

**Final Year 9 Groundwater Monitoring Report  
for  
Remedial Action Implementation  
Buildings C-17/20/16/50**

**Naval Weapons Station Earle  
Colts Neck, NJ**

November 2007

Prepared for:  
Naval Facilities Engineering Command Mid-Atlantic

Prepared by:  
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Remedial Action Implementation  
Buildings C-17/20/16/50**

**Naval Weapons Station Earle  
Colts Neck, NJ**

**Contract No. N62472-03-D-0802  
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## 1.0 INTRODUCTION

### 1.1 Introduction

ECOR Solutions, Incorporated (ECOR) prepared this Final Year 9 Groundwater Monitoring Report for the Remedial Action Implementation at Buildings C-17/20/16/50, for Naval Facilities Engineering Command Mid-Atlantic (NAVFAC MIDLANT) under the Contract Number N62467-03-D-0802, Contract Task Order (CTO) No. 0017. The purpose of this report is to present the quarterly results of the Year 9 monitoring program for groundwater remediation within the vicinity of Buildings C-17/20/16/50 on the Mainside area of the Naval Weapons Station (NWS) Earle. A map of this location is presented in Figure 1-1. This report was originally adapted from the Tetra Tech NUS, Incorporated (TtNUS) Year 5 Groundwater Monitoring Report for Buildings C-17/20/16/50 (TtNUS, 2003).

An underground fuel line located in the area north of Building C-19 was used to transport diesel fuel from an underground storage tank (UST) located in the northeast corner of Building C-18 to a dispensing station north of Building C-50. A leak in the fuel line was discovered in 1977. All of the former USTs were removed from the former gas station in 1995. Part of the former underground diesel transfer line is still in place. An investigation was performed between 1995 and 1997 to delineate the extent of the contamination. The hydrogeologic investigation and site characterization for the Remedial Action Work Plan (RAWP) were completed in 1997. The New Jersey Department of Environmental Protection (NJDEP) approved the RAWP with monitored natural attenuation selected as the remedial method in 1997 (Appendix A). The Classification Exception Area (CEA) documents for this Area of Concern (AOC) were approved by NJDEP in 1998 (Appendix B). The CEA, depicted in Figure 1-2, encompasses groundwater contamination from the leaking underground fuel line used to transport diesel fuel from a UST previously located in the vicinity of Buildings C-20 and C-17.

The plume of contamination includes highly weathered free-phase diesel fuel and dissolved-phase fuel constituents. The horizontal extent of the free-phase diesel fuel, or light non-aqueous phase liquid (LNAPL), encompasses an area of approximately one acre located northwest of

Buildings C-17 and C-20 and between Buildings C-16 and C-50. The Navy continues to remediate the LNAPL with bioslurping technology within the CEA.

Prior to the CEA approval, trace concentrations of dissolved-phase benzene occurring below NJDEP's Groundwater Quality Standard (GWQS) were detected in monitoring wells 16MW-02, -08, -10, and 17MW-02, all located within 150 feet outside of the northern boundary of the CEA. Concentrations of dissolved-phase benzene above the NJDEP GWQS were also detected in monitoring well 16MW-06, located approximately 265 feet north of the CEA northern boundary. Previous investigations had not confirmed a correlation between the LNAPL product and the dissolved-phase contamination at C-17 and the dissolved benzene at well 16MW-06.

This report summarizes the results of the monitored natural attenuation program for dissolved-phase contaminants. During Year 9, monitoring under the approved CEA was performed at monitoring wells 16MW-04, -05, -08, -10, -11, -15, -24, -25, 18MW-01, and two surface water locations, 16SW-01 and 16SW-02. In recent years, modifications have been made to the previous monitoring programs resulting in the deletion of certain monitoring wells from the program and other recommended changes. These modifications leading up to the current monitoring program are detailed later in Section 3.0.

## **1.2 Report Organization**

In addition to Section 1.0, the Introduction, this report also includes Section 2.0, which summarizes the CEA documents, and Section 3.0, which summarizes the groundwater monitoring program as proposed in the CEA documents and modifications to the program during Years 1 through 9. Section 4.0 provides a summary and discusses the Year 9 monitoring results. Conclusions and recommendations are presented in Section 5.0.

## 2.0 CEA SUMMARY

### 2.1 General Information

The CEA documents list the following general information for the C-17/20/16/50 Site:

- **Site Name/Location:** Buildings C-17/20/16/50, Naval Weapons Station Earle; Colts Neck, New Jersey.
- **Site Identification Number:** Spill Case Number 91-5-15-0941-14
- **NJDEP Case Manager:** Steve Maybury
- **Site Contact Person:** Eric Helms
- **Lead Program:** NJDEP - Bureau of Federal Case Management
- **Aquifer/Formation Impacted:** Vincentown/Vincentown
- **Aquifer Classification:** Groundwater for the Mainside area of the NWS Earle facility is classified as Class II-A.
- **Contaminants Exceeding Applicable GWQS:** Benzene, Methyl tert-butyl ether (MTBE)
- **Projected Longevity of the CEA:** 23 years.

### 2.2 Site Location and CEA Description

The area of concern is located at the Mainside area of the NWS Earle facility (Figure 1-1). According to the Colts Neck Township Tax Office, the entire Mainside area is designated as Block 56, Lot 1. The affected area may be described as a circular area of approximately 3,000 square feet. The area has been used in the past to store and maintain railroad cars and other heavy equipment. In general, the area is overlain by railroad tracks and paved and unpaved surfaces. The area is bordered to the south by Buildings C-17, C-20, C-18, C-19, and C-50. The area is bordered to the west by Building C-15, to the north by monitoring wells 16MW-10 and 16MW-12, and to the east by monitoring well 16MW-02 and a wetland area. The CEA boundaries and surface features are presented in Figure 1-2. The approximate center of the approved CEA is at the intersection of latitude 40° 16' 10.3" and longitude 74° 09' 19.4".

### 3.0 GROUNDWATER MONITORING PROGRAM

#### 3.1 CEA Monitoring Program Overview

The monitoring program provided for in the CEA consists of:

- Short-term monitoring of wells 16MW-04, -05, -08, -10, -11, -15, -24, -25, 18MW-01, and two surface water locations, 16SW-01 and 16SW-02, will occur throughout the implementation of the LNAPL recovery remedial program (Bioslurper activities).
- Reviewing data from planned recovery wells installed within the eastern portion of the CEA. If groundwater contamination is identified at levels above the GWQs within this area, an additional sentry or monitoring well may be required.
- Long-term monitoring will be implemented only in the event that the GWQs are not exceeded during the short-term monitoring and will last for a minimum of four and a maximum of eight consecutive quarters after Bioslurper activities have ceased.
- EPA Methods 624 and 625 will be used to analyze groundwater samples for MTBE, benzene, ethylbenzene, naphthalene, toluene, and xylenes. All analyses are performed by a state of New Jersey certified laboratory. Recently, naphthalene analysis has been omitted from certain monitoring wells, due to repeat non detections. The complete sampling and analysis summary can be found in Table 3.
- Field chemistry measurements performed during sample acquisition include; dissolved oxygen, pH, conductivity, ORP (oxidation reduction potential), turbidity, and temperature. These parameters will be measured using field instruments and recorded for all groundwater samples.
- Groundwater monitoring reports, which will be submitted to NJDEP on an annual basis. The reports will include a tabulation of all sample results received during the reporting period

pursuant to New Jersey Administrative Code (N.J.A.C.) 7:26E-3.13(c)3 and will provide a brief narrative summarizing the data and presenting conclusions. In the event a non-compliance with the RAWP is identified, NJDEP will be notified as soon as possible.

### **3.2 Groundwater Monitoring Program: Years 1 through 8**

This section presents the results of the monitoring program during each year (Years 1 through 8) that resulted in modifications to the program or additional site investigations. Historical groundwater laboratory analytical results are presented in Table 1.

#### ***3.2.1 Year 1 Monitoring Program (August 1998 - May 1999)***

The Year 1 natural attenuation monitoring program included the following monitoring wells: 16MW-02, -03, -04, -05, -06, -08, -10, 17MW-01 and -02, and 18MW-01. Benzene concentrations in excess of the GWQS (1 microgram per liter [ $\mu\text{g/L}$ ]) were identified in all four sampling periods during Year 1 at monitoring well 16MW-06.

#### ***3.2.2 Year 2 Monitoring Program (August 1999 - May 2000)***

Based on the Year 1 sampling results, the Navy modified the monitoring program for Year 2 to include monitoring well 16MW-09, located approximately 125 feet north and downgradient from monitoring well 16MW-06. During this monitoring period, benzene levels in excess of the GWQS were again identified in all four sampling periods at monitoring well 16MW-06, and in three sampling periods at monitoring well 16MW-09.

#### ***3.2.3 Year 3 Monitoring Program (August 2000 - May 2001)***

Based on the Year 2 sampling results, the Navy modified this monitoring program between the August 2000 and November 2000 sampling periods to include installation and sampling of a new downgradient monitoring well, 16MW-11, located approximately 280 feet north of monitoring well 16MW-09. The results from three sampling periods indicated benzene concentrations (100  $\mu\text{g/L}$  to 582  $\mu\text{g/L}$ ) above the GWQS and higher than any other monitoring wells located outside of the CEA boundary. Monitoring well 16MW-11 also contained the only notable MTBE

concentration outside of the LNAPL area. Therefore, in addition to this installation and sampling, the Navy performed a one-time expanded monitoring program, concurrent with the February 2001 sampling period, at six wells located at Installation Restoration Program (IRP) Site 1 (01MW-01 through 01MW-05) and two wells at IRP Site 29 (29MW-01 and 29MW-02). The monitoring wells at IRP Site 1 are located approximately 1,200 feet north and downgradient from monitoring well 16MW-11. The monitoring wells at IRP Site 29 are located approximately 240 feet southwest and side gradient from monitoring well 16MW-11. During the regular monitoring period, benzene concentrations above the GWQS were detected in monitoring wells 16MW-06, -08, -09, -10, and 17MW-01.

#### ***3.2.4 Year 4 Monitoring Program (August 2001 - May 2002)***

No changes were made to the Year 4 monitoring program. During the Year 4 monitoring program, MTBE concentrations exceeded the NJDEP GWQS (70 µg/L) in at least one sampling period in monitoring wells 16MW-05 and 16MW-11. Trace MTBE concentrations were intermittently detected in monitoring wells 16MW-06, -08, and -09. Benzene exceeded the GWQS in six of seven downgradient monitoring wells throughout this monitoring period. At monitoring well 16MW-05, located in the area of LNAPL, benzene exceeded the GWQS (ranging from 180 µg/L in August 2001 to the maximum concentration of 2,500 µg/L in November 2001). Concurrent with the Year 4 monitoring program, the Navy performed additional investigations in the area of monitoring well 16MW-11. The summary and results of these investigations were detailed in the Year 5 Groundwater Monitoring Report for Remedial Action Implementation (TtNUS, 2003). As a result of these investigations, the Navy added five new monitoring wells, 16MW-15, -16, -17, -24, -25, and two surface water sampling locations, 16SW-01 and 16SW-02, to the long term monitoring program for the site.

#### ***3.2.5 Year 5 Monitoring Program (August 2002 - May 2003)***

All five of the newly added monitoring wells were sampled during the Year 5 monitoring program; however, the surface water sample locations were only sampled in three out of the four monitoring periods. During the Year 5 monitoring program, MTBE concentrations exceeded the NJDEP GWQS during two sampling periods in monitoring well 16MW-11. Benzene concentrations

exceeded the GWQS at nine monitoring wells at various sampling periods throughout Year 5. The highest benzene concentration (132 µg/L) was indicated in monitoring well 16MW-11 during the February 2003 sampling period. In the CEA, benzene exceeded the GWQS at monitoring well 16MW-05 during two sampling periods when LNAPL was not present. Naphthalene levels exceeded the GWQS (300 µg/L) in monitoring well 16MW-05 during the August 2002 sampling period.

### ***3.2.6 Year 6 Monitoring Program (August 2003 - May 2004)***

The Year 5 report recommended the removal of four monitoring wells from the program (16MW-02, -06, -16, and 17MW-02). These wells were sampled during the first two quarters and then removed from further sampling periods with the exception of monitoring well 17MW-02, which was sampled during all four quarters and maintained in the monitoring program. The NJDEP approval letter of the Year 5 Groundwater Monitoring Report for Remedial Action Implementation for this site and its conclusions and recommendations was presented in the Year 6 Groundwater Monitoring Report for Remedial Action (TtNUS, 2004a). After the August 2003 monitoring period, monitoring well 16MW-03 was abandoned in accordance with New Jersey regulations on 4 December 2003. The corresponding well abandonment report was presented in the Year 6 Annual Report (TtNUS 2004b). Monitoring well 16MW-03 was replaced by monitoring well 17MW-02 in the program. Also, as recommended by the Year 5 report, the naphthalene analysis was omitted for the following six wells and two surface water locations: 16MW-03, -09, -15, -17, -24, -25, 16SW-01, and 16SW-02. During the Year 6 monitoring program, MTBE concentrations exceeded the GWQS during one sampling event in monitoring well 16MW-05, which was only sampled once due to the presence of LNAPL, and during three sampling quarters at monitoring well 16MW-11. Benzene concentrations exceeded the GWQS at eight monitoring wells and one surface water location during at least one sampling period during Year 6. The highest benzene concentration (2,230 µg/L) was detected in monitoring well 16MW-05 during the November 2003 sampling event. Benzene concentrations exceeded the GWQS during all sampling events at monitoring wells 16MW-11, ranging from 54.8 to 68.2 µg/L, and 16MW-15, ranging from 8.8 to 233 J µg/L.

### ***3.2.7 Year 7 Monitoring Program (August 2004 - May 2005)***

Modifications to the Year 7 monitoring program include the renaming of monitoring well 17MW-02 to 16MW-12 and the removal of the naphthalene analysis for this monitoring well in the program. Also, after the Year 6 monitoring program, monitoring well 17MW-01 was renamed to 17MW-17.

During Year 7, LNAPL was detected in monitoring well 16MW-05 during three of the four sampling events at thicknesses ranging from 0.05 foot to 0.16 foot. A groundwater sample was collected during November 2004 when LNAPL was not present.

### ***3.2.8 Year 8 Monitoring Program (August 2005 - May 2006)***

During Year 8, five additional recovery wells were installed, 16MW-31 through 16MW-35, in accordance with the Bioslurper Upgrade Work Plan (ECOR, 2005) (Figure 1-2). Since installation, all recovery wells have been added to the LNAPL recovery remedial program. All additional recovery wells have had some level of product present thus far. Four of the five wells reached their maximum product thickness, ranging from 0.07 foot in 16MW-31 to 6.55 feet in 16MW-33 in January 2006. Recovery well 16MW-34 reached a maximum product thickness of 1.36 feet in March 2006.

## 4.0 DISCUSSION OF RESULTS

### 4.1 Technical Overview

The Year 9 quarterly groundwater monitoring program at Buildings C-17/20/16/50 was implemented in accordance with the CEA documents and the modifications described in the preceding sections of this report. Year 9 sampling events were performed in August 2006, November 2006, February 2007, and May 2007.

### 4.2 Field Sampling and Analytical Methods

All field sampling activities were completed by ECOR staff during Year 9. Sampling activities were conducted in accordance with the methods described in the NJDEP Field Sampling Procedures Manual (FSPM), August 2005.

The sample logs (Appendix E) document all sample dates, times, field analysis results, depth to groundwater, monitoring well purge volumes, and site-specific observations relevant to interpretation of the analytical results.

Quality assurance (QA) samples were included during each sampling round. The QA samples included one trip blank per sample shipment group, one duplicate sample per sampling event, and one field blank per sampling event. An equipment blank was not prepared as dedicated sampling equipment was used. Sample containers and sample holding times were maintained in accordance with NJDEP guidelines.

Quarterly monitoring at C-17/20/16/50 was performed concurrently with annual monitoring at AOC R-6/7 and R-12, which have also been approved by NJDEP as CEAs with natural attenuation groundwater remediation monitoring programs. QA samples were also prepared concurrently and are representative of both sites.

### 4.3 Data Validation

ECOR utilized an independent data validator to review the laboratory analytical results from each quarter of the Year 9 groundwater monitoring program. The data validation was performed in accordance with U. S. Environmental Protection Agency (EPA) Region 2, NJDEP guidelines, and the Navy Installation Restoration Chemical Data Quality Manual. Data validation reports are included with the laboratory data presented in Appendix D.

No quality issues were identified that would impact the reliability of the data or the conclusions reached based on the data.

During the November sampling event, samples were analyzed at Severn Trent's Canton, Ohio laboratory instead of Analytical Laboratory Services (ALS). The STL Canton is NJDEP certified for Method 624 analytes except MTBE. A NJDEP laboratory certified for all analytical parameters will continue to be used for future sampling events.

### 4.4 Analytical Results and Groundwater Flow Direction for Year 9

Table 1 provides a summary of the historical results through Year 9 and Table 2 provides a summary of the results for Year 9 exclusively. The sample locations and the corresponding sample results for all four quarters sampled in Year 9 are depicted in Figure 4-1. Figures 4-2 through 4-5 present potentiometric surface maps for each sampling period.

Year 9 analytical results indicate the following:

- All levels of contaminants were “non-detect” in upgradient monitoring well 18MW-01 and downgradient monitoring well 16MW-25.
- MTBE concentrations exceeded the GWQS during three quarters in monitoring well 16MW-11 and during one quarter in 16MW-24. The highest MTBE level (288 µg/L) was observed in monitoring well 16MW-11 during the May 2007 sampling event.

- Benzene concentrations exceeded the GWQS at four monitoring wells (16MW-08, 16MW-11, 16MW-15, and 16MW-24) during all four sampling quarters. The highest benzene level (159 µg/L) was indicated in monitoring well 16MW-11 during the May 2007 sampling event.
- The NJDEP GWQS for total xylenes was not exceeded during any of the quarterly sampling events for Year 9. Concentrations below the GWQS were detected at monitoring wells 16MW-08, 16MW-10, and 16MW-24.
- The NJDEP GWQS for ethylbenzene was not exceeded during any of the quarterly sampling events for Year 9. Concentrations below the GWQS were detected at monitoring well 16MW-08.
- The NJDEP GWQS for toluene was not exceeded during any of the quarterly sampling events for Year 9. Concentrations below the GWQS were detected at monitoring wells 16MW-08, 16MW-24 and surface water sample 16SW-02.
- The NJDEP GWQS for naphthalene was not exceeded during any of the quarterly sampling events for Year 9. Concentrations below the GWQS were detected at monitoring wells 16MW-08 and 16MW-10.
- Surface water samples were collected from two sample locations during all four quarters and analyzed by EPA Method 624 for benzene, ethylbenzene, toluene, xylenes and MTBE. Surface water samples were not collected during the August 2006 sampling event because the sample locations were dry.
- 16MW-04 and 16MW-05 were not sampled during Year 9 because product was present in both wells during all four quarters.

Groundwater flow direction during Year 9 was similar to Years 1 through 8. The interpreted groundwater contours indicate that groundwater flow direction within the southern area of the CEA and north of the CEA boundary is generally from the south toward the north-northeast.

Groundwater at the far northern limits of the expanded groundwater monitoring area, in the vicinity of monitoring wells 16MW-15, 16MW-24, and 16MW-25, flows generally toward the northwest, toward the wetlands and the stream adjacent to the Family Housing area. Groundwater flow direction within the central area of the CEA during all four sampling events was in a northerly direction with mild evidence of drawdown in the area of the Bioslurper wells specifically 16MW-04. The groundwater flow around the bioslurping wells varies when the LNAPL recovery system is operating and depends on which recovery wells are in use at the time of monitoring well gauging.

Laboratory analytical data for each sampling event are included in Appendix D. Appendix E contains sample logs and field notes.

#### **4.5 Trend Analysis**

Simple trend analyses, consisting of graphing the concentrations of benzene and MTBE for select monitoring wells (16MW-11, 16MW-15, and 16MW-24) over time, were prepared utilizing data collected through the fourth sampling event in Year 9. The monitoring wells selected are representative of the extent of the plume downgradient of the CEA boundary. Sufficient data was available from these three monitoring wells to accurately depict the trend analyses of the specified contaminants. The GWQS reference criterion for the chemical of concern is noted on each trend analysis graph for comparison. Benzene concentrations over time are represented in Figures 4-6, 4-7, and 4-8 for monitoring wells 16MW-11, 16MW-15, and 16MW-24, respectively. Overall there is a decreasing trend in benzene concentrations over time for both 16MW-11 and 16MW-15. However, data from Year 9 indicates a slight upward trend in benzene concentrations over the past year. A more significant upward trend in benzene is evidenced in 16MW-11 over the past year. Elevated benzene concentrations were observed in 16MW-24, during the August 2006 sampling event. Benzene concentrations have since returned to levels consistent with historical data, but remain above the NJDEP GWQS. MTBE concentrations over time are represented in Figures 4-9, 4-10, and 4-11 for the same three monitoring wells, 16MW-11, 16MW-15, and 16MW-24, respectively. MTBE concentrations in 16MW-11 were above the NJDEP GWQS of 70 µg/L during three out of the four quarters of Year 9, but remain within historical limits. In 16MW-15 MTBE concentrations were below the NJDEP GWQS during all four quarters of Year 9. MTBE

concentrations in 16MW-24 have been increasing since 2004, but remain below the NJDEP GWQS (except for the spike during the August 2006 sampling event). Data analyses suggest that there is a direct correlation between MTBE and benzene trends for these wells (Figures 4-6 through 4-11).

Graphs showing contaminant distribution for benzene and MTBE along a transect from the source area to downgradient monitoring wells were prepared for the quarterly sampling events during Year 9. The southernmost upgradient monitoring well, 18MW-01, was utilized as the starting point of the transect with 16MW-25 being the furthest downgradient and marking the end of the transect. Figure 4-12 indicates a benzene concentration spike just outside of the CEA in monitoring well 16MW-08 during February and May of 2007. The highest benzene concentrations were detected downgradient of the CEA at monitoring well 16MW-11 during all quarters except August 2006 when the highest benzene concentration was detected in 16MW-24. The MTBE transect in Figure 4-13 indicates that the highest MTBE concentrations were detected during all quarters at monitoring well 16MW-11 except for August 2006 when the highest concentration was detected in 16MW-24. Data suggest downgradient migration of soluble components (MTBE and benzene, with a significant peak during August 2006.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions

In general, compounds of concern (COC) appear to be consistent with historically observed concentrations. Benzene was detected above the GWQS in the following monitoring wells; 16MW-08, 16MW-11, 16MW-15, and 16-MW-24 during all four of the quarterly sampling events (Table 1). A significant benzene peak was noted in 16MW-24 during the August 2006 sampling event. MTBE concentrations exceeded the GWQS during three quarters in monitoring well 16MW-11 and during one quarter in 16MW-24. Low levels of ethylbenzene, toluene, xylene, and naphthalene were detected in at least one monitoring well during Year 9. None of the COC were detected in monitoring wells 16MW-25 and 18MW-01 during Year 9. LNAPL continues to be present in monitoring wells 16MW-04 and 16MW-05, but the thickness appears to be diminishing over time, likely as a result of continued operation of the bioslurper remediation system.

### 5.2 Recommendations

ECOR recommends continuation of the short-term quarterly groundwater monitoring program. The monitoring program for Year 9 includes collecting groundwater samples from nine monitoring wells and two surface water locations (Table 3), provided that product is not present in two monitoring wells, 16MW-04 and 16MW-05.

Based on continued MTBE detections in groundwater at monitoring well 16MW-24, an additional groundwater monitoring well should be considered downgradient (northeast) of this location to delineate the extent of the MTBE plume. Otherwise, no modifications are recommended at this time.

## 6.0 REFERENCES

ECOR Solutions, Inc. 2005, *Bioslurper Upgrade Work Plan*, May.

TETRA TECH NUS Inc, 2003, *Year 5 Groundwater Monitoring Report for Remedial Action Implementation Buildings C-17/20/16/50*, October.

TETRA TECH NUS Inc, 2004a, *Year 6 Groundwater Monitoring Report for Remedial Action Implementation Buildings C-17/20/16/59*, August.

TETRA TECH NUS Inc, 2004b, *Year 6 Annual Report*, August.

## **TABLES**

**TABLE 1**  
**ANALYTICAL DATA SUMMARY**  
**YEARS 1 THROUGH 9 GROUNDWATER MONITORING**  
**BUILDINGS C-17/20/16/50**  
**NWS EARLE, COLTS NECK, NEW JERSEY**  
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Location/ Duplicate	Compounds						Groundwater Levels		
	Volatiles					Semivolatiles	Elevation Top of Casing	Depth to GW	GW Elevation**
	Benzene ug/L	Ethylbenzene ug/L	MTBE ug/L	Toluene ug/L	Xylenes ug/L	Naphthalene ug/L			
NJDEP GQS	1.0	700	70	1,000	1,000*	300	ft above MSL	ft BGS	ft above MSL
<b>16-MW-02<sup>1</sup></b>									
Aug-98	ND	ND	NS	ND	ND	ND	98.48	7.04	91.44
Nov-98	ND	ND	NS	ND	ND	ND	98.48	7.31	91.17
Feb-99	ND	ND	NS	ND	ND	ND	98.48	6.59	91.89
May-99	ND	ND	NS	ND	ND	ND	98.48	6.40	92.08
Aug-99	ND	ND	NS	ND	ND	ND	98.48	7.52	90.96
Nov-99	ND	ND	NS	ND	ND	ND	98.48	7.17	91.31
Feb-00	ND	ND	ND	ND	ND	ND	98.48	7.13	91.35
May-00	ND	ND	ND	ND	ND	ND	98.48	6.64	91.84
Aug-00	ND	ND	ND	ND	ND	ND	98.48	6.85	91.63
Nov-00	ND	ND	ND	ND	ND	ND	98.48	7.37	91.11
Feb-01	ND	ND	ND	ND	ND	ND	98.48	6.52	91.96
May-01	ND	ND	ND	ND	ND	ND	98.48	6.44	92.04
Aug-01	ND	ND	ND	ND	ND	ND	98.48	7.58	90.90
Nov-01	ND	ND	ND	ND	ND	ND	98.48	7.96	90.52
Feb-02	ND	ND	ND	ND	ND	ND	98.48	7.68	90.80
May-02	ND	ND	ND	ND	ND	ND	98.48	7.15	91.33
Aug-02	ND	ND	ND	ND	ND	ND	98.48	8.68	89.80
Nov-02	ND	ND	ND	ND	ND	ND	98.48	7.26	91.22
Feb-03	ND	ND	ND	ND	ND	ND	98.48	6.82	91.66
May-03	ND	ND	ND	ND	ND	ND	98.48	6.32	92.16
Aug-03	ND	ND	ND	ND	ND	ND	98.48	6.23	92.25
Nov-03	ND	ND	ND	ND	ND	ND	98.48	6.81	91.67
<b>16-MW-03<sup>2</sup></b>									
Aug-98	3.8	ND	NS	ND	ND	ND	99.59	7.77	91.82
Nov-98	2.9	ND	NS	ND	ND	ND	99.59	7.94	91.65
Feb-99	ND	ND	NS	ND	ND	ND	99.59	7.29	92.30
May-99	ND	ND	NS	ND	ND	ND	99.59	7.10	92.49
Aug-99	ND	ND	NS	ND	ND	ND	99.59	8.48	91.11
Nov-99	ND / ND	ND / ND	NS	ND / ND	ND / ND	ND / ND	99.59	7.91	91.68
Feb-00	ND	ND	ND	ND	ND	ND	99.59	7.85	91.74
May-00	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	99.59	7.51	92.08
Aug-00	ND	ND	ND	ND	ND	ND	99.59	7.57	92.02
Nov-00	NS	NS	NS	NS	NS	NS	99.59	NS	NS
Feb-01	NS	NS	NS	NS	NS	NS	99.59	NS	NS
May-01	NS	NS	NS	NS	NS	NS	99.59	NS	NS
Aug-01	NS	NS	NS	NS	NS	NS	99.59	NS	NS
Nov-01	NS	NS	NS	NS	NS	NS	99.59	NS	NS
Feb-02	ND	ND	ND	ND	ND	ND	99.59	8.38	91.21
May-02	1.8	ND	ND	ND	ND	ND	99.59	7.99	91.60
Aug-02	3.7 / 3.7	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	99.59	9.39	90.20
Nov-02	ND	ND	ND	ND	ND	ND	99.59	8.00	91.59
Feb-03	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	99.59	7.57	92.02
May-03	1.4	ND	ND	ND	ND	ND	99.59	6.97	92.62
Aug-03	2.3	ND	ND	ND	ND	2.2 J	99.59	6.90	92.69
<b>16-MW-04<sup>3</sup></b>									
Aug-01	110 J	63	13	8.7	229	270	101.23	9.15	92.08
<b>16-MW-05</b>									
Aug-98	NS	NS	NS	NS	NS	NS	104.14	NS	NS
Nov-98	NS	NS	NS	NS	NS	NS	104.14	NS	NS
Feb-99	1520	147	NS	ND	103	110	104.14	NS	NS
May-99	1140	75.2	NS	44.3	75.1	249	104.14	10.40	93.74
Aug-99	2230	273	NS	238	338	125	104.14	NS	NS
Nov-99	135	62.9	NS	4.8	36.8	208	104.14	NS	NS
Feb-00	47.5	23.1	72	ND	16.1	81.8	104.14	NS	NS
May-00	328	47.4	218	6	30.8	213	104.14	NS	NS
Aug-00	1770	61.3	250	113	56.7	372	104.14	11.44	92.70
Nov-00	1730	109	279	ND	71.9	403	104.14	13.24	90.90
Feb-01	230	27	89	N.D	24.5	230	104.14	11.28	92.86
May-01	300	45 J	ND	ND	53 J	95	104.14	10.60	93.54
Aug-01	180J	31	110	ND	57.4	200	104.14	11.89	92.25
Nov-01	2500	241	278	70.4 J	294 J	207 J	104.14	13.18	90.96
Feb-02	NA	NA	NA	NA	NA	NA	104.14	12.03	92.11
May-02	610	58.3	44.3	40	50J	307	104.14	12.50	91.64
Aug-02	72.9 J	59.7 J	10.6 J	4.5 J	84.6 J	1280 J	104.14	15.35	91.22
Nov-02	NS	NS	NS	NS	NS	NS	104.14	12.10	92.36
Feb-03	74.5	39.2	13.2	2.1	37.1	154	104.14	11.57	92.98
May-03	NS	NS	NS	NS	NS	NS	104.14	10.72	93.62
Aug-03	NS	NS	NS	NS	NS	NS	104.14	10.64	93.50
Nov-03	NS	88.7	113	84.9	86.2	75.3	104.14	11.12	93.02
Mar-04	NS	NS	NS	NS	NS	NS	104.14	10.95	93.19
May-04	NS	NS	NS	NS	NS	NS	104.14	10.07	94.07
Aug-04	NS	NS	NS	NS	NS	NS	104.14	11.55	92.59
Nov-04	NS	163 / 160	83.5 / 88.1	30.8 / 30.8	155 / 158	49 / 50	104.14	11.14	93.00
Feb-05	NS	NS	NS	NS	NS	NS	104.14	11.05	93.09
May-05	NS	NS	NS	NS	NS	NS	104.14	10.06	94.08
Aug-05	NS	NS	NS	NS	NS	NS	104.14	11.96	92.18
Nov-05	NS	NS	NS	NS	NS	NS	104.14	10.81	93.33
Feb-06	NS	NS	NS	NS	NS	NS	104.14	9.97	94.17
May-06	NS	NS	NS	NS	NS	NS	104.14	10.57	93.57
Aug-06	NS	NS	NS	NS	NS	NS	104.14	11.70	92.44
Nov-06	NS	NS	NS	NS	NS	NS	104.14	9.89	94.25
Feb-07	NS	NS	NS	NS	NS	NS	104.14	10.51	93.63
May-07	NS	NS	NS	NS	NS	NS	104.14	9.00	95.14

