Anthracene	UG/L	400			10 U	10 U			1 J	10 U
Atrazine	UG/L	400	GA	7.5	10 U	10 U			9 U	10 U
Benzaldehyde	UG/L	400			48 U	48 U			47 U	49 U
Benzo(a)anthracene	UG/L	400			10 U	10 U			9 U	10 U
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U			9 U	10 U
Benzo(b)fluoranthene	UG/L	400			10 U	10 U			9 U	10 U
Benzo(ghi)perylene	UG/L	400			10 U	10 U			0.6 J	10 U
Benzo(k)fluoranthene	UG/L	400			10 U	10 U			9 U	10 U
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U			9 U	10 U
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U			9 U	10 U
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U			9 U	10 U
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U			9 U	10 U
Butylbenzylphthalate	UG/L	400			10 U	10 U			9 U	10 U
Caprolactam	UG/L	400			10 U	10 U			9 U	10 U
Carbazole	UG/L	400			10 U	10 U			9 U	10 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-3		MW25-3		MW25-8	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20086		25LM20087		25LM20003	
Sample Depth Interval (FT)	0-0.1		0-0.1		8.79-8.79		8.79-8.79		0-0.1	
Sample Date	1/31/2006		8/9/2006		2/29/2012		2/29/2012		1/31/2006	
QC Type	SA		SA		SA		DU		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		9		9		1	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Chrysene	UG/L	400			10 U	10 U			9 U	10 U
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U			9 U	10 U
Dibenzofuran	UG/L	400			10 U	10 U			9 U	10 U
Diethyl phthalate	UG/L	400			10 U	10 U			9 U	10 U
Dimethylphthalate	UG/L	400			10 U	10 U			9 U	10 U
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U			9 U	10 U
Di-n-octylphthalate	UG/L	400			10 U	10 U			9 U	10 U
Fluoranthene	UG/L	400			10 U	10 U			9 U	10 U
Fluorene	UG/L	400			10 U	10 UJ			9 U	10 U
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U			9 U	10 U
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U			9 U	10 U
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U			42 U	44 U
Hexachloroethane	UG/L	400	GA	5	10 U	10 U			9 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U			9 U	10 U
Isophorone	UG/L	400			10 U	10 U			9 U	10 U
Naphthalene	UG/L	400			10 U	10 U			9 U	10 U
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U			9 U	10 U
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U			9 U	10 U
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U			9 U	10 U
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U			47 U	49 U
Phenanthrene	UG/L	400			10 U	10 U			9 U	10 U
Phenol	UG/L	400	GA	1	10 U	10 U			9 U	10 U
Pyrene	UG/L	400			10 U	10 U			9 U	10 U
Iron	UG/L	600	GA	300	62.8 J	358	458 J	530 J	329 J	667
Sodium	UG/L	600	GA	20000	8870	6530 J	5980	5960	5110	7060 J
Chloride	MG/L	700	GA	250	0.73	0.71 J	1.5 J	1.4 J	1.4	0.73 J
Ethane	UG/L	700			2 U	2 U	0.58 U	0.58 U	2 U	2 U
Ethene	UG/L	700			2 U	2 U	0.69 U	0.69 U	2 U	2 U
Methane	UG/L	700			2 U	2 U	18 J	18 J	2 U	2 U
Nitrate	MG/L	700	GA	10			0.0152 U	0.0152 U		
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U			0.05 U	0.13
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10						
NITRITE	MG/L	700								
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U			0.05 U	0.05 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25			
Loc ID	MW25-10	MW25-10	MW25-3	MW25-3	MW25-8	MW25-8			
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER			
Sample ID	25LM20005	25LM20015	25LM20086	25LM20087	25LM20003	25LM20012			
Sample Depth Interval (FT)	0-0.1	0-0.1	8.79-8.79	8.79-8.79	0-0.1	0-0.1			
Sample Date	1/31/2006	8/9/2006	2/29/2012	2/29/2012	1/31/2006	8/11/2006			
QC Type	SA	SA	SA	DU	SA	SA			
Study ID	LTM	LTM	LTM	LTM	LTM	LTM			
Sample Round	1	2	9	9	1	2			
Filtered	N	N	N	N	N	N			
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Sulfate	MG/L	700	GA 250	18.1	18.4	50 J	50 J	19.5	28.2
Conductivity	S/m	750		0.464	0.701	0.766	0.766	0.494	0.72
Conductivity (post)	S/m	750							
Conductivity (pre)	S/m	750							
Dissolved Oxygen	MG/L	750		4.22	4.23	0.1	0.1	0.84	2.92
Dissolved Oxygen (post)	MG/L	750							
Dissolved Oxygen (pre)	MG/L	750							
Nitrate Nitrogen	MG/L	750							
Nitrite Nitrogen	MG/L	750							
ORP	mV	750		107	138.8	-141	-141	-70	33.4
ORP (post)	mV	750							
ORP (pre)	mV	750							
pH	Std units	750		6.97	6.56	6.94	6.94	7.3	6.97
pH (post)	Std units	750							
pH (pre)	Std units	750							
Sulfide	MG/L	750		0.1	0.28	0.46	0.46	0.04	0.09
Temperature	deg C	750		5	21.56	4.6	4.6	4.1	25.01
Turbidity	NTU	750		1.09	195	1.99	1.99	2.4	8.7
Turbidity (post)	NTU	750							
Turbidity (pre)	NTU	750							



**Appendix D Table D-1**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-8		MW25-8		MW25-8	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20037		25LM20047		25LM20059	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		4.41-4.41	
Sample Date	1/31/2006		8/9/2006		3/4/2008		4/29/2009		1/13/2010	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		4		5		6	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual				
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	1 U	1 U	0.32 U	0.2 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.09 U	0.38 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.4 U	0.31 UJ
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	0.2 U	0.33 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.14 U	0.21 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.37 U	0.35 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.19 U	0.37 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5		1 U				0.19 U
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	2 U	2 U	0.43 U	0.5 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	1 U	1 U	0.18 U	0.22 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	0.4 U	0.15 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	1 U	1 U	0.14 U	0.2 U
1,2-Dichloroethene (total)	UG/L	100	GA	5						0.21 UJ
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	0.15 U	0.25 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U				0.2 U
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	0.36 U	0.26 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	0.34 U	0.24 U
Acetone	UG/L	100			5 U	5 U	10 UJ	10 U	5 U	2.2 U
Benzene	UG/L	100	GA	1	1 U	1 U	1 U	1 U	0.18 U	0.26 U
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	0.17 U	0.33 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	1 UJ	1 U	0.2 U	0.23 U
Carbon disulfide	UG/L	100			1 U	1 U	1 U	1 U	0.36 U	0.25 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.36 U	0.22 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.26 U	0.22 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	0.11 U	0.3 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	2 U	1 U	0.21 U	0.55 U
Chloroform	UG/L	100	GA	7	1 U	1 U	1 U	1 U	0.16 U	0.32 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.14 U	0.21 U
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	0.14 U	0.19 UJ
Cyclohexane	UG/L	100			1 U	1 U	1 U	1 U	0.14 U	0.31 U
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 UJ	1 U	0.18 U	
Diisopropyl Ether	UG/L	100								0.21 U
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.42 U	0.21 U
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.34 U	0.23 U

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-8		MW25-8		MW25-8	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20037		25LM20047		25LM20059	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		4.41-4.41	
Sample Date	1/31/2006		8/9/2006		3/4/2008		4/29/2009		1/13/2010	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		4		5		6	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual				
Meta/Para Xylene	UG/L	100	GA	5			1 U	2 U	0.81 U	0.59 U
Methyl Acetate	UG/L	100			1 U	1 U	10 U	2 U	0.48 U	0.53 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	2 U	1 UJ	0.4 U	0.49 UJ
Methyl butyl ketone	UG/L	100			5 U	5 U	5 U	5 U	0.4 U	1.7 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	2 U	1 U	0.18 U	0.36 U
Methyl cyclohexane	UG/L	100			1 U	1 U	1 U	1 U	0.16 U	0.3 U
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	5 U	2.3 J	1 U	1.3 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	5 U	5 U	0.34 U	1.3 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	1 U	1 U	0.13 U	0.36 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	1 U	1 U	0.13 U	1.1 U
Naphthalene	UG/L	100								0.3 U
n-Butylbenzene	UG/L	100	GA	5						0.23 U
Ortho Xylene	UG/L	100	GA	5			1 U	1 U	0.4 U	0.25 U
p-Isopropyltoluene	UG/L	100	GA	5		1 U				
Propylbenzene	UG/L	100	GA	5		1 U				
sec-Butylbenzene	UG/L	100	GA	5						0.21 U
Styrene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.36 U	0.23 U
tert-Butylbenzene	UG/L	100	GA	5						0.31 U
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.42 U	0.4 U
Toluene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.21 U	0.27 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U				0.25 U
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.16 U	0.25 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	0.17 U	0.2 UJ
Trichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	0.19 U	0.28 U
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 U	1 U	0.16 U	0.24 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	1 U	1 U	0.22 U	0.25 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U				
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U				
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U				
2,4-Dimethylphenol	UG/L	400			10 U	10 U				
2,4-Dinitrophenol	UG/L	400			48 U	48 U				
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U				

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25
Loc ID	MW25-10	MW25-10	MW25-8	MW25-8	MW25-8	MW25-8
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample ID	25LM20005	25LM20015	25LM20037	25LM20047	25LM20059	25LM20092
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	4.41-4.41
Sample Date	1/31/2006	8/9/2006	3/4/2008	4/29/2009	1/13/2010	2/29/2012
QC Type	SA	SA	SA	SA	SA	SA
Study ID	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round	1	2	4	5	6	9
Filtered	N	N	N	N	N	N
Criteria	Source Criteria LOWEST-GW					
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400			10 U	10 U
2-Chlorophenol	UG/L	400			10 U	10 U
2-Methylnaphthalene	UG/L	400			10 U	10 U
2-Methylphenol	UG/L	400			10 U	10 U
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U
4-Bromophenyl phenyl ether	UG/L	400			10 U	10 U
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U
4-Chlorophenyl phenyl ether	UG/L	400			10 U	10 U
4-Methylphenol	UG/L	400			10 U	10 U
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U
Acenaphthene	UG/L	400			10 U	10 U
Acenaphthylene	UG/L	400			1 J	10 U
Acetophenone	UG/L	400			10 U	10 U
Anthracene	UG/L	400			10 U	10 U
Atrazine	UG/L	400	GA	7.5	10 U	10 U
Benzaldehyde	UG/L	400			48 U	48 U
Benzo(a)anthracene	UG/L	400			10 U	10 U
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U
Benzo(b)fluoranthene	UG/L	400			10 U	10 U
Benzo(ghi)perylene	UG/L	400			10 U	10 U
Benzo(k)fluoranthene	UG/L	400			10 U	10 U
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U
Butylbenzylphthalate	UG/L	400			10 U	10 U
Caprolactam	UG/L	400			10 U	10 U
Carbazole	UG/L	400			10 U	10 U

**Appendix D Table D-1**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-8	MW25-8	MW25-8	MW25-8				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20037	25LM20047	25LM20059	25LM20092				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	4.41-4.41				
Sample Date	1/31/2006	8/9/2006	3/4/2008	4/29/2009	1/13/2010	2/29/2012				
QC Type	SA	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	4	5	6	9				
Filtered	N	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual				
Chrysene	UG/L	400			10 U	10 U				
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U				
Dibenzofuran	UG/L	400			10 U	10 U				
Diethyl phthalate	UG/L	400			10 U	10 U				
Dimethylphthalate	UG/L	400			10 U	10 U				
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U				
Di-n-octylphthalate	UG/L	400			10 U	10 U				
Fluoranthene	UG/L	400			10 U	10 U				
Fluorene	UG/L	400			10 U	10 UJ				
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U				
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U				
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U				
Hexachloroethane	UG/L	400	GA	5	10 U	10 U				
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U				
Isophorone	UG/L	400			10 U	10 U				
Naphthalene	UG/L	400			10 U	10 U				
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U				
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U				
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U				
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U				
Phenanthrene	UG/L	400			10 U	10 U				
Phenol	UG/L	400	GA	1	10 U	10 U				
Pyrene	UG/L	400			10 U	10 U				
Iron	UG/L	600	GA	300	62.8 J	358	349	620	408	411 J
Sodium	UG/L	600	GA	20000	8870	6530 J	4180	6000	9740	6650
Chloride	MG/L	700	GA	250	0.73	0.71 J	0.2 U	3.2	0.5 U	1.3 J
Ethane	UG/L	700			2 U	2 U	1 U	1 U	0.16 U	0.58 U
Ethene	UG/L	700			2 U	2 U	1 U	1 U	0.17 U	0.69 U
Methane	UG/L	700			2 U	2 U	0.36 J	16	0.14 U	4.7 J
Nitrate	MG/L	700	GA	10				0.05 U	0.05 UJ	0.017 J
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U	0.607 J			
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10			0.607		0.003 UJ	
NITRITE	MG/L	700						0.016	0.007 UJ	
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U	0.01 UJ			

**Appendix D Table D-1**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25
Loc ID	MW25-10	MW25-10	MW25-8	MW25-8	MW25-8	MW25-8
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample ID	25LM20005	25LM20015	25LM20037	25LM20047	25LM20059	25LM20092
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	4.41-4.41
Sample Date	1/31/2006	8/9/2006	3/4/2008	4/29/2009	1/13/2010	2/29/2012
QC Type	SA	SA	SA	SA	SA	SA
Study ID	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round	1	2	4	5	6	9
Filtered	N	N	N	N	N	N
Criteria	Source Criteria LOWEST-GW					
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual
Sulfate	MG/L	700	GA	250	18.1	18.4
Conductivity	S/m	750			0.464	0.701
Conductivity (post)	S/m	750				
Conductivity (pre)	S/m	750				
Dissolved Oxygen	MG/L	750			4.22	4.23
Dissolved Oxygen (post)	MG/L	750				
Dissolved Oxygen (pre)	MG/L	750				
Nitrate Nitrogen	MG/L	750				
Nitrite Nitrogen	MG/L	750				
ORP	mV	750			107	138.8
ORP (post)	mV	750				
ORP (pre)	mV	750				
pH	Std units	750			6.97	6.56
pH (post)	Std units	750				
pH (pre)	Std units	750				
Sulfide	MG/L	750			0.1	0.28
Temperature	deg C	750			5	21.56
Turbidity	NTU	750			1.09	195
Turbidity (post)	NTU	750				
Turbidity (pre)	NTU	750				

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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-9		MW25-9		MW25-9	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20004		25LM20013		25LM20038	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0.1	
Sample Date	1/31/2006		8/9/2006		1/31/2006		8/9/2006		3/4/2008	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		1		2		4	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual				
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	0.62 J	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	1	1 U	1 U	1 U
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene	UG/L	100	GA	5		1 U		1 U		
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	1 U	1 U	2 U	2 U
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	0.49 J	1 U	1 U	1 U
1,2-Dichloroethene (total)	UG/L	100	GA	5						
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U		1 U		
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	1 U	1 U	1 U	1 U
Acetone	UG/L	100			5 U	5 U	5 U	63 UJ	10 UJ	10 U
Benzene	UG/L	100	GA	1	1 U	1 U	33	0.58 J	2.3	0.46 J
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	1 UJ	1 U
Carbon disulfide	UG/L	100			1 U	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	1 U	1 UJ	2 U	1 U
Chloroform	UG/L	100	GA	7	1 U	1 U	1 U	1 U	1 U	1 U
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	2.8	1 U	1 U	1 U
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	UG/L	100			1 U	1 U	8 J	1 U	1 U	1 U
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 UJ	1 U	1 UJ	1 U
Diisopropyl Ether	UG/L	100								
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	15	1 U	1 U	1 U
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	2.6	1 U	1 U	1 U

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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-9		MW25-9		MW25-9	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20004		25LM20013		25LM20038	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0.1	
Sample Date	1/31/2006		8/9/2006		1/31/2006		8/9/2006		3/4/2008	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		1		2		4	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual				
Meta/Para Xylene	UG/L	100	GA	5					0.43 J	2 U
Methyl Acetate	UG/L	100			1 U	1 U	1 U	1 U	10 U	2 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	1 U	1 U	2 U	1 UJ
Methyl butyl ketone	UG/L	100			5 U	5 U	5 U	5 U	5 U	5 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	1 U	1 U	2 U	1 U
Methyl cyclohexane	UG/L	100			1 U	1 U	1.9 J	1 U	1 U	1 U
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	5 U	5 UJ	5 U	5 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	5 U	5 U	5 U	5 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	1 U	1 UJ	1 U	1 U
Naphthalene	UG/L	100								
n-Butylbenzene	UG/L	100	GA	5						
Ortho Xylene	UG/L	100	GA	5					1.5	1 U
p-Isopropyltoluene	UG/L	100	GA	5		1 U		1 U		
Propylbenzene	UG/L	100	GA	5		1 U		1 U		
sec-Butylbenzene	UG/L	100	GA	5						
Styrene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	UG/L	100	GA	5						
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	UG/L	100	GA	5	1 U	1 U	14	1 U	0.39 J	1 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U	62	3 U		
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	1 U	1 U	1 U	1 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	UG/L	100	GA	5	1 U	1 U	0.53 J	1 U	1 U	1 U
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	1 U	1 U	1 U	1 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U	10 U	10 U		
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U	10 U	10 U		
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U	10 U	10 U		
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U	10 U	10 U		
2,4-Dimethylphenol	UG/L	400			10 U	10 U	10 U	10 U		
2,4-Dinitrophenol	UG/L	400			48 U	48 U	48 U	48 U		
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U	10 U	10 U		
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U	10 U	10 U		

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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25
Loc ID	MW25-10	MW25-10	MW25-9	MW25-9	MW25-9	MW25-9
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample ID	25LM20005	25LM20015	25LM20004	25LM20013	25LM20038	25LM20049
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Sample Date	1/31/2006	8/9/2006	1/31/2006	8/9/2006	3/4/2008	4/29/2009
QC Type	SA	SA	SA	SA	SA	SA
Study ID	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round	1	2	1	2	4	5
Filtered	N	N	N	N	N	N
Criteria	Source Criteria LOWEST-GW					
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400			10 U	10 U
2-Chlorophenol	UG/L	400			10 U	10 U
2-Methylnaphthalene	UG/L	400			10 U	10 U
2-Methylphenol	UG/L	400			10 U	10 U
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U
4-Bromophenyl phenyl ether	UG/L	400			10 U	10 U
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U
4-Chlorophenyl phenyl ether	UG/L	400			10 U	10 U
4-Methylphenol	UG/L	400			10 U	10 U
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U
Acenaphthene	UG/L	400			10 U	10 U
Acenaphthylene	UG/L	400			1 J	10 U
Acetophenone	UG/L	400			10 U	10 U
Anthracene	UG/L	400			10 U	10 U
Atrazine	UG/L	400	GA	7.5	10 U	10 U
Benzaldehyde	UG/L	400			48 U	48 U
Benzo(a)anthracene	UG/L	400			10 U	10 U
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U
Benzo(b)fluoranthene	UG/L	400			10 U	10 U
Benzo(ghi)perylene	UG/L	400			10 U	10 U
Benzo(k)fluoranthene	UG/L	400			10 U	10 U
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U
Butylbenzylphthalate	UG/L	400			10 U	10 U
Caprolactam	UG/L	400			10 U	10 U
Carbazole	UG/L	400			10 U	10 U



**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-9		MW25-9		MW25-9	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20004		25LM20013		25LM20038	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		0-0.1		0-0.1	
Sample Date	1/31/2006		8/9/2006		1/31/2006		8/9/2006		3/4/2008	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		1		2		4	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual				
Chrysene	UG/L	400			10 U	10 U	10 U	10 U		
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U	10 U	10 U		
Dibenzofuran	UG/L	400			10 U	10 U	10 U	10 U		
Diethyl phthalate	UG/L	400			10 U	10 U	10 U	10 U		
Dimethylphthalate	UG/L	400			10 U	10 U	10 U	10 U		
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U	10 U	10 U		
Di-n-octylphthalate	UG/L	400			10 U	10 U	10 U	10 U		
Fluoranthene	UG/L	400			10 U	10 U	10 U	10 U		
Fluorene	UG/L	400			10 U	10 UJ	10 U	10 UJ		
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U	10 U	10 U		
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U	10 U	10 U		
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U	43 U	43 U		
Hexachloroethane	UG/L	400	GA	5	10 U	10 U	10 U	10 U		
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U	10 U	10 U		
Isophorone	UG/L	400			10 U	10 U	10 U	10 U		
Naphthalene	UG/L	400			10 U	10 U	2 J	10 U		
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U	10 U	10 U		
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U	10 U	10 U		
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U	10 U	10 U		
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U	48 U	48 U		
Phenanthrene	UG/L	400			10 U	10 U	10 U	10 U		
Phenol	UG/L	400	GA	1	10 U	10 U	10 U	10 U		
Pyrene	UG/L	400			10 U	10 U	10 U	10 U		
Iron	UG/L	600	GA	300	62.8 J	358	56.9 J	12 U	100 U	9440
Sodium	UG/L	600	GA	20000	8870	6530 J	14500	16400 J	8380	26000
Chloride	MG/L	700	GA	250	0.73	0.71 J	1.1	0.99 J	0.2 U	2.7
Ethane	UG/L	700			2 U	2 U	2 U	2 U	1 U	1 U
Ethene	UG/L	700			2 U	2 U	2 U	2 U	1 U	1 U
Methane	UG/L	700			2 U	2 U	29	2 U	2.4 J	3.5
Nitrate	MG/L	700	GA	10						0.05 U
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U	0.05 U	0.1	0.05 UJ	
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10					0.05 U	
NITRITE	MG/L	700								0.01 U
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U	0.05 U	0.05 U	0.01 UJ	

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25
Loc ID	MW25-10	MW25-10	MW25-9	MW25-9	MW25-9	MW25-9
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Sample ID	25LM20005	25LM20015	25LM20004	25LM20013	25LM20038	25LM20049
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1	0-0.1
Sample Date	1/31/2006	8/9/2006	1/31/2006	8/9/2006	3/4/2008	4/29/2009
QC Type	SA	SA	SA	SA	SA	SA
Study ID	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round	1	2	1	2	4	5
Filtered	N	N	N	N	N	N
Criteria	Source Criteria LOWEST-GW					
Parameter	Unit	Source Criteria	Action Level	Value Qual	Value Qual	Value Qual
Sulfate	MG/L	700	GA 250	18.1	18.4	21.8 25.3 24.8 39.7
Conductivity	S/m	750		0.464	0.701	0.535 0.718 0.59
Conductivity (post)	S/m	750				
Conductivity (pre)	S/m	750				
Dissolved Oxygen	MG/L	750		4.22	4.23	5.33 5.22 2.02
Dissolved Oxygen (post)	MG/L	750				
Dissolved Oxygen (pre)	MG/L	750				
Nitrate Nitrogen	MG/L	750				
Nitrite Nitrogen	MG/L	750				
ORP	mV	750		107	138.8	91 62.5 99
ORP (post)	mV	750				
ORP (pre)	mV	750				
pH	Std units	750		6.97	6.56	7.15 7.15 7.33
pH (post)	Std units	750				
pH (pre)	Std units	750				
Sulfide	MG/L	750		0.1	0.28	0.02 0.45 0.01 U 0.12
Temperature	deg C	750		5	21.56	4.8 23.11 3.3
Turbidity	NTU	750		1.09	195	2.49 3.38 1.3
Turbidity (post)	NTU	750				
Turbidity (pre)	NTU	750				