**TABLE 1**  
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**BUILDINGS C-17/20/16/50**  
**NWS EARLE, COLTS NECK, NEW JERSEY**  
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Location/ Duplicate	Compounds						Groundwater Levels		
	Volatiles					Semivolatiles	Elevation Top of Casing	Depth to GW	GW Elevation**
	Benzene ug/L	Ethylbenzene ug/L	MTBE	Toluene ug/L	Xylenes ug/L	Naphthalene ug/L			
NJDEP GQS	1.0	700	70	1,000	1,000*	300	ft above MSL	ft BGS	ft above MSL
<b>16-MW-06<sup>4</sup></b>									
Aug-98	20.8	ND	NS	ND	0.84	0.91	98.73	8.33	90.40
Nov-98	46.5	ND	NS	ND	2.7	ND	98.73	9.26	89.47
Feb-99	84.4	ND	NS	0.99	3.8	19.8	98.73	7.61	91.12
May-99	113	3.7	NS	1.3	3.5	32.9	98.73	7.40	91.33
Aug-99	43.6	ND	NS	ND	0.62	3.6	98.73	9.17	89.56
Nov-99	18.9	ND	NS	ND	0.51	1.6	98.73	7.86	90.87
Feb-00	11.5	ND	1.1	ND	ND	1	98.73	7.82	90.91
May-00	7.8	ND	0.75	ND	ND	ND	98.73	7.71	91.02
Aug-00	7.5 / 7.5	ND / ND	1.8 / 1.9	ND / ND	ND / ND	ND / ND	98.73	7.74	90.99
Nov-00	6.6	ND	1.8	ND	ND	ND	98.73	8.06	90.67
Feb-01	5.7	ND	ND	ND	ND	ND	98.73	7.31	91.42
May-01	7.9J	ND	ND	ND	ND	ND	98.73	7.62	91.11
Aug-01	13J	ND	ND	ND	ND	3.3	98.73	8.57	90.16
Nov-01	10.6	ND	4.4	ND	ND	ND	98.73	8.91	89.82
Feb-02	13.2	ND	2.6	ND	ND	ND	98.73	8.33	90.40
May-02	38.8	40.5	ND	15.9	267	18.3	98.73	8.11	90.62
Aug-02	15.1	ND	5.5	ND	ND	5.4	98.73	9.54	89.19
Nov-02	20	ND	4.8	ND	ND	ND	98.73	8.05	90.68
Feb-03	26.2	ND	7.4	ND	ND	ND	98.73	7.87	90.86
May-03	58	ND	7.7	ND	ND	2.4 J	98.73	7.51	91.22
Aug-03	7.2	ND	3.1	ND	ND	ND	98.73	7.30	91.43
Nov-03	37	ND	10.5	0.58 J	ND	ND	98.73	7.70	91.03
<b>16-MW-08</b>									
Aug-98	0.55 / 0.54	ND / ND	NS	ND / ND	ND / ND	ND / ND	103.29	10.34	92.95
Nov-98	1.5	ND	NS	ND	ND	ND	103.29	12.24	91.05
Feb-99	N.D	ND	NS	ND	ND	ND	103.29	9.48	93.81
May-99	ND	ND	NS	ND	ND	ND	103.29	9.50	93.79
Aug-99	76.9	24.4	NS	1.6	45.4	131	103.29	12.29	91.00
Nov-99	28	6.2	NS	0.64	25.4	50.1	103.29	11.70	91.59
Feb-00	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	103.29	11.31	91.98
May-00	0.54	ND	ND	0.55	ND	ND	103.29	9.67	93.62
Aug-00	ND	ND	ND	ND	ND	ND	103.29	9.46	93.83
Nov-00	42.8	20.2	ND	ND	ND	1.7	103.29	10.34	92.95
Feb-01	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	103.29	9.29	94.00
May-01	130	38 J	ND	ND	130 J	200	103.29	9.56	93.73
Aug-01	7.2J	2.2	ND	ND	6.9	6.4	103.29	11.35	91.94
Nov-01	68.5 / 73.6	11.4 / 12.2	6.9 / 7.7	1.4 J / 1.5 J	11.2 / 12.1	130 / 116	103.29	12.54	90.75
Feb-02	ND	ND	ND	ND	ND	ND	103.29	12.11	91.18
May-02	ND	ND	1.2 J	ND	ND	ND	103.29	11.75	91.54
Aug-02	7.2	3.6	4.1	ND	ND	ND	103.29	13.25	90.04
Nov-02	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	103.29	10.24	93.05
Feb-03	8	ND	11	ND	ND	1J	103.29	9.81	93.48
May-03	20	0.56 J	4.5	ND	9.6	17.5	103.29	9.23	94.06
Aug-03	1.1	ND	0.51 J	ND	ND	ND	103.29	9.10	94.19
Nov-03	ND	ND	ND	ND	ND	ND	103.29	10.65	92.64
Mar-04	ND / N.D	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	103.29	9.73	93.56
May-04	ND	ND	ND	ND	ND	ND	103.29	9.71	93.58
Aug-04	24.4 / 24.4	7.1 / 7.9	2.2 / 2.3	ND / ND	ND / ND	4 / 2 J	103.29	11.55	91.74
Nov-04	18.9	4.8	3.3	ND	ND	0.80 J	103.29	11.12	92.17
Feb-05	35	11.5	0.51 J	ND	ND	3	103.29	11.15	92.14
May-05	29.8	1.5	2.6	1.0	2.0 J	17	103.29	9.41	93.88
Aug-05	15	1.7	4.6	0.24 J	0.58 J	4.0 J	103.29	10.81	92.48
Nov-05	26	10	1.6	0.56 J	4.5	20	103.29	9.81	93.48
Feb-06	24	7.2	0.33 J	0.43 J	2.5	30	103.29	9.04	94.25
May-06	ND	ND	ND	ND	ND	ND	103.29	9.29	94.00
Aug-06	1.1	ND	0.32 J	ND	ND	ND	103.29	10.51	92.78
Nov-06	1.4 / 1.3	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	103.29	9.76	93.53
Feb-07	34.6	9.6	2.5	0.70 J	ND	3	103.29	9.68	93.61
May-07	40.1 / 36.4	15.8 / 13.3	2.8	0.33 J / 0.28 J	1.5 J / 1.3 J	15 / 17	103.29	9.78	93.51
<b>16-MW-09</b>									
Aug-99	NS	NS	NS	NS	NS	NS	--	--	--
Nov-99	16.2	ND	NS	ND	ND	1.4	99.99	9.37	90.62
Feb-00	6.7	ND	5.7	ND	ND	ND	99.99	9.44	90.55
May-00	2.5	ND	4.5	ND	ND	ND	99.99	9.30	90.69
Aug-00	3.5	ND	3	ND	ND	4.4	99.99	8.85	91.14
Nov-00	1.9	ND	1.8	ND	ND	ND	99.99	9.78	90.21
Feb-01	ND	ND	ND	ND	ND	ND	99.99	8.75	91.24
May-01	ND	ND	ND	ND	ND	ND	99.99	9.34	90.65
Aug-01	21 J	ND	14	ND	ND	ND	99.99	10.39	89.60
Nov-01	14	ND	2.8	ND	ND	ND	99.99	10.45	89.54
Feb-02	3.5	ND	2.1	ND	ND	ND	99.99	9.83	90.16
May-02	ND	ND	ND	ND	ND	ND	99.99	9.64	90.35
Aug-02	19.9	ND	30.2	0.64 J	9.1	ND	99.99	11.18	88.81
Nov-02	1.2	ND	3.2	ND	ND	ND	99.99	9.60	90.39
Feb-03	1.0 J	ND	2	ND	ND	1J	99.99	9.49	90.50
May-03	8.6	ND	17.8	ND	ND	ND	99.99	9.22	90.77
Aug-03	8 / 8.5	ND / ND	6.9 / 7.5	ND / ND	ND / ND	ND / ND	99.99	8.96	91.03
Nov-03	1.3 J / 2.3 J	ND / ND	1.5 J / 1.5 J	ND / ND	ND / ND	ND / ND	99.99	8.27	91.72
Mar-04	0.56 J	ND	1.3 J	ND	ND	NS	99.99	9.23	90.76
May-04	ND	ND	ND	ND	ND	NS	99.99	8.90	91.09
Aug-04	3.5	ND	13.4	ND	ND	NS	99.99	10.06	89.93
Nov-04	0.76 J	ND	1.1	ND	ND	ND	99.99	9.40	90.59
Feb-05	1.8	ND	1.4	ND	ND	NS	99.99	9.31	90.68
May-05	0.65 J	ND	0.99 J	ND	ND	NS	99.99	8.60	91.39

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**NWS EARLE, COLTS NECK, NEW JERSEY**  
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Location/ Duplicate	Compounds						Groundwater Levels		
	Volatiles					Semivolatiles	Elevation Top of Casing	Depth to GW	GW Elevation**
	Benzene ug/L	Ethylbenzene ug/L	MTBE ug/L	Toluene ug/L	Xylenes ug/L	Naphthalene ug/L			
NJDEP GQS	1.0	700	70	1,000	1,000*	300	ft above MSL	ft BGS	ft above MSL
<b>16-MW-10</b>									
Aug-98	N.D	ND	NS	ND	ND	0.51	100.36	9.46	90.90
Nov-98	0.53	ND	NS	ND	ND	ND	100.36	9.56	90.80
Feb-99	ND	ND	NS	ND	0.5	1.2	100.36	8.74	91.62
May-99	N.D	ND	NS	ND	ND	0.8	100.36	7.59	92.77
Aug-99	N.D / ND	ND / ND	NS	ND / ND	1.3 / 1.4	1.9 / 2.2	100.36	9.78	90.58
Nov-99	ND	ND	NS	ND	ND	1.5	100.36	9.18	91.18
Feb-00	ND	ND	ND	ND	ND	0.68	100.36	9.11	91.25
May-00	ND	ND	ND	ND	ND	ND	100.36	8.80	91.56
Aug-00	1.2	ND	ND	ND	1.1	1.5	100.36	9.06	91.30
Nov-00	2.1	ND	ND	ND	ND	ND	100.36	9.45	90.91
Feb-01	ND	ND	ND	ND	ND	ND	100.36	8.56	91.80
May-01	3.9J	ND	ND	ND	2.7 J	ND	100.36	8.68	91.68
Aug-01	ND	ND	ND	ND	ND	ND	100.36	9.81	90.55
Nov-01	5.9	ND	ND	ND	ND	1.0 J	100.36	10.09	90.27
Feb-02	3.9	ND	ND	ND	ND	ND	100.36	9.63	90.73
May-02	2.6	ND	ND	ND	ND	ND	100.36	9.30	91.06
Aug-02	2	ND	ND	ND	ND	ND	100.36	10.79	89.57
Nov-02	1.3	ND	ND	ND	ND	ND	100.36	9.31	91.05
Feb-03	1.3	ND	ND	ND	ND	ND	100.36	8.95	91.41
May-03	2.5	ND	ND	ND	ND	ND	100.36	8.53	91.83
Aug-03	2.2	ND	ND	ND	ND	ND	100.36	8.41	91.95
Nov-03	1.7	ND	ND	ND	ND	ND	100.36	8.88	91.48
Mar-04	3.8	ND	ND	ND	ND	ND	100.36	8.69	91.67
May-04	3.2	ND	ND	ND	ND	ND	100.36	8.15	92.21
Aug-04	2.1	ND	ND	ND	ND	ND	100.36	9.40	90.96
Nov-04	0.67 J	ND	ND	ND	1.4 J	1.0 J	100.36	8.68	91.68
Feb-05	0.60 J / 0.65 J	ND / ND	ND / ND	ND / ND	1.4 J / 1.3 J	2 J / 2 J	100.36	8.80	91.56
May-05	0.21 J / ND	ND / ND	ND / ND	ND / ND	2.8 J / 2.7 J	2 J / 2 J	100.36	7.94	92.42
Aug-05	ND	ND	ND	ND	2.0	2.0 J	100.36	9.88	90.48
Nov-05	2.2	ND	ND	ND	ND	2.6 J	100.36	8.77	91.59
Feb-06	2.1	ND	ND	ND	0.37 J	ND	100.36	8.15	92.21
May-06	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	100.36	8.51	91.85
Aug-06	0.46 J / 0.45 J	ND / ND	ND / ND	ND / ND	0.88 J / 1.0 J	1 J / 1 J	100.36	9.66	90.70
Nov-06	ND	ND	ND	ND	ND	ND	100.36	9.05	91.31
Feb-07	ND	ND	ND	ND	0.88 J	0.9 J	100.36	8.54	91.82
May-07	ND	ND	ND	ND	0.94 J	0.6 J	100.36	7.45	92.91
<b>16-MW-11</b>									
Aug-00	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nov-00	566 / 564	ND / ND	997 / 872	ND / ND	ND / ND	ND / ND	91.76	3.03	88.73
Feb-01	580 / 470	ND / ND	ND / ND	ND / ND	2.6 J / 2.6 J	12 J / 13	91.76	2.53	89.23
May-01	99 J / 100	ND / ND	300 / 190	ND / ND	ND / ND	ND / ND	91.76	3.18	88.58
Aug-01	22 J / 21 J	ND / ND	110 / 100	ND / ND	ND / ND	ND / ND	91.76	4.22	87.54
Nov-01	18.3	ND	74.5	ND	ND	ND	91.76	3.99	87.77
Feb-02	83.5 / 95.2	ND / ND	89.3 / 114	ND / ND	ND / ND	ND / ND	91.76	3.19	88.57
May-02	5.2	ND	ND	ND	ND	ND	91.76	2.92	88.84
Aug-02	21.2	ND	20.5	ND	ND	ND	91.81	4.87	86.94
Nov-02	106	ND	75.9	ND	ND	ND	91.81	3.12	88.69
Feb-03	132	ND	74.5	ND	ND	1.7 J	91.81	3.09	88.72
May-03	37.1 / 34.3	ND / ND	37.1 / 35.2	ND / ND	ND / ND	ND / ND	91.81	3.04	88.77
Aug-03	56	ND	63.1	ND	ND	ND	91.81	2.77	89.04
Nov-03	60.9	ND	93.2	ND	ND	ND	91.81	2.91	88.90
Mar-04	66.8	ND	100	ND	ND	ND	91.81	2.89	88.92
May-04	54.8 / 68.2	ND / ND	172 / 164 J	ND / ND	ND / ND	ND / ND	91.81	2.82	88.99
Aug-04	50.9	ND	172	ND	ND	ND	91.81	3.80	88.01
Nov-04	36.2	ND	239	ND	ND	ND	91.81	2.73	89.08
Feb-05	4.5	ND	60.1	ND	ND	ND	91.81	3.25	88.56
May-05	5.7	ND	47.2	ND	ND	ND	91.81	2.64	89.17
Aug-05	2.6	ND	24	ND	ND	ND	91.81	4.27	87.54
Nov-05	15 / 15	ND / ND	60 / 64	ND / ND	ND / ND	ND / ND	91.81	3.02	88.79
Feb-06	13 / 12	ND / ND	52 / 51	ND / ND	ND / ND	ND / ND	91.81	2.79	89.02
May-06	6.4	ND	36	ND	ND	ND	91.81	1.94	89.87
Aug-06	3.8 / 3.8	ND / ND	20.5 / 20.9	ND / ND	ND / ND	ND / ND	91.81	4.25	87.56
Nov-06	19	ND	79	ND	ND	ND	91.81	2.53	89.28
Feb-07	81.4	ND	169	ND	ND	ND	91.81	2.99	88.82
May-07	159 / 164	ND / ND	288 / 301	ND / ND	ND / ND	ND / 2	91.81	2.62	89.19
<b>16-MW-15</b>									
Aug-02	289	7.4	16.5	3.3	49.5	13	91.97	5.88	86.09
Nov-02	271	ND	17.8	4 J	32.8	10.9	91.97	3.58	88.39
Feb-03	21	1 J	2 J	ND	6 J	4 J	91.97	3.65	88.32
May-03	99.7	2	6	ND	15.2	3.1 J	91.97	3.58	88.39
Aug-03	233J	10	14.1	5.2	47.9	11	91.97	3.32	88.65
Nov-03	118	11.8	7.5	2.3	52.6	8.4	91.97	3.38	88.59
Mar-04	15.7	ND	ND	ND	ND	NS	91.97	3.37	88.60
May-04	8.8	ND	ND	ND	ND	NS	91.97	2.32	89.65
Aug-04	8.1	ND	ND	ND	ND	NS	91.97	4.45	87.52
Nov-04	20.1	ND	0.79 J	ND	ND	NS	91.97	3.61	88.36
Feb-05	2.7	ND	1.1	ND	ND	NS	91.97	3.43	88.54
May-05	12.5	ND	0.90 J	ND	ND	NS	91.97	3.15	88.82
Aug-05	12	ND	ND	ND	ND	NS	91.97	5.12	86.85
Nov-05	14	ND	ND	ND	ND	NS	91.97	3.61	88.36
Feb-06	7.6	ND	0.42 J	ND	ND	NS	91.97	3.34	88.63
May-06	13	ND	ND	ND	ND	NS	91.97	2.72	89.25
Aug-06	7.7	ND	ND	ND	ND	NS	91.97	5.11	86.86
Nov-06	6.5	ND	ND	ND	ND	NS	91.97	3.21	88.76
Feb-07	14.6	ND	0.42 J	ND	ND	NS	91.97	3.90	88.07
May-07	20.4	ND	0.35 J	ND	ND	NS	91.97	3.51	88.46

**TABLE 1**  
**ANALYTICAL DATA SUMMARY**  
**YEARS 1 THROUGH 9 GROUNDWATER MONITORING**  
**BUILDINGS C-17/20/16/50**  
**NWS EARLE, COLTS NECK, NEW JERSEY**  
 Page 4 of 6

Location/ Duplicate	Compounds						Groundwater Levels		
	Volatiles					Semivolatiles	Elevation Top of Casing	Depth to GW	GW Elevation**
	Benzene ug/L	Ethylbenzene ug/L	MTBE ug/L	Toluene ug/L	Xylenes ug/L	Naphthalene ug/L			
NJDEP GQS	1.0	700	70	1,000	1,000*	300	ft above MSL	ft BGS	ft above MSL
<b>16-MW-16<sup>5</sup></b>									
Aug-02	ND	ND	ND	ND	ND	ND	94.34	6.00	88.34
Nov-02	ND	ND	ND	ND	ND	ND	94.34	4.39	89.95
Feb-03	ND	ND	ND	ND	ND	ND	94.34	4.12	90.22
May-03	ND	ND	ND	ND	ND	ND	94.34	4.00	90.34
Aug-03	ND	ND	ND	ND	ND	ND	94.34	3.85	90.49
Nov-03	ND	ND	ND	ND	ND	ND	94.34	4.09	90.25
<b>16-MW-17</b>									
Aug-02	ND	ND	ND	ND	ND	ND	93.94	5.86	88.08
Nov-02	ND	ND	ND	ND	ND	ND	93.94	4.30	89.64
Feb-03	ND	ND	ND	ND	ND	ND	93.94	4.03	89.91
May-03	ND	ND	ND	ND	ND	ND	93.94	3.86	90.08
Aug-03	ND	ND	ND	ND	ND	ND	93.94	3.70	90.24
Nov-03	ND	ND	ND	ND	ND	ND	93.94	3.86	90.08
Mar-04	ND	ND	ND	ND	ND	NS	93.94	3.84	90.10
May-04	ND	ND	0.55 J	ND	ND	NS	93.94	3.69	90.25
Aug-04	ND	ND	N.D	ND	ND	NS	93.94	4.75	89.19
Nov-04	ND	ND	0.30 J	ND	ND	NS	93.94	3.81	90.13
Feb-05	ND	ND	ND	ND	ND	NS	93.94	3.20	90.74
May-05	ND	ND	0.31 J	ND	ND	NS	93.94	3.52	90.42
<b>16-MW-24</b>									
Aug-02	ND	ND	3	ND	ND	ND	89.88	5.45	84.43
Nov-02	ND	ND	3.6	ND	ND	ND	89.88	4.03	85.85
Feb-03	ND	ND	1.3 J	ND	ND	ND	89.88	4.02	85.86
May-03	ND	ND	ND	ND	ND	ND	89.88	3.94	85.94
Aug-03	ND	ND	ND	ND	ND	ND	89.88	4.07	85.81
Nov-03	ND	ND	ND	ND	ND	ND	89.88	4.02	85.86
Mar-04	ND	ND	ND	ND	ND	NS	89.88	3.99	85.89
May-04	ND	ND	ND	ND	ND	NS	89.88	3.95	85.93
Aug-04	ND	ND	ND	ND	ND	NS	89.88	4.61	85.27
Nov-04	6.2	ND	9.2	ND	ND	NS	89.88	3.79	86.09
Feb-05	ND	ND	2.5	ND	ND	NS	89.88	3.95	85.93
May-05	ND	ND	6.1	ND	ND	NS	89.88	3.72	86.16
Aug-05	21	ND	28	ND	ND	NS	89.88	5.12	84.76
Nov-05	27	ND	33	ND	ND	NS	89.88	4.01	85.87
Feb-06	2.8	ND	35	0.18 J	ND	NS	89.88	3.92	85.96
May-06	35	ND	53	ND	ND	NS	89.88	2.38	87.50
Aug-06	114	ND	90.1	3.5	1.8 J	NS	89.88	5.12	84.76
Nov-06	4.8	ND	ND	ND	ND	NS	89.88	3.83	86.05
Feb-07	6.2	ND	13.4	ND	ND	NS	89.88	4.01	85.87
May-07	7.6	ND	20.9	ND	ND	NS	89.88	4.00	85.88
<b>16-MW-25</b>									
Aug-02	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	93.22	9.04	84.18
Nov-02	ND	ND	ND	ND	ND	ND	93.22	6.30	86.92
Feb-03	ND	ND	ND	ND	ND	ND	93.22	6.20	87.02
May-03	ND	ND	ND	ND	ND	ND	93.22	6.11	87.11
Aug-03	ND	ND	ND	ND	ND	ND	93.22	6.55	86.67
Nov-03	ND	ND	ND	ND	ND	ND	93.22	6.43	86.79
Mar-04	ND	ND	ND	ND	ND	NS	93.22	6.13	87.09
May-04	ND	ND	ND	ND	ND	NS	93.22	5.80	87.42
Aug-04	ND	ND	ND	ND	ND	NS	93.22	7.85	85.37
Nov-04	ND	ND	ND	ND	ND	NS	93.22	5.91	87.31
Feb-05	ND	ND	ND	ND	ND	NS	93.22	6.17	87.05
May-05	ND	ND	ND	ND	ND	NS	93.22	5.31	87.91
Aug-05	ND	ND	ND	ND	ND	NS	93.22	8.36	84.86
Nov-05	ND	ND	ND	ND	ND	NS	93.22	9.11	84.11
Feb-06	ND	ND	ND	ND	ND	NS	93.22	5.71	87.51
May-06	ND	ND	ND	ND	ND	NS	93.22	6.61	86.61
Aug-06	ND	ND	ND	ND	ND	NS	93.22	8.32	84.90
Nov-06	ND	ND	ND	ND	ND	NS	93.22	5.42	87.80
Feb-07	ND	ND	ND	ND	ND	NS	93.22	6.21	87.01
May-07	ND	ND	ND	ND	ND	NS	93.22	5.10	88.12
<b>17-MW-01<sup>6</sup></b>									
Aug-01	44 J	3.6	ND	3.6	121	220	101.50	8.82	92.68
<b>17-MW-02<sup>7</sup></b>									
Aug-98	N.D	ND	NS	ND	ND	ND	98.38	7.08	91.30
Nov-98	0.96	ND	NS	ND	ND	ND	98.38	7.24	91.14
Feb-99	N.D	ND	NS	ND	ND	ND	98.38	6.02	92.36
May-99	ND	ND	NS	ND	ND	ND	98.38	6.64	91.74
Aug-99	8.5	3.7	NS	ND	15.8	76.7	98.38	7.60	90.78
Nov-99	ND	ND	NS	ND	ND	ND	98.38	7.19	91.19
Feb-00	0.64	ND	ND	ND	ND	0.71	98.38	6.98	91.40
May-00	ND	ND	ND	ND	ND	ND	98.38	6.28	92.10
Aug-00	ND	ND	ND	ND	ND	ND	98.38	--	--
Nov-00	3	ND	ND	ND	ND	2.6	98.38	7.32	91.06
Feb-01	ND	ND	ND	ND	ND	ND	98.38	5.78	92.60
May-01	ND	ND	ND	ND	ND	ND	98.38	5.80	92.58
Aug-01	1.3 J	ND	ND	ND	ND	ND	98.38	7.40	90.98
Nov-01	3.1	ND	ND	ND	ND	ND	98.38	7.90	90.48
Feb-02	3.5	ND	ND	ND	ND	ND	98.38	7.47	90.91
May-02	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	98.38	7.05	91.33
Aug-02	4.1	ND	0.9J	ND	ND	10.6	98.38	8.60	89.78
Nov-02	ND	ND	ND	ND	ND	ND	98.38	7.13	91.25
Feb-03	ND	ND	ND	ND	ND	ND	98.38	6.54	91.84
May-03	ND	ND	ND	ND	ND	ND	98.38	5.51	92.87
Aug-03	ND	ND	ND	ND	ND	ND	98.38	5.40	92.98
Nov-03	ND	ND	ND	ND	ND	ND	98.38	6.22	92.16
Mar-04	ND	ND	ND	ND	ND	NS	98.38	6.00	92.38
May-04	ND	ND	ND	ND	ND	NS	98.38	5.01	93.37

**TABLE 1**  
**ANALYTICAL DATA SUMMARY**  
**YEARS 1 THROUGH 9 GROUNDWATER MONITORING**  
**BUILDINGS C-17/20/16/50**  
**NWS EARLE, COLTS NECK, NEW JERSEY**  
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Location/ Duplicate	Compounds						Groundwater Levels		
	Volatiles					Semivolatiles	Elevation Top of Casing	Depth to GW	GW Elevation**
	Benzene ug/L	Ethylbenzene ug/L	MTBE ug/L	Toluene ug/L	Xylenes ug/L	Naphthalene ug/L			
<b>NJDEP GQS</b>	<b>1.0</b>	<b>700</b>	<b>70</b>	<b>1,000</b>	<b>1,000*</b>	<b>300</b>	<b>ft above MSL</b>	<b>ft BGS</b>	<b>ft above MSL</b>
<b>16-MW-12 (Replaced 17-MW-02)</b>									
Aug-04	1.6	ND	ND	ND	ND	NS	98.38	6.99	91.39
Nov-04	0.34 J	ND	ND	ND	ND	NS	98.38	6.65	91.73
Feb-05	1.1	ND	ND	ND	ND	NS	98.38	7.58	90.80
May-05	0.38 J	ND	ND	ND	ND	NS	98.38	5.07	93.31
<b>18-MW-01</b>									
Aug-98	N.D	ND	NS	ND	ND	ND	103.00	9.21	93.79
Nov-98	ND	ND	NS	ND	ND	ND	103.00	9.71	93.29
Feb-99	ND	ND	NS	ND	ND	ND	103.00	9.29	93.71
May-99	ND	ND	NS	ND	ND	ND	103.00	9.00	94.00
Aug-99	ND	ND	NS	ND	ND	ND	103.00	10.55	92.45
Nov-99	ND	ND	NS	ND	ND	3.0	103.00	10.19	92.81
Feb-00	ND	ND	ND	ND	ND	ND	103.00	9.88	93.12
May-00	ND	ND	ND	0.71	ND	ND	103.00	9.41	93.59
Aug-00	ND	ND	ND	ND	ND	ND	103.00	9.66	93.34
Nov-00	ND	ND	ND	ND	ND	ND	103.00	10.30	92.70
Feb-01	ND	ND	ND	ND	ND	ND	103.00	9.52	93.48
May-01	ND	ND	ND	ND	ND	ND	103.00	8.58	94.42
Aug-01	ND	ND	ND	ND	ND	2.9	103.00	9.58	93.42
Nov-01	ND	ND	ND	ND	ND	ND	103.00	10.79	92.21
Feb-02	ND	ND	ND	ND	ND	ND	103.00	10.61	92.39
May-02	ND	ND	ND	ND	ND	ND	103.00	10.18	92.82
Aug-02	ND	ND	0.55 J	ND	ND	ND	103.00	11.39	91.61
Nov-02	ND	ND	ND	ND	ND	ND	103.00	10.19	92.81
Feb-03	ND	ND	ND	ND	ND	ND	103.00	9.26	93.74
May-03	ND	ND	ND	ND	ND	ND	103.00	8.39	94.61
Aug-03	ND	ND	ND	ND	ND	ND	103.00	8.27	94.73
Nov-03	ND	ND	ND	ND	ND	ND	103.00	9.17	93.83
Mar-04	ND	ND	ND	ND	ND	ND	103.00	8.79	94.21
May-04	ND	ND	R	ND	ND	ND	103.00	8.12	94.88
Aug-04	ND	ND	0.34 J	ND	ND	ND	103.00	9.67	93.33
Nov-04	ND	ND	ND	ND	ND	ND	103.00	9.59	93.41
Feb-05	ND	ND	ND	ND	ND	ND	103.00	9.32	93.68
May-05	ND	ND	ND	ND	ND	ND	103.00	8.21	94.79
Aug-05	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	103.00	9.94	93.06
Nov-05	ND	ND	ND	ND	ND	ND	103.00	8.81	94.19
Feb-06	ND	ND	ND	ND	ND	ND	103.00	7.86	95.14
May-06	ND	ND	ND	ND	ND	ND	103.00	5.47	97.53
Aug-06	ND	ND	ND	ND	ND	ND	103.00	9.78	93.22
Nov-06	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	ND / ND	103.00	8.08	94.92
Feb-07	ND	ND	ND	ND	ND	ND	103.00	8.62	94.38
May-07	ND	ND	ND	ND	ND	ND	103.00	7.35	95.65
<b>NJDEP SWGS</b>	<b>0.15</b>	<b>3,030</b>	<b>NA</b>	<b>7,440</b>	<b>NA</b>	<b>NA</b>			
<b>16-SW-01</b>									
May-02	ND	ND	3	ND	ND	ND	--	--	--
Aug-02	NS	NS	NS	NS	NS	NS	--	--	--
Nov-02	ND	ND	ND	ND	ND	ND	--	--	--
Feb-03	ND	ND	0.56 J	ND	ND	ND	--	--	--
May-03	ND	ND	ND	ND	ND	ND	--	--	--
Aug-03	ND	ND	0.53 J	ND	ND	ND	--	--	--
Nov-03	ND	ND	ND	ND	ND	ND	--	--	--
Mar-04	ND	ND	ND	ND	ND	NS	--	--	--
May-04	ND	ND	ND	ND	ND	NS	--	--	--
Aug-04	ND	ND	2.4 J	ND	ND	NS	--	--	--
Nov-04	ND	ND	ND	ND	ND	NS	--	--	--
Feb-05	ND	ND	ND	ND	ND	NS	--	--	--
May-05	ND	ND	8	ND	ND	NS	--	--	--
Aug-05	NS	NS	NS	NS	NS	NS	--	--	--
Nov-05	ND	ND	ND	ND	ND	NS	--	--	--
Feb-06	ND	ND	ND	ND	ND	NS	--	--	--
May-06	ND	ND	ND	ND	ND	NS	--	--	--
Aug-06	NS	NS	NS	NS	NS	NS	--	--	--
Nov-06	ND	ND	ND	ND	ND	NS	--	--	--
Feb-07	ND	ND	ND	ND	ND	NS	--	--	--
May-07	ND	ND	ND	ND	ND	NS	--	--	--
<b>16-SW-02</b>									
May-02	ND / ND	ND / ND	3.8 / 4.4	ND / ND	ND / ND	ND / ND	--	--	--
Aug-02	NS	NS	NS	NS	NS	NS	--	--	--
Nov-02	ND / ND	ND / ND	3.8 J / 5.5 J	ND / ND	ND / ND	ND / ND	--	--	--
Feb-03	ND	ND	7.7	ND	ND	ND	--	--	--
May-03	ND / ND	ND / ND	3.9 / 4.4	ND / ND	ND / ND	ND / ND	--	--	--
Aug-03	ND / ND	ND / ND	28.4 / 33.9	ND / ND	ND / ND	ND / ND	--	--	--
Nov-03	ND / ND	ND / ND	26.4 / 23.3	ND / ND	ND / ND	ND / ND	--	--	--
Mar-04	1.4 / 1.2	ND / ND	11.3 / 12	0.87 J / 2.2 J	ND / ND	NS / NS	--	--	--
May-04	ND / ND	ND / ND	7.7 J / R	0.6 J / ND	ND / ND	NS / NS	--	--	--
Aug-04	0.66 J	ND	58.6	ND	ND	NS	--	--	--
Nov-04	0.20 J	ND	9.7	ND	ND	NS	--	--	--
Feb-05	ND	ND	0.79 J	ND	ND	NS	--	--	--
May-05	ND	ND	ND	ND	ND	NS	--	--	--
Aug-05	ND	ND	21	1.2	ND	NS	--	--	--

TABLE 1  
ANALYTICAL DATA SUMMARY  
YEARS 1 THROUGH 9 GROUNDWATER MONITORING  
BUILDINGS C-17/20/16/50  
NWS EARLE, COLTS NECK, NEW JERSEY  
Page 6 of 6

Location/ Duplicate	Compounds						Groundwater Levels		
	Volatiles					Semivolatiles	Elevation Top of Casing	Depth to GW	GW Elevation**
	Benzene ug/L	Ethylbenzene ug/L	MTBE ug/L	Toluene ug/L	Xylenes ug/L	Naphthalene ug/L			
NJDEP GQS	1.0	700	70	1,000	1,000*	300	ft above MSL	ft BGS	ft above MSL
NJDEP SWQS	0.15	3,030	NA	7,440	NA	NA			
<b>16-SW-02 continued</b>									
Nov-05	ND	ND	0.52J	ND	ND	NS	--	--	--
Feb-06	ND	ND	2.0	ND	ND	NS	--	--	--
May-06	ND	ND	ND	ND	ND	NS	--	--	--
Aug-06	NS	NS	NS	NS	NS	NS	--	--	--
Nov-06	ND	ND	ND	ND	ND	NS	--	--	--
Feb-07	ND	ND	19.2	ND	ND	NS	--	--	--
May-07	ND	ND	0.76 J	ND	ND	NS	--	--	--

Data previous to August 2004 was provided by Tetra Tech NUS, Incorporated (TtNUS). Groundwater Quality Standard (GQS) and Surface Water Quality Standard (SWQS) Criteria is from the New Jersey Department of Environmental Protection (NJDEP) criteria for class II-A Groundwater (N.J.A.C. 7:9-6) and class FW2 Surface Water (N.J.A.C. 7:9B). Unless otherwise noted, the groundwater criteria used are the Higher of the Practical Quantitation Levels (PQLs) and Groundwater Quality Criteria.

Analytes with concentrations greater than the NJDEP GQS or SWQS are highlighted in bold. \*Criterion for total xylenes was raised to the NJDEP Maximum Contaminant Level (MCL) of 1,000 ug/L as of 5 February 1997. Previous reports used a value of 40 ug/L; however, the bold highlights have been updated to correspond to the current criterion.

\*\*GW Elevation is not corrected for LNAPL (if present). Corrected GW Elevations are presented in Appendix F.

feet msl = feet above mean sea level; feet bgs = feet below ground surface

Sampling periods displaying two values for a concentration (i.e. XX/XX) indicate a duplicate sample was taken and analyzed.

H: Holding Time Exceedance

J: Estimated value due to exceedance of technical criteria or because results are less than the CRQL.

R: Surrogate recovery non-compliance

ND: Non-Detect

NS: Not Sampled

NA: Not Available

<sup>1</sup> Omitted from monitoring program after second quarter of Year 6.

<sup>2</sup> Destroyed after first quarter of Year 6.

<sup>3</sup> Omitted from monitoring program due to active remediation (bioslurping).

<sup>4</sup> Omitted from monitoring program after second quarter of Year 6.

<sup>5</sup> Omitted from monitoring program after second quarter of Year 6.

<sup>6</sup> Renamed 17-MW-17 after Year 6. Omitted due to active remediation (bioslurping).

<sup>7</sup> Renamed 16-MW-12 after Year 6.

**TABLE 2**  
**Sample Data Summary**  
**Year 9 Groundwater Monitoring**  
**Naval Weapons Station Earle, Colts Neck, NJ**  
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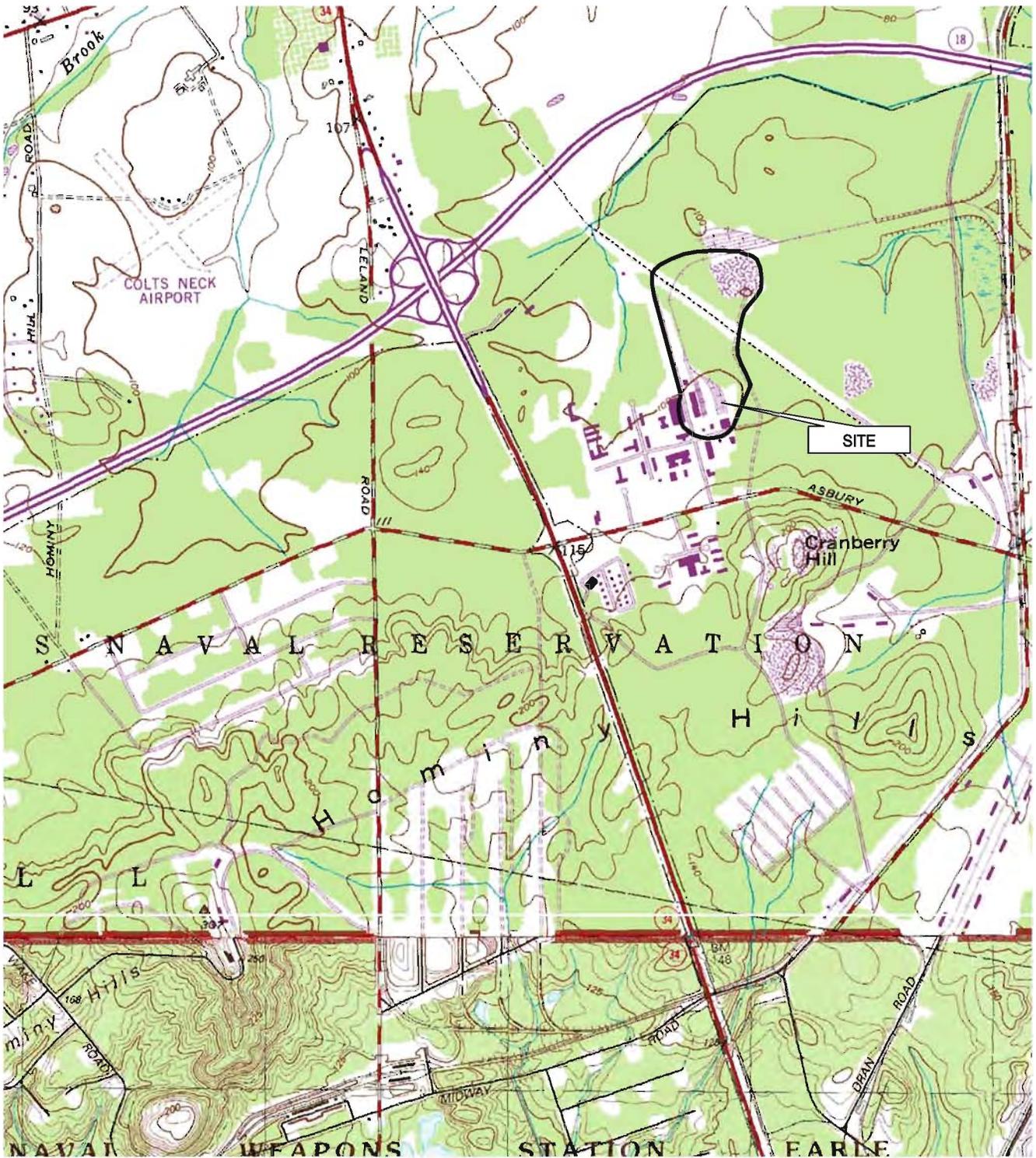
Location/ Duplicate	Compounds						Groundwater Levels					
	Volatiles					Semivolatiles	Elevation Top of Casing	Depth to Product	Depth to GW	Product Thickness	Elevation GW***	
	Benzene	Ethylbenzene	MTBE	Toluene	Xylenes	Naphthalene						
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L						
<b>NJDEP GWQS</b>	<b>1.0</b>	<b>700</b>	<b>70</b>	<b>1,000</b>	<b>1,000</b>	<b>300</b>	ft above MSL	feet BGS	feet BGS	ft	ft above MSL	
<b>16MW-04</b>	<b>(Not Sampled in Year 9 Monitoring Program)</b>											
Aug-06	NS	NS	NS	NS	NS	NS	101.23	9.12	9.10	0.02	92.13	
Nov-06	NS	NS	NS	NS	NS	NS	101.23	7.35	7.80	0.45	93.81	
Feb-07	NS	NS	NS	NS	NS	NS	101.23	7.78	7.81	0.03	93.42	
May-07	NS	NS	NS	NS	NS	NS	101.23	**	6.62	**	94.61	
<b>16MW-05</b>	<b>(Product Found in Well)</b>											
Aug-06	NS	NS	NS	NS	NS	NS	104.14	11.52	11.70	0.18	92.44	
Nov-06	NS	NS	NS	NS	NS	NS	104.14	**	9.89	**	94.25	
Feb-07	NS	NS	NS	NS	NS	NS	104.14	10.45	10.51	0.06	93.63	
May-07	NS	NS	NS	NS	NS	NS	104.14	**	9.00	**	95.14	
<b>16MW-08</b>												
Aug-06	1.1	ND	0.32 J	ND	ND	ND	103.29	NA	10.51	NA	92.78	
Nov-06	1.4	ND	ND	ND	ND	ND	103.29	NA	9.76	NA	93.53	
Nov-06 (DUP-2)	1.3	ND	ND	ND	ND	ND	103.29	NA	9.76	NA	93.53	
Feb-07	34.6	9.6	2.5	0.70 J	ND	3.0	103.29	NA	9.68	NA	93.61	
May-07	40.1	15.8	2.8	0.33 J	1.5 J	15	103.29	NA	9.78	NA	93.51	
May-07 (DUP-2)	36.4	13.3	2.4	0.28 J	1.3 J	17	103.29	NA	9.78	NA	93.51	
<b>16MW-10</b>												
Aug-06	0.46 J	ND	ND	ND	0.88 J	1 J	100.36	NA	9.66	NA	90.70	
Aug-06 (DUP-2)	0.45 J	ND	ND	ND	1.0 J	1 J	100.36	NA	9.66	NA	90.70	
Nov-06	ND	ND	ND	ND	ND	ND	100.36	NA	9.05	NA	91.31	
Feb-07	ND	ND	ND	ND	0.88 J	0.9 J	100.36	NA	8.54	NA	91.82	
May-07	ND	ND	ND	ND	0.94 J	0.6 J	100.36	NA	7.45	NA	92.91	
<b>16MW-11</b>												
Aug-06	3.8	ND	20.5	ND	ND	ND	91.81	NA	4.25	NA	87.56	
Aug-06 (DUP-1)	3.8	ND	20.9	ND	ND	ND	91.81	NA	4.25	NA	87.56	
Nov-06	19	ND	79	ND	ND	ND	91.81	NA	2.53	NA	89.28	
Feb-07	81.4	ND	169	ND	ND	ND	91.81	NA	2.99	NA	88.82	
May-07	159	ND	288	ND	ND	ND	91.81	NA	2.62	NA	89.19	
May-07 (DUP-1)	164	ND	301	ND	ND	2	91.81	NA	2.62	NA	89.19	
<b>16MW-15</b>												
Aug-06	7.7	ND	ND	ND	ND	NS	91.97	NA	5.11	NA	86.86	
Nov-06	6.5	ND	ND	ND	ND	NS	91.97	NA	3.21	NA	88.76	
Feb-07	14.6	ND	0.42 J	ND	ND	NS	91.97	NA	3.90	NA	88.07	
May-07	20.4	ND	0.35 J	ND	ND	NS	91.97	NA	3.51	NA	88.46	
<b>16MW-24</b>												
Aug-06	114	ND	90.1	3.5	1.8 J	NS	89.88	NA	5.12	NA	84.76	
Nov-06	4.8	ND	ND	ND	ND	NS	89.88	NA	3.83	NA	86.05	
Feb-07	6.2	ND	13.4	ND	ND	NS	89.88	NA	4.01	NA	85.87	
May-07	7.6	ND	20.9	ND	ND	NS	89.88	NA	4.00	NA	85.88	
<b>16MW-25</b>												
Aug-06	ND	ND	ND	ND	ND	NS	93.22	NA	8.32	NA	84.90	
Nov-06	ND	ND	ND	ND	ND	NS	93.22	NA	5.42	NA	87.80	
Feb-07	ND	ND	ND	ND	ND	NS	93.22	NA	6.21	NA	87.01	
May-07	ND	ND	ND	ND	ND	NS	93.22	NA	5.10	NA	88.12	
<b>18MW-01</b>												
Aug-06	ND	ND	ND	ND	ND	ND	103	NA	9.78	NA	93.22	
Nov-06	ND	ND	ND	ND	ND	ND	103	NA	8.08	NA	94.92	
Nov-06 (DUP-1)	ND	ND	ND	ND	ND	ND	103	NA	8.08	NA	94.92	
Feb-07	ND	ND	ND	ND	ND	ND	103	NA	8.62	NA	94.38	
May-07	ND	ND	ND	ND	ND	ND	103	NA	7.35	NA	95.65	
<b>16SW-01*</b>												
Aug-06	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	
Nov-06	ND	ND	ND	ND	ND	NS	NA	NA	NA	NA	NA	
Feb-07	ND	ND	ND	ND	ND	NS	NA	NA	NA	NA	NA	
May-07	ND	ND	ND	ND	ND	NS	NA	NA	NA	NA	NA	
<b>16SW-02*</b>												
Aug-06	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	
Nov-06	ND	ND	ND	ND	ND	NS	NA	NA	NA	NA	NA	
Feb-07	ND	ND	19.2	ND	ND	NS	NA	NA	NA	NA	NA	
May-07	ND	ND	0.76 J	ND	ND	NS	NA	NA	NA	NA	NA	

MSL: Mean Sea Level.  
 BGS: Below Ground Surface.  
 J: Estimated Value. Result is less than the reporting limit.  
 ND: Not Detected.  
 NS: Not Sampled.  
 NA: Not Available.  
 Bold value indicates that results exceed NJDEP GWQS.  
 \* 16SW-01 and 16SW-02 were not sampled in August 2006 because the locations were dry.  
 \*\*Sheen of Product Present; Product Thickness <0.10 foot  
 \*\*\* For wells with product present, groundwater elevations were calculated and corrected

**TABLE 3**  
**YEAR 9 GROUNDWATER SAMPLING AND ANALYSIS SUMMARY**  
 BUILDINGS C-16/17/20/50

MONITORING WELL NUMBER	ANALYSIS	METHOD(S)
16MW-04 <i>(Sample only if floating product is not encountered)</i>	benzene, ethylbenzene, naphthalene, toluene, xylenes, MTBE	624/625
16MW-05 <i>(Sample only if floating product is not encountered)</i>	benzene, ethylbenzene, naphthalene, toluene, xylenes, MTBE	624/625
16MW-08	benzene, ethylbenzene, naphthalene, toluene, xylenes, MTBE	624/625
16MW-10	benzene, ethylbenzene, naphthalene, toluene, xylenes, MTBE	624/625
16MW-11	benzene, ethylbenzene, naphthalene, toluene, xylenes, MTBE	624/625
16MW-15	benzene, ethylbenzene, toluene, xylenes, MTBE	624 only
16MW-24	benzene, ethylbenzene, toluene, xylenes, MTBE	624 only
16MW-25	benzene, ethylbenzene, toluene, xylenes, MTBE	624 only
18MW-01	benzene, ethylbenzene, naphthalene, toluene, xylenes, MTBE	624/625
16SW-01	benzene, ethylbenzene, toluene, xylenes, MTBE	624 only
16SW-02	benzene, ethylbenzene, toluene, xylenes, MTBE	624 only

## **FIGURES**



**SITE LOCATION MAP**

**BUILDINGS C-17/20/16/50  
U.S. NAVY NWS- EARLE  
COLTS NECK, NJ**

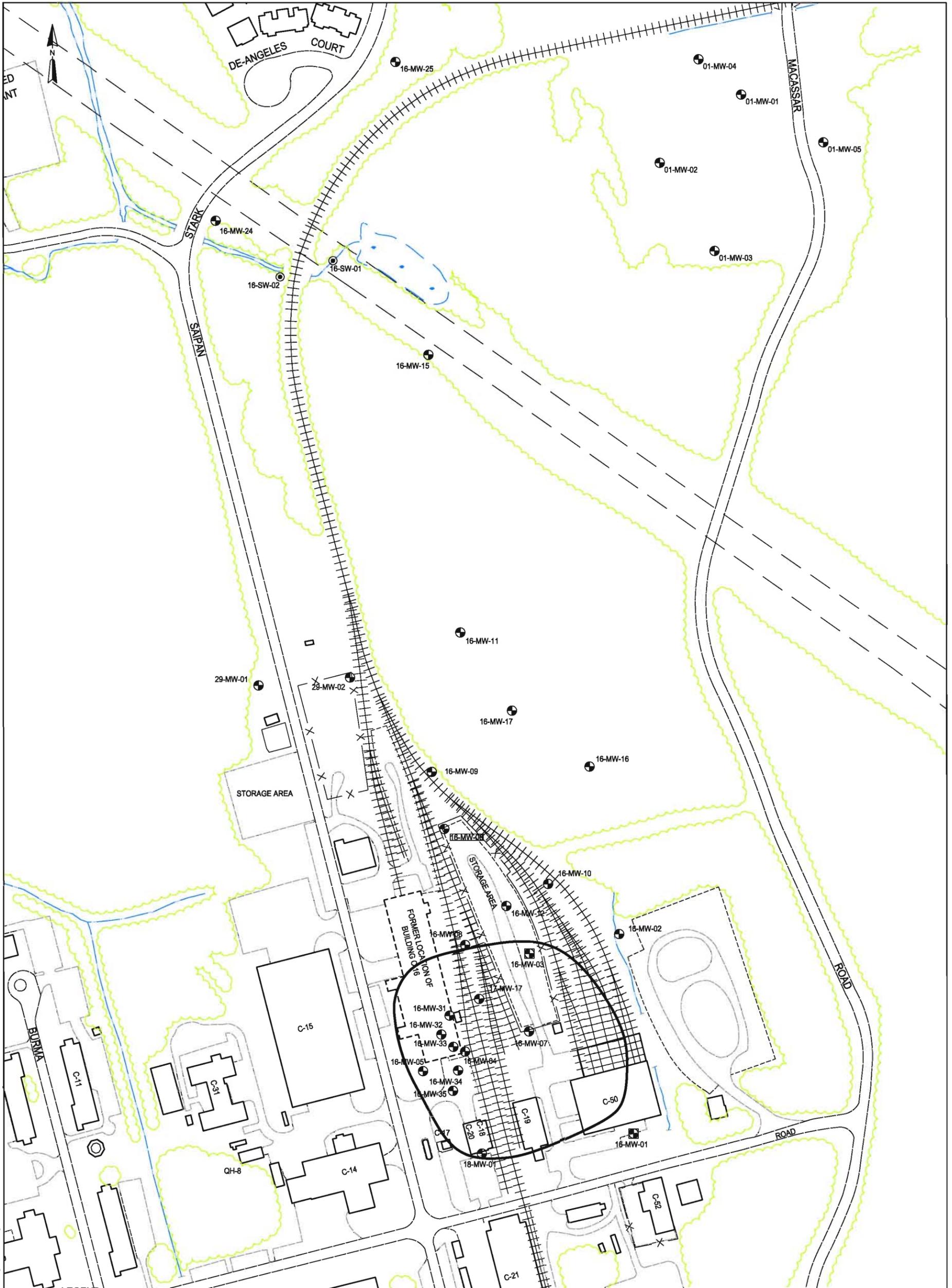
**ECOR Solutions**  
1075 Andrew Drive, Suite I, West Chester, PA 19380



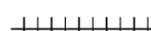
DATE  
09-27-04

FIGURE  
1-1



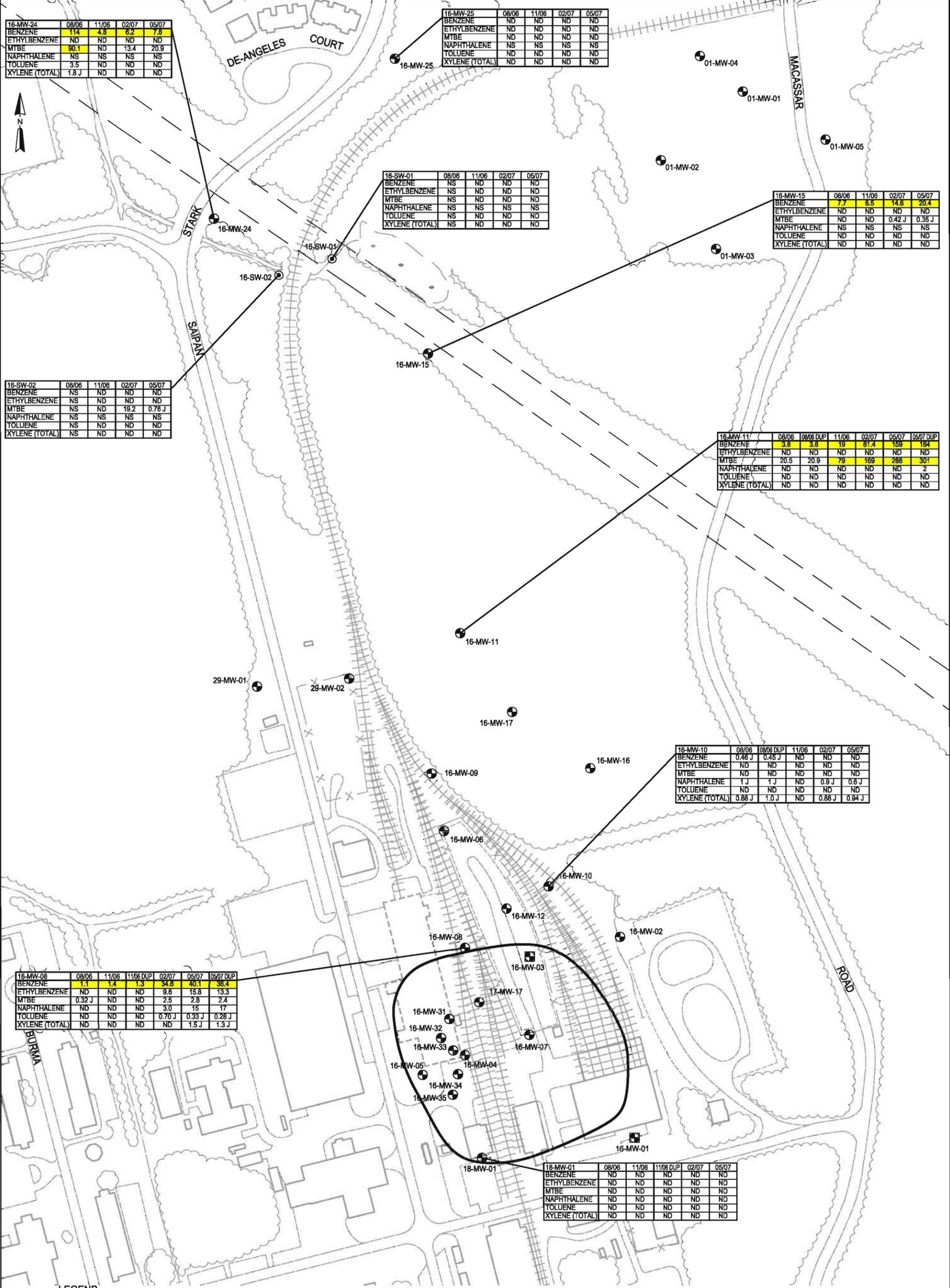


**LEGEND**

-  FENCE
-  TREELINE
-  RAILROAD
-  MONITORING WELL
-  ABANDONED MONITORING WELL
-  SURFACE WATER SITES
-  CEA BOUNDARY

SOURCE: TERRATECHNUS

<b>CEA BOUNDARY</b>		
BUILDINGS C-17/20/16/50 U.S. NAVY NWS- EARLE COLTS NECK, NJ		
ECOR Solutions 1075 Andrew Drive, Suite I, West Chester, PA 19380		
SCALE IN FEET 	DATE 09-24-06	FIGURE 1-2
		



16-MW-24	08/06	11/06	02/07	05/07
BENZENE	114	4.8	6.2	7.8
ETHYLBENZENE	ND	ND	ND	ND
MTBE	90.1	ND	13.4	20.9
NAPHTHALENE	NS	NS	NS	NS
TOLUENE	3.5	ND	ND	ND
XYLENE (TOTAL)	1.8 J	ND	ND	ND

16-MW-25	08/06	11/06	02/07	05/07
BENZENE	ND	ND	ND	ND
ETHYLBENZENE	ND	ND	ND	ND
MTBE	ND	ND	ND	ND
NAPHTHALENE	NS	NS	NS	NS
TOLUENE	ND	ND	ND	ND
XYLENE (TOTAL)	ND	ND	ND	ND

16-SW-01	08/06	11/06	02/07	05/07
BENZENE	NS	ND	ND	ND
ETHYLBENZENE	NS	ND	ND	ND
MTBE	NS	ND	ND	ND
NAPHTHALENE	NS	NS	NS	NS
TOLUENE	NS	ND	ND	ND
XYLENE (TOTAL)	NS	ND	ND	ND

16-MW-15	08/06	11/06	02/07	05/07
BENZENE	7.7	6.5	14.6	20.4
ETHYLBENZENE	ND	ND	ND	ND
MTBE	ND	ND	0.42 J	0.35 J
NAPHTHALENE	NS	NS	NS	NS
TOLUENE	ND	ND	ND	ND
XYLENE (TOTAL)	ND	ND	ND	ND

16-SW-02	08/06	11/06	02/07	05/07
BENZENE	NS	ND	ND	ND
ETHYLBENZENE	NS	ND	ND	ND
MTBE	NS	ND	18.2	0.78 J
NAPHTHALENE	NS	NS	NS	NS
TOLUENE	NS	ND	ND	ND
XYLENE (TOTAL)	NS	ND	ND	ND

16-MW-11	08/06	08/06 DUP	11/06	02/07	05/07	05/07 DUP
BENZENE	3.8	3.8	19	81.4	159	184
ETHYLBENZENE	ND	ND	ND	ND	ND	ND
MTBE	20.5	20.9	79	169	288	301
NAPHTHALENE	ND	ND	ND	ND	ND	2
TOLUENE	ND	ND	ND	ND	ND	ND
XYLENE (TOTAL)	ND	ND	ND	ND	ND	ND

16-MW-10	08/06	08/06 DUP	11/06	02/07	05/07
BENZENE	0.48 J	0.45 J	ND	ND	ND
ETHYLBENZENE	ND	ND	ND	ND	ND
MTBE	ND	ND	ND	ND	ND
NAPHTHALENE	1 J	1 J	ND	0.9 J	0.6 J
TOLUENE	ND	ND	ND	ND	ND
XYLENE (TOTAL)	0.88 J	1.0 J	ND	0.88 J	0.64 J

16-MW-08	08/06	11/06	11/06 DUP	02/07	05/07	05/07 DUP
BENZENE	1.1	1.4	1.3	34.8	40.1	36.4
ETHYLBENZENE	ND	ND	ND	9.8	15.8	13.3
MTBE	0.32 J	ND	ND	2.5	2.8	2.4
NAPHTHALENE	ND	ND	ND	3.0	15	17
TOLUENE	ND	ND	ND	0.70 J	0.33 J	0.28 J
XYLENE (TOTAL)	ND	ND	ND	ND	1.5 J	1.3 J

16-MW-01	08/06	11/06	11/06 DUP	02/07	05/07
BENZENE	ND	ND	ND	ND	ND
ETHYLBENZENE	ND	ND	ND	ND	ND
MTBE	ND	ND	ND	ND	ND
NAPHTHALENE	ND	ND	ND	ND	ND
TOLUENE	ND	ND	ND	ND	ND
XYLENE (TOTAL)	ND	ND	ND	ND	ND

**LEGEND**

- FENCE
- TREELINE
- RAILROAD
- MONITORING WELL
- CEA BOUNDARY
- ABANDONED MONITORING WELL
- SURFACE WATER SITES
- RESULT EXCEEDS NJDEP GWQS
- ESTIMATED VALUE
- NOT DETECTED
- NOT ANALYZED

**YEAR 9  
GROUNDWATER QUALITY MAP**  
BUILDINGS C-17/20/16/50  
U.S. NAVY NWS- EARLE  
COLTS NECK, NJ

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SCALE IN FEET



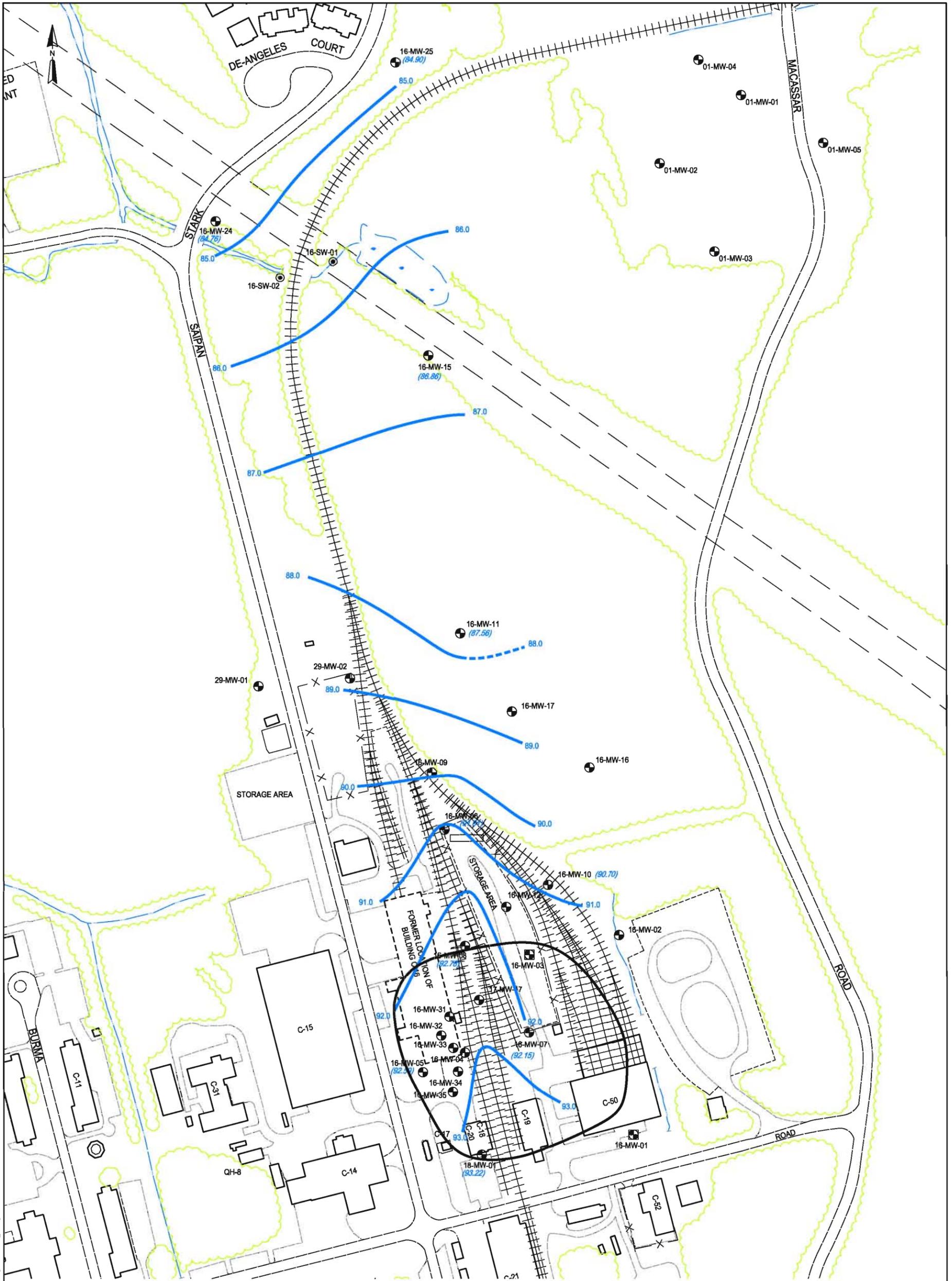
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07-05-07