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Area	SEAD-25		SEAD-25		SEAD-25		SEAD-25		SEAD-25	
Loc ID	MW25-10		MW25-10		MW25-9		MW25-9		MW25-9	
Matrix	GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER		GROUNDWATER	
Sample ID	25LM20005		25LM20015		25LM20058		25LM20082		25LM20093	
Sample Depth Interval (FT)	0-0.1		0-0.1		0-0.1		4.41-4.41		2.93-2.93	
Sample Date	1/31/2006		8/9/2006		1/12/2010		2/9/2011		2/29/2012	
QC Type	SA		SA		SA		SA		SA	
Study ID	LTM		LTM		LTM		LTM		LTM	
Sample Round	1		2		6		8		9	
Filtered	N		N		N		N		N	
Criteria	Source Criteria LOWEST-GW									
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
1,1,1-Trichloroethane	UG/L	100	GA	5	1 U	0.53 J	0.32 U	0.2 UJ	0.2 U	
1,1,2,2-Tetrachloroethane	UG/L	100	GA	5	1 U	1 U	0.09 U	0.38 UJ	0.38 U	
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	100	GA	5	1 U	1 U	0.4 U	0.31 U	0.31 UJ	
1,1,2-Trichloroethane	UG/L	100	GA	1	1 U	1 U	0.2 U	0.33 UJ	0.33 U	
1,1-Dichloroethane	UG/L	100	GA	5	1 U	1 U	0.14 U	0.21 UJ	0.21 U	
1,1-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.37 U	0.35 UJ	0.35 U	
1,2,4-Trichlorobenzene	UG/L	100	GA	5	1 U	1 U	0.19 U	0.37 UJ	0.37 U	
1,2,4-Trimethylbenzene	UG/L	100	GA	5	1 U	1 U		0.19 UJ	0.19 U	
1,2-Dibromo-3-chloropropane	UG/L	100	GA	0.04	1 U	1 U	0.43 U	0.5 U	0.5 U	
1,2-Dibromoethane	UG/L	100	GA	0.0006	1 U	1 U	0.18 U	0.22 UJ	0.22 U	
1,2-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.4 U	0.15 UJ	0.15 U	
1,2-Dichloroethane	UG/L	100	GA	0.6	1 U	1 U	0.14 U	0.2 UJ	0.2 U	
1,2-Dichloroethene (total)	UG/L	100	GA	5				0.21 UJ	0.21 UJ	
1,2-Dichloropropane	UG/L	100	GA	1	1 U	1 U	0.15 U	0.25 UJ	0.25 U	
1,3,5-Trimethylbenzene	UG/L	100	GA	5		1 U		0.2 UJ	0.2 U	
1,3-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.36 U	0.26 UJ	0.26 U	
1,4-Dichlorobenzene	UG/L	100	GA	3	1 U	1 U	0.34 U	0.24 UJ	0.24 U	
Acetone	UG/L	100			5 U	5 U	5 U	2.2 U	2.2 U	
Benzene	UG/L	100	GA	1	1 U	1 U	0.18 U	0.74 J	0.4 J	
Bromodichloromethane	UG/L	100	MCL	80	1 U	1 U	0.17 U	0.33 UJ	0.33 U	
Bromoform	UG/L	100	MCL	80	1 U	1 U	0.2 U	0.23 UJ	0.23 U	
Carbon disulfide	UG/L	100			1 U	1 U	0.36 U	0.25 U	0.25 U	
Carbon tetrachloride	UG/L	100	GA	5	1 U	1 U	0.36 U	0.22 UJ	0.22 U	
Chlorobenzene	UG/L	100	GA	5	1 U	1 U	0.26 U	0.22 UJ	0.22 U	
Chlorodibromomethane	UG/L	100	MCL	80	1 U	1 U	0.11 U	0.3 UJ	0.3 U	
Chloroethane	UG/L	100	GA	5	1 U	1 UJ	0.21 U	0.55 U	0.55 U	
Chloroform	UG/L	100	GA	7	1 U	1 U	0.16 U	0.32 UJ	0.32 U	
Cis-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.14 U	0.21 UJ	0.21 U	
Cis-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	0.14 U	0.19 UJ	0.19 UJ	
Cyclohexane	UG/L	100			1 U	1 U	0.14 U	0.31 UJ	0.31 U	
Dichlorodifluoromethane	UG/L	100	GA	5	1 UJ	1 U	0.18 U			
Diisopropyl Ether	UG/L	100						0.21 U	0.21 U	
Ethyl benzene	UG/L	100	GA	5	1 U	1 U	0.42 U	0.21 UJ	0.21 U	
Isopropylbenzene	UG/L	100	GA	5	1 U	1 U	0.34 U	0.23 UJ	0.23 U	

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-9	MW25-9	MW25-9				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20058	25LM20082	25LM20093				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	4.41-4.41	2.93-2.93				
Sample Date	1/31/2006	8/9/2006	1/12/2010	2/9/2011	2/29/2012				
QC Type	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	6	8	9				
Filtered	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual			
Meta/Para Xylene	UG/L	100	GA	5			0.81 U	0.59 UJ	0.59 U
Methyl Acetate	UG/L	100			1 U	1 U	0.48 U	0.53 U	0.53 U
Methyl bromide	UG/L	100	GA	5	1 U	1 U	0.4 U	0.49 U	0.49 UJ
Methyl butyl ketone	UG/L	100			5 U	5 U	0.4 U	1.7 U	1.7 U
Methyl chloride	UG/L	100	GA	5	1 U	1 U	0.18 U	0.36 U	0.36 U
Methyl cyclohexane	UG/L	100			1 U	1 U	0.16 U	0.3 U	0.3 U
Methyl ethyl ketone	UG/L	100			5 U	5 UJ	1 U	1.3 U	1.3 U
Methyl isobutyl ketone	UG/L	100			5 U	5 U	0.34 U	1.3 U	1.3 U
Methyl Tertbutyl Ether	UG/L	100			1 U	1 U	0.13 U	0.36 U	0.36 U
Methylene chloride	UG/L	100	GA	5	1 U	1 UJ	0.13 U	1.1 U	1.1 U
Naphthalene	UG/L	100						0.3 UJ	0.3 U
n-Butylbenzene	UG/L	100	GA	5				0.23 UJ	0.23 U
Ortho Xylene	UG/L	100	GA	5			0.4 U	0.25 UJ	0.25 U
p-Isopropyltoluene	UG/L	100	GA	5		1 U			
Propylbenzene	UG/L	100	GA	5		1 U			
sec-Butylbenzene	UG/L	100	GA	5				0.21 UJ	0.21 U
Styrene	UG/L	100	GA	5	1 U	1 U	0.36 U	0.23 UJ	0.23 U
tert-Butylbenzene	UG/L	100	GA	5				0.31 UJ	0.31 U
Tetrachloroethene	UG/L	100	GA	5	1 U	1 U	0.42 U	0.4 U	0.4 U
Toluene	UG/L	100	GA	5	1 U	1 U	0.21 U	0.27 UJ	0.27 U
Total Xylenes	UG/L	100	GA	5	3 U	3 U		0.25 UJ	0.25 U
Trans-1,2-Dichloroethene	UG/L	100	GA	5	1 U	1 U	0.16 U	0.25 U	0.25 U
Trans-1,3-Dichloropropene	UG/L	100	GA	0.4	1 U	1 U	0.17 U	0.2 UJ	0.2 UJ
Trichloroethene	UG/L	100	GA	5	1 U	1 U	0.19 U	0.28 UJ	0.28 U
Trichlorofluoromethane	UG/L	100	GA	5	1 UJ	1 U	0.16 U	0.24 U	0.24 U
Vinyl chloride	UG/L	100	GA	2	1 U	1 U	0.22 U	0.25 U	0.25 U
1,1'-Biphenyl	UG/L	400	GA	5	10 U	10 U			
2,4,5-Trichlorophenol	UG/L	400	GA	1	10 U	10 U			
2,4,6-Trichlorophenol	UG/L	400	GA	1	10 U	10 U			
2,4-Dichlorophenol	UG/L	400	GA	5	10 U	10 U			
2,4-Dimethylphenol	UG/L	400			10 U	10 U			
2,4-Dinitrophenol	UG/L	400			48 U	48 U			
2,4-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U			
2,6-Dinitrotoluene	UG/L	400	GA	5	10 U	10 U			

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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25	
Loc ID	MW25-10	MW25-10	MW25-9	MW25-9	MW25-9	
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	
Sample ID	25LM20005	25LM20015	25LM20058	25LM20082	25LM20093	
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	4.41-4.41	2.93-2.93	
Sample Date	1/31/2006	8/9/2006	1/12/2010	2/9/2011	2/29/2012	
QC Type	SA	SA	SA	SA	SA	
Study ID	LTM	LTM	LTM	LTM	LTM	
Sample Round	1	2	6	8	9	
Filtered	N	N	N	N	N	
Criteria	Source Criteria LOWEST-GW					
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual
2-Chloronaphthalene	UG/L	400			10 U	10 U
2-Chlorophenol	UG/L	400			10 U	10 U
2-Methylnaphthalene	UG/L	400			10 U	10 U
2-Methylphenol	UG/L	400			10 U	10 U
2-Nitroaniline	UG/L	400	GA	5	48 U	48 U
2-Nitrophenol	UG/L	400	GA	1	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	400	GA	5	19 U	19 U
3-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4,6-Dinitro-2-methylphenol	UG/L	400	GA	1	48 U	48 U
4-Bromophenyl phenyl ether	UG/L	400			10 U	10 U
4-Chloro-3-methylphenol	UG/L	400	GA	1	10 U	10 U
4-Chloroaniline	UG/L	400	GA	5	10 U	10 U
4-Chlorophenyl phenyl ether	UG/L	400			10 U	10 U
4-Methylphenol	UG/L	400			10 U	10 U
4-Nitroaniline	UG/L	400	GA	5	48 U	48 U
4-Nitrophenol	UG/L	400	GA	1	48 U	48 U
Acenaphthene	UG/L	400			10 U	10 U
Acenaphthylene	UG/L	400			1 J	10 U
Acetophenone	UG/L	400			10 U	10 U
Anthracene	UG/L	400			10 U	10 U
Atrazine	UG/L	400	GA	7.5	10 U	10 U
Benzaldehyde	UG/L	400			48 U	48 U
Benzo(a)anthracene	UG/L	400			10 U	10 U
Benzo(a)pyrene	UG/L	400	GA	0	10 U	10 U
Benzo(b)fluoranthene	UG/L	400			10 U	10 U
Benzo(ghi)perylene	UG/L	400			10 U	10 U
Benzo(k)fluoranthene	UG/L	400			10 U	10 U
Bis(2-Chloroethoxy)methane	UG/L	400	GA	5	10 U	10 U
Bis(2-Chloroethyl)ether	UG/L	400	GA	1	10 U	10 U
Bis(2-Chloroisopropyl)ether	UG/L	400	GA	5	10 U	10 U
Bis(2-Ethylhexyl)phthalate	UG/L	400	GA	5	10 U	10 U
Butylbenzylphthalate	UG/L	400			10 U	10 U
Caprolactam	UG/L	400			10 U	10 U
Carbazole	UG/L	400			10 U	10 U