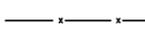
FIGURE

4-1





**LEGEND**

-  FENCE
-  TREELINE
-  RAILROAD
-  MONITORING WELL
-  ABANDONED MONITORING WELL
-  SURFACE WATER SITES
-  CEA BOUNDARY
-  GROUNDWATER CONTOUR (ft)
-  INFERRED GROUNDWATER CONTOUR
-  GROUNDWATER ELEVATION (ft)

SOURCE: TETRATECH NUS

**POTENTIOMETRIC SURFACE MAP  
AUGUST 2006**

**BUILDINGS C-17/20/16/50  
U.S. NAVY NWS- EARLE  
COLTS NECK, NJ**

**ECOR Solutions**  
1075 Andrew Drive, Suite I, West Chester, PA 19380

SCALE IN FEET



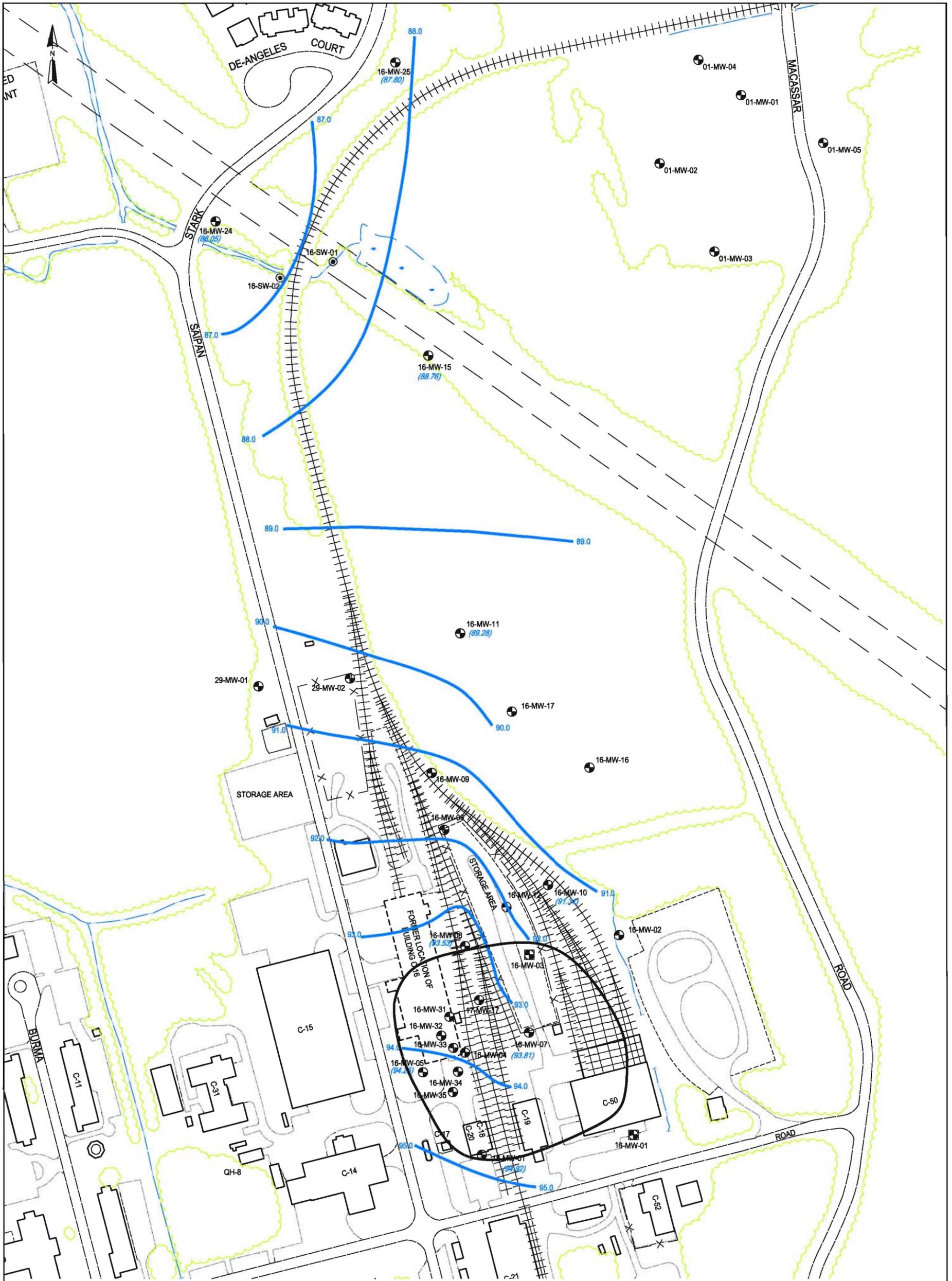
DATE

07-04-07

FIGURE

4-2





**LEGEND**

- |  |                           |  |                              |
|--|---------------------------|--|------------------------------|
|  | FENCE                     |  | GROUNDWATER CONTOUR (ft)     |
|  | TREELINE                  |  | INFERRED GROUNDWATER CONTOUR |
|  | RAILROAD                  |  | GROUNDWATER ELEVATION (ft)   |
|  | MONITORING WELL           |  |                              |
|  | ABANDONED MONITORING WELL |  |                              |
|  | SURFACE WATER SITES       |  |                              |
|  | CEA BOUNDARY              |  |                              |

SOURCE: TETRATECH NUS

**POTENTIOMETRIC SURFACE MAP  
NOVEMBER 2006**

**BUILDINGS C-17/20/16/50  
U.S. NAVY NWS- EARLE  
COLTS NECK, NJ**

**ECOR Solutions**  
1075 Andrew Drive, Suite 1, West Chester, PA 19380

SCALE IN FEET



DATE

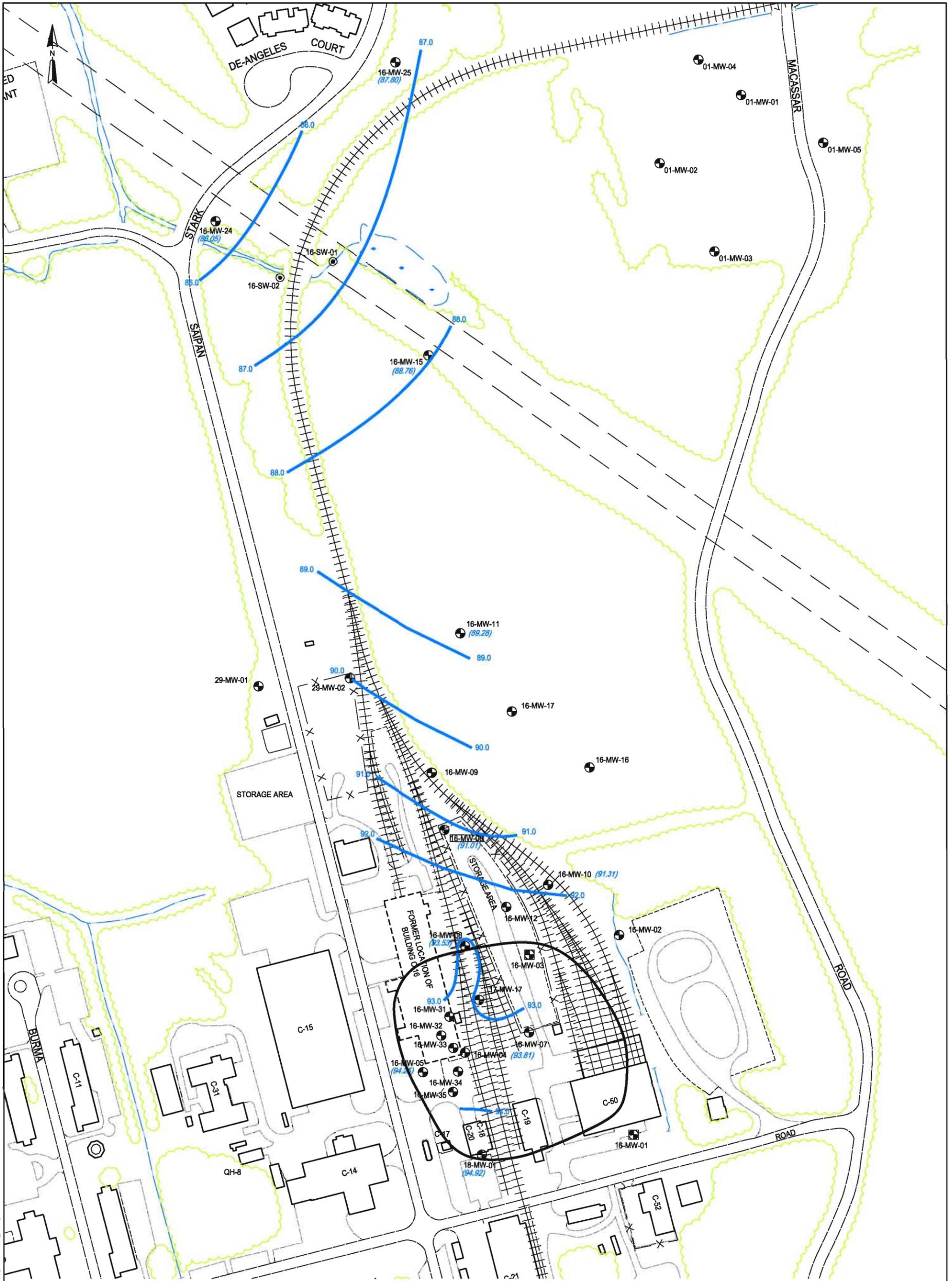
07-04-07

FIGURE

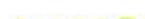
4-3



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**LEGEND**

-  FENCE
-  TREELINE
-  RAILROAD
-  MONITORING WELL
-  ABANDONED MONITORING WELL
-  SURFACE WATER SITES
-  CEA BOUNDARY
-  GROUNDWATER CONTOUR (ft)
-  INFERRED GROUNDWATER CONTOUR
-  GROUNDWATER ELEVATION (ft)

SOURCE: TETRATECH NUS

**POTENTIOMETRIC SURFACE MAP  
FEBRUARY 2007**

**BUILDINGS C-17/20/16/50  
U.S. NAVY NWS- EARLE  
COLTS NECK, NJ**

**ECOR Solutions**  
1075 Andrew Drive, Suite 1, West Chester, PA 19380

SCALE IN FEET



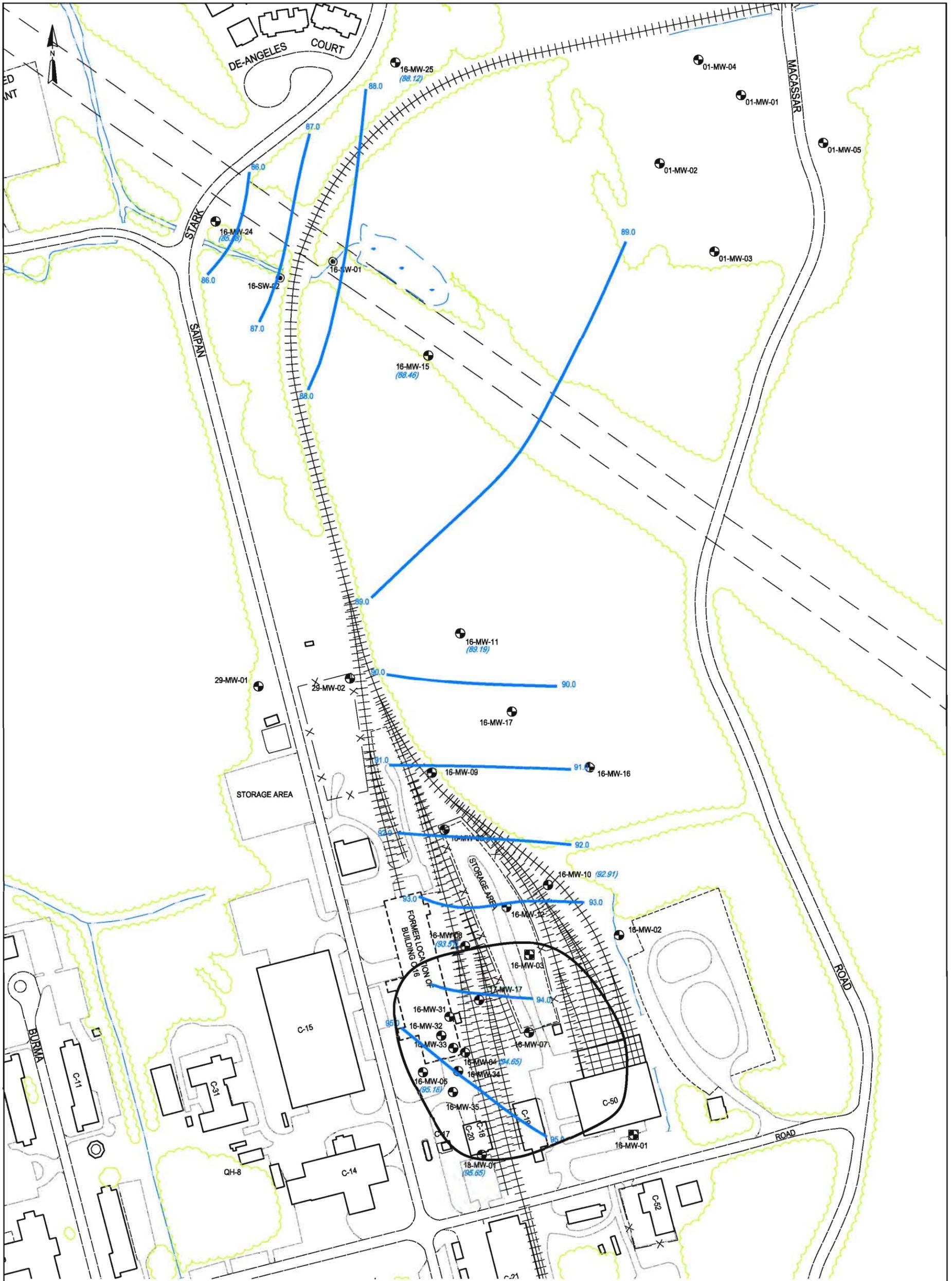
DATE

07-04-07

FIGURE

4-4





**LEGEND**

-  FENCE
-  TREELINE
-  RAILROAD
-  MONITORING WELL
-  ABANDONED MONITORING WELL
-  SURFACE WATER SITES
-  CEA BOUNDARY
-  GROUNDWATER CONTOUR (ft)
-  GROUNDWATER ELEVATION (ft)

SOURCE: TETRATECH NUS

**POTENTIOMETRIC SURFACE MAP  
MAY 2007**

**BUILDINGS C-17/20/16/50  
U.S. NAVY NWS- EARLE  
COLTS NECK, NJ**

**ECOR Solutions**  
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SCALE IN FEET



DATE

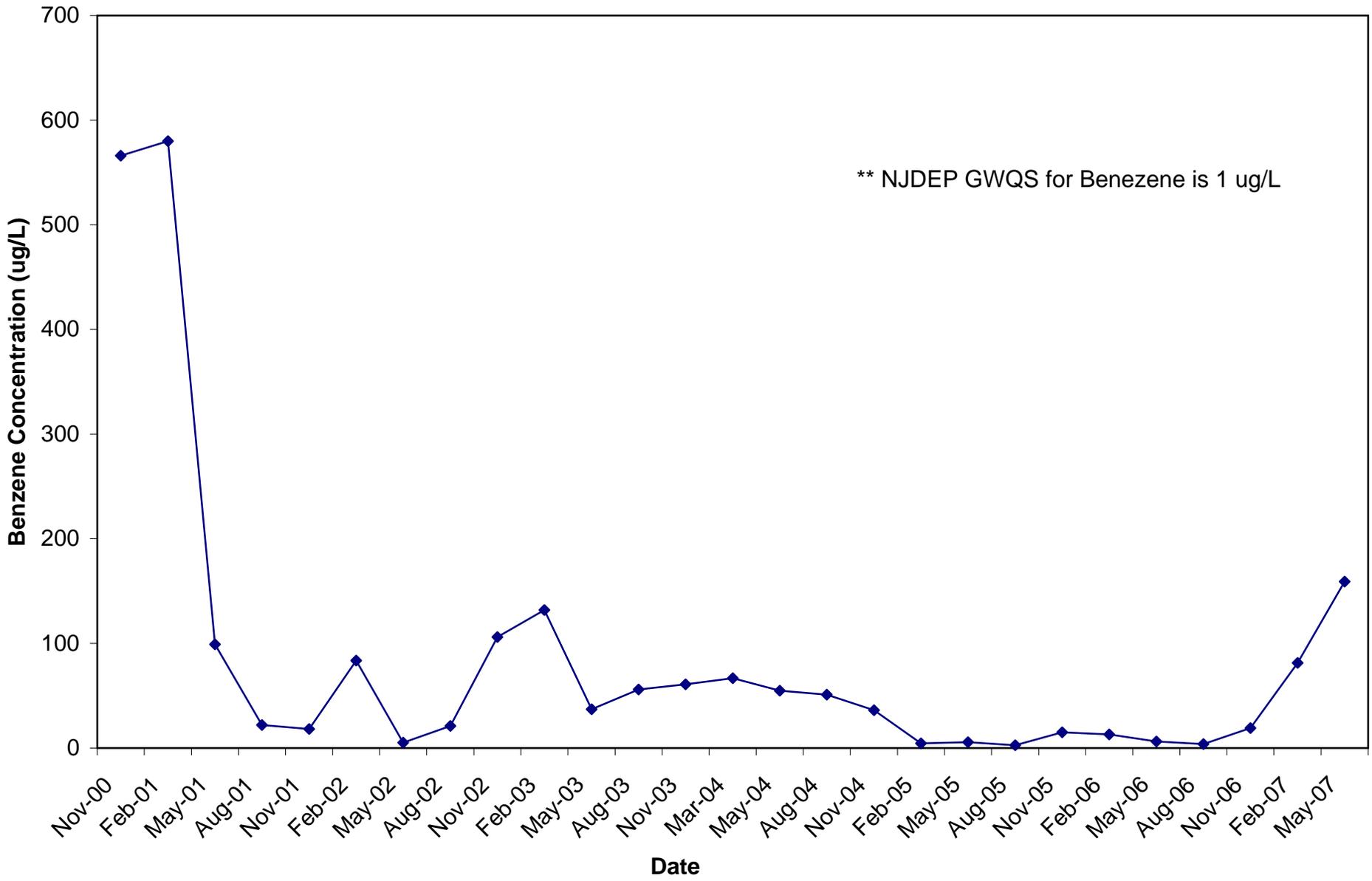
07-04-07

FIGURE

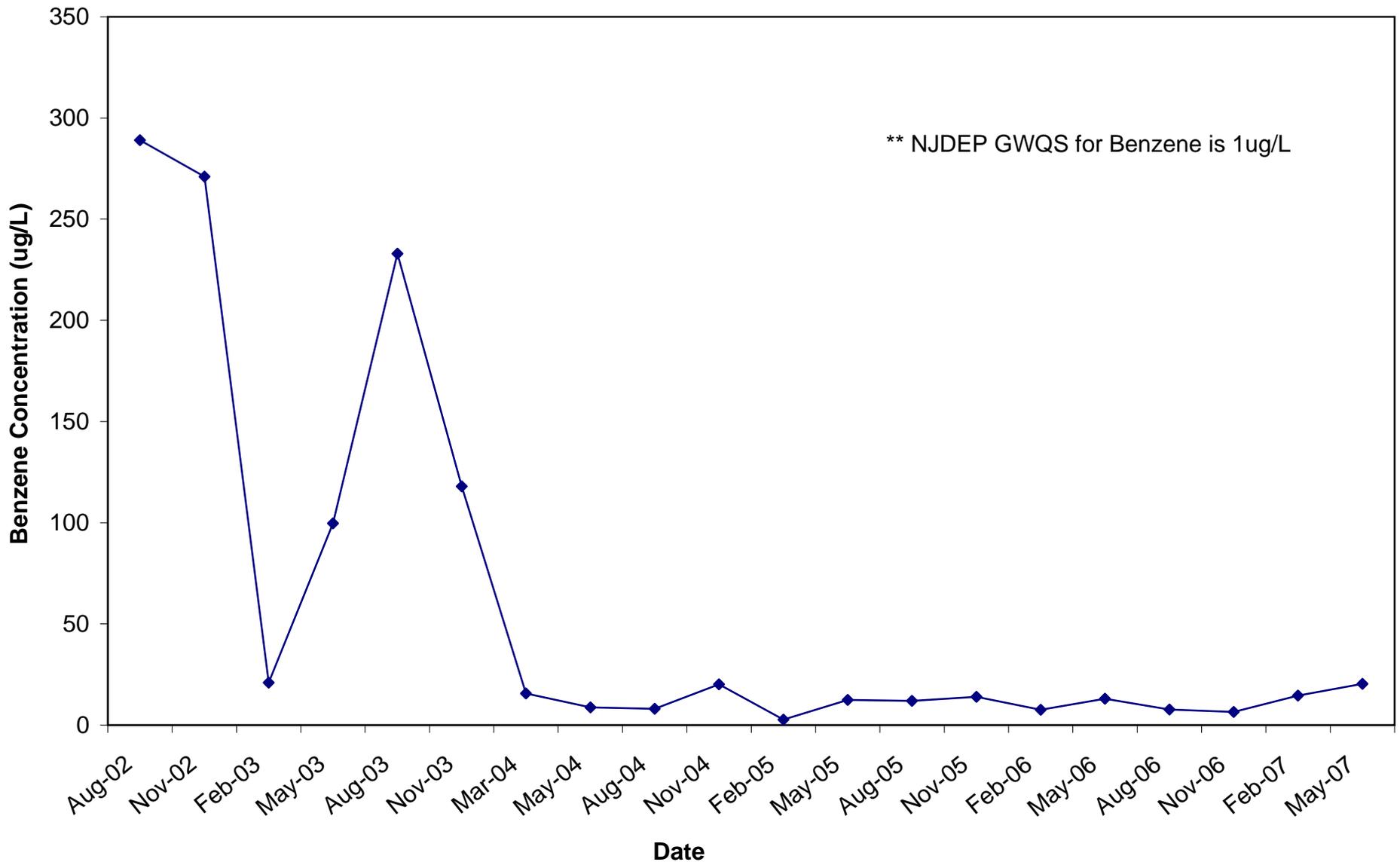
4-5



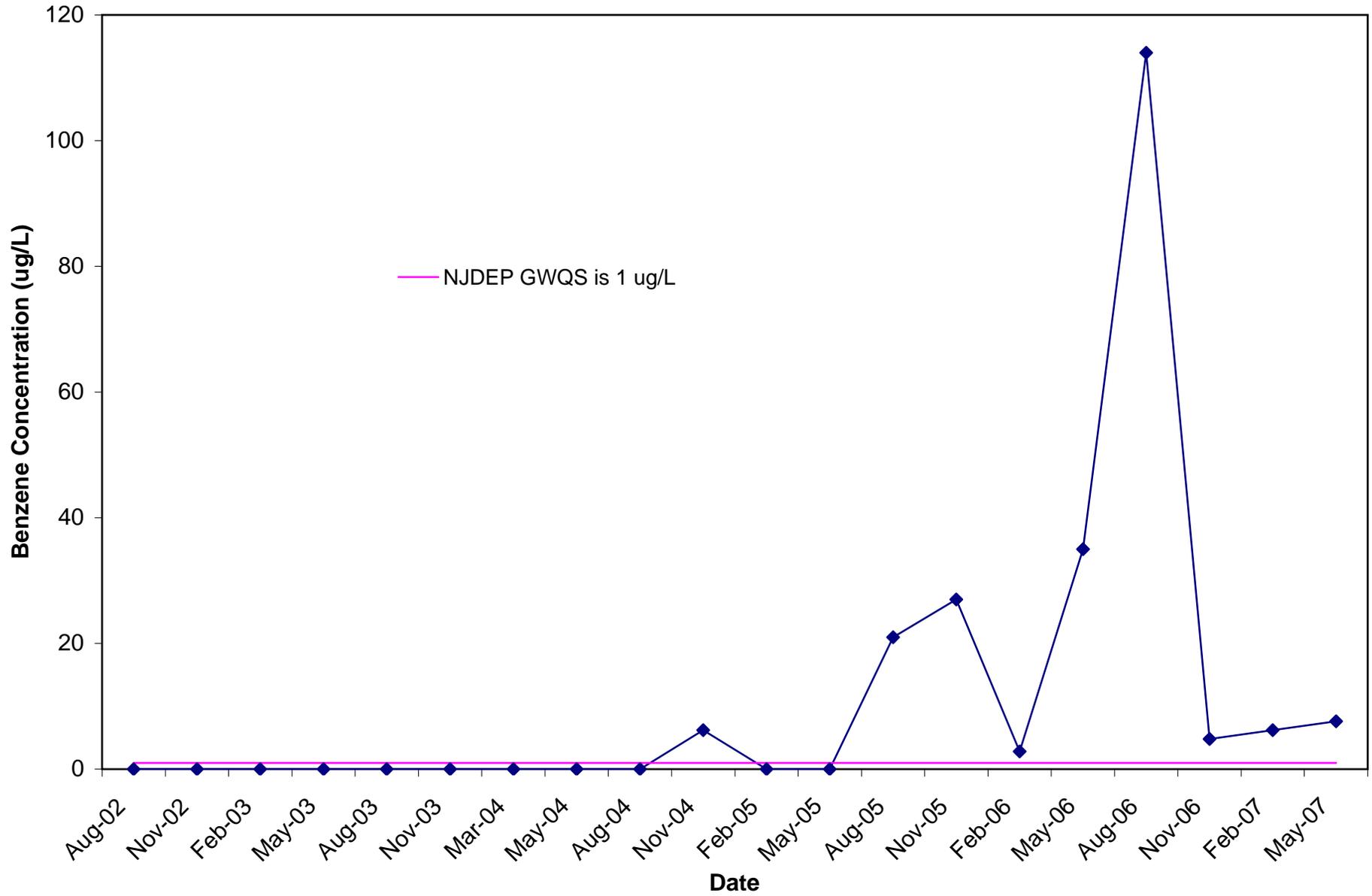
Figure 4-6  
Monitoring Well 16MW-11  
Benzene Concentration versus Time