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Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-9	MW25-9	MW25-9				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20058	25LM20082	25LM20093				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	4.41-4.41	2.93-2.93				
Sample Date	1/31/2006	8/9/2006	1/12/2010	2/9/2011	2/29/2012				
QC Type	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	6	8	9				
Filtered	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual			
Chrysene	UG/L	400			10 U	10 U			
Dibenz(a,h)anthracene	UG/L	400			10 U	10 U			
Dibenzofuran	UG/L	400			10 U	10 U			
Diethyl phthalate	UG/L	400			10 U	10 U			
Dimethylphthalate	UG/L	400			10 U	10 U			
Di-n-butylphthalate	UG/L	400	GA	50	10 U	10 U			
Di-n-octylphthalate	UG/L	400			10 U	10 U			
Fluoranthene	UG/L	400			10 U	10 U			
Fluorene	UG/L	400			10 U	10 UJ			
Hexachlorobenzene	UG/L	400	GA	0.04	10 U	10 U			
Hexachlorobutadiene	UG/L	400	GA	0.5	10 U	10 U			
Hexachlorocyclopentadiene	UG/L	400	GA	5	43 U	43 U			
Hexachloroethane	UG/L	400	GA	5	10 U	10 U			
Indeno(1,2,3-cd)pyrene	UG/L	400			10 U	10 U			
Isophorone	UG/L	400			10 U	10 U			
Naphthalene	UG/L	400			10 U	10 U			
Nitrobenzene	UG/L	400	GA	0.4	10 U	10 U			
N-Nitroso-di-n-propylamine	UG/L	400			10 U	10 U			
N-Nitrosodiphenylamine	UG/L	400			10 U	10 U			
Pentachlorophenol	UG/L	400	GA	1	48 U	48 U			
Phenanthrene	UG/L	400			10 U	10 U			
Phenol	UG/L	400	GA	1	10 U	10 U			
Pyrene	UG/L	400			10 U	10 U			
Iron	UG/L	600	GA	300	62.8 J	358	916	3580	2080 J
Sodium	UG/L	600	GA	20000	8870	6530 J	16500	29600	45300
Chloride	MG/L	700	GA	250	0.73	0.71 J	0.5 U	1.6 J	0.55 J
Ethane	UG/L	700			2 U	2 U	0.16 U	0.58 U	0.58 U
Ethene	UG/L	700			2 U	2 U	0.17 U	0.69 U	0.69 U
Methane	UG/L	700			2 U	2 U	0.14 U	5.4 J	4 J
Nitrate	MG/L	700	GA	10			0.05 UJ	0.0152 U	0.018 J
Nitrate Nitrogen	MG/L	700			0.05 U	0.05 U			
Nitrate/Nitrite Nitrogen	MG/L	700	GA	10			0.003 UJ		
NITRITE	MG/L	700					0.007 UJ		
Nitrite Nitrogen	MG/L	700			0.05 U	0.05 U			

**Appendix D Table D-1**  
**SEAD-25 Historic Groundwater Results**  
 2012 Annual Report  
 Seneca Army Depot Activity

Area	SEAD-25	SEAD-25	SEAD-25	SEAD-25	SEAD-25				
Loc ID	MW25-10	MW25-10	MW25-9	MW25-9	MW25-9				
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER				
Sample ID	25LM20005	25LM20015	25LM20058	25LM20082	25LM20093				
Sample Depth Interval (FT)	0-0.1	0-0.1	0-0.1	4.41-4.41	2.93-2.93				
Sample Date	1/31/2006	8/9/2006	1/12/2010	2/9/2011	2/29/2012				
QC Type	SA	SA	SA	SA	SA				
Study ID	LTM	LTM	LTM	LTM	LTM				
Sample Round	1	2	6	8	9				
Filtered	N	N	N	N	N				
Criteria	Source Criteria LOWEST-GW								
Parameter	Unit		Source Criteria	Action Level	Value Qual	Value Qual			
Sulfate	MG/L	700	GA	250	18.1	18.4	35.3 J	32 J	26 J
Conductivity	S/m	750			0.464	0.701	0.427		0.555
Conductivity (post)	S/m	750							
Conductivity (pre)	S/m	750							
Dissolved Oxygen	MG/L	750			4.22	4.23			1.77
Dissolved Oxygen (post)	MG/L	750							
Dissolved Oxygen (pre)	MG/L	750							
Nitrate Nitrogen	MG/L	750							
Nitrite Nitrogen	MG/L	750							
ORP	mV	750			107	138.8	-72		-129
ORP (post)	mV	750							
ORP (pre)	mV	750							
pH	Std units	750			6.97	6.56	6.73		7.41
pH (post)	Std units	750							
pH (pre)	Std units	750							
Sulfide	MG/L	750			0.1	0.28	0.01		
Temperature	deg C	750			5	21.56	3.62		4.1
Turbidity	NTU	750			1.09	195	2.8		2.74
Turbidity (post)	NTU	750							
Turbidity (pre)	NTU	750							

**APPENDIX E**

**LONG-TERM MONITORING EVENT 2012 DATA VALIDATION SHEETS**



**PROJECT NAME/NO.** USACE - Seneca Army Depot SEAD-25 LTM February 2012  
**LAB:** Katahdin Analytical Services  
**SDG:**  
**FRACTION:** VOC (Method 8260B)  
**MEDIA:** Groundwater  
**NUMBER OF SAMPLES:** 11 Samples + 3 Trip Blanks + 1 Rinsate Blank

CRITERIA	Did Analyses Meet all criteria as specified in the SOPS?	If no, specify items not meet criteria	Comments/Qualifying Actions	Qualifiers Added?
<b>Data Completeness, Holding Times, &amp; Preservation</b>	No	Cooler temp >4° but <10°C	Coolers were received at 4.8°, 5.6° and 4.4°C by the laboratory between 2/29/12 to 3/2/2012. All samples were received in good condition based on the Cooler Receipt Form. The VOA samples were properly preserved and the pH was less than 2. The samples were analyzed within 5 days from sample collection. No action was taken since the temp was <10° C.	No
<b>System Monitoring Compounds</b>	No	DBF below 85%	All system monitoring compound recoveries were within the laboratory established limits and the project limits (i.e., 80-120% for Method 8260B aqueous samples) for all samples in this SDG except Dibromofluoromethane (85-115%) in samples: 25LM20092 (84.4%) and 25LM20092RE (83.6%). No action taken for being outside lab acceptance criteria since the project limits (80-120%, EPA region 2) were met.	No
<b>Matrix Spike/Matrix Spike Duplicates</b>	No	MS/MSD low recovery LCS low recovery	MS/MSD analyses were conducted for 25LM20086 for all TCLs and the MS/MSD results were within the laboratory established limits and project limits of 70-130% except for Bromomethane (65.6% MS), Cis-1,3-Dichloropropene (69.6% MS, 69.6% MSD), and Trans-1,3-Dichloropropene (62.6% MS, 63.2% MSD). RPDs for MS/MSD were below 25%. Of the above analytes only the following were detected in project samples 25LM20086, 25LM20087, and 25LM20091, and 25LM20093: 1,2-Dichloroethene (total), Benzene, Cis-1,2-Dichloroethene, Ethyl benzene, and Trichloroethene. The cis-1,3-dichloropropene and trans-1,3-dichloropropene results were considered estimated, possibly biased low, and qualified results as J or UJ, since both MS/MSD accuracy results fell below the QC limit.  Three LCS recoveries were all within the laboratory advisory limits except: LCS (WG105296-1) recovery for Total 1,2-Dichloroethene (82.5%) was below the lab limit (84-121%), LCS (WG105334-1) recovery for Freon 113 (70.8%, lab limit 73-126%) and Total 1,2-Dichloroethene (82.0%) were below the lab limit, LCS (WG105409-1) recovery for Freon 113 (67.4%) and Total 1,2-Dichloroethene (82.7%) were below the lab limit. Qualify results all results for Total 1,2-Dichloroethene as J. Qualify Freon 113 results as J for the following samples: 25LM20086, 25LM20087, 25LM20089, 25LM20091, 25LM20092, 25LM20092RE, and 25LM20093.	Yes
<b>Blanks</b>	No	EB acetone detect	No TCLs were detected in the method blanks, no action was taken. An equipment rinsate blank (25LM200109) was available for the SDG ; Acetone (3.6 J ug/L) was detected. Rinsate blank was done on a decon'ed Pine bladder pump. No impact to project sample results because the concentration were < 1x CRQL and the project samples analyzed in same batch were non-detect for Acetone. Three trip blanks (25LM00019, 25LM00020, and 25LM00021) were associated with this SDG, there were no detect. No action was taken.	No
<b>GC/MS Instrument Performance Check</b>	Yes		DB-624 (0.20mmID) column was used. Instrument performance check met requirement.	No
<b>TCL Analytes</b>	Yes		The standard relative ion intensities generally agree within 20% for all TCLs detected. All RTs within the limits. No action was taken.	No

**PROJECT NAME/NO.** USACE - Seneca Army Depot SEAD-25 LTM February 2012  
**LAB:** Katahdin Analytical Services  
**SDG:**  
**FRACTION:** VOC (Method 8260B)  
**MEDIA:** Groundwater  
**NUMBER OF SAMPLES:** 11 Samples + 3 Trip Blanks + 1 Rinsate Blank

CRITERIA	Did Analyses Meet all criteria as specified in the SOPS?	If no, specify items not meet criteria	Comments/Qualifying Actions	Qualifiers Added?
Tentatively Identified Compounds	NA		TICs were not reported for this SDG.	No
Quantitation Limits	Yes		The 2nd lowest calibration standards (1.0ppb) were reported as reporting limits. MDLs below the RLs.	No
GC/MS Initial Calibration	Yes		Initial Calibration (Instrument GCMS-D) was run on 2/17/2012 at 09:30-11:51. Percent RSDs were all within 20% . RRFs were above 0.05 for all TCLs. No action was taken.	No
GC/MS Continuing Calibration	No	%D > 20%	%Ds were within the Method 8260B QC limit of 20% for all target compounds except were noted otherwise. CCV (Instrument GCMS-D) were run on : 3/01/2012 at 09:08. %Ds were within the QC limit except Chloromethane (-20.76%), Bromomethane (-31.63%), and Freon 113 (-25.34%). Qualify these analyte results as J in samples: 25LM200088, 25LM200090, 25LM200094, 25LM200095, and 25LM200096. 3/02/2012 at 09:49. %Ds were within the QC limit except Bromomethane (-23.33%), Freon 113 (-21.96%), and trans-1,3-Dichloropropene (-27.41%). Qualify these analyte results as J in samples: 25LM200086, 25LM200087, 25LM200089, 25LM200092, and 25LM200093. 3/05/2012 at 10:20. %Ds were within the QC limit except Bromomethane (-23.84%), Freon 113 (-30.35%), trans-1,3-Dichloropropene (-29.99%), and Methylcyclohexane (-20.67%). Qualify these analyte results as J in samples: 25LM200092RE and 25LM200091. Average RRFs were greater than 0.05 for all target compounds.	Yes
Internal Standards	Yes		Standard recovery areas for all samples were within the limits (i.e., 50% - 200% of the 12-hour standard areas) for all three internal standards; and retention times were within 30 seconds of the standard RTs for all samples.	No
Field Duplicate	Yes		A field duplicate pair (25LM20086 and 25LM20087) was collected for this SDG. Benzene was the only detected analyte with a RPD=0%. No action was taken.	No

RT = Retention Time; %D = Percent Deviation; %RPD = Relative Percent Difference; %RSD = Percent Relative Standard Deviation; RRF = Relative Response Factor;  
 TCL = Target Compound List; TIC = Tentatively Identified Compound; CCV = Continuing Calibration Verification