**Figure 4-7**  
**Monitoring Well 16MW-15**  
**Benzene Concentration versus Time**



**Figure 4-8**  
**Monitoring Well 16MW-24**  
**Benzene Concentration versus Time**



**Figure 4-9**  
**Monitoring Well 16MW-11**  
**MTBE Concentration Trend versus Time**

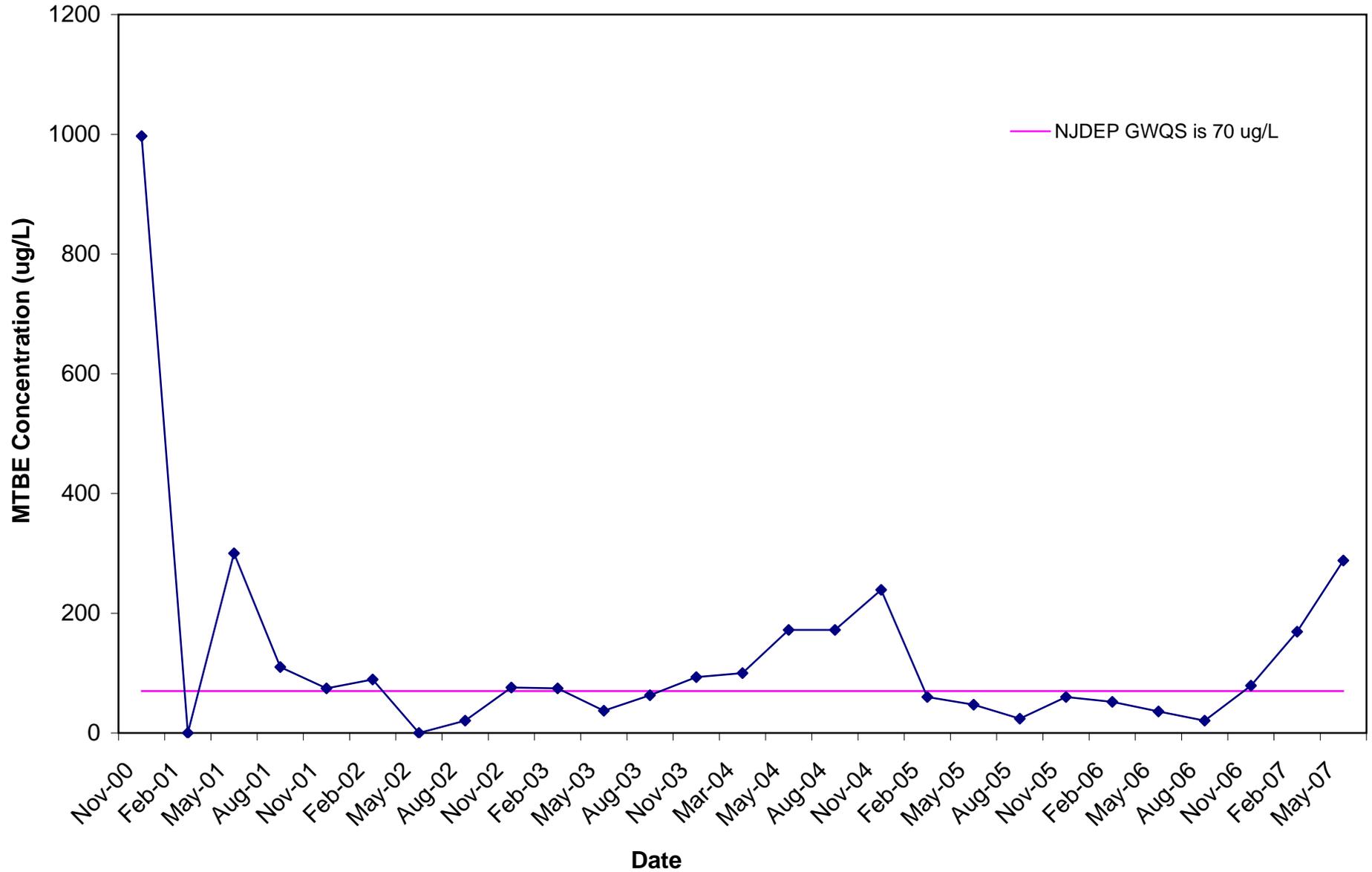


Figure 4-10  
Monitoring Well 16MW-15  
MTBE Concentration Trend versus Time

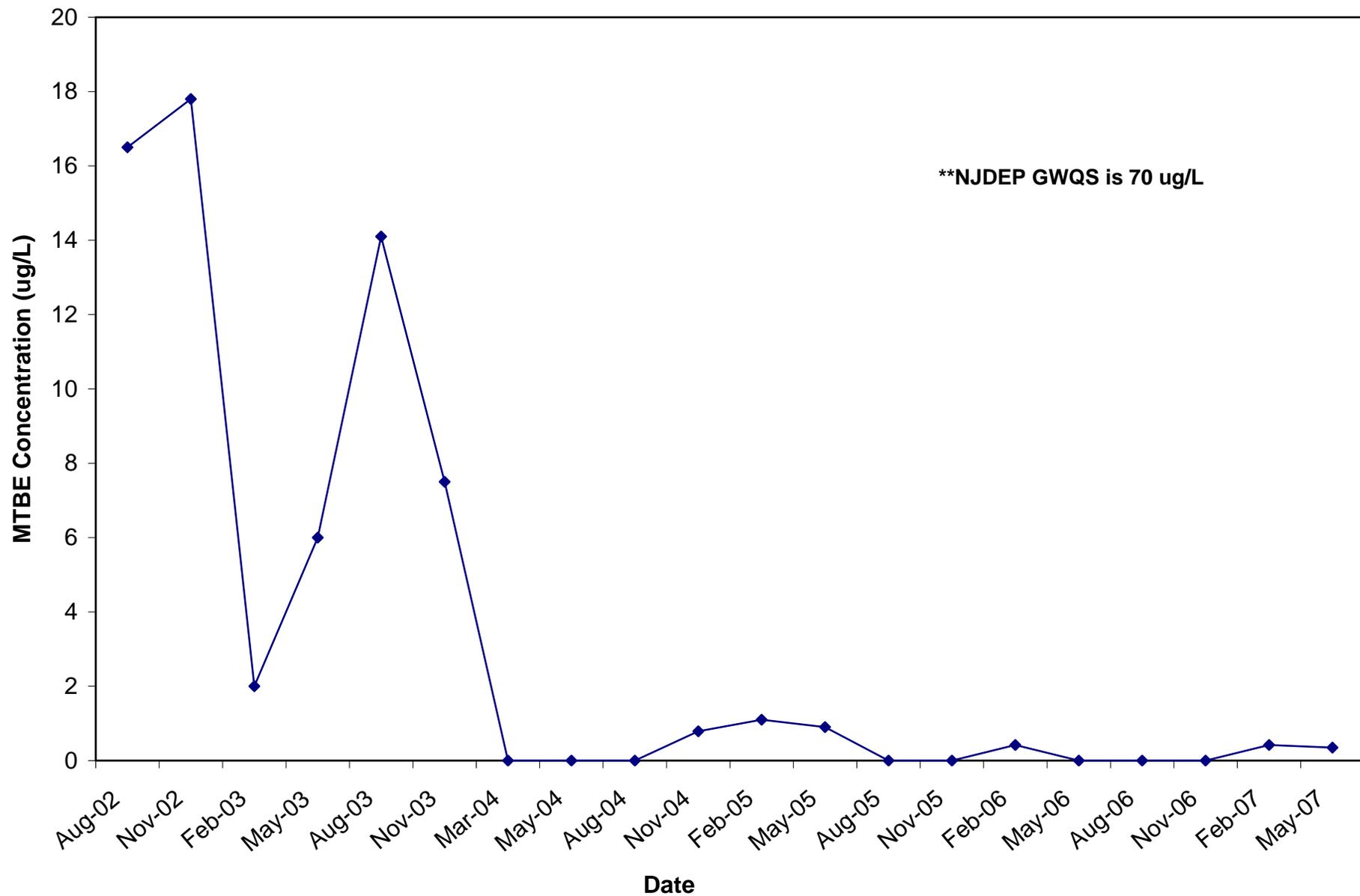
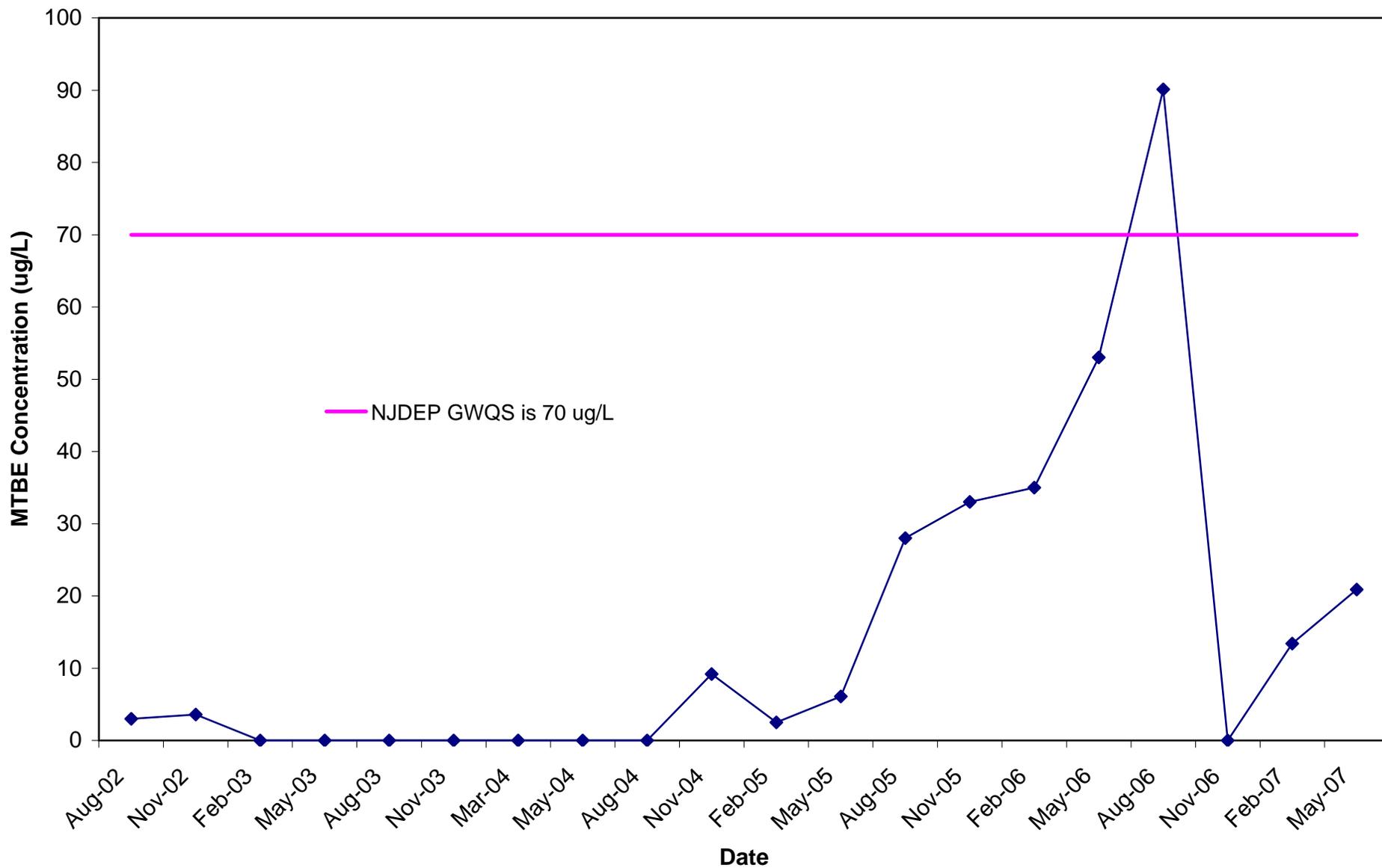
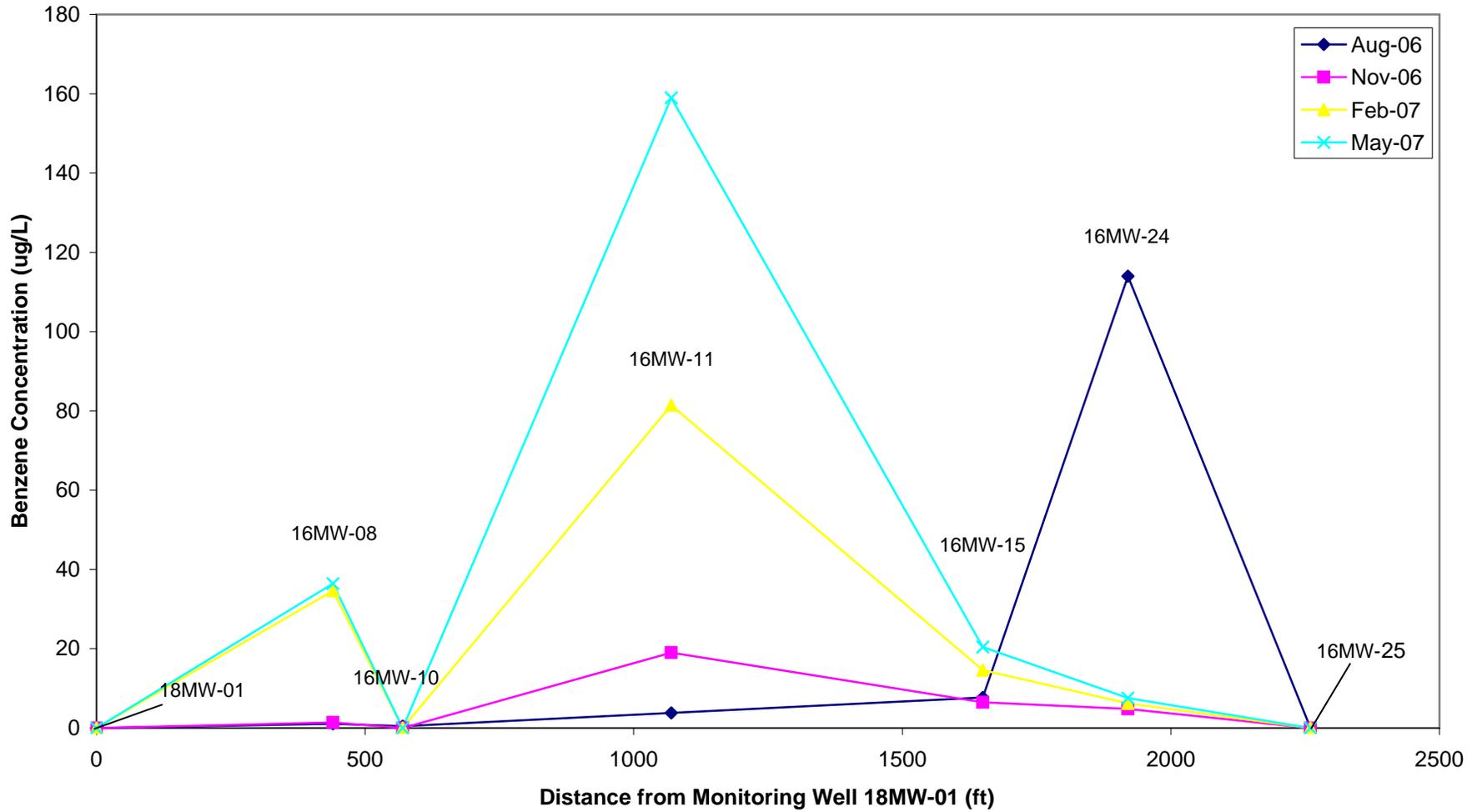


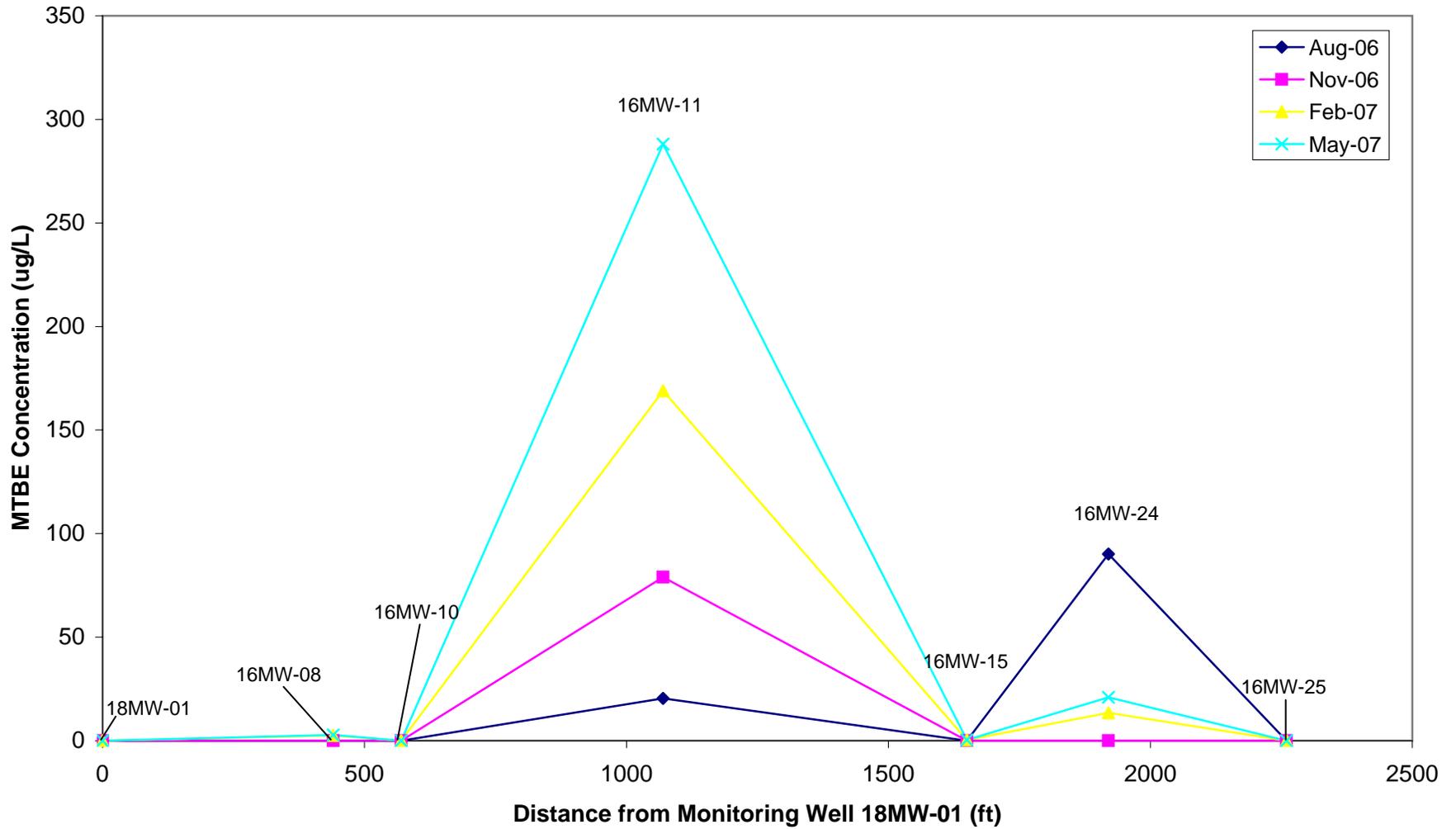
Figure 4-11  
Monitoring Well 16MW-24  
MTBE Concentration versus Time



**Figure 4-12**  
**Benzene Concentration Transect**  
**Year 9**



**Figure 4-13**  
**MTBE Concentration Transect**  
**Year 9**



## **APPENDICES**

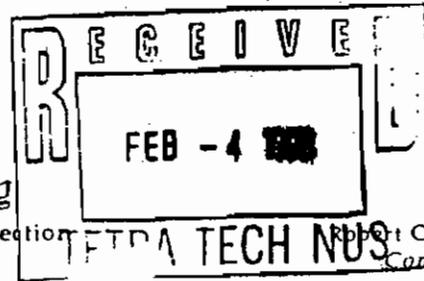
**APPENDIX A**

**CORRESPONDENCE, NJDEP TO NORTHDIV, JANUARY 22, 1998,  
NJDEP APPROVAL OF THE REMEDIAL ACTION WORK PLAN FOR BUILDINGS  
C-17/20/16/50**



State of New Jersey

Department of Environmental Protection



Robert C. Shinn, Jr.  
Commissioner

Christine Todd Whitman  
Governor

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
NO: Z 161 586 243

Brian Helland  
Northern Division  
Naval Facilities Engineering Command  
10 Industrial Highway, Mail Stop 82  
Lester, PA 19113

JAN 22 1998

Dear Mr. Helland:

Re: Focused Investigation and  
Remedial Action Work Plan for  
Buildings C-17/20/16/50  
Naval Weapons Station Earle  
Colts Neck Twp., Monmouth Co.

The New Jersey Department of Environmental Protection (Department) has reviewed the above referenced report, prepared by Brown & Root Environmental on behalf of the Naval Weapons Station Earle, dated September 1997. The report is approved pending incorporation of the following comments. The Department concurs with Brown & Root's recommendation of natural attenuation of the dissolved fraction of diesel fuel with monitoring. However, a Classification Exception Area (CEA) must be established in conjunction with the natural attenuation remedy. The following information is required for the Department to establish the CEA:

- 1) Lot and block numbers of impacted properties

NOTE: Site boundaries can define the CEA perimeter if no offsite contamination is expected to occur for the duration of the CEA.

- 2) The CEA boundaries depicted on a USGS 7.5 minute quadrangle map;

This information is required as a separate submittal in order for the Department to enter this information on their Geographic Information System (GIS).

- 3) The monitoring program should include MW16-06. This well can be substituted for MW16-07.

## **APPENDIX B**

**CORRESPONDENCE, NJDEP TO NORTHDIV, JULY 8, 1998, NJDEP APPROVAL  
OF THE CEA DOCUMENTATION FOR BUILDINGS 566, S106B, AND C-17/20/16/50**



State of New Jersey

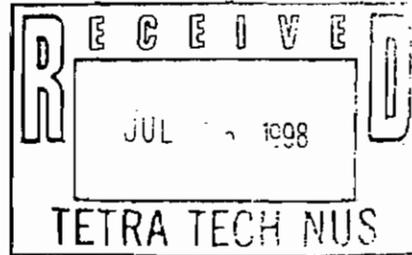
Christine Todd Whitman  
Governor

Department of Environmental Protection

Robert C. Shinn, Jr.  
Commissioner

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
NO: P 055 806 240

Brian Helland  
Northern Division  
Naval Facilities Engineering Command  
10 Industrial Highway, Mail Stop 82  
Lester, PA 19113



JUL 08 1998

Dear Mr. Helland:

Re:

CEA Documentation for the following Sites:  
Building 566, Building S-106B and Buildings C-17/20/16/50  
Naval Weapons Station Earle  
Colts Neck Twp., Monmouth Co.

The New Jersey Department of Environmental Protection (Department) has reviewed the aforementioned documents, prepared by Brown & Root Environmental on behalf of the Naval Weapons Station Earle, dated May 1998. The Classification Exception Areas (CEAs) are approved, no further modification of these reports are necessary.

If you have any questions, please call me at (609)-633-7327.

Sincerely,

Bob Marcolina, Case Manager  
Bureau of Federal Case Management

c: Rick Gorrell, Brown & Root Environmental  
Lester Jargowsky, Monmouth County Health Dept.  
Larry Burg, NWS Earle

**APPENDIX C**

**CORRESPONDENCE, NJDEP TO NORTHDIV, SEPTEMBER 20, 2004, YEAR 6  
GROUNDWATER MONITORING REPORT FOR REMEDIAL ACTION  
IMPLEMENTATION, BUILDINGS  
C-17/20/16/50**



State of New Jersey

Department of Environmental Protection

James E. McGreevey  
Governor

Bradley M. Campbell  
Commissioner

Michele DiGeambeardino  
Remedial Project Manager  
Naval Facilities Engineering Command  
10 Industrial Highway  
Code 1821, Mail Stop 82  
Lester, PA 19113-2090

Dear Mrs. DiGeambeardino:

Re: Year 6 Groundwater Monitoring Report for  
Remedial Action Implementation  
Buildings C-17/20/16/50  
Naval Weapons Station Earle  
Colts Neck Township, Monmouth Co.

The New Jersey Department of Environmental Protection (NJDEP) has reviewed the above referenced document prepared by Tetra Tech NUS Corporation, dated August 2004. The NJDEP approves this document in its current form; no further modifications are necessary. The NJDEP is in agreement with NUS's recommendations for deletion of three monitoring wells (17-MW-01, 16-MW-09 and 16-MW-17) from the monitoring program. According to the Department's records 17-MW-02 was recommended for deletion in the Year 5 Ground water monitoring report. The NJDEP is also in agreement to add the five newly installed monitoring wells from the 16-MW-11 investigation into the monitoring program in addition to surface water sampling north of well 16-MW-15.

Pursuant to N.J.S.A. 58:4A, Earle shall properly seal all monitoring wells that will no longer be used for ground water monitoring. A certified and licensed well driller shall seal the wells in accordance with the requirements of N.J.A.C. 7:9D-3.1 (et seq.). The well abandonment forms shall be completed and submitted to the Bureau of Water Allocation. Please call (609) 984-6831 for forms and information.

If you have any questions, please do not hesitate to call me at (609)-633-7237.

Sincerely,

Bob Marcolina, Case Manager  
Bureau of Case Management

cc: Alicia Hartmann, NWS Earle

## **APPENDIX D**

### **LABORATORY ANALYTICAL DATA AND DATA VALIDATION REPORTS**

**Project:** Earle Long Term Monitoring  
**Laboratory:** Analytical Laboratory Services, Inc.  
**Sample Delivery Group:** ENW076  
**Fraction:** Organic  
**Matrix:** Aqueous  
**Report Date:** 12/10/2006

This analytical quality assurance report is based upon a review of analytical data generated for groundwater samples. The sample locations, laboratory identification numbers, sample collection dates, sample matrix, and analyses performed are presented in Table 1.

The samples were analyzed for volatile organic compounds: benzene, toluene, ethylbenzene, xylene, and methyl-tert-butyl ether and semivolatile organic compound, naphthalene. The sample analyses were performed in accordance with the procedures outlined in "40 CFR Part 136".

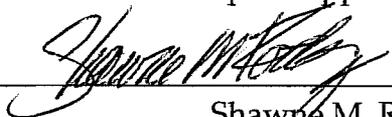
All sample analyses have undergone an analytical quality assurance review to ensure adherence to the required protocols. Results have been validated or qualified according to general guidance provided in the Region III modifications to "Laboratory Data Validation Functional Guidelines for Validating Organic Analyses", USEPA 9/94. This document specifies procedures for validating data generated for CLP analyses. Therefore, the quality control requirements specified in the methods and associated acceptance criteria were also used to evaluate the non-CLP data. The parameters presented on the following page were evaluated.

- 
- X • Data Completeness
  - X • Chain of Custody Documentation
  - X • Holding Times
  - X • Instrument Performance
  - X • Initial and Continuing Calibration Summaries
  - X • Laboratory and Field Blank Analysis Results
  - X • Surrogate Compound Recoveries
    - Matrix Spike/Matrix Spike Duplicate Recoveries and Reproducibility
    - Field Duplicate Analysis Results
  - X • Laboratory Control Sample Results
  - X • Internal Standard Performance
  - X • Qualitative Identification
  - X • Quantitation/Reporting Limits
- 

X - Denotes parameter evaluated.

It is recommended that the data only be used according to the qualifiers presented, and discussed in this report. All other data should be considered qualitatively and quantitatively valid as reported by the laboratory, based on the items evaluated.

Report Approved By:

  
\_\_\_\_\_  
Shawne M. Rodgers  
President

  
\_\_\_\_\_  
Date

**1.0 DATA COMPLETENESS**

The data package was complete.

**2.0 CHAIN OF CUSTODY DOCUMENTATION**

The chain of custody documentation was complete.

**3.0 HOLDING TIMES**

All criteria were met. No qualifiers were applied.

**4.0 INSTRUMENT PERFORMANCE**

All criteria were met. No qualifiers were applied.

**5.0 INITIAL AND CONTINUING CALIBRATIONS**

All criteria were met. No qualifiers were applied.

**6.0 LABORATORY AND FIELD BLANK ANALYSIS RESULTS**

All criteria were met. No qualifiers were applied.

**7.0 SURROGATE COMPOUNDS**

All criteria were met. No qualifiers were applied.

**8.0** ***MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND REPRODUCIBILITY***

The laboratory did not select a site sample to perform matrix spike/matrix spike duplicate analyses. Therefore, the associated sample data could not be evaluated based on these parameters. This should be noted when assessing the sample data.

**9.0** ***FIELD DUPLICATE RESULTS***

Duplicate sample pairs 16-MW-11 and DUP-1, and 16-MW-10 and DUP-2 were submitted to the laboratory to evaluate sampling and analytical precision for those organic compounds determined to be present. Results for duplicate samples presented in Tables 2 and 3. Precision is evaluated by calculating the relative percent difference (%RPD) between duplicate pair results. There are no USEPA-established acceptance criteria for field duplicate samples. EDQ uses internal acceptance criteria of twenty percent for volatile detected compounds (and 25 percent for extractable compounds) to evaluate field duplicate samples.

**10.0** ***LABORATORY CONTROL SAMPLE RESULTS***

All criteria were met. No qualifiers were applied.

**11.0** ***INTERNAL STANDARD PERFORMANCE***

All criteria were met. No qualifiers were applied.

**12.0** ***QUALITATIVE IDENTIFICATION***

All criteria were met. No qualifiers were applied.

### 13.0

### **QUANTITATION/REPORTING LIMITS**

As required by USEPA protocol, all compounds, which were qualitatively identified at concentrations below their respective Quantitation Limits (QLs), have been marked with "J" qualifiers to indicate that they are quantitative estimates.

**Table 1 Samples For Data Validation Review  
Earle Long Term Monitoring  
Groundwater Samples Collected August 2006  
Analytical Laboratory Services Sample Delivery Group ENW-076**

Sample Location	Laboratory ID	Date Collected	Matrix	Analyses Performed		
				VOC	SVOC	
16-MW15	965834700	1	8/16/2006	Groundwater	X	
16-MW25	965834700	2	8/16/2006	Groundwater	X	
16-MW24	965834700	3	8/16/2006	Groundwater	X	
16-MW11	965834700	4	8/16/2006	Groundwater	X	X
DUP-1	965834700	5	8/16/2006	Groundwater	X	X
FB-1	965834700	6	8/16/2006	Field Blank	X	X
16-MW10	965834700	7	8/17/2006	Groundwater	X	X
DUP-2	965834700	8	8/17/2006	Groundwater	X	X
16-MW08	965834700	9	8/17/2006	Field Blank	X	X
FB-2	96583470	10	8/17/2006	Groundwater	X	X
18-MW01	96583470	11	8/17/2006	Groundwater	X	X
TB-1	96583470	12	8/17/2006	Trip Blank	X	
TB-2	96583470	13	8/17/2006	Trip Blank	X	
TB-3	96583470	14	8/17/2006	Trip Blank	X	
Trip Blank	965834700	15	8/18/2006	Trip Blank	X	

VOC      Methyl tert-butyl Ether, Benzene, Toluene, Ethylbenzene, total Xylenes  
SVOC      Naphthalene

Table 2 Field Duplicate Sample Results for Organic Analyses  
 Duplicate Samples 16-MW-11 and DUP-1

	16-MW-11 (µg/L)	DUP-1 (µg/L)	RPD	Comments
Benzene	3.8	3.8	0	
Methyl t-Butyl Ether	20.5	20.9	2	

Table 3 Field Duplicate Sample Results for Organic Analyses  
Duplicate Samples 16-MW-10 and DUP-2

	16-MW-10 (µg/L)		DUP-2 (µg/L)		RPD	Comments
Benzene	0.46	J	0.45	J	2	
Total Xylenes	0.88	J	1.0	J	13	
Naphthalene	1	J	1	J	0	

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

TRIP BLANK
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Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076

Matrix: (soil/water) WATER Lab Sample ID: 9658347015

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3082125

Level: (low/med) LOW Date Received: 08/18/06

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/21/06

GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	1.0 U	
100-41-4-----	Ethylbenzene	1.0 U	
1634-04-4-----	Methyl t-Butyl Ether	1.0 U	
108-88-3-----	Toluene	1.0 U	
95-47-6-----	o-Xylene	1.0 U	
108383/106423---	m + p-Xylene	2.0 U	
XYLENES	TOTAL XYLENES	3.0 U	



FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

TB-1

Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_  
 Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076  
 Matrix: (soil/water) WATER Lab Sample ID: 9658347012  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3082126  
 Level: (low/med) LOW Date Received: 08/18/06  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/21/06  
 GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
71-43-2	Benzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1634-04-4	Methyl t-Butyl Ether	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	1.0	U
108383/106423	m + p-Xylene	2.0	U
XYLENES	TOTAL XYLENES	3.0	U

*SMM*  
12/10/2006

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

TB-2

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: ENW076

Matrix: (soil/water) WATER

Lab Sample ID: 9658347013

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 3082127

Level: (low/med) LOW

Date Received: 08/18/06

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/21/06

GC Column: RTX-VRX ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	1.0 U	
100-41-4-----	Ethylbenzene	1.0 U	
1634-04-4-----	Methyl t-Butyl Ether	1.0 U	
108-88-3-----	Toluene	1.0 U	
95-47-6-----	o-Xylene	1.0 U	
108383/106423---	m + p-Xylene	2.0 U	
XYLENES TOTAL---	TOTAL XYLENES	3.0 U	

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 8/21/06  
 MMS

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

TB-3

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: ENW076

Matrix: (soil/water) WATER

Lab Sample ID: 9658347014

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 3082128

Level: (low/med) LOW

Date Received: 08/18/06

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/21/06

GC Column: RTX-VRX ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	1.0 U	
100-41-4-----	Ethylbenzene	1.0 U	
1634-04-4-----	Methyl t-Butyl Ether	1.0 U	
108-88-3-----	Toluene	1.0 U	
95-47-6-----	o-Xylene	1.0 U	
108383/106423---	m + p-Xylene	2.0 U	
XYLENES TOTAL---	TOTAL XYLENES	3.0 U	

*SM*  
*12/18/06*  
*0816*

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW15

Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_  
 Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076  
 Matrix: (soil/water) WATER Lab Sample ID: 9658347001  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3082135  
 Level: (low/med) LOW Date Received: 08/18/06  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/21/06  
 GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	7.7	
100-41-4	Ethylbenzene	1.0	U
1634-04-4	Methyl t-Butyl Ether	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	1.0	U
108383/106423	m + p-Xylene	2.0	U
XYLENES	TOTAL XYLENES	3.0	U

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 SMM  
 12/10/06

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW25

Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_  
 Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076  
 Matrix: (soil/water) WATER Lab Sample ID: 9658347002  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3082136  
 Level: (low/med) LOW Date Received: 08/18/06  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/21/06  
 GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	1.0 U	
100-41-4-----	Ethylbenzene	1.0 U	
1634-04-4-----	Methyl t-Butyl Ether	1.0 U	
108-88-3-----	Toluene	1.0 U	
95-47-6-----	o-Xylene	1.0 U	
108383/106423---	m + p-Xylene	2.0 U	
XYLENES	TOTAL XYLENES	3.0 U	

*SMM*  
*R/S/KOZ*  
8/21/06

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW24

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: ENW076

Matrix: (soil/water) WATER

Lab Sample ID: 9658347003

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 3082137

Level: (low/med) LOW

Date Received: 08/18/06

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/21/06

GC Column: RTX-VRX ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L Q

71-43-2-----	Benzene	114	
100-41-4-----	Ethylbenzene	1.0	U
1634-04-4-----	Methyl t-Butyl Ether	90.1	
108-88-3-----	Toluene	3.5	
95-47-6-----	o-Xylene	1.8	
108383/106423---	m + p-Xylene	2.0	U
XYLENES TOTAL---	TOTAL XYLENES	1.8	J

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FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW11

Lab Name: Contract: Lab Code: Case No.: SAS No.: SDG No.: ENW076  
 Matrix: (soil/water) WATER Lab Sample ID: 9658347004  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3082138  
 Level: (low/med) LOW Date Received: 08/18/06  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/21/06  
 GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
71-43-2	Benzene	3.8	
100-41-4	Ethylbenzene	1.0	U
1634-04-4	Methyl t-Butyl Ether	20.5	
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	1.0	U
108383/106423	m + p-Xylene	2.0	U
XYLENES	TOTAL XYLENES	3.0	U