**PROJECT NAME/NO.** USACE - Seneca Army Depot SEAD-25 LTM February 2012  
**LAB:** Katahdin Analytical Services  
**SDG:**  
**FRACTION:** CAS (RSK-175 Modified)  
**MEDIA:** Groundwater  
**NUMBER OF SAMPLES:** 11 Samples + 1 Rinsate Blank

CRITERIA	Did Analyses Meet all criteria as specified in the SOPS?	If no, specify analysis IDs which do not meet criteria	Comments/Qualifying Actions	Qualifiers Added?
<b>Data Completeness, Holding Times, Preservation, &amp; Solids Percentage</b>	Yes		Coolers were received at 4.8°, 5.6° and 4.4°C by the laboratory between 2/29/12 to 3/2/2012. All samples were received in good condition based on the Cooler Receipt Form. The samples were properly preserved and the pH was less than 2. The samples were analyzed within 7 days from sample collection. No action was taken since the temp was <10° C.	NO
<b>Matrix Spike/Matrix Spike Duplicates</b>	No	MS/MSD recoveries < Limit	MS/MSD analyses were conducted for 25LM20086. The MS/MSD recoveries were within the laboratory established limits (70%-130%) except for Methane (65.9% MS, 62.1% MSD) and Ethane (69.9% MSD); and were below the project limits (i.e., 90-110%). All %RPDs were below laboratory established limit (30%) and the project limit (25%). Results for methane are considered estimated, possibly biased low, and qualified J or UJ for the project samples. LCS recoveries were within laboratory limits of 70-130% and the project limits (70-130%).	YES
<b>Blanks</b>	No	Methane detected in Rinsate Blank	No MEE compounds were detected in the Method Blank. An equipment rinsate blank (25LM200109) was available for the SDG: Methane (1.1 J ug/L) was detected. Rinsate blank was done on a decon'ed bladder pump. No impact to project sample results.	NO
<b>TCL Analytes</b>	Yes		All RTs were within the limits (i.e., 0.06 unit of RT in the initial calibration).	NO
<b>Reported Quantitation Limits</b>	YES		The lowest calibration standard concentration level was reported as reporting limit. MDLs below RLs.	NO
<b>GC/MS Initial Calibration</b>	YES		Initial calibrations conducted on 3/1/2012. All target compounds had %RSD<20%. RRFs>0.05	NO
<b>GC/MS Continuing Calibration</b>	Yes		Calibrations Verification conducted on: 3/1/2012 at 16:20 %D were all within 20% and RRFs>0.05. 3/5/2012 at 10:20 %D were all within 20% and RRFs>0.05. 3/5/2012 at 16:35 %D were all within 20% and RRFs>0.05. No action was taken since %D was within the lab limit.	NO
<b>Field Duplicate</b>	YES		A field duplicate pair (25LM20086 and 25LM20087) was collected for this SDG. Methane was detected in both samples with a 0% RPD.	NO

**PROJECT NAME/NO.** USACE - Seneca Army Depot SEAD-25 LTM February 2012  
**LAB:** Katahdin Analytical Services  
**SDG:**  
**FRACTION:** General Chemistry (chloride and sulfate - Method 300.0; nitrate+nitrite as nitrogen - Method 352.3)  
**MEDIA:** Groundwater  
**NUMBER OF SAMPLES** 11 Samples + 1 Rinsate Blank

CRITERIA	Did Analyses Meet all criteria as specified in the SOPs?	If no, specify analysis IDs which do not meet criteria	Comments/Qualifying Actions	Qualifiers Added?
<b>Data Completeness, Holding Times &amp; Preservation</b>	YES		Coolers were received at 4.8°, 5.6° and 4.4°C by the laboratory between 2/29/12 to 3/2/2012. All samples were received in good condition based on the Cooler Report Form. Nitrite as Nitrogen and Nitrate as Nitrogen were analyzed within 48 hours from collection. All other parameters were analyzed within 7 days from sample collection. No action was taken since the temperature was within $\pm 2^{\circ}\text{C}$ .	NO
<b>Calibration</b>	YES		Calibration for chloride, nitrate, nitrite, and sulfate had R2>0.99.	NO
<b>Blanks</b>	No	No2/NO3 detected in RB	No chloride, nitrite, nitrate, or sulfate contamination was detected in the method blank above the RLs. An equipment rinsate blank (25LM200109) was available for the SDG; Nitrate (0.029 J ug/L) and Nitrite (0.022 J ug/L) were detected. Rinsate blank was done on a decon'ed bladder pump. No impact to project sample results.	NO
<b>Laboratory Control Sample</b>	YES		LCS recoveries for chloride, nitrite, nitrate, and sulfate met the laboratory established limits and the SAP specified criteria.	NO
<b>Duplicates</b>	YES		A field duplicate pair (25LM20086 and 25LM20087) was collected for this SDG. Only Nitrite had RPD > 30%. Laboratory duplicate analyses were conducted for 25LM20086 on Nitrate and Nitrite and were within the SAP limits.	NO
<b>Spike Sample Analysis</b>	No	%Rec outside limits	Spike analysis was conducted for sample 25LM20096 on 2/29/12, sample 25LM20086 on 3/2/12, and sample 25LM00109 (RB) on 3/5/12. The laboratory established limits (90-110%) and the limits established by the SAP (90-110%). Only Nitrate recoveries were within both limits. The following were outside the lab and project limits: Chloride (85% and 78%) on 3/5/12. Nitrite on 2/29/12 was 120%, on 3/2/12 was 118% and 117%, on 3/2/12 was 117%. Sulfate (89% and 89%) on 3/6/12. Qualify all results as J for Sulfate, Nitrite, and Chloride	Yes

**PROJECT NAME/NO.** USACE - Seneca Army Depot SEAD-25 LTM February 2012  
**LAB:** Katahdin Analytical Services  
**SDG:**  
**FRACTION:** metals 6010C (Iron and sodium)  
**MEDIA:** Groundwater  
**NUMBER OF SAMPLES:** 11 Samples + 1 Rinsate Blank

CRITERIA	Did Analyses Meet all criteria as specified in the SOPS?	If no, specify analysis IDs which do not meet criteria	Comments/Qualifying Actions	Qualifiers Added?
Data Completeness, Holding Times & Preservation	Yes		Coolers were received at 4.8°, 5.6° and 4.4°C by the laboratory between 2/29/12 to 3/2/2012. All samples were received in good condition based on Cooler Report Form. Sample pH was below 2. Holding time met criteria.	No
Calibration	No	Na recovery 117.8%	Calibrations available, taken every ten samples, and within recovery limits (90-110%) for iron and sodium except CCV on 3/7/12 at 19:53 had Sodium recovery 117.8%. Samples 25LM00109 and 25LM20091 were analyzed before this CCV. Qualify samples 25LM00109 and 25LM20091 Na detects as J if > MDL.	Yes
Blanks (method blank, prep blank)	No	CCB Fe and Na detect Prep Blank Na detect	ICB analyzed for iron and sodium. CCB analyzed for metals every ten samples. Iron and sodium were not detected on 3/7/12 in the ICB or any CCBs except the following: Iron was detected: at 12:44 (3.172 J ug/L), at 16:21 (2.893 J ug/L), and at 19:58 (3.839 J ug/L). Sodium was detected: at 13:38 (478 J ug/L), at 14:32 (507.5 B ug/L), at 15:27 (247.5 J ug/L), at 16:21 (137.2 J ug/L), at 17:15 (114.9 J ug/L), at 18:09 (161.1 J ug/L), and at 19:58 (2156 B ug/L). Between the CCB at 17:15 and 18:09 these samples were analyzed: 25LM20088, 25LM20095, 25LM20094, and 25LM20096. No action was taken since CCB conc < MDL and samples detected > CRDL. Between the CCB at 18:09 and 19:03 these samples were analyzed: 25LM20086, 25LM20087, 25LM20089, 25LM20090, 25LM20092, and 25LM20093. No action was taken since CCB conc < MDL and samples detected > CRDL. Between the CCB at 19:03 and 19:53 sample 25LM20091 was analyzed. Qualify Na result for 25LM20091 as J since the CCB conc < sample conc < 10xCCB value Iron and sodium were not detected on 3/9/12 in the ICB or any CCBs except Sodium was detected at 17:11 (126.4 J ug/L) Between the CCB at 16:17 and 17:11 sample 25LM20091 was analyzed. No action was taken since CCB conc < MDL and samples detected > CRDL. Sodium (130.5 J ug/L) was detected in preparation blank. No action was taken since all project samples detected Na >6X CRDL and the preparation blank values were below the CRQL.	Yes
Interference Check Sample	Yes		Interference check results were within the limits of 80-120% for iron. Sodium was not evaluated, no action was taken.	No
CRQL Standard	Yes		CRQL Check Standard analysis was performed for iron and sodium at the beginning of the analysis and at the end of the analysis. As all results within 70-130%.	No
Laboratory Control Sample	Yes		LCS results all within limits, i.e., 80-120%, for iron and sodium, no action was taken.	No
Duplicates	Yes		A laboratory duplicate analysis was not conducted for this SDG. A field duplicate pair (25LM20086 and 25LM20087) was collected for this SDG and had RPD < 30%.	No
Spike Sample Analysis	Yes		Spike and Spike Duplicate analysis was conducted for 25LM20086 for iron and sodium and the results were within the limits of 75-125% for the Spike analysis and RPD < 10%. Post digest spike was not required since Spike recoveries were acceptable.	No
ICP Serial Dilution	No	Fe recovery 30%	ICP serial dilution was conducted for iron and sodium on 25LM20086. Sodium recovery (6.4%) was within the limits, but Iron recovery (30.4%) was above. Qualify Iron detects > MDL as J.	Yes
Detection Limits	Yes		IDL's available, IDLs=CRDLs. IDLs were reported for nondetects. No action was taken.	No
ICP Linear Range	Yes		All results within the ICP linear range.	No

**APPENDIX F****SATURATED THICKNESS TRENDS (MW25-2, MW25-3, MW25-9)**

- Figure 13 SEAD-25 Horizontal Profiles Lines (Plan View)
- Figure 14A SEAD-25 Horizontal Profile A-A'
- Figure 14B SEAD-25 Horizontal Profile B-B'
- Figure 14C SEAD-25 Horizontal Profile C-C'
- Figure 15A Weather Station Location Surrounding Romulus, NY
- Figure 15B 2006-2010 Monthly Rainfall Data with Wells MW25-2, MW25-3, and MW25-9 Saturated Thickness
- Figure 16 MW25-2 Benzene Concentration vs. Saturated Thickness – Rounds 1 through 9
- Figure 17 MW25-2 Benzene Concentration vs. Saturated Thickness – Round 1 Excluded
- Figure 18 MW25-2 Total BTEX Concentration vs. Saturated Thickness – Round 1 Excluded
- Figure 19 MW25-9 Benzene Concentration vs. Saturated Thickness – All Rounds
- Figure 20 MW25-9 Total BTEX Concentration vs. Saturated Thickness – Round 1 Excluded



Figure 14A  
 Profile A-A' (LTM Round 8)  
 SEAD-25 LTM Annual Report  
 Seneca Army Depot Activity