*SMK*  
*12/10/2004*  


FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

DUP-1

Lab Name: Contract:   
 Lab Code: Case No.: SAS No.: SDG No.: ENW076   
 Matrix: (soil/water) WATER Lab Sample ID: 9658347005   
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3082139   
 Level: (low/med) LOW Date Received: 08/18/06   
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/22/06   
 GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0   
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	3.8	
100-41-4-----	Ethylbenzene	1.0	U
1634-04-4-----	Methyl t-Butyl Ether	20.9	
108-88-3-----	Toluene	1.0	U
95-47-6-----	o-Xylene	1.0	U
108383/106423---	m + p-Xylene	2.0	U
XYLENES	TOTAL XYLENES	3.0	U

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FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW10

Lab Name: Contract: Lab Code: Case No.: SAS No.: SDG No.: ENW076  
 Matrix: (soil/water) WATER Lab Sample ID: 9658347007  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3082140  
 Level: (low/med) LOW Date Received: 08/18/06  
 % Moisture: not dec. Date Analyzed: 08/22/06  
 GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.46	J
100-41-4	Ethylbenzene	1.0	U
1634-04-4	Methyl t-Butyl Ether	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	0.43	J
108383/106423	m + p-Xylene	0.44	J
	XYLENES TOTAL	0.88	J

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FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

DUP-2

Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_  
 Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076  
 Matrix: (soil/water) WATER Lab Sample ID: 9658347008  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3082141  
 Level: (low/med) LOW Date Received: 08/18/06  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/22/06  
 GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	0.45	J
100-41-4-----	Ethylbenzene	1.0	U
1634-04-4-----	Methyl t-Butyl Ether	1.0	U
108-88-3-----	Toluene	1.0	U
95-47-6-----	o-Xylene	0.53	J
108383/106423---	m + p-Xylene	0.50	J
XYLENES TOTAL----	TOTAL XYLENES	1.0	J

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 8/22/06  
 [Signature]

FORM 1 In-house QC Account SAMPLE NO.  
VOLATILE ORGANICS ANALYSIS DATA SHEET

298823

Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076

Matrix: (soil/water) WATER Lab Sample ID: 298823

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3082322

Level: (low/med) LOW Date Received: 08/23/06

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/23/06

GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	1.0	U
100-41-4-----	Ethylbenzene	1.0	U
1634-04-4-----	Methyl t-Butyl Ether	1.0	U
108-88-3-----	Toluene	1.0	U
95-47-6-----	o-Xylene	1.0	U
108383/106423---	m + p-Xylene	2.0	U
XYLENES	TOTAL XYLENES	3.0	U





FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

FB-1

Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076

Matrix: (soil/water) WATER Lab Sample ID: 9658347006

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3082325

Level: (low/med) LOW Date Received: 08/18/06

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/23/06

GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
71-43-2-----	Benzene	1.0	U
100-41-4-----	Ethylbenzene	1.0	U
1634-04-4-----	Methyl t-Butyl Ether	1.0	U
108-88-3-----	Toluene	1.0	U
95-47-6-----	o-Xylene	1.0	U
108383/106423---	m + p-Xylene	2.0	U
XYLENES	TOTAL XYLENES	3.0	U

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12/18/06

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

FB-2

Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076

Matrix: (soil/water) WATER Lab Sample ID: 9658347010

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3082326

Level: (low/med) LOW Date Received: 08/18/06

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/23/06

GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	1.0 U	
100-41-4-----	Ethylbenzene	1.0 U	
1634-04-4-----	Methyl t-Butyl Ether	1.0 U	
108-88-3-----	Toluene	1.0 U	
95-47-6-----	o-Xylene	1.0 U	
108383/106423---	m + p-Xylene	2.0 U	
XYLENES TOTAL----	TOTAL XYLENES	3.0 U	

  
 SMK  
 12/10/2004  
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FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW08

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: ENW076

Matrix: (soil/water) WATER

Lab Sample ID: 9658347009

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 3082329

Level: (low/med) LOW

Date Received: 08/18/06

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/23/06

GC Column: RTX-VRX ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
71-43-2	Benzene	1.1	
100-41-4	Ethylbenzene	1.0	U
1634-04-4	Methyl t-Butyl Ether	0.32	J
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	1.0	U
108383/106423	m + p-Xylene	2.0	U
XYLENES	TOTAL XYLENES	3.0	U

*SMM*  
*12/10/06*  
*12/10/06*

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

18-MW01

Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_  
 Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076  
 Matrix: (soil/water) WATER Lab Sample ID: 9658347011  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3082330  
 Level: (low/med) LOW Date Received: 08/18/06  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/23/06  
 GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	1.0 U	
100-41-4-----	Ethylbenzene	1.0 U	
1634-04-4-----	Methyl t-Butyl Ether	1.0 U	
108-88-3-----	Toluene	1.0 U	
95-47-6-----	o-Xylene	1.0 U	
108383/106423---	m + p-Xylene	2.0 U	
XYLENES TOTAL---	TOTAL XYLENES	3.0 U	

*SMH*  
*12/10/06*  


FORM 1 In-house QC Account SAMPLE NO.  
VOLATILE ORGANICS ANALYSIS DATA SHEET

18-MW01MS
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Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076

Matrix: (soil/water) WATER Lab Sample ID: 298838

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3082335

Level: (low/med) LOW Date Received: 08/18/06

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/24/06

GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	22.2	_____
100-41-4-----	Ethylbenzene	21.3	_____
1634-04-4-----	Methyl t-Butyl Ether	14.9	_____
108-88-3-----	Toluene	21.0	_____
95-47-6-----	o-Xylene	22.0	_____
108383/106423---	m + p-Xylene	43.2	_____
XYLENES	TOTAL XYLENES	65.2	_____



FORM 1 ECOR Solutions SAMPLE NO.  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DUP-1
-------

Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076

Matrix: (soil/water) WATER Lab Sample ID: 9658347005

Sample wt/vol: 1005 (g/mL) ML Lab File ID: 8082405

Level: (low/med) LOW Date Received: 08/18/06

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 08/23/06

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/25/06

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	1.5	U

*SMC*  
*12/18/06*

FORM 1  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW11

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: ENW076

Matrix: (soil/water) WATER

Lab Sample ID: 9658347004

Sample wt/vol: 985.0 (g/mL) ML

Lab File ID: 8082406

Level: (low/med) LOW

Date Received: 08/18/06

% Moisture: \_\_\_\_\_ decanted: (Y/N)\_\_\_

Date Extracted: 08/23/06

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/25/06

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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91-20-3-----	Naphthalene	1.5	U
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SMK  
12/27/06

FORM 1  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

DUP-2

Lab Name: Contract:   
 Lab Code: Case No.: SAS No.: SDG No.: ENW076   
 Matrix: (soil/water) WATER Lab Sample ID: 9658347008   
 Sample wt/vol: 1030 (g/mL) ML Lab File ID: 8082508   
 Level: (low/med) LOW Date Received: 08/18/06   
 % Moisture: \_\_\_\_\_ decanted: (Y/N)\_\_\_\_ Date Extracted: 08/23/06   
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/25/06   
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0   
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	1.2	J

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*12/19/2006*  
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FORM 1 ECOR Solutions SAMPLE NO.  
 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FB-1
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Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076

Matrix: (soil/water) WATER Lab Sample ID: 9658347006

Sample wt/vol: 960.0 (g/mL) ML Lab File ID: 8082407

Level: (low/med) LOW Date Received: 08/18/06

% Moisture: \_\_\_\_\_ decanted: (Y/N)\_\_\_ Date Extracted: 08/23/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/25/06

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	1.6	U

*SM*  
12/18/06

FORM 1  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW10
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Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_  
 Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076  
 Matrix: (soil/water) WATER Lab Sample ID: 9658347007  
 Sample wt/vol: 935.0 (g/mL) ML Lab File ID: 8082509  
 Level: (low/med) LOW Date Received: 08/18/06  
 % Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 08/23/06  
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/25/06  
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0  
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
91-20-3-----	Naphthalene	1.2	J	

*Handwritten signature and date:*  
 SIMR  
 12/18/2004

FORM 1 ECOR Solutions SAMPLE NO.  
 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

16-MW08
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Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076

Matrix: (soil/water) WATER Lab Sample ID: 9658347009

Sample wt/vol: 890.0 (g/mL) ML Lab File ID: 8082510

Level: (low/med) LOW Date Received: 08/18/06

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 08/23/06

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/25/06

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	1.7	U

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 12/18/2006  
 12/18/2006

FORM 1  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

FB-2
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Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076

Matrix: (soil/water) WATER Lab Sample ID: 9658347010

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: 8082511

Level: (low/med) LOW Date Received: 08/18/06

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 08/23/06

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/25/06

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
91-20-3-----	Naphthalene	1.5	U	

*SMK*  
*12/18/2004*

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100  
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100

FORM 1 ECOR Solutions SAMPLE NO.  
 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

18-MW01
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Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076

Matrix: (soil/water) WATER Lab Sample ID: 9658347011

Sample wt/vol: 970.0 (g/mL) ML Lab File ID: 8082512

Level: (low/med) LOW Date Received: 08/18/06

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 08/23/06

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/25/06

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	1.5	U

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 12/18/06  
 12/18/06

FORM 1 In-house QC Account SAMPLE NO.  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

18-MW01MS
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Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076

Matrix: (soil/water) WATER Lab Sample ID: 298745

Sample wt/vol: 870.0 (g/mL) ML Lab File ID: 8082513

Level: (low/med) LOW Date Received: 08/18/06

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 08/23/06

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/25/06

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N. pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	83.8	_____

*SMS*  
*12/18/06*  
*12/18/06*

FORM 1 In-house QC Account SAMPLE NO.  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

18-MW01MSD

Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076

Matrix: (soil/water) WATER Lab Sample ID: 298746

Sample wt/vol: 985.0 (g/mL) ML Lab File ID: 8082514

Level: (low/med) LOW Date Received: 08/18/06

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 08/23/06

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/25/06

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene_____	71.1	_____



FORM 1 In-house QC Account SAMPLE NO.  
 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

298743
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Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: ENW076

Matrix: (soil/water) WATER

Lab Sample ID: 298743

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 2082721A

Level: (low/med) LOW

Date Received: 08/23/06

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/28/06

GC Column: RTX-5SILMS ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	1.5	U



FORM 1 In-house QC Account SAMPLE NO.  
 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

298744
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Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: ENW076

Matrix: (soil/water) WATER Lab Sample ID: 298744

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 2082722A

Level: (low/med) LOW Date Received: 08/23/06

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/28/06

GC Column: RTX-5SILMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	79.3	



**Project:** Earle Long Term Monitoring  
**Laboratory:** Severn Trent Laboratories  
**Sample Delivery Group:** A6L010320  
**Fraction:** Organic  
**Matrix:** Aqueous  
**Report Date:** 2/20/2007

This analytical quality assurance report is based upon a review of analytical data generated for groundwater samples. The sample locations, laboratory identification numbers, sample collection dates, sample matrix, and analyses performed are presented in Table 1.

The samples were analyzed for volatile organic compounds: benzene toluene, ethylbenzene, xylene, and methyl-tert-butyl ether and semivolatile organic compound, naphthalene. The sample analyses were performed in accordance with the procedures outlined in "40 CFR Part 136".

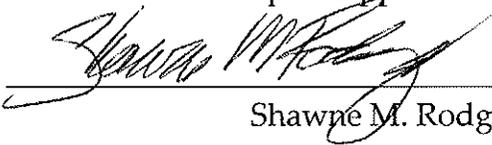
All sample analyses have undergone an analytical quality assurance review to ensure adherence to the required protocols. Results have been validated or qualified according to general guidance provided in the Region III modifications to "Laboratory Data Validation Functional Guidelines for Validating Organic Analyses", USEPA 9/94. This document specifies procedures for validating data generated for CLP analyses. Therefore, the quality control requirements specified in the methods and associated acceptance criteria were also used to evaluate the non-CLP data. The parameters presented on the following page were evaluated.

- 
- X • Data Completeness
  - X • Chain of Custody Documentation
  - X • Holding Times
  - X • Instrument Performance
  - X • Initial and Continuing Calibration Summaries
  - X • Laboratory and Field Blank Analysis Results
  - X • Surrogate Compound Recoveries
  - X • Matrix Spike/Matrix Spike Duplicate Recoveries and Reproducibility
  - X • Field Duplicate Analysis Results
  - X • Laboratory Control Sample Results
  - X • Internal Standard Performance
  - X • Qualitative Identification
  - X • Quantitation/Reporting Limits
- 

X - Denotes parameter evaluated.

It is recommended that the data only be used according to the qualifiers presented, and discussed in this report. All other data should be considered qualitatively and quantitatively valid as reported by the laboratory, based on the items evaluated.

Report Approved By:

  
\_\_\_\_\_  
Shawne M. Rodgers  
President



\_\_\_\_\_  
Date

**1.0 DATA COMPLETENESS**

The data package was complete.

**2.0 CHAIN OF CUSTODY DOCUMENTATION**

The chain of custody documentation was complete.

**3.0 HOLDING TIMES**

All criteria were met. No qualifiers were applied.

**4.0 INSTRUMENT PERFORMANCE**

All criteria were met. No qualifiers were applied.

**5.0 INITIAL AND CONTINUING CALIBRATIONS**

All criteria were met. No qualifiers were applied.

**6.0 LABORATORY AND FIELD BLANK ANALYSIS RESULTS**

All criteria were met. No qualifiers were applied.

**7.0 SURROGATE COMPOUNDS**

All criteria were met. No qualifiers were applied.

**8.0** *MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND REPRODUCIBILITY*

All criteria were met. No qualifiers were applied.

**9.0** *FIELD DUPLICATE RESULTS*

Duplicate samples 18-MW-01 and DUP-1, and 16-MW-08 and DUP-2 were submitted to the laboratory to evaluate sampling and analytical precision for those organic compounds determined to be present. There were no positive results for samples 18-MW-01 and DUP-1. Results for duplicate samples 16-MW-08 and DUP-2 are presented in Table 2. Precision is evaluated by calculating the relative percent difference (%RPD) between duplicate pair results. There are no USEPA-established acceptance criteria for field duplicate samples. EDQ uses internal acceptance criteria of twenty percent for volatile detected compounds (and 25 percent for extractable compounds) to evaluate field duplicate samples.

**10.0** *LABORATORY CONTROL SAMPLE RESULTS*

All criteria were met. No qualifiers were applied.

**11.0** *INTERNAL STANDARD PERFORMANCE*

All criteria were met. No qualifiers were applied.

**12.0** *QUALITATIVE IDENTIFICATION*

All criteria were met. No qualifiers were applied.

**13.0** *QUANTITATION/REPORTING LIMITS*

The following samples were analyzed at dilutions for volatile organic compounds. The dilution analyses were performed because of suspected

high concentrations of target compounds and/or interferences. Quantitation limits elevated by the dilution factor have resulted for those compounds that were not detected. This should be noted when assessing the data.

---

Sample	Dilution Factor
MW-107	12.5

---

As required by USEPA protocol, all compounds, which were qualitatively identified at concentrations below their respective Quantitation Limits (QLs), have been marked with "J" qualifiers to indicate that they are quantitative estimates.

## METHODOLOGY REFERENCES

Analysis	Reference
Volatile Organic Compounds	Method 624, "40 CFR Part 136
Semivolatile Organic Compounds	Method 625, "40 CFR Part 136

**Table 1 Samples For Data Validation Review  
 NWS Earle Long Term Monitoring  
 Groundwater Samples Collected November 2006  
 Severn Trent Laboratories Sample Delivery Group A6L010320**

Sample Location	Laboratory ID		Date Collected	Matrix	Analyses Performed	
					VOC	SVOC
16-MW-15	A6L010320	001	11/28/2006	Groundwater	X	
16-MW-25	A6L010320	002	11/28/2006	Groundwater	X	
16-SW-01	A6L010320	003	11/28/2006	Groundwater	X	
16-SW-02	A6L010320	004	11/28/2006	Groundwater	X	
16-MW-24	A6L010320	005	11/28/2006	Groundwater	X	
FB-1	A6L010320	006	11/28/2006	Field Blank	X	
TB-1	A6L010320	007	11/28/2006	Trip Blank	X	
18-MW-01	A6L010320	008	11/29/2006	Groundwater	X	X
16-MW-10	A6L010320	009	11/29/2006	Groundwater	X	X
16-MW-11	A6L010320	010	11/29/2006	Groundwater	X	X
DUP-1	A6L010320	011	11/29/2006	Groundwater	X	X
16-MW-08	A6L010320	012	11/29/2006	Groundwater	X	X
DUP-2	A6L010320	013	11/29/2006	Groundwater	X	X
FB-2	A6L010320	014	11/29/2006	Field Blank	X	X
TB-2	A6L010320	015	11/29/2006	Trip Blank	X	
MW-106	A6L010320	016	11/30/2006	Groundwater	X	
MW-102	A6L010320	017	11/30/2006	Groundwater	X	
MW-107	A6L010320	018	11/30/2006	Groundwater	X	
FB-3	A6L010320	019	11/30/2006	Field Blank	X	

VOC Methyl tert-butyl ether, Benzene, Toluene, Ethylbenzene, total Xylenes  
 SVOC Naphthalene

Table 2 Field Duplicate Sample Results for Organic Analyses  
Duplicate Samples 16-MW-08 and DUP-2

	16-MW-08 (µg/L)	DUP-2 (µg/L)	RPD	Comments
Benzene	1.4	1.3	7.4	

ECOR Solutions Inc

Client Sample ID: 16-MW-15

GC/MS Volatiles

Lot-Sample #...: A6L010320-001    Work Order #...: JKNMC1AA    Matrix.....: WG  
Date Sampled...: 11/28/06 13:02    Date Received...: 12/01/06  
Prep Date.....: 12/04/06    Analysis Date...: 12/04/06  
Prep Batch #...: 6338465  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	6.5 ✓	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
1,2-Dichloroethane-d4	105	(90 - 117)
Toluene-d8	101	(90 - 110)
Bromofluorobenzene	98	(85 - 111)

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2/20/2007

ECOR Solutions Inc

Client Sample ID: 16-MW-25

GC/MS Volatiles

Lot-Sample #...: A6L010320-002 Work Order #...: JKNMR1AA Matrix.....: WG  
Date Sampled...: 11/28/06 15:00 Date Received...: 12/01/06  
Prep Date.....: 12/04/06 Analysis Date...: 12/04/06  
Prep Batch #...: 6338465  
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
1,2-Dichloroethane-d4	105	(90 - 117)
Toluene-d8	100	(90 - 110)
Bromofluorobenzene	96	(85 - 111)

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2/20/2007*

ECOR Solutions Inc

Client Sample ID: 16-SW-01

GC/MS Volatiles

Lot-Sample #...: A6L010320-003    Work Order #...: JKNMX1AA    Matrix.....: WG  
Date Sampled...: 11/28/06 15:30    Date Received...: 12/01/06  
Prep Date.....: 12/04/06    Analysis Date...: 12/04/06  
Prep Batch #...: 6338465  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
1,2-Dichloroethane-d4	111	(90 - 117)
Toluene-d8	102	(90 - 110)
Bromofluorobenzene	96	(85 - 111)

*SMK  
12/28/2007*

ECOR Solutions Inc

Client Sample ID: 16-SW-02

GC/MS Volatiles

Lot-Sample #...: A6L010320-004 Work Order #...: JKNM11AA Matrix.....: WG  
 Date Sampled...: 11/28/06 15:35 Date Received...: 12/01/06  
 Prep Date.....: 12/04/06 Analysis Date...: 12/04/06  
 Prep Batch #...: 6338465  
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
 Method.....: CFR136A 624

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	110	(90 - 117)
Toluene-d8	100	(90 - 110)
Bromofluorobenzene	95	(85 - 111)

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12/21/07*

ECOR Solutions Inc

Client Sample ID: 16-MW-24

GC/MS Volatiles

Lot-Sample #....: A6L010320-005 Work Order #....: JKNM31AA Matrix.....: WG  
 Date Sampled....: 11/28/06 15:38 Date Received...: 12/01/06  
 Prep Date.....: 12/04/06 Analysis Date...: 12/04/06  
 Prep Batch #....: 6338465  
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
 Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	4.8 $\checkmark$	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
1,2-Dichloroethane-d4	108	(90 - 117)
Toluene-d8	103	(90 - 110)
Bromofluorobenzene	96	(85 - 111)

*SMK  
2/20/2007*

ECOR Solutions Inc

Client Sample ID: FB-1

GC/MS Volatiles

Lot-Sample #...: A6L010320-006 Work Order #...: JKNNF1AA Matrix.....: WQ  
Date Sampled...: 11/28/06 16:00 Date Received...: 12/01/06  
Prep Date.....: 12/04/06 Analysis Date...: 12/04/06  
Prep Batch #...: 6338465  
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
1,2-Dichloroethane-d4	108	(90 - 117)
Toluene-d8	102	(90 - 110)
Bromofluorobenzene	92	(85 - 111)

*SML*  
*2/20/2007*

ECOR Solutions Inc

Client Sample ID: TB-1

GC/MS Volatiles

Lot-Sample #...: A6L010320-007    Work Order #...: JKNNJ1AA    Matrix.....: WQ  
Date Sampled...: 11/28/06    Date Received...: 12/01/06  
Prep Date.....: 12/04/06    Analysis Date...: 12/04/06  
Prep Batch #...: 6338465  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
1,2-Dichloroethane-d4	109	(90 - 117)
Toluene-d8	103	(90 - 110)
Bromofluorobenzene	98	(85 - 111)

*SMK*  
*2/20/2007*

ECOR Solutions Inc

Client Sample ID: 18-MW-01

GC/MS Volatiles

Lot-Sample #...: A6L010320-008 Work Order #...: JKNNL1AA Matrix.....: WG  
 Date Sampled...: 11/29/06 09:30 Date Received...: 12/01/06  
 Prep Date.....: 12/04/06 Analysis Date...: 12/04/06  
 Prep Batch #...: 6338465  
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
 Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
1,2-Dichloroethane-d4	104	(90 - 117)
Toluene-d8	103	(90 - 110)
Bromofluorobenzene	96	(85 - 111)

*SML*  
*7/20/2007*

ECOR Solutions Inc

Client Sample ID: 16-MW-10

GC/MS Volatiles

Lot-Sample #...: A6L010320-009 Work Order #...: JKNNP1AA Matrix.....: WG  
Date Sampled...: 11/29/06 11:03 Date Received...: 12/01/06  
Prep Date.....: 12/04/06 Analysis Date...: 12/04/06  
Prep Batch #...: 6338465  
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L
	<u>PERCENT</u>	<u>RECOVERY</u>	
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>	
1,2-Dichloroethane-d4	109	(90 - 117)	
Toluene-d8	102	(90 - 110)	
Bromofluorobenzene	102	(85 - 111)	

*SML*  
*2/20/2007*

ECOR Solutions Inc

Client Sample ID: 16-MW-11

GC/MS Volatiles

Lot-Sample #...: A6L010320-010 Work Order #...: JKNNQ1AA Matrix.....: WG  
 Date Sampled...: 11/29/06 13:47 Date Received...: 12/01/06  
 Prep Date.....: 12/04/06 Analysis Date...: 12/04/06  
 Prep Batch #...: 6338465  
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
 Method.....: CFR136A 624

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	19	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	79 ✓	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	103	(90 - 117)
Toluene-d8	103	(90 - 110)
Bromofluorobenzene	98	(85 - 111)

*SMK  
2/20/2007*

ECOR Solutions Inc

Client Sample ID: DUP-1

GC/MS Volatiles

Lot-Sample #...: A6L010320-011    Work Order #...: JKNNR1AA    Matrix.....: WG  
Date Sampled...: 11/29/06    Date Received...: 12/01/06  
Prep Date.....: 12/04/06    Analysis Date...: 12/04/06  
Prep Batch #...: 6338465  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L
<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	
	<u>RECOVERY</u>	<u>LIMITS</u>	
1,2-Dichloroethane-d4	105	(90 - 117)	
Toluene-d8	99	(90 - 110)	
Bromofluorobenzene	95	(85 - 111)	

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2/20/07*

ECOR Solutions Inc

Client Sample ID: 16-MW-08

GC/MS Volatiles

Lot-Sample #...: A6L010320-012    Work Order #...: JKNNT1AA    Matrix.....: WG  
Date Sampled...: 11/29/06 15:25    Date Received...: 12/01/06  
Prep Date.....: 12/04/06    Analysis Date...: 12/04/06  
Prep Batch #...: 6338465  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	1.4	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L
<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	
	<u>RECOVERY</u>	<u>LIMITS</u>	
1,2-Dichloroethane-d4	107	(90 - 117)	
Toluene-d8	104	(90 - 110)	
Bromofluorobenzene	100	(85 - 111)	

SMK  
2/29/2007

ECOR Solutions Inc

Client Sample ID: DUP-2

GC/MS Volatiles

Lot-Sample #...: A6L010320-013    Work Order #...: JKNNW1AA    Matrix.....: WG  
Date Sampled...: 11/29/06    Date Received...: 12/01/06  
Prep Date.....: 12/04/06    Analysis Date...: 12/04/06  
Prep Batch #...: 6338465  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	1.3	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
1,2-Dichloroethane-d4	107	(90 - 117)
Toluene-d8	100	(90 - 110)
Bromofluorobenzene	96	(85 - 111)

*SMK  
12/20/06*

ECOR Solutions Inc

Client Sample ID: FB-2

GC/MS Volatiles

Lot-Sample #...: A6L010320-014 Work Order #...: JKNNX1AA Matrix.....: WQ  
Date Sampled...: 11/29/06 15:55 Date Received...: 12/01/06  
Prep Date.....: 12/04/06 Analysis Date...: 12/04/06  
Prep Batch #...: 6338465  
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
1,2-Dichloroethane-d4	111	(90 - 117)
Toluene-d8	102	(90 - 110)
Bromofluorobenzene	96	(85 - 111)

*SMK  
12/29/06*

ECOR Solutions Inc

Client Sample ID: TB-2

GC/MS Volatiles

Lot-Sample #...: A6L010320-015    Work Order #...: JKNN01AA    Matrix.....: WQ  
Date Sampled...: 11/29/06    Date Received...: 12/01/06  
Prep Date.....: 12/05/06    Analysis Date...: 12/05/06  
Prep Batch #...: 6338465  
Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
1,2-Dichloroethane-d4	107	(90 - 117)
Toluene-d8	103	(90 - 110)
Bromofluorobenzene	96	(85 - 111)

*SML  
2/29/2007*

ECOR Solutions Inc

Client Sample ID: MW-106

GC/MS Volatiles

Lot-Sample #...: A6L010320-016 Work Order #...: JKNN31AA Matrix.....: WG  
Date Sampled...: 11/30/06 09:26 Date Received...: 12/01/06  
Prep Date.....: 12/05/06 Analysis Date...: 12/05/06  
Prep Batch #...: 6338465  
Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
1,2-Dichloroethane-d4	109	(90 - 117)
Toluene-d8	102	(90 - 110)
Bromofluorobenzene	95	(85 - 111)

*SMK  
12/20/06*

ECOR Solutions Inc

Client Sample ID: MW-102

GC/MS Volatiles

Lot-Sample #...: A6L010320-017    Work Order #...: JKNN41AA    Matrix.....: WG  
 Date Sampled...: 11/30/06 10:19    Date Received...: 12/01/06  
 Prep Date.....: 12/05/06    Analysis Date...: 12/05/06  
 Prep Batch #...: 6338465  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: CFR136A 624

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L
		PERCENT	RECOVERY
SURROGATE	RECOVERY	LIMITS	
1,2-Dichloroethane-d4	107	(90 - 117)	
Toluene-d8	103	(90 - 110)	
Bromofluorobenzene	99	(85 - 111)	

*SMK  
12/20/06*

ECOR Solutions Inc

Client Sample ID: MW-107

GC/MS Volatiles

Lot-Sample #...: A6L010320-018 Work Order #...: JKNN51AA Matrix.....: WG  
Date Sampled...: 11/30/06 11:40 Date Received...: 12/01/06  
Prep Date.....: 12/06/06 Analysis Date...: 12/06/06  
Prep Batch #...: 6340343  
Dilution Factor: 12.5 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL  
Method.....: CFR136A 624

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	400	12	ug/L
Ethylbenzene	790	62	ug/L
Methyl tert-butyl ether	ND	250	ug/L
Toluene	220	62	ug/L
Xylenes (total)	1700	62	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
1,2-Dichloroethane-d4	104	(90 - 117)
Toluene-d8	107	(90 - 110)
Bromofluorobenzene	110	(85 - 111)

*SMK  
2/20/07*

ECOR Solutions Inc

Client Sample ID: FB-3

GC/MS Volatiles

Lot-Sample #...: A6L010320-019    Work Order #...: JKNN81AA    Matrix.....: WQ  
 Date Sampled...: 11/30/06 11:50    Date Received...: 12/01/06  
 Prep Date.....: 12/05/06    Analysis Date...: 12/05/06  
 Prep Batch #...: 6340343  
 Dilution Factor: 1    Initial Wgt/Vol: 5 mL    Final Wgt/Vol...: 5 mL  
 Method.....: CFR136A 624

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Methyl tert-butyl ether	ND	20	ug/L
Toluene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
1,2-Dichloroethane-d4	108	(90 - 117)
Toluene-d8	102	(90 - 110)
Bromofluorobenzene	97	(85 - 111)

*Handwritten signature:*  
 SML  
 2/24/07

ECOR Solutions Inc

Client Sample ID: 18-MW-01

GC/MS Semivolatiles

Lot-Sample #...: A6L010320-008 Work Order #...: JKNNL1AC Matrix.....: WG  
Date Sampled...: 11/29/06 09:30 Date Received...: 12/01/06  
Prep Date.....: 12/04/06 Analysis Date...: 12/07/06  
Prep Batch #...: 6338138  
Dilution Factor: 1 Initial Wgt/Vol: 1020 mL Final Wgt/Vol...: 2 mL  
Method.....: CFR136A 625

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Naphthalene	ND	10	ug/L
<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	
2-Fluorophenol	55	(10 - 135)	
Phenol-d5	57	(10 - 132)	
2,4,6-Tribromophenol	66	(10 - 142)	
2-Fluorobiphenyl	57	(38 - 110)	
Terphenyl-d14	57	(24 - 135)	
Nitrobenzene-d5	58	(44 - 110)	

*SMS*  
*2/2/07*

ECOR Solutions Inc

Client Sample ID: 16-MW-10

GC/MS Semivolatiles

Lot-Sample #...: A6L010320-009 Work Order #...: JKNNP1AD Matrix.....: WG  
Date Sampled...: 11/29/06 11:03 Date Received...: 12/01/06  
Prep Date.....: 12/04/06 Analysis Date...: 12/07/06  
Prep Batch #...: 6338138  
Dilution Factor: 1 Initial Wgt/Vol: 990 mL Final Wgt/Vol...: 2 mL  
Method.....: CFR136A 625

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Naphthalene	ND	10	ug/L
<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>	
2-Fluorophenol	68	(10 - 135)	
Phenol-d5	59	(10 - 132)	
2,4,6-Tribromophenol	67	(10 - 142)	
2-Fluorobiphenyl	61	(38 - 110)	
Terphenyl-d14	64	(24 - 135)	
Nitrobenzene-d5	59	(44 - 110)	

SMM  
12/20/07

ECOR Solutions Inc

Client Sample ID: 16-MW-11

GC/MS Semivolatiles

Lot-Sample #...: A6L010320-010    Work Order #...: JKNNQ1AC    Matrix.....: WG  
Date Sampled...: 11/29/06 13:47    Date Received...: 12/01/06  
Prep Date.....: 12/04/06    Analysis Date...: 12/07/06  
Prep Batch #...: 6338138  
Dilution Factor: 1    Initial Wgt/Vol: 1050 mL    Final Wgt/Vol...: 2 mL  
Method.....: CFR136A 625

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	<u>LIMIT</u>	<u>UNITS</u>
Naphthalene	ND		10	ug/L
		<u>PERCENT</u>	<u>RECOVERY</u>	
<u>SURROGATE</u>	<u>RECOVERY</u>		<u>LIMITS</u>	
2-Fluorophenol	60		(10 - 135)	
Phenol-d5	59		(10 - 132)	
2,4,6-Tribromophenol	66		(10 - 142)	
2-Fluorobiphenyl	64		(38 - 110)	
Terphenyl-d14	68		(24 - 135)	
Nitrobenzene-d5	62		(44 - 110)	