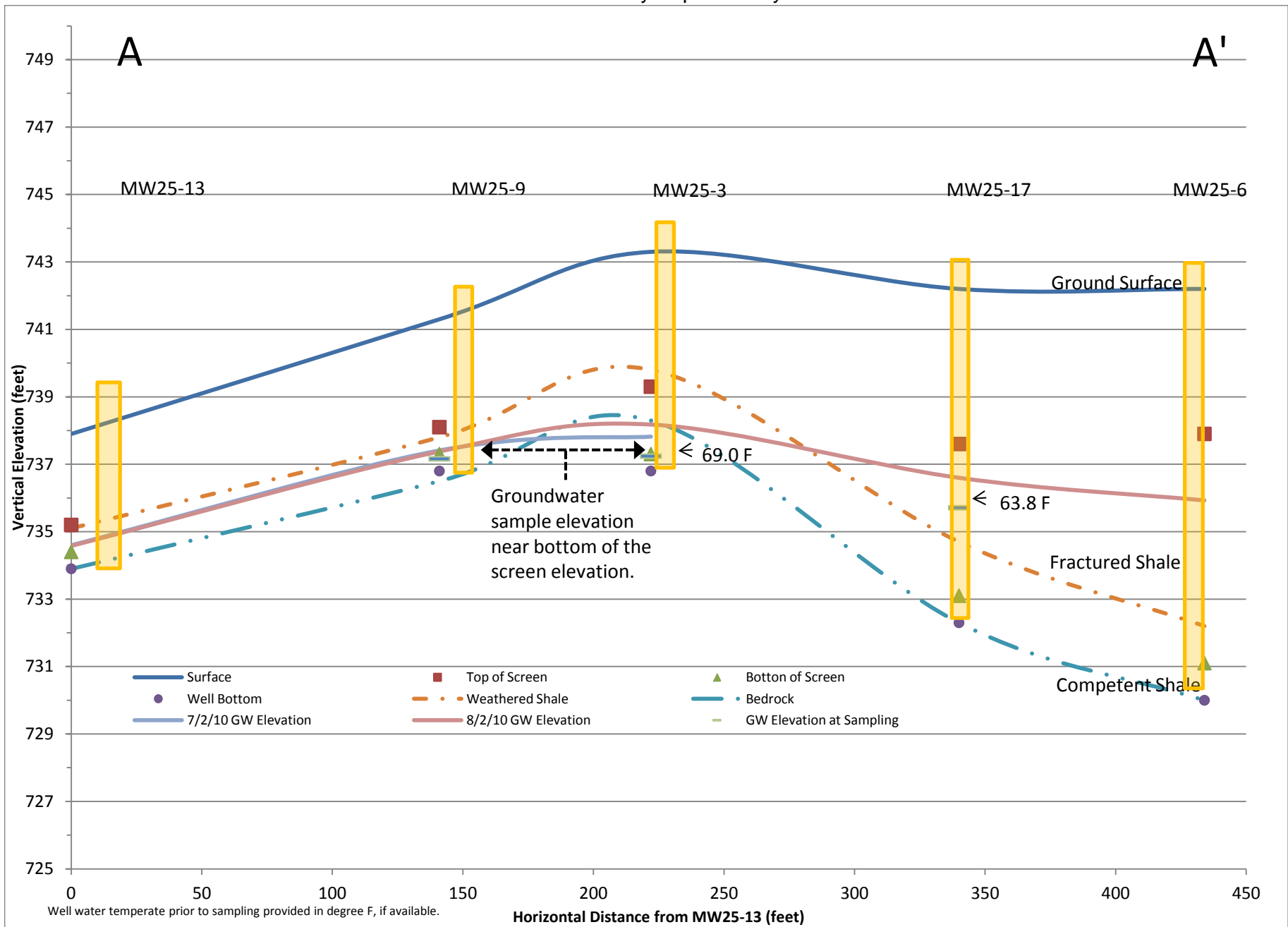




Figure 14B  
 Profile B-B' (LTM Round 8)  
 SEAD-25 LTM Annual Report  
 Seneca Army Depot Activity

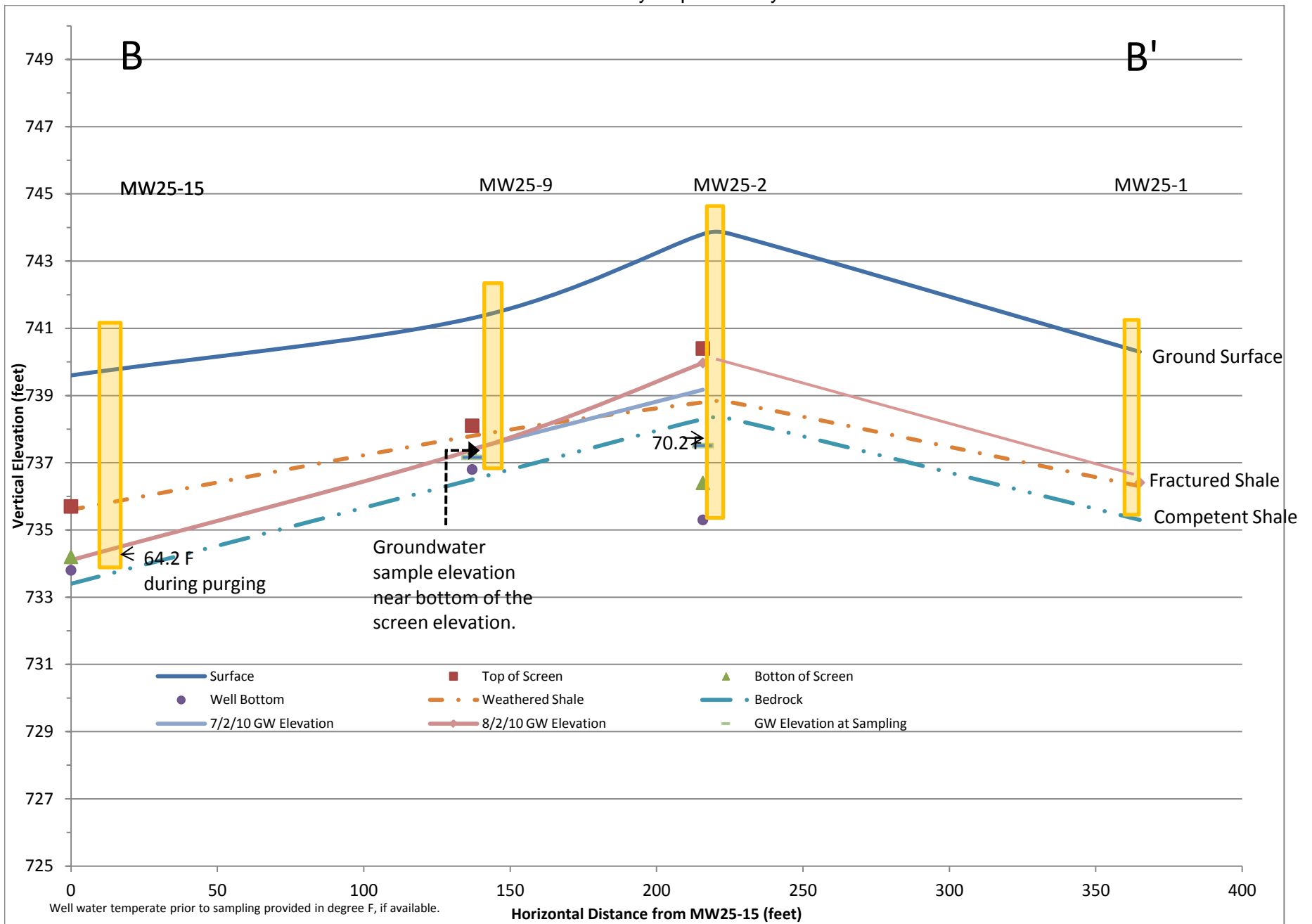
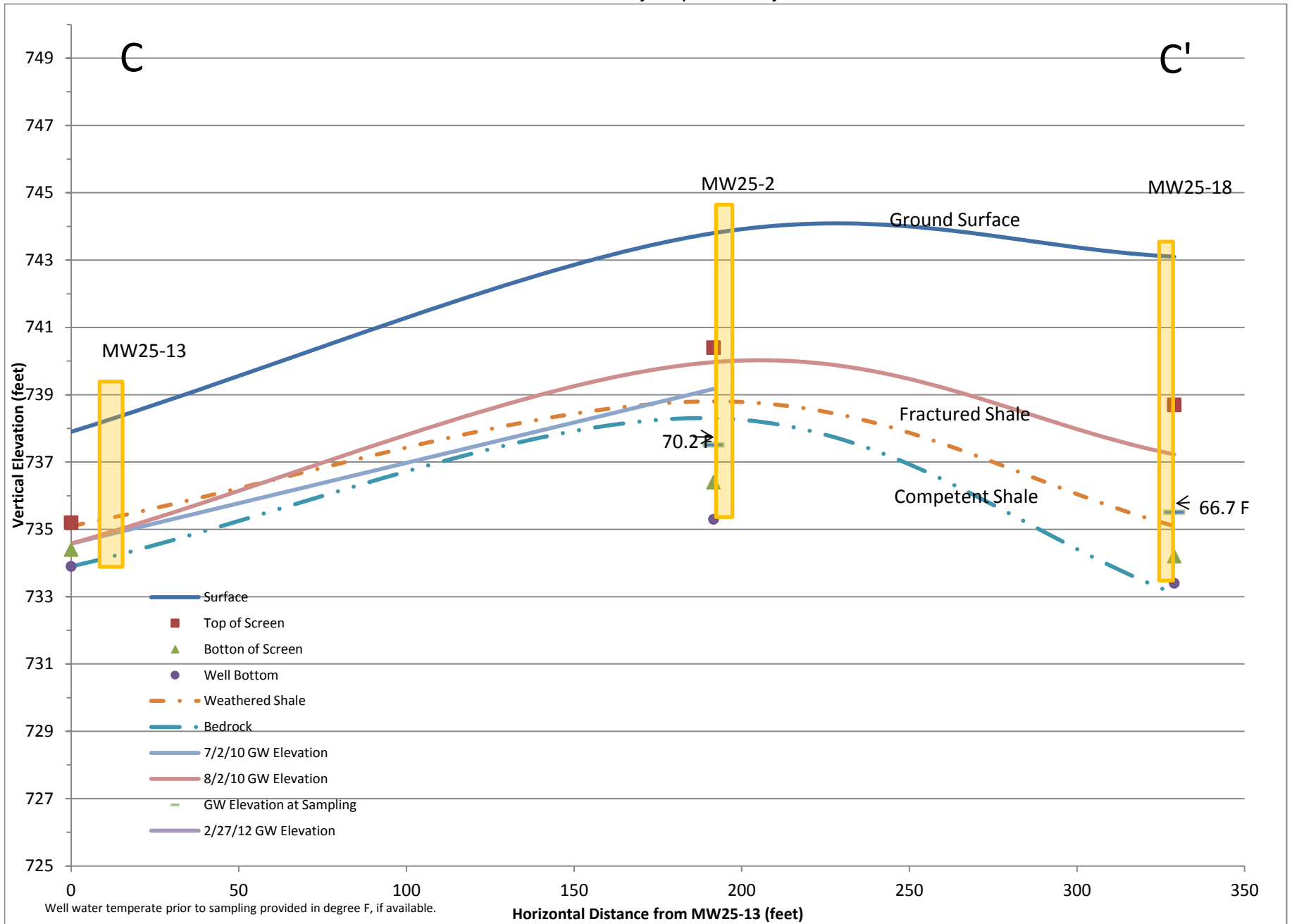
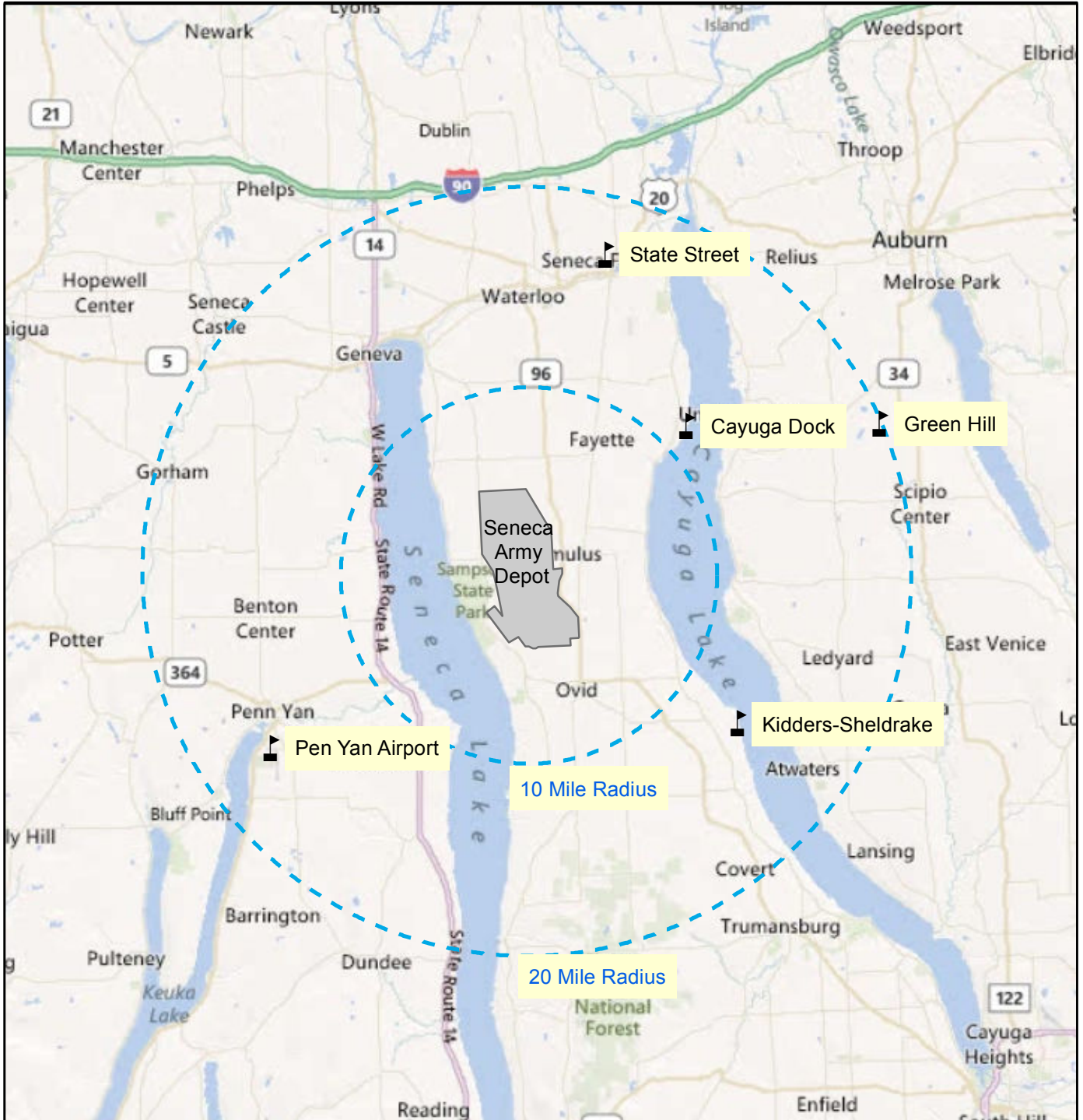