SMK  
2/10/2007

ECOR Solutions Inc

Client Sample ID: DUP-1

GC/MS Semivolatiles

Lot-Sample #...: A6L010320-011    Work Order #...: JKNNR1AC    Matrix.....: WG  
Date Sampled...: 11/29/06    Date Received...: 12/01/06  
Prep Date.....: 12/04/06    Analysis Date...: 12/07/06  
Prep Batch #...: 6338138  
Dilution Factor: 1    Initial Wgt/Vol: 1040 mL    Final Wgt/Vol...: 2 mL  
Method.....: CFR136A 625

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	<u>LIMIT</u>	<u>UNITS</u>
Naphthalene	ND		10	ug/L

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
2-Fluorophenol	57	(10 - 135)
Phenol-d5	57	(10 - 132)
2,4,6-Tribromophenol	65	(10 - 142)
2-Fluorobiphenyl	58	(38 - 110)
Terphenyl-d14	61	(24 - 135)
Nitrobenzene-d5	58	(44 - 110)

*SMK  
2/20/2007*

ECOR Solutions Inc

Client Sample ID: 16-MW-08

GC/MS Semivolatiles

Lot-Sample #...: A6L010320-012    Work Order #...: JKNNT1AC    Matrix.....: WG  
Date Sampled...: 11/29/06 15:25    Date Received...: 12/01/06  
Prep Date.....: 12/04/06    Analysis Date...: 12/07/06  
Prep Batch #...: 6338138  
Dilution Factor: 1    Initial Wgt/Vol: 970 mL    Final Wgt/Vol...: 2 mL  
Method.....: CFR136A 625

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	<u>LIMIT</u>	<u>UNITS</u>
Naphthalene	ND		10	ug/L
<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>LIMITS</u>	
2-Fluorophenol	52		(10 - 135)	
Phenol-d5	51		(10 - 132)	
2,4,6-Tribromophenol	66		(10 - 142)	
2-Fluorobiphenyl	54		(38 - 110)	
Terphenyl-d14	68		(24 - 135)	
Nitrobenzene-d5	57		(44 - 110)	

*SMK  
12/07/07*

ECOR Solutions Inc

Client Sample ID: DUP-2

GC/MS Semivolatiles

Lot-Sample #...: A6L010320-013    Work Order #...: JKNNW1AC    Matrix.....: WG  
Date Sampled...: 11/29/06    Date Received...: 12/01/06  
Prep Date.....: 12/04/06    Analysis Date...: 12/07/06  
Prep Batch #...: 6338138  
Dilution Factor: 1    Initial Wgt/Vol: 960 mL    Final Wgt/Vol...: 2 mL  
Method.....: CFR136A 625

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Naphthalene	ND	10	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
2-Fluorophenol	49	(10 - 135)
Phenol-d5	48	(10 - 132)
2,4,6-Tribromophenol	67	(10 - 142)
2-Fluorobiphenyl	54	(38 - 110)
Terphenyl-d14	70	(24 - 135)
Nitrobenzene-d5	53	(44 - 110)

*SMK  
2/20/07*

ECOR Solutions Inc

Client Sample ID: FB-2

GC/MS Semivolatiles

Lot-Sample #...: A6L010320-014    Work Order #...: JKNNX1AC    Matrix.....: WQ  
Date Sampled...: 11/29/06 15:55    Date Received...: 12/01/06  
Prep Date.....: 12/04/06    Analysis Date...: 12/07/06  
Prep Batch #...: 6338138  
Dilution Factor: 1    Initial Wgt/Vol: 1050 mL    Final Wgt/Vol...: 2 mL  
Method.....: CFR136A 625

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
1 Naphthalene	ND	10	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
2-Fluorophenol	54	(10 - 135)
Phenol-d5	54	(10 - 132)
2,4,6-Tribromophenol	60	(10 - 142)
2-Fluorobiphenyl	55	(38 - 110)
Terphenyl-d14	73	(24 - 135)
Nitrobenzene-d5	57	(44 - 110)

*SMK  
12/27/07*

## Data Validation Qualifier Code Glossary

- B - The compound/analyte was not detected substantially above the level of the associated method blank/preparation or field blank.
- J - The positive result reported for this analyte is a quantitative estimate.
- U - This compound/analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.
- UJ - This compound/analyte was not detected in the sample. The quantitation/detection should be considered estimated and may be inaccurate or imprecise.
- R - The result for this compound/analyte is unusable. The analyte may or may not be present.
- K - The positive result reported for this analyte is a biased high quantitative estimate. The actual result may be lower than reported.
- L - The positive result for this analyte is a biased low quantitative estimate. The actual result may be higher than reported.
- UL - This compound/analyte was not detected in the sample. The actual quantitation/detection may be higher than reported.
- X - This analyte coelutes with another target compound on the two chromatographic columns used for analysis.

### Other Codes:

- ND - There were no positive results for this analytical fraction.
- NA - This parameter is not applicable to this sample.
- NR - This analysis parameter was not required for this sample.

**Project:** Earle Long Term Monitoring  
**Laboratory:** Analytical Laboratory Services, Inc.  
**Sample Delivery Group:** EWN001  
**Fraction:** Organic  
**Matrix:** Aqueous  
**Report Date:** 5/2/2007

This analytical quality assurance report is based upon a review of analytical data generated for groundwater samples. The sample locations, laboratory identification numbers, sample collection dates, sample matrix, and analyses performed are presented in Table 1.

The samples were analyzed for volatile organic compounds: benzene toluene, ethylbenzene, xylene, and methyl-tert-butyl ether and semivolatile organic compound, naphthalene. The sample analyses were performed in accordance with the procedures outlined in "40 CFR Part 136".

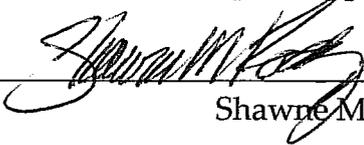
All sample analyses have undergone an analytical quality assurance review to ensure adherence to the required protocols. Results have been validated or qualified according to general guidance provided in the Region III modifications to "Laboratory Data Validation Functional Guidelines for Validating Organic Analyses", USEPA 9/94. This document specifies procedures for validating data generated for CLP analyses. Therefore, the quality control requirements specified in the methods and associated acceptance criteria were also used to evaluate the non-CLP data. The parameters presented on the following page were evaluated.

- 
- X • Data Completeness
  - X • Chain of Custody Documentation
  - X • Holding Times
  - X • Instrument Performance
  - X • Initial and Continuing Calibration Summaries
  - X • Laboratory and Field Blank Analysis Results
  - X • Surrogate Compound Recoveries
    - Matrix Spike/Matrix Spike Duplicate Recoveries and Reproducibility
  - X • Field Duplicate Analysis Results
  - X • Laboratory Control Sample Results
  - X • Internal Standard Performance
  - X • Qualitative Identification
  - X • Quantitation/Reporting Limits
- 

X - Denotes parameter evaluated.

It is recommended that the data only be used according to the qualifiers presented, and discussed in this report. All other data should be considered qualitatively and quantitatively valid as reported by the laboratory, based on the items evaluated.

Report Approved By:

  
\_\_\_\_\_  
Shawne M. Rodgers  
President

  
\_\_\_\_\_  
Date

**1.0 DATA COMPLETENESS**

The data package was complete.

**2.0 CHAIN OF CUSTODY DOCUMENTATION**

The chain of custody documentation was complete.

**3.0 HOLDING TIMES**

All criteria were met. No qualifiers were applied.

**4.0 INSTRUMENT PERFORMANCE**

All criteria were met. No qualifiers were applied.

**5.0 INITIAL AND CONTINUING CALIBRATIONS**

All criteria were met. No qualifiers were applied.

**6.0 LABORATORY AND FIELD BLANK ANALYSIS RESULTS**

All criteria were met. No qualifiers were applied.

**7.0 SURROGATE COMPOUNDS**

All criteria were met. No qualifiers were applied.

**8.0** *MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND REPRODUCIBILITY*

The laboratory did not select a site sample to perform matrix spike/matrix spike duplicate analyses. Therefore, the associated sample data could not be evaluated based on these parameters. This should be noted when assessing the sample data.

**9.0** *FIELD DUPLICATE RESULTS*

Duplicate sample pairs 16-MW-10 and DUP-1, and 18-MW-01 and DUP-2 were submitted to the laboratory to evaluate sampling and analytical precision for those organic compounds determined to be present. Results for samples 16-MW-10 and DUP-1 are presented in Table 2. There were no positive results for samples 18-MW-01 and DUP-2. Precision is evaluated by calculating the relative percent difference (%RPD) between duplicate pair results. There are no USEPA-established acceptance criteria for field duplicate samples. EDQ uses internal acceptance criteria of twenty percent for volatile detected compounds (and 25 percent for extractable compounds) to evaluate field duplicate samples.

**10.0** *LABORATORY CONTROL SAMPLE RESULTS*

All criteria were met. No qualifiers were applied.

**11.0** *INTERNAL STANDARD PERFORMANCE*

All criteria were met. No qualifiers were applied.

**12.0** *QUALITATIVE IDENTIFICATION*

All criteria were met. No qualifiers were applied.

## 13.0

### **QUANTITATION/REPORTING LIMITS**

As required by USEPA protocol, all compounds, which were qualitatively identified at concentrations below their respective Quantitation Limits (QLs), have been marked with "J" qualifiers to indicate that they are quantitative estimates.

## ***METHODOLOGY REFERENCES***

Analysis	Reference
Volatile Organic Compounds	Method 624, "40 CFR Part 136
Semivolatile Organic Compounds	Method 625, "40 CFR Part 136

**Table 1 Samples For Data Validation Review  
Earle Long Term Monitoring  
Groundwater Samples Collected February 2007  
Analytical Laboratory Services Sample Delivery Group EWN-001**

Sample Location	Laboratory ID		Date Collected	Matrix	Analyses Performed	
					VOC	SVOC
16-MW-15	9675195001	1	2/6/2007	Groundwater	X	
FB-1	9675195002	2	2/6/2007	Field Blank	X	
TB-1	9675195003	3	2/6/2007	Trip Blank	X	
16-MW-10	9675195004	4	2/7/2007	Groundwater	X	X
DUP-1	9675195005	5	2/7/2007	Groundwater	X	X
18-MW-01	9675195006	6	2/7/2007	Groundwater	X	X
DUP-2	9675195007	7	2/7/2007	Groundwater	X	X
16-MW-08	9675195008	8	2/7/2007	Groundwater	X	X
16-MW-24	9675195009	9	2/7/2007	Groundwater	X	
FB-2	9675195010	10	2/7/2007	Field Blank	X	X
16-MW-25	9675195011	11	2/8/2007	Groundwater	X	
16-MW-11	9675195012	12	2/8/2007	Groundwater	X	X
FB-3	9675195013	13	2/8/2007	Field Blank	X	X
16-SW-01	9675195014	14	2/8/2007	Groundwater	X	
16-SW-02	9675195015	15	2/8/2007	Groundwater		

VOC Methyl tert-butyl Ether, Benzene, Toluene, Ethylbenzene, total Xylenes  
SVOC Naphthalene

Table 2 Field Duplicate Sample Results for Organic Analyses  
Duplicate Samples 16-MW-10 and DUP-1

	16-MW-10 (µg/L)		DUP-1 (µg/L)		RPD	Comments
Total Xylenes	0.88	J	1.0	J	13	
Naphthalene	0.86	J	0.68	J	23	

FORM 1 In-house QC Account SAMPLE NO.  
VOLATILE ORGANICS ANALYSIS DATA SHEET

341972
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Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: EWN001

Matrix: (soil/water) WATER Lab Sample ID: 341972

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3021350

Level: (low/med) LOW Date Received: 02/13/07

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 02/14/07

GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	1.0 U	
100-41-4-----	Ethylbenzene	1.0 U	
108-88-3-----	Toluene	1.0 U	
95-47-6-----	o-Xylene	1.0 U	
108383/106423---	mp-Xylene	2.0 U	
1330-20-7-----	Total Xylenes	3.0 U	
1634-04-4-----	Methyl t-Butyl Ether	1.0 U	



FORM 1 In-house QC Account SAMPLE NO.  
VOLATILE ORGANICS ANALYSIS DATA SHEET

341973
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Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: EWN001

Matrix: (soil/water) WATER Lab Sample ID: 341973

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3021351

Level: (low/med) LOW Date Received: 02/13/07

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 02/14/07

GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	20.9	_____
100-41-4-----	Ethylbenzene	21.1	_____
108-88-3-----	Toluene	22.1	_____
95-47-6-----	o-Xylene	20.8	_____
108383/106423---	mp-Xylene	42.0	_____
1330-20-7-----	Total Xylenes	62.7	_____
1634-04-4-----	Methyl t-Butyl Ether	18.4	_____



FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

FB-1
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Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: EWN001

Matrix: (soil/water) WATER Lab Sample ID: 9675195002

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3021353

Level: (low/med) LOW Date Received: 02/09/07

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 02/14/07

GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	1.0	U
108383/106423	mp-Xylene	2.0	U
1330-20-7	Total Xylenes	3.0	U
1634-04-4	Methyl t-Butyl Ether	1.0	U

5/1/2007

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

TB-1

Lab Name: Contract: TB-1

Lab Code: Case No.: SAS No.: SDG No.: EWN001

Matrix: (soil/water) WATER Lab Sample ID: 9675195003

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3021354

Level: (low/med) LOW Date Received: 02/09/07

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 02/14/07

GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	1.0	U
108383/106423	mp-Xylene	2.0	U
1330-20-7	Total Xylenes	3.0	U
1634-04-4	Methyl t-Butyl Ether	1.0	U

SMK  
5/1/2007

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

FB-2

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: EWN001

Matrix: (soil/water) WATER

Lab Sample ID: 9675195010

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 3021355

Level: (low/med) LOW

Date Received: 02/09/07

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 02/14/07

GC Column: RTX-VRX ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
71-43-2	Benzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	1.0	U
108383/106423	mp-Xylene	2.0	U
1330-20-7	Total Xylenes	3.0	U
1634-04-4	Methyl t-Butyl Ether	1.0	U

*SMK*  
5/11/2007

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW-15

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: EWN001

Matrix: (soil/water) WATER

Lab Sample ID: 9675195001

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 3021359

Level: (low/med) LOW

Date Received: 02/09/07

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 02/14/07

GC Column: RTX-VRX ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
71-43-2	Benzene	14.6	
100-41-4	Ethylbenzene	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	1.0	U
108383/106423	mp-Xylene	2.0	U
1330-20-7	Total Xylenes	3.0	U
1634-04-4	Methyl t-Butyl Ether	0.42	J

SMR  
5/1/2007

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW-10

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: EWN001

Matrix: (soil/water) WATER

Lab Sample ID: 9675195004

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 3021360

Level: (low/med) LOW

Date Received: 02/09/07

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 02/14/07

GC Column: RTX-VRX ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	0.42	J
108383/106423	mp-Xylene	0.46	J
1330-20-7	Total Xylenes	0.88	J
1634-04-4	Methyl t-Butyl Ether	1.0	U

FORM I VOA

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SMK  
5/11/07

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

DUP-1

Lab Name: Contract:   
 Lab Code: Case No.: SAS No.: SDG No.: EWN001   
 Matrix: (soil/water) WATER Lab Sample ID: 9675195005   
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3021361   
 Level: (low/med) LOW Date Received: 02/09/07   
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 02/14/07   
 GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0   
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L Q
71-43-2	Benzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	0.49	J
108383/106423	mp-Xylene	0.54	J
1330-20-7	Total Xylenes	1.0	J
1634-04-4	Methyl t-Butyl Ether	1.0	U

02/14/07

SMK  
02/14/07

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

18-MW-01

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: EWN001

Matrix: (soil/water) WATER

Lab Sample ID: 9675195006

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 3021362

Level: (low/med) LOW

Date Received: 02/09/07

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 02/14/07

GC Column: RTX-VRX ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
71-43-2	Benzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	1.0	U
108383/106423	mp-Xylene	2.0	U
1330-20-7	Total Xylenes	3.0	U
1634-04-4	Methyl t-Butyl Ether	1.0	U

SM  
5/17/07

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

DUP-2

Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_  
 Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: EWN001  
 Matrix: (soil/water) WATER Lab Sample ID: 9675195007  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3021363  
 Level: (low/med) LOW Date Received: 02/09/07  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 02/14/07  
 GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	1.0	U
108383/106423	m-p-Xylene	2.0	U
1330-20-7	Total Xylenes	3.0	U
1634-04-4	Methyl t-Butyl Ether	1.0	U

SML  
5/1/2007

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW-08

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: EWN001

Matrix: (soil/water) WATER

Lab Sample ID: 9675195008

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 3021364

Level: (low/med) LOW

Date Received: 02/09/07

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 02/14/07

GC Column: RTX-VRX ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	34.6	
100-41-4-----	Ethylbenzene	9.6	
108-88-3-----	Toluene	0.70	J
95-47-6-----	o-Xylene	1.0	U
108383/106423---	mp-Xylene	2.0	U
1330-20-7-----	Total Xylenes	3.0	U
1634-04-4-----	Methyl t-Butyl Ether	2.5	

FORM I VOA

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SML  
5/11/2007

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW-24

Lab Name: Contract:   
 Lab Code: Case No.: SAS No.: SDG No.: EWN001   
 Matrix: (soil/water) WATER Lab Sample ID: 9675195009   
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3021365   
 Level: (low/med) LOW Date Received: 02/09/07   
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 02/14/07   
 GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0   
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	6.2	
100-41-4-----	Ethylbenzene	1.0	U
108-88-3-----	Toluene	1.0	U
95-47-6-----	o-Xylene	1.0	U
108383/106423---	mp-Xylene	2.0	U
1330-20-7-----	Total Xylenes	3.0	U
1634-04-4-----	Methyl t-Butyl Ether	13.4	

SMP  
5/1/2007

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW-25

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: EWN001

Matrix: (soil/water) WATER

Lab Sample ID: 9675195011

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 3021366

Level: (low/med) LOW

Date Received: 02/09/07

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 02/14/07

GC Column: RTX-VRX ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
71-43-2	Benzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	1.0	U
108383/106423	mp-Xylene	2.0	U
1330-20-7	Total Xylenes	3.0	U
1634-04-4	Methyl t-Butyl Ether	1.0	U

*SMK*  
*5/11/2007*

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW-11

Lab Name: Contract: 16-MW-11

Lab Code: Case No.: SAS No.: SDG No.: EWN001

Matrix: (soil/water) WATER Lab Sample ID: 9675195012

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3021367

Level: (low/med) LOW Date Received: 02/09/07

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 02/14/07

GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	81.4	
100-41-4	Ethylbenzene	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	1.0	U
108383/106423	mp-Xylene	2.0	U
1330-20-7	Total Xylenes	3.0	U
1634-04-4	Methyl t-Butyl Ether	169	

*SMY*  
*6/17/07*

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

FB-3

Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: EWN001

Matrix: (soil/water) WATER Lab Sample ID: 9675195013

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3021551

Level: (low/med) LOW Date Received: 02/09/07

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 02/16/07

GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	1.0	U
108383/106423	mp-Xylene	2.0	U
1330-20-7	Total Xylenes	3.0	U
1634-04-4	Methyl t-Butyl Ether	1.0	U



*SMK*  
*5/17/2007*

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-SW-01

Lab Name: Contract: 16-SW-01

Lab Code: Case No.: SAS No.: SDG No.: EWN001

Matrix: (soil/water) WATER Lab Sample ID: 9675195014

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3021563

Level: (low/med) LOW Date Received: 02/09/07

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 02/16/07

GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	1.0 U	
100-41-4-----	Ethylbenzene	1.0 U	
108-88-3-----	Toluene	1.0 U	
95-47-6-----	o-Xylene	1.0 U	
108383/106423---	mp-Xylene	2.0 U	
1330-20-7-----	Total Xylenes	3.0 U	
1634-04-4-----	Methyl t-Butyl Ether	1.0 U	

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*SM*  
*4/1/007*

FORM 1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-SW-02

Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_  
 Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: EWN001  
 Matrix: (soil/water) WATER Lab Sample ID: 9675195015  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 3021564  
 Level: (low/med) LOW Date Received: 02/09/07  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 02/16/07  
 GC Column: RTX-VRX ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
108-88-3	Toluene	1.0	U
95-47-6	o-Xylene	1.0	U
108383/106423	mp-Xylene	2.0	U
1330-20-7	Total Xylenes	3.0	U
1634-04-4	Methyl t-Butyl Ether	19.2	

*SMK  
5/11/2007*

FORM 2  
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_  
 Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: EWN001

	ECOR SOL'N	SMC1	SMC2	SMC3	OTHER	TOT
	SAMPLE NO.	#	(DCE) #	(TOL) #	#	OUT
	=====	=====	=====	=====	=====	=====
01	341972	101	111	118	105	0
02	341973	96	104	112	100	0
03	FB-1	101	112	117	106	0
04	TB-1	98	114	115	102	0
05	FB-2	102	115	117	102	0
06	16-MW-15	98	110	114	99	0
07	16-MW-10	103	115	122	105	0
08	DUP-1	100	113	115	99	0
09	18-MW-01	103	115	118	107	0
10	DUP-2	99	114	119	101	0
11	16-MW-08	104	113	118	99	0
12	16-MW-24	95	110	116	96	0
13	16-MW-25	98	112	116	97	0
14	16-MW-11	97	110	121	101	0
15	16-MW-10MS	101	112	117	103	0
16	16-MW-10MSD	101	111	114	102	0
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

QC LIMITS

SMC1 = Dibromofluoromethane (74-132)  
 SMC2 (DCE) = 1,2-Dichloroethane-d4 (72-142)  
 SMC3 (TOL) = Toluene-d8 (75-133)  
 OTHER = 4-Bromofluorobenzene (73-119)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D System Monitoring Compound diluted out



FORM 1  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW-10
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Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: EWN001

Matrix: (soil/water) WATER

Lab Sample ID: 9675195004

Sample wt/vol: 910.0 (g/mL) ML

Lab File ID: 8021618

Level: (low/med) LOW

Date Received: 02/09/07

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 02/13/07

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 02/17/07

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	0.86	J

1000

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FORM 1 In-house QC Account SAMPLE NO.  
 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

16-MW-10MS
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Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: EWN001

Matrix: (soil/water) WATER Lab Sample ID: 341933

Sample wt/vol: 1010 (g/mL) ML Lab File ID: 8021619

Level: (low/med) LOW Date Received: 02/09/07

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 02/13/07

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/17/07

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	77.4	



FORM 1 In-house QC Account SAMPLE NO.  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

16-MW-10MSD
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Lab Name: \_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: \_\_\_\_\_ Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: EWN001

Matrix: (soil/water) WATER Lab Sample ID: 341934

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 8021620

Level: (low/med) LOW Date Received: 02/09/07

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 02/13/07

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/17/07

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	77.4	



FORM 1  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

DUP-1

Lab Name: Contract:  
 Lab Code: Case No.: SAS No.: SDG No.: EWN001  
 Matrix: (soil/water) WATER Lab Sample ID: 9675195005  
 Sample wt/vol: 920.0 (g/mL) ML Lab File ID: 8021621  
 Level: (low/med) LOW Date Received: 02/09/07  
 % Moisture: \_\_\_\_\_ decanted: (Y/N)\_\_\_\_ Date Extracted: 02/13/07  
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/17/07  
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0  
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	0.68	J

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02/17/07

FORM 1  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

18-MW-01

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: EWN001

Matrix: (soil/water) WATER

Lab Sample ID: 9675195006

Sample wt/vol: 900.0 (g/mL) ML

Lab File ID: 8021622

Level: (low/med) LOW

Date Received: 02/09/07

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 02/13/07

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 02/17/07

Injection Volume: 1.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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91-20-3-----	Naphthalene	1.7	U
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SMI  
5/17/07

FORM 1  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

DUP-2

Lab Name: Contract:   
 Lab Code: Case No.: SAS No.: SDG No.: EWN001   
 Matrix: (soil/water) WATER Lab Sample ID: 9675195007   
 Sample wt/vol: 1050 (g/mL) ML Lab File ID: 8021623   
 Level: (low/med) LOW Date Received: 02/09/07   
 % Moisture: \_\_\_\_\_ decanted: (Y/N)\_\_\_\_ Date Extracted: 02/13/07   
 Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/17/07   
 Injection Volume: 1.0(uL) Dilution Factor: 1.0   
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	1.4	U

*SM*  
5/1/2007

FORM 1  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW-08

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: EWN001

Matrix: (soil/water) WATER

Lab Sample ID: 9675195008

Sample wt/vol: 940.0 (g/mL) ML

Lab File ID: 8021624

Level: (low/med) LOW

Date Received: 02/09/07

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 02/13/07

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 02/17/07

Injection Volume: 1.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
91-20-3-----	Naphthalene	3.5	Q

FORM I SV

16-MW-08

5/11/07  
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FORM 1  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

FB-2
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Lab Name: Contract: Lab Code: Case No.: SAS No.: SDG No.: EWN001  
 Matrix: (soil/water) WATER Lab Sample ID: 9675195010  
 Sample wt/vol: 940.0 (g/mL) ML Lab File ID: 8021625  
 Level: (low/med) LOW Date Received: 02/09/07  
 % Moisture: \_\_\_\_\_ decanted: (Y/N)\_\_\_\_ Date Extracted: 02/13/07  
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/17/07  
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0  
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	1.6	U



SMA  
5/11/2007

FORM 1  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

16-MW-11

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: EWN001

Matrix: (soil/water) WATER

Lab Sample ID: 9675195012

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 8021626

Level: (low/med) LOW

Date Received: 02/09/07

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 02/13/07

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 02/17/07

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	2.3	



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02/17/07

FORM 1  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECOR Solutions SAMPLE NO.

FB-3
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Lab Name: Contract:   
 Lab Code: Case No.: SAS No.: SDG No.: EWN001   
 Matrix: (soil/water) WATER Lab Sample ID: 9675195013   
 Sample wt/vol: 860.0 (g/mL) ML Lab File ID: 8021627   
 Level: (low/med) LOW Date Received: 02/09/07   
 % Moisture: \_\_\_\_\_ decanted: (Y/N)\_\_\_\_ Date Extracted: 02/13/07   
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/17/07   
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0   
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	1.7	U

**VOLATILE ORGANIC COMPOUNDS**  
USEPA Region II – Level II Data Validation

**Project Name:** NWS EARLE-LTM  
**Location:** Colts Neck, NJ 07722  
**Project Number:** N0100.174  
**SDG #:** EWN-002  
**Client:** ECOR Solutions, Inc.  
**Date:** 07/16/2007  
**Laboratory:** Analytical Laboratory Services, Inc.  
**Reviewer:** Samir A. Naguib

**Summary:**

1. Level II data validation was performed on the data for ten (10) water samples analyzed for Volatiles by EPA Method 624 (BETX+ MTBE).
2. The samples were collected on 04/30/2007 and 05/01/2007. The samples were submitted to Analytical Laboratory Services, Inc. on 05/02/2007 for analysis.
3. The USEPA Region II SOP HW-24, Revision 1, June 1999: Validating Volatile Organic Compounds by SW-846 Method 8260B and EPA Method 624 were used in evaluating the Volatiles data in this summary report.
4. In general, the data are valid as reported and may be used for decision making purposes. Selected data points were qualified due to nonconformance of certain Quality Control criteria (See discussion below).

**Samples:**

The samples included in this review are listed below:

Client Sample ID	Laboratory Sample ID	Analysis	Matrix	Sample Status
16-MW-25	9683534001	VOA	Water	
FB-1	9683534002	VOA	Water	Field Blank
TB-1	9683534003	VOA	Water	Trip Blank
16-MW-15	9683534004	VOA	Water	
16-SW-01	9683534005	VOA	Water	
16-SW-02	9683534006	VOA	Water	
16-MW-24	9683534007	VOA	Water	
16-MW-11	9683534008	VOA	Water	
DUP-1	9683534009	VOA	Water	Field Duplicate for Sample 16-MW-11
FB-2	9683534010	VOA	Water	

**Sample Conditions/Problems:**

1. The Traffic Reports/Chain-of-Custody Records, Sampling Report and/or Laboratory Case Narrative did not indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data. No qualifications were required.

**Holding Times:**

1. All water samples were analyzed within 14days from sample collection. No qualifications were required.
2. All water samples were properly preserved (pH<2.0). No qualifications were required.

**GC/MS Tuning:**

1. All of the BFB tunes in the initial and continuing calibrations met the percent relative abundance criteria. No qualifications were required.

**Initial Calibration:**

1. Initial calibration curve analyzed on instrument "MS03" (05/01/2007) exhibited acceptable %RSD ( $\leq 35\%$ ) for all compounds of interest. No qualifications were required.

**Continuing Calibration Verification (CCV):**

1. CCV analyzed on instrument "MS03" (05/03/2007) exhibited acceptable %D.
  2. CCV analyzed on instrument "MS03" (05/07/2007) exhibited acceptable %D.
- No qualifications were required.

**Surrogates:**

1. All surrogates %REC's values for all water samples and associated QC were within the laboratory control limits. No qualifications were required.

**Internal Standard (IS) Area Performance:**

1. All samples exhibited acceptable area count for all three internal standards. No qualifications were required.

**Method Blank, Trip, Field, Equipment Blank:**

1. Method Blank (361440) was analyzed on 05/04/2007.

Laboratory Sample ID	Compound	Results (µg/L)	Action Level (5x)(*)(µg/L)	Sample Affected	Action
361440	Total Xylenes	0.47	2.35	None	None

\*= When sample concentration is greater than the MDL, but less than the Action Level (AL), data will be flagged as non-detect (U). If sample concentration greater than the Action Level (AL) or sample results was non-detect, no qualifications/action required. Data was evaluated against the higher concentration detected in the any blank in this case it was the Method Blank.

2. Method Blank (362091) analyzed on 05/07/2007 was free contaminations. No qualifications were required.
3. Field Blank (FB-1) collected on 04/30/2007 and analyzed on 05/04/2007 was free of contaminations. No qualifications were required.
4. Trip Blank (TB-1) analyzed on 05/04/2007 was free of contaminations. No qualifications were required.
5. Field Blank (FB-2) collected on 05/01/2007 and analyzed on 05/04/2007 was free of contaminations. No qualifications were required.

**Laboratory Control Sample (LCS)/ Laboratory Control Sample Duplicate (LCSD):**

1. All %REC's in Laboratory Control Sample (361441) associated with samples analyzed 05/04/2007 were within the QC limits. No qualifications were required.
2. All %REC's in Laboratory Control Sample (362092) associated with samples analyzed 05/07-08/2007 were within the QC limits. No qualifications were required.

**Field Duplicate:**

1. Sample DUP-1 was collected as field duplicate for sample 16-MW-11. All RPD's were <20%. No qualifications were required.

Compound	16-MW-11 (µg/L)	DUP-1 (µg/L)	RPD	Action
Benzene	159	164	3.1	
Methyl-t-Butyl Ether	288	304	4.4	

**Matrix Spike (MS)/ Matrix Spike Duplicate (MSD):**

1. Matrix Spike (MS) and Matrix Spike duplicate (MSD) were performed on sample 160MW-11. All %REC's and RPD's were within the QC limits with the following exceptions:
  - 1.1 RPD for Benzene was outside the QC limit
  - 1.2 Methyl -t-Butyl Ether recovered in both MS and MSD outside the QC limits.
  - 1.3 These failures were due to high concentrations in the native sample (>4x) relative to the spike concentration. No qualifications were required.