Figure 14C  
 Profile C-C' (LTM Round 8)  
 SEAD-25 LTM Annual Report  
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# PARSONS

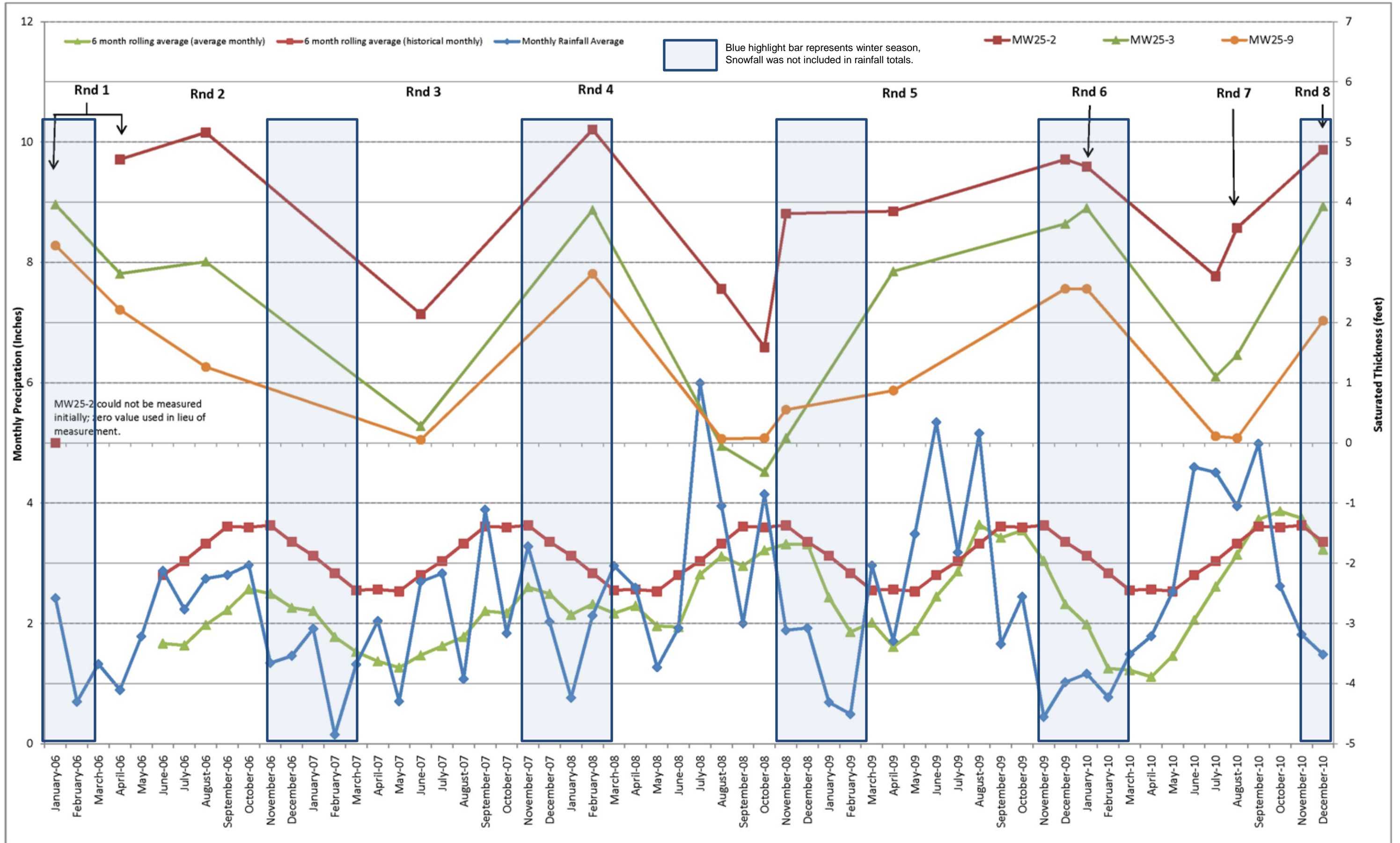
SENECA ARMY DEPOT ACTIVITY  
SEAD-25 LTM ANNUAL REPORT

Figure 15A  
Locations of Weather Stations

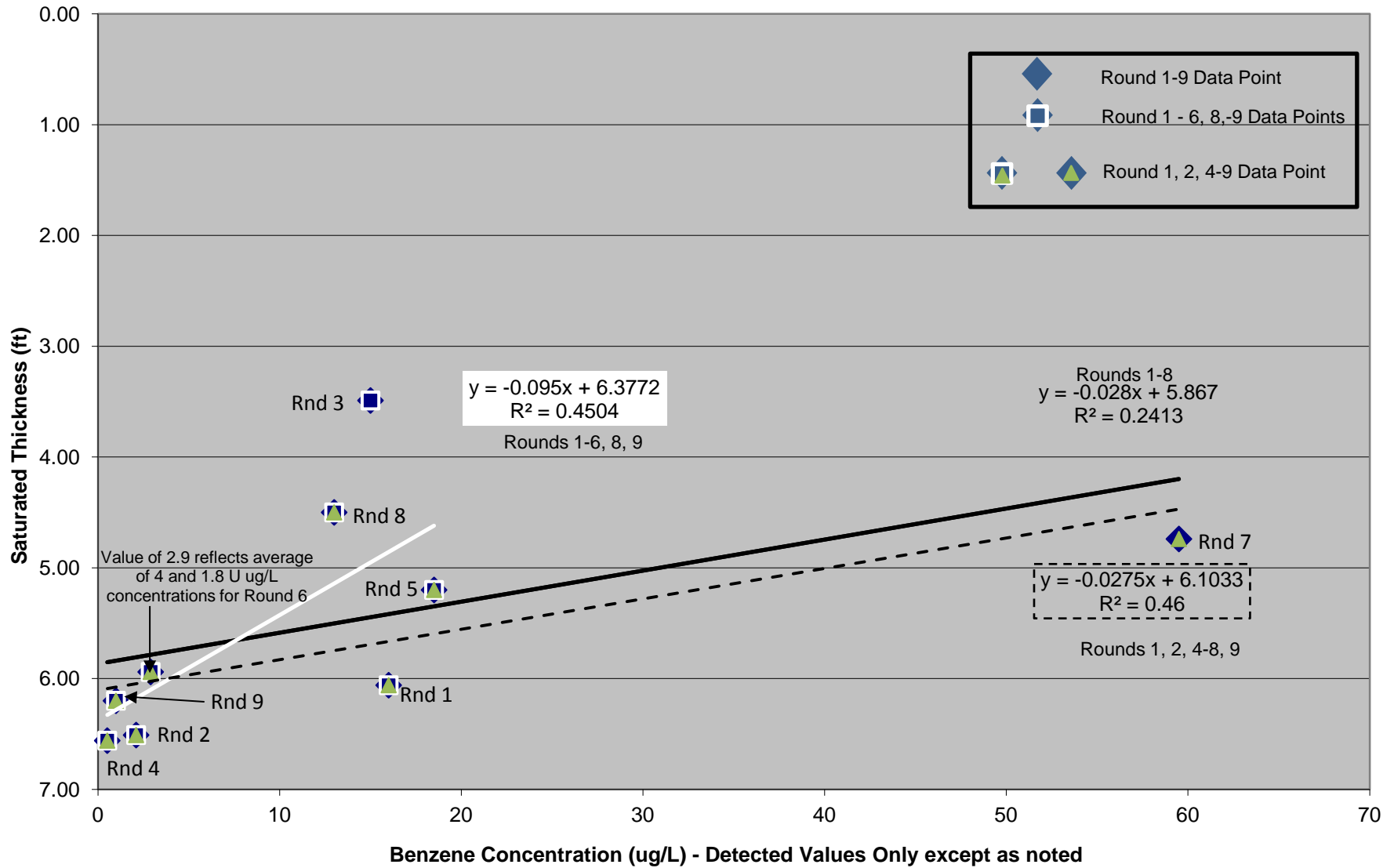
May 2012

BBO

Figure 15B  
 2006-2010 Monthly Rainfall Data with wells MW25-2, MW25-3, and MW25-9 Saturated Thickness  
 SEAD-25 LTM Annual Report

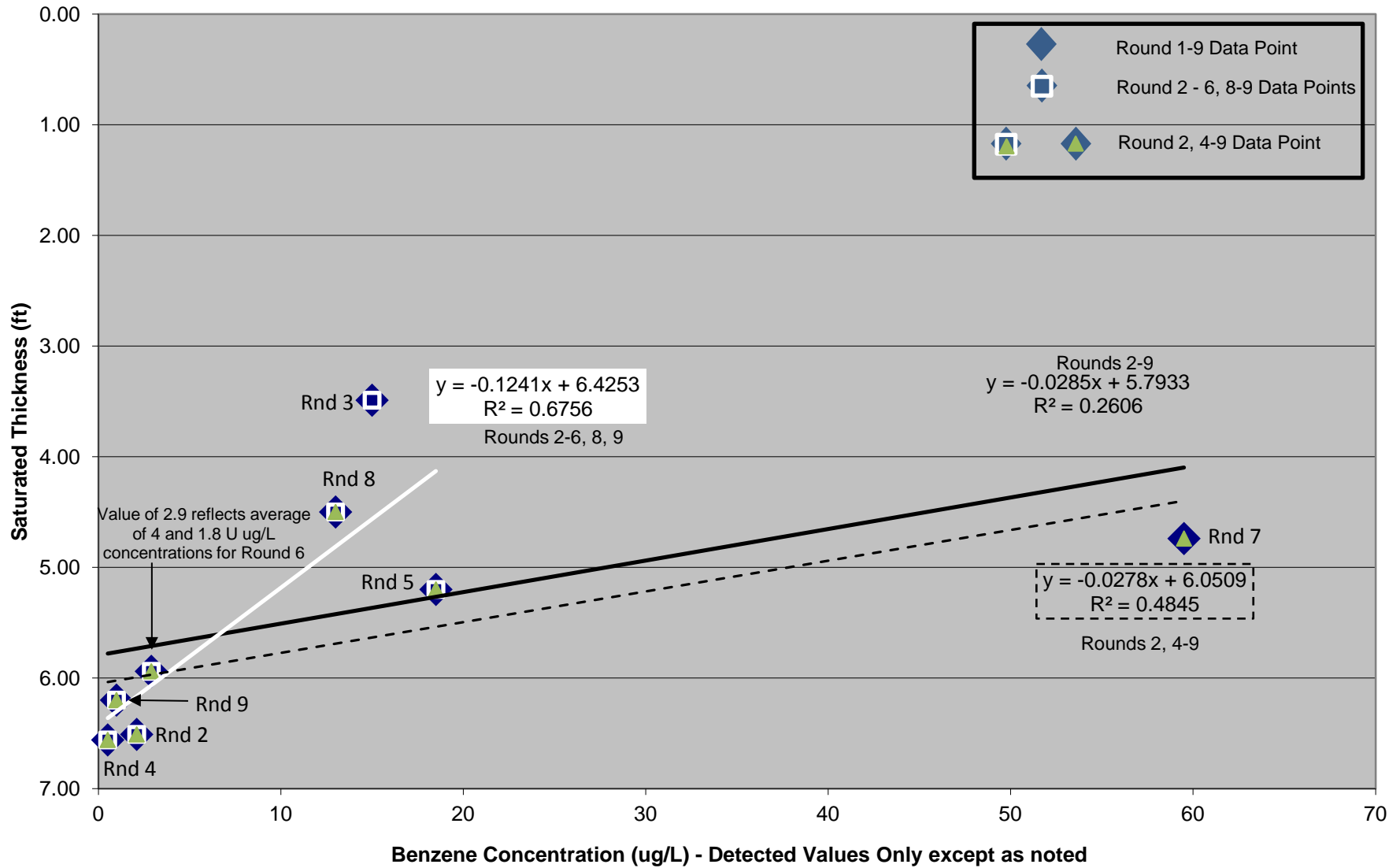


**Figure 16**  
**MW25-2 - Benzene Concentration vs Saturated Thickness - All Rounds**

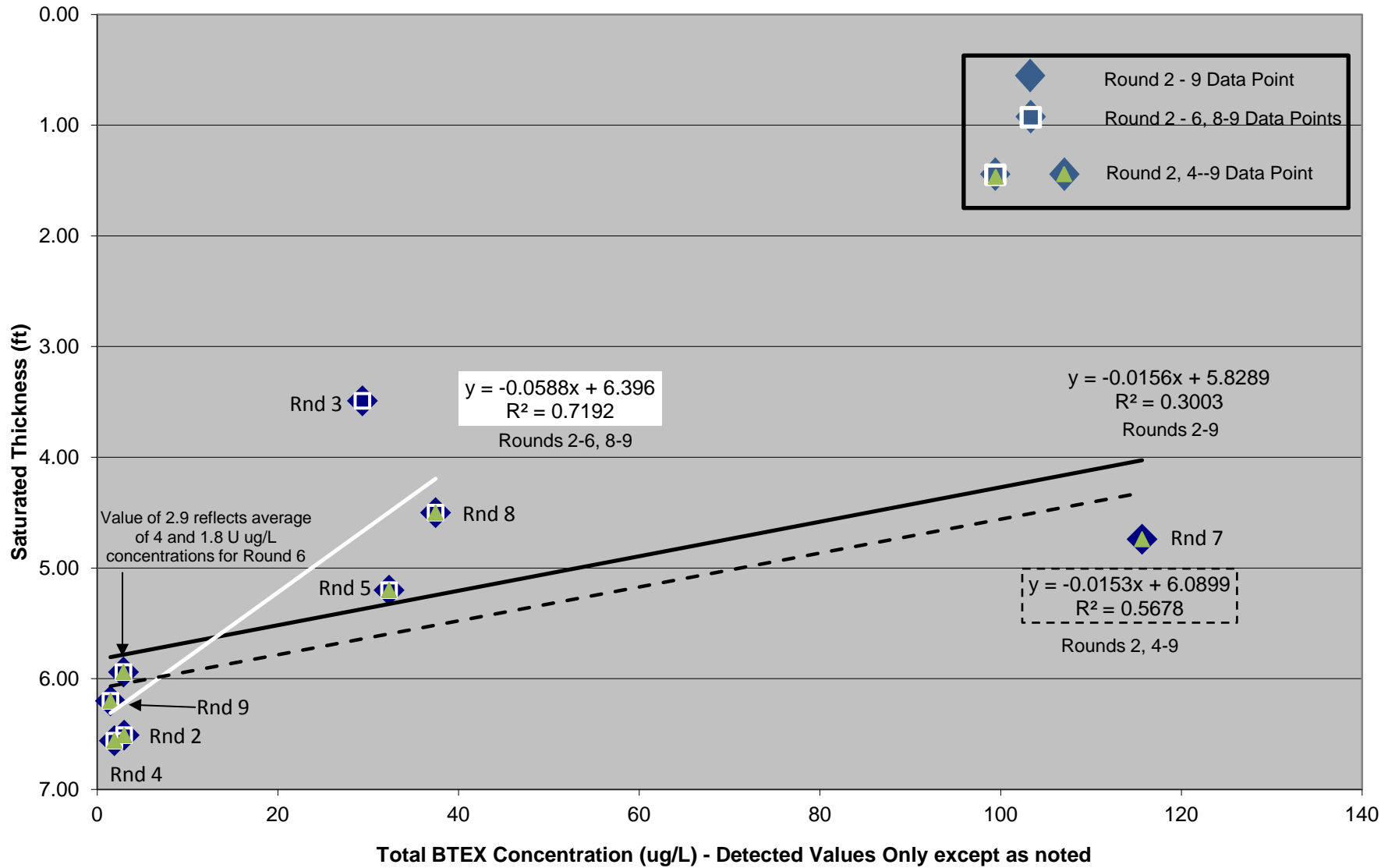




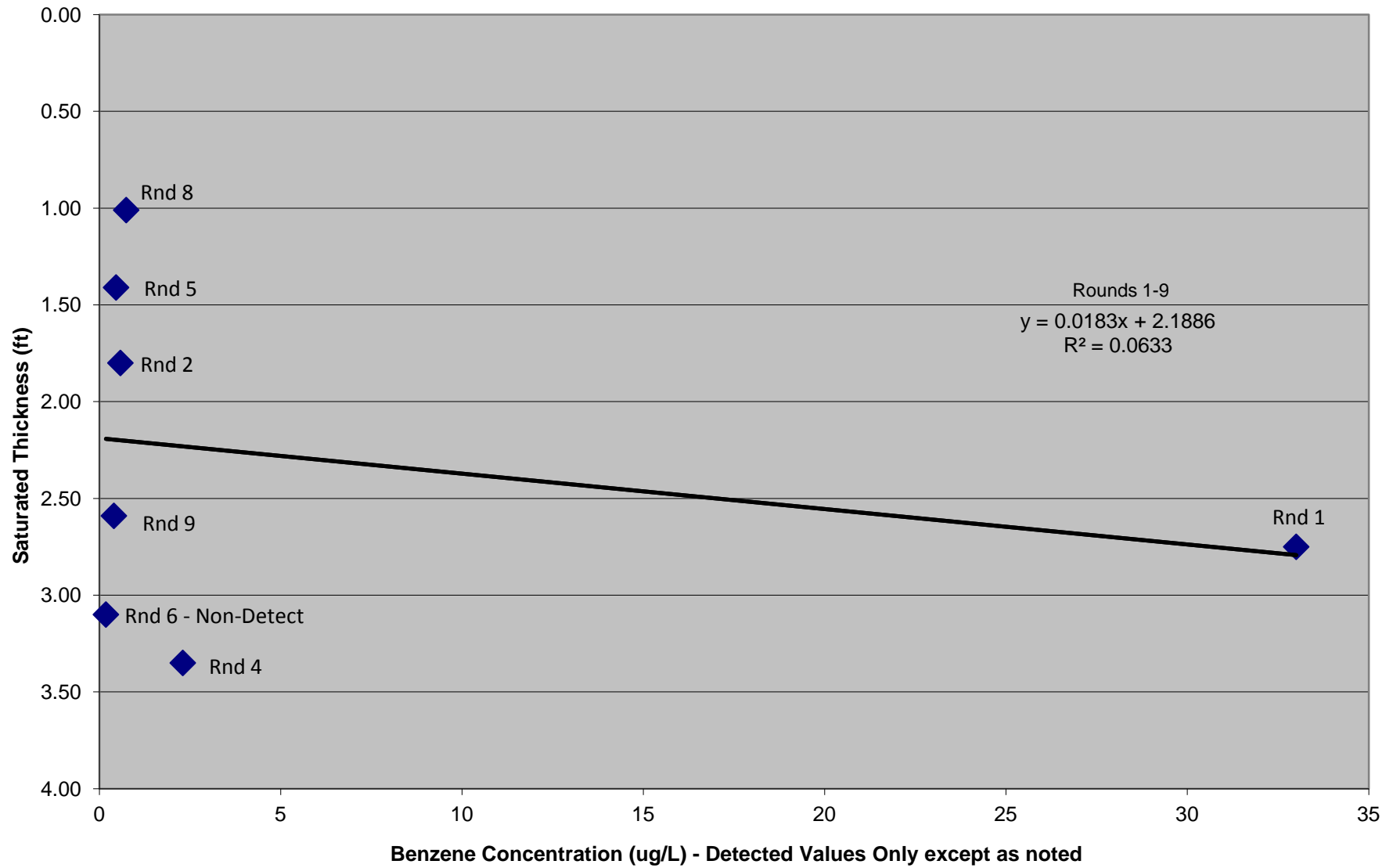
**Figure 17**  
**MW25-2 - Benzene Concentration vs Saturated Thickness - Round 1 Excluded**



**Figure 18**  
**MW25-2 - BTEX Concentration vs Saturated Thickness - Round 1 Excluded**



**Figure 19**  
**MW25-9 - Benzene Concentration vs Saturated Thickness - All Rounds**





**Figure 20**  
**MW25-9 - BTEX Concentration vs Saturated Thickness - Round 1 Excluded**