**Compound Quantitation and Reported Detection Limits:**

1. The following samples were analyzed at higher dilution in order to bring all target analytes within the linear calibration range:

Client Sample ID	Laboratory Sample ID	Dilution	Comments
16-MW-11	9683534008	5x	Methyl-t-Butyl ether
DUP-1	9683534009	5x	Methyl-t-Butyl ether

**SEMI-VOLATILE ORGANIC COMPOUNDS**  
USEPA Region II – Level II Data Validation

**Project Name:** NWS EARLE-LTM  
**Location:** Colts Neck, NJ 07722  
**Project Number:** N0100.174  
**SDG #:** EWN-002  
**Client:** ECOR Solutions, Inc.  
**Date:** 07/16/2007  
**Laboratory:** Analytical Laboratory Services, Inc.  
**Reviewer:** Samir A. Naguib

**Summary:**

1. Level II data validation was performed on the data for three (3) water samples analyzed for Semi-volatiles (Naphthalene only) by EPA Method 625.
2. The samples were collected on 05/01/2007. The samples were submitted to Analytical Laboratory Services, Inc. on 05/02/2007 for analysis.
3. The USEPA Region II SOP HW-22, Revision 2, June 2001: Validating Semi-volatile Organic Compounds by SW-846 Method 8270C and EPA Method 625 were used in evaluating the Semi-volatiles data in this summary report.
4. In general, the data are valid as reported and may be used for decision making purposes. Selected data points were qualified due to nonconformance of certain Quality Control criteria (See discussion below).

**Samples:**

The samples included in this review are listed below:

Client Sample ID	Laboratory Sample ID	Analysis	Matrix	Sample Status
16-MW-11	9683534008	SVO	Water	
DUP-1	9683534009	SVO	Water	Field Duplicate for Sample 16-MW-11
FB-2	9683534010	SVO	Water	

**Sample Conditions/Problems:**

1. The Traffic Reports/Chain-of-Custody Records, Sampling Report and/or Laboratory Case Narrative did not indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data. No qualifications were required.

**Holding Times:**

1. All water samples were extracted within 7days from sample collection and analyzed within 40days following sample extraction. No qualifications were required.

**GC/MS Tuning:**

1. All of the DFTPP tunes in the initial and continuing calibrations met the percent relative abundance criteria. Analytical Laboratory Services did not include Pentachlorophenol and benzidine tailing factor into the data package. However twelve hour calibration interval was met. No qualifications were required.

**Initial Calibration:**

1. Initial calibration curve analyzed instrument "MS08" (05/01/2007) exhibited acceptable %RSD ( $\leq 35\%$ ) for Naphthalene. No qualifications were required.
2. Initial calibration curve analyzed instrument "MS08" (05/08/2007) exhibited acceptable %RSD ( $\leq 35\%$ ) for Naphthalene. No qualifications were required.

**Continuing Calibration Verification (CCV):**

1. The CCV analyzed on 05/04/2007@ 21:39 exhibited acceptable %D ( $\leq 20\%$ ) for Naphthalene. No qualifications were required.
2. The CCV analyzed on 05/08/2007@ 08:29 exhibited acceptable %D ( $\leq 20\%$ ) for Naphthalene. No qualifications were required.

**Method Blank:**

1. Method Blank (361402) associated with the water samples extracted on 05/03/2007 and analyzed on 05/08/2007 was free of contaminations. No qualifications were required.
2. Method Blank (361988) associated with the water samples extracted on 05/07/2007 and analyzed on 05/09/2007 was free of contaminations. No qualifications were required.

**Trip, Field, Equipment (Rinsate) Blank:**

1. Field Blank (FB-2) associated with the water samples analyzed on 05/09/2007 was free of contaminations. No qualifications were required.

**Surrogates:**

1. All surrogate %REC values in the original extracts were within the laboratory control limits. No qualifications were required.

**Internal Standard (IS) Area Performance:**

1. All samples exhibited acceptable area count for all six internal standards. No qualifications were required.

**Laboratory Control Sample (LCS)/ Laboratory Control Sample Duplicate (LCSD):**

1. Laboratory Control Sample (361403) associated with the water samples analyzed on 05/08/2007 was within the QC limits. No qualifications were required.
2. Laboratory Control Sample (361989) associated with the water samples analyzed on 05/09/2007 was within the QC limits. No qualifications were required.

**Field Duplicate:**

1. Sample DUP-1 was collected as field duplicate for sample 16-MW-11. All RPD's were <20%. No qualifications were required.

Compound	16-MW-11 (µg/L)	DUP-1 (µg/L)	RPD	Action
Naphthalene	2	2	0	

**Matrix Spike (MS)/Matrix Spike Duplicate (MSD):**

1. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were performed on sample 16-MW-11. Naphthalene %REC in both MS and MSD were within the QC limits. Also RPD was acceptable. No qualifications were required.

**Compound Quantitation and Reported Detection Limits:**

1. No QC deviations were observed.

**VOLATILE ORGANIC COMPOUNDS**  
USEPA Region II – Level II Data Validation

**Project Name:** NWS EARLE-LTM  
**Location:** Colts Neck, NJ 07722  
**Project Number:** N0100.174  
**SDG #:** EWN-003  
**Client:** ECOR Solutions, Inc.  
**Date:** 07/16/2007  
**Laboratory:** Analytical Laboratory Services, Inc.  
**Reviewer:** Samir A. Naguib

**Summary:**

1. Level II data validation was performed on the data for Six (6) water samples analyzed for Volatiles by EPA Method 624 (BETX+ MTBE).
2. The samples were collected on 05/02/2007. The samples were submitted to Analytical Laboratory Services, Inc. on 05/03/2007 for analysis.
3. The USEPA Region II SOP HW-24, Revision 1, June 1999: Validating Volatile Organic Compounds by SW-846 Method 8260B and EPA Method 624 were used in evaluating the Volatiles data in this summary report.
4. In general, the data are valid as reported and may be used for decision making purposes. Selected data points were qualified due to nonconformance of certain Quality Control criteria (See discussion below).

**Samples:**

The samples included in this review are listed below:

Client Sample ID	Laboratory Sample ID	Analysis	Matrix	Sample Status
16-MW-08	9683778001	VOA	Water	
DUP-2	9683378002	VOA	Water	Field Duplicate for Sample 16-MW-08
16-MW-10	9683778003	VOA	Water	
FB-3	9683778004	VOA	Water	
18-MW-01	9683778005	VOA	Water	
TB-2	9683778006	VOA	Water	

**Sample Conditions/Problems:**

1. The Traffic Reports/Chain-of-Custody Records, Sampling Report and/or Laboratory Case Narrative did not indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data. No qualifications were required.

**Holding Times:**

1. All water samples were analyzed within 14 days from sample collection. No qualifications were required.
2. All water samples were properly preserved (pH<2.0). No qualifications were required.

**GC/MS Tuning:**

1. All of the BFB tunes in the initial and continuing calibrations met the percent relative abundance criteria. No qualifications were required.

**Initial Calibration:**

1. Initial calibration curve analyzed on instrument "MS03" (05/09/2007) exhibited acceptable %RSD ( $\leq 35\%$ ) for all compounds of interest. No qualifications were required.

**Continuing Calibration Verification (CCV):**

1. CCV analyzed on instrument "MS03" (05/10/2007) exhibited acceptable %D.  
No qualifications were required.

**Surrogates:**

1. All surrogates %REC's values for all water samples and associated QC were within the laboratory control limits. No qualifications were required.

**Internal Standard (IS) Area Performance:**

1. All samples exhibited acceptable area count for all three internal standards. No qualifications were required.

**Method Blank, Trip, Field, Equipment Blank:**

1. Method Blank (362969) analyzed on 05/10/2007 was free contaminations. No qualifications were required.
2. Field Blank (FB-3) collected on 05/02/2007 and analyzed on 05/10/2007 was free of contaminations. No qualifications were required.
3. Trip Blank (TB-2) analyzed on 05/10/2007 was free of contaminations. No qualifications were required.

**Laboratory Control Sample (LCS)/ Laboratory Control Sample Duplicate (LCSD):**

1. All %REC's in Laboratory Control Sample (362970) associated with samples analyzed 05/10/2007 were within the QC limits. No qualifications were required.

**Field Duplicate:**

1. Sample DUP-2 was collected as field duplicate for sample 16-MW-08. All RPD's were <20%. No qualifications were required.

<b>Compound</b>	<b>16-MW-08 (µg/L)</b>	<b>DUP-2 (µg/L)</b>	<b>RPD</b>	<b>Action</b>
Benzene	40.1	36.4	9.7	
Ethyl Benzene	15.8	13.3	17.2	
Methyl-t-Butyl Ether	2.8	2.4	15.4	
Toluene	0.33	0.28	16.4	
Total Xylenes	1.5	1.3	14.3	

**Matrix Spike (MS)/ Matrix Spike Duplicate (MSD):**

1. Matrix Spike (MS) and Matrix Spike duplicate (MSD) were not performed in this SDG.

**Compound Quantitation and Reported Detection Limits:**

1. No QC deviations were observed.

**SEMI-VOLATILE ORGANIC COMPOUNDS**  
USEPA Region II – Level II Data Validation

**Project Name:** NWS EARLE-LTM  
**Location:** Colts Neck, NJ 07722  
**Project Number:** N0100.174  
**SDG #:** EWN-003  
**Client:** ECOR Solutions, Inc.  
**Date:** 07/17/2007  
**Laboratory:** Analytical Laboratory Services, Inc.  
**Reviewer:** Samir A. Naguib

**Summary:**

1. Level II data validation was performed on the data for five (5) water samples analyzed for Semi-volatiles (Naphthalene only) by EPA Method 625.
2. The samples were collected on 05/02/2007. The samples were submitted to Analytical Laboratory Services, Inc. on 05/03/2007 for analysis.
3. The USEPA Region II SOP HW-22, Revision 2, June 2001: Validating Semi-volatile Organic Compounds by SW-846 Method 8270C and EPA Method 625 were used in evaluating the Semi-volatiles data in this summary report.
4. In general, the data are valid as reported and may be used for decision making purposes. Selected data points were qualified due to nonconformance of certain Quality Control criteria (See discussion below).

**Samples:**

The samples included in this review are listed below:

Client Sample ID	Laboratory Sample ID	Analysis	Matrix	Sample Status
16-MW-08	9683778001	SVO	Water	
DUP-2	9683378002	SVO	Water	Field Duplicate for Sample 16-MW-08
16-MW-10	9683778003	SVO	Water	
FB-3	9683778004	SVO	Water	
18-MW-01	9683778005	SVO	Water	

**Sample Conditions/Problems:**

1. The Traffic Reports/Chain-of-Custody Records, Sampling Report and/or Laboratory Case Narrative did not indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data. No qualifications were required.

**Holding Times:**

1. All water samples were extracted within 7days from sample collection and analyzed within 40days following sample extraction. No qualifications were required.

**GC/MS Tuning:**

1. All of the DFTPP tunes in the initial and continuing calibrations met the percent relative abundance criteria. Analytical Laboratory Services did not include Pentachlorophenol and benzidine tailing factor into the data package. However twelve hour calibration interval was met. No qualifications were required.

**Initial Calibration:**

1. Initial calibration curve analyzed instrument "MS06" (05/14/2007) exhibited acceptable %RSD ( $\leq 35\%$ ) for Naphthalene. No qualifications were required.

**Continuing Calibration Verification (CCV):**

1. The CCV analyzed on 05/15/2007@ 02:09 exhibited acceptable %D ( $\leq 20\%$ ) for Naphthalene. No qualifications were required.

**Method Blank:**

1. Method Blank (362333) associated with the water samples extracted on 05/08/2007 and analyzed on 05/15/2007 was free of contaminations. No qualifications were required.

**Trip, Field, Equipment (Rinsate) Blank:**

1. Field Blank (FB-3) associated with the water samples analyzed on 05/15/2007 was free of contaminations. No qualifications were required.

**Surrogates:**

1. All surrogate %REC values in the original extracts were within the laboratory control limits. No qualifications were required.

**Internal Standard (IS) Area Performance:**

1. All samples exhibited acceptable area count for all six internal standards. No qualifications were required.

**Laboratory Control Sample (LCS)/ Laboratory Control Sample Duplicate (LCSD):**

1. Laboratory Control Sample (362334) associated with the water samples analyzed on 05/15/2007 was within the QC limits. No qualifications were required.

**Field Duplicate:**

1. Sample DUP-2 was collected as field duplicate for sample 16-MW-08. All RPD's were  $< 20\%$ . No qualifications were required.

Compound	16-MW-08 ( $\mu\text{g/L}$ )	DUP-2 ( $\mu\text{g/L}$ )	RPD	Action
Naphthalene	15	17	12.5	

**Matrix Spike (MS)/Matrix Spike Duplicate (MSD):**

1. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were not performed in this SDG.

**Compound Quantitation and Reported Detection Limits:**

1. No QC deviations were observed.



Certificate of Analysis

May 14, 2007

Ms. Amanda Bell  
ECOR Solutions  
1075 Andrew Drive  
Suite I  
West Chester, PA 19380

Lab ID #: 9683534001  
Received: 05/02/07 11:05  
Discard: 05/28/07

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN002|NWS EARLE

Page: 2 Of 13  
PO#: N0100.174  
COC Number:

Sample ID: 16-MW-25

Matrix: Waste Water

Date Collected: 04/30/07 15:50

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
VOLATILE ORGANICS								
Benzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 06:49	05/04/07	JAH	A
Ethylbenzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 06:49	05/04/07	JAH	A
Methyl t-Butyl Ether	1.0 U	ug/L	1.0	EPA 624	05/04/07 06:49	05/04/07	JAH	A
Toluene	1.0 U	ug/L	1.0	EPA 624	05/04/07 06:49	05/04/07	JAH	A
Total Xylenes	3.0 U	ug/L	3.0	EPA 624	05/04/07 06:49	05/04/07	JAH	A
Surrogates								
	Result	Units	Recovery	Limits				
1,2-Dichloroethane-d4	31.4	ug/L	105.0%	(72 - 142)				
Dibromofluoromethane	31.4	ug/L	105.0%	(74 - 132)				
Toluene-d8	31	ug/L	103.0%	(75 - 133)				
4-Bromofluorobenzene	30.7	ug/L	102.0%	(73 - 119)				

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Raymond J. Martrano  
Laboratory Manager

05/16/07



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Lab ID #: 9683534002  
Received: 05/02/07 11:05  
Discard: 05/28/07

Page: 3 Of 13

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN002 | NWS EARLE

PO#: N0100.174  
COC Number:

Sample ID: FB-1

Matrix: Waste Water

Date Collected: 04/30/07 16:15

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
VOLATILE ORGANICS								
Benzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 03:48	05/04/07	JAH	A
Ethylbenzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 03:48	05/04/07	JAH	A
Methyl t-Butyl Ether	1.0 U	ug/L	1.0	EPA 624	05/04/07 03:48	05/04/07	JAH	A
Toluene	1.0 U	ug/L	1.0	EPA 624	05/04/07 03:48	05/04/07	JAH	A
Total Xylenes	3.0 U	ug/L	3.0	EPA 624	05/04/07 03:48	05/04/07	JAH	A
Surrogates								
	Result	Units	Recovery	Limits				
1,2-Dichloroethane-d4	27	ug/L	90.0%	(72 - 142)				
Dibromofluoromethane	29.1	ug/L	96.9%	(74 - 132)				
Toluene-d8	30.1	ug/L	100.0%	(75 - 133)				
4-Bromofluorobenzene	30.6	ug/L	102.0%	(73 - 119)				

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Lab ID #: 9683534003  
Received: 05/02/07 11:05  
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Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN002|NWS EARLE

Page: 4 Of 13  
PO#: N0100.174  
COC Number:

Sample ID: TB-1

Matrix: Waste Water

Date Collected: 05/02/07 11:05

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
<b>VOLATILE ORGANICS</b>								
Benzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 04:25	05/04/07	JAH	A
Ethylbenzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 04:25	05/04/07	JAH	A
Methyl t-Butyl Ether	1.0 U	ug/L	1.0	EPA 624	05/04/07 04:25	05/04/07	JAH	A
Toluene	1.0 U	ug/L	1.0	EPA 624	05/04/07 04:25	05/04/07	JAH	A
Total Xylenes	3.0 U	ug/L	3.0	EPA 624	05/04/07 04:25	05/04/07	JAH	A
<b>Surrogates</b>								
1,2-Dichloroethane-d4	27.5	ug/L	91.7%	(72 - 142)				
Dibromofluoromethane	29	ug/L	96.6%	(74 - 132)				
Toluene-d8	29.2	ug/L	97.5%	(75 - 133)				
4-Bromofluorobenzene	31.4	ug/L	105.0%	(73 - 119)				

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Raymond J. Martrano  
Laboratory Manager

02/16/07SD



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West Chester, PA 19380

Lab ID #: 9683534004  
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Page: 5 Of 13

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN002 | NWS EARLE

PO#: N0100.174  
COC Number:

Sample ID: 16-MW-15

Matrix: Waste Water

Date Collected: 05/01/07 12:50

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
VOLATILE ORGANICS								
Benzene	20.4	ug/L	1.0	EPA 624	05/04/07 07:25	05/04/07	JAH	A
Ethylbenzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 07:25	05/04/07	JAH	A
Methyl t-Butyl Ether	0.35J	ug/L	1.0	EPA 624	05/04/07 07:25	05/04/07	JAH	A
Toluene	1.0 U	ug/L	1.0	EPA 624	05/04/07 07:25	05/04/07	JAH	A
Total Xylenes	3.0 U	ug/L	3.0	EPA 624	05/04/07 07:25	05/04/07	JAH	A
Surrogates								
	Result	Units	Recovery	Limits				
1,2-Dichloroethane-d4	34.1	ug/L	114.0%	(72 - 142)				
Dibromofluoromethane	32.7	ug/L	109.0%	(74 - 132)				
Toluene-d8	33.2	ug/L	111.0%	(75 - 133)				
4-Bromofluorobenzene	32.6	ug/L	109.0%	(73 - 119)				

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Laboratory Manager

07/16/07



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Lab ID #: 9683534005  
Received: 05/02/07 11:05  
Discard: 05/28/07

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN002|NWS EARLE

Page: 6 Of 13  
PO#: N0100.174  
COC Number:

Sample ID: 16-SW-01

Matrix: Waste Water

Date Collected: 05/01/07 11:50

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
VOLATILE ORGANICS								
Benzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 08:02	05/04/07	JAH	A
Ethylbenzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 08:02	05/04/07	JAH	A
Methyl t-Butyl Ether	1.0 U	ug/L	1.0	EPA 624	05/04/07 08:02	05/04/07	JAH	A
Toluene	1.0 U	ug/L	1.0	EPA 624	05/04/07 08:02	05/04/07	JAH	A
Total Xylenes	3.0 U	ug/L	3.0	EPA 624	05/04/07 08:02	05/04/07	JAH	A
Surrogates								
1,2-Dichloroethane-d4	33.8	ug/L	113.0%	(72 - 142)				
Dibromofluoromethane	33.2	ug/L	111.0%	(74 - 132)				
Toluene-d8	32.6	ug/L	109.0%	(75 - 133)				
4-Bromofluorobenzene	32.5	ug/L	108.0%	(73 - 119)				

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Laboratory Manager

02/06/07SM



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Lab ID #: 9683534006  
Received: 05/02/07 11:05  
Discard: 05/28/07

Page: 7 Of 13

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN002|NWS EARLE

PO#: N0100.174  
COC Number:

Sample ID: 16-SW-02

Matrix: Waste Water

Date Collected: 05/01/07 11:55

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
<b>VOLATILE ORGANICS</b>								
Benzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 08:39	05/04/07	JAH	A
Ethylbenzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 08:39	05/04/07	JAH	A
Methyl t-Butyl Ether	0.76J	ug/L	1.0	EPA 624	05/04/07 08:39	05/04/07	JAH	A
Toluene	1.0 U	ug/L	1.0	EPA 624	05/04/07 08:39	05/04/07	JAH	A
Total Xylenes	3.0 U	ug/L	3.0	EPA 624	05/04/07 08:39	05/04/07	JAH	A
<b>Surrogates</b>								
	Result	Units	Recovery	Limits				
1,2-Dichloroethane-d4	32.8	ug/L	109.0%	(72 - 142)				
Dibromofluoromethane	32	ug/L	107.0%	(74 - 132)				
Toluene-d8	30.6	ug/L	102.0%	(75 - 133)				
4-Bromofluorobenzene	31.1	ug/L	104.0%	(73 - 119)				

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Laboratory Manager

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May 14, 2007

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West Chester, PA 19380

Lab ID #: 9683534007  
Received: 05/02/07 11:05  
Discard: 05/28/07

Page: 8 Of 13

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN002|NWS EARLE

PO#: N0100.174  
COC Number:

Sample ID: 16-MW-24

Matrix: Waste Water

Date Collected: 05/01/07 13:47

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
<b>VOLATILE ORGANICS</b>								
Benzene	7.6	ug/L	1.0	EPA 624	05/04/07 09:14	05/04/07	JAH	A
Ethylbenzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 09:14	05/04/07	JAH	A
Methyl t-Butyl Ether	20.9	ug/L	1.0	EPA 624	05/04/07 09:14	05/04/07	JAH	A
Toluene	1.0 U	ug/L	1.0	EPA 624	05/04/07 09:14	05/04/07	JAH	A
Total Xylenes	3.0 U	ug/L	3.0	EPA 624	05/04/07 09:14	05/04/07	JAH	A
<b>Surrogates</b>								
	Result	Units	Recovery	Limits				
1,2-Dichloroethane-d4	31.7	ug/L	106.0%	(72 - 142)				
Dibromofluoromethane	30.3	ug/L	101.0%	(74 - 132)				
Toluene-d8	31.9	ug/L	106.0%	(75 - 133)				
4-Bromofluorobenzene	30	ug/L	100.0%	(73 - 119)				

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Raymond J. Martrano  
Laboratory Manager

05/16/07



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West Chester, PA 19380

Lab ID #: 9683534008  
Received: 05/02/07 11:05  
Discard: 05/28/07

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN002|NWS EARLE

Page: 9 Of 13  
PO#: N0100.174  
COC Number:

Sample ID: 16-MW-11  
Date Collected: 05/01/07 15:17

Matrix: Waste Water  
Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
<b>VOLATILE ORGANICS</b>								
Benzene	159	ug/L	1.0	EPA 624	05/04/07 09:50	05/04/07	JAH	A
Ethylbenzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 09:50	05/04/07	JAH	A
Methyl t-Butyl Ether	288	ug/L	5.0	EPA 624	05/08/07 02:18	05/08/07	DXN	D
Toluene	1.0 U	ug/L	1.0	EPA 624	05/04/07 09:50	05/04/07	JAH	A
Total Xylenes	3.0 U	ug/L	3.0	EPA 624	05/04/07 09:50	05/04/07	JAH	A
<b>SEMIVOLATILES</b>								
Naphthalene	2	ug/L	2	EPA 625	05/09/07 02:59	05/07/07	DRS	H1
<b>Surrogates</b>								
	Result	Units	Recovery	Limits				
1,2-Dichloroethane-d4	32.7	ug/L	109.0%	(72 - 142)				
1,2-Dichloroethane-d4	133	ug/L	88.8%	(72 - 142)				
Dibromofluoromethane	31.4	ug/L	105.0%	(74 - 132)				
Dibromofluoromethane	136	ug/L	91.0%	(74 - 132)				
Toluene-d8	31.1	ug/L	104.0%	(75 - 133)				
Toluene-d8	158	ug/L	105.0%	(75 - 133)				
2-Fluorobiphenyl	38	ug/L	69.8%	(41 - 114)				
Nitrobenzene-d5	40	ug/L	74.1%	(33 - 140)				
4-Bromofluorobenzene	30.8	ug/L	103.0%	(73 - 119)				
4-Bromofluorobenzene	159	ug/L	106.0%	(73 - 119)				

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Lab ID #: 9683534008  
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Discard: 05/28/07

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN002 | NWS EARLE

Page: 10 Of 13  
PO#: N0100.174  
COC Number:

Sample ID: 16-MW-11  
Date Collected: 05/01/07 15:17

Matrix: Waste Water  
Collected by: Collected by Customer

Surrogates (continued)	Result	Units	Recovery	Limits
Terphenyl-d14	38	ug/L	71.2%	(14 - 185)

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Laboratory Manager

07/16/07



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 1075 Andrew Drive  
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Lab ID #: 9683534009  
 Received: 05/02/07 11:05  
 Discard: 05/28/07

Page: 11 Of 13

Project Name: NWS EARLE - LTM PROJECT  
 Workorder ID: EWN002|NWS EARLE

PO#: N0100.174  
 COC Number:

Sample ID: DUP-1

Matrix: Waste Water

Date Collected: 05/01/07 00:00

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
<b>VOLATILE ORGANICS</b>								
Benzene	164	ug/L	1.0	EPA 624	05/04/07 10:26	05/04/07	JAH	A
Ethylbenzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 10:26	05/04/07	JAH	A
Methyl t-Butyl Ether	301	ug/L	5.0	EPA 624	05/08/07 01:42	05/08/07	DXN	B
Toluene	1.0 U	ug/L	1.0	EPA 624	05/04/07 10:26	05/04/07	JAH	A
Total Xylenes	3.0 U	ug/L	3.0	EPA 624	05/04/07 10:26	05/04/07	JAH	A
<b>SEMIVOLATILES</b>								
Naphthalene	2	ug/L	1	EPA 625	05/05/07 02:35	05/03/07	DHF	D1
Surrogates	Result	Units	Recovery	Limits				
1,2-Dichloroethane-d4	31.4	ug/L	105.0%	(72 - 142)				
1,2-Dichloroethane-d4	134	ug/L	89.4%	(72 - 142)				
Dibromofluoromethane	30.6	ug/L	102.0%	(74 - 132)				
Dibromofluoromethane	148	ug/L	99.0%	(74 - 132)				
Toluene-d8	30.8	ug/L	103.0%	(75 - 133)				
Toluene-d8	155	ug/L	103.0%	(75 - 133)				
2-Fluorobiphenyl	40	ug/L	84.3%	(41 - 114)				
Nitrobenzene-d5	44	ug/L	93.7%	(33 - 140)				
4-Bromofluorobenzene	30.9	ug/L	103.0%	(73 - 119)				
4-Bromofluorobenzene	159	ug/L	106.0%	(73 - 119)				

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02/16/07



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**Certificate of Analysis**

May 14, 2007

Ms. Amanda Bell  
 ECOR Solutions  
 1075 Andrew Drive  
 Suite I  
 West Chester, PA 19380

Lab ID #: 9683534009  
 Received: 05/02/07 11:05  
 Discard: 05/28/07

Project Name: NWS EARLE - LTM PROJECT  
 Workorder ID: EWN002|NWS EARLE

Page: 12 Of 13  
 PO#: N0100.174  
 COC Number:

Sample ID: DUP-1  
 Date Collected: 05/01/07 00:00

Matrix: Waste Water  
 Collected by: Collected by Customer

Surrogates (continued)	Result	Units	Recovery	Limits
Terphenyl-d14	40	ug/L	84.0%	(14 - 185)

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Raymond J. Martrano  
 Laboratory Manager

05/16/07



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May 14, 2007

Ms. Amanda Bell  
ECOR Solutions  
1075 Andrew Drive  
Suite I  
West Chester, PA 19380

Lab ID #: 9683534010  
Received: 05/02/07 11:05  
Discard: 05/28/07

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN002|NWS EARLE

Page: 13 Of 13  
PO#: N0100.174  
COC Number:

Sample ID: FB-2  
Date Collected: 05/01/07 14:40

Matrix: Waste Water  
Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
<b>VOLATILE ORGANICS</b>								
Benzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 05:01	05/04/07	JAH	A
Ethylbenzene	1.0 U	ug/L	1.0	EPA 624	05/04/07 05:01	05/04/07	JAH	A
Methyl t-Butyl Ether	1.0 U	ug/L	1.0	EPA 624	05/04/07 05:01	05/04/07	JAH	A
Toluene	1.0 U	ug/L	1.0	EPA 624	05/04/07 05:01	05/04/07	JAH	A
Total Xylenes	3.0 U	ug/L	3.0	EPA 624	05/04/07 05:01	05/04/07	JAH	A
<b>SEMIVOLATILES</b>								
Naphthalene	2 U	ug/L	2	EPA 625	05/09/07 02:09	05/07/07	DRS	C1
<b>Surrogates</b>								
	Result	Units	Recovery	Limits				
1,2-Dichloroethane-d4	28.9	ug/L	96.4%	(72 - 142)				
Dibromofluoromethane	29.9	ug/L	99.7%	(74 - 132)				
Toluene-d8	31.3	ug/L	104.0%	(75 - 133)				
2-Fluorobiphenyl	43	ug/L	76.9%	(41 - 114)				
Nitrobenzene-d5	45	ug/L	81.1%	(33 - 140)				
4-Bromofluorobenzene	30.8	ug/L	103.0%	(73 - 119)				
Terphenyl-d14	48	ug/L	85.9%	(14 - 185)				

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Raymond J. Martrano  
Laboratory Manager

07/16/07



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Suite I  
West Chester, PA 19380

Lab ID #: 9683778001  
Received: 05/03/07 11:33  
Discard: 05/30/07

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN003|NWS EARLE

Page: 2 OF 7  
PO#: N0100.174  
COC Number:

Sample ID: 16-MW-08

Matrix: Waste Water

Date Collected: 05/02/07 09:20

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
<b>VOLATILE ORGANICS</b>								
Benzene	40.1	ug/L	1.0	EPA 624	05/11/07 03:52	05/11/07	DXN	A
Ethylbenzene	15.8	ug/L	1.0	EPA 624	05/11/07 03:52	05/11/07	DXN	A
Methyl t-Butyl Ether	2.8	ug/L	1.0	EPA 624	05/11/07 03:52	05/11/07	DXN	A
Toluene	0.33J	ug/L	1.0	EPA 624	05/11/07 03:52	05/11/07	DXN	A
Total Xylenes	1.5J	ug/L	3.0	EPA 624	05/11/07 03:52	05/11/07	DXN	A
<b>SEMIVOLATILES</b>								
Naphthalene	15	ug/L	1	EPA 625	05/15/07 10:22	05/08/07	DRS	D1
Surrogates	Result	Units	Recovery	Limits				
1,2-Dichloroethane-d4	23.4	ug/L	77.9%	(72 - 142)				
Dibromofluoromethane	26.9	ug/L	89.7%	(74 - 132)				
Toluene-d8	32.2	ug/L	107.0%	(75 - 133)				
2-Fluorobiphenyl	39	ug/L	80.3%	(41 - 114)				
Nitrobenzene-d5	40	ug/L	83.3%	(33 - 140)				
4-Bromofluorobenzene	32.3	ug/L	108.0%	(73 - 119)				
Terphenyl-d14	43	ug/L	88.1%	(14 - 185)				

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05/16/07

Raymond J. Martrano  
Laboratory Manager



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Ms. Amanda Bell  
ECOR Solutions  
1075 Andrew Drive  
Suite I  
West Chester, PA 19380

Lab ID #: 9683778002  
Received: 05/03/07 11:33  
Discard: 05/30/07

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN003|NWS EARLE

Page: 3 OF 7  
PO#: N0100.174  
COC Number:

Sample ID: DUP-2  
Date Collected: 05/02/07 00:00

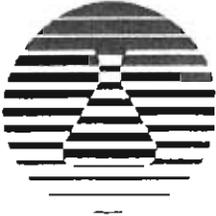
Matrix: Waste Water  
Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
<b>VOLATILE ORGANICS</b>								
Benzene	36.4	ug/L	1.0	EPA 624	05/11/07 04:28	05/11/07	DXN	A
Ethylbenzene	13.3	ug/L	1.0	EPA 624	05/11/07 04:28	05/11/07	DXN	A
Methyl t-Butyl Ether	2.4	ug/L	1.0	EPA 624	05/11/07 04:28	05/11/07	DXN	A
Toluene	0.28J	ug/L	1.0	EPA 624	05/11/07 04:28	05/11/07	DXN	A
Total Xylenes	1.3J	ug/L	3.0	EPA 624	05/11/07 04:28	05/11/07	DXN	A
<b>SEMIVOLATILES</b>								
Naphthalene	17	ug/L	1	EPA 625	05/15/07 06:15	05/08/07	DRS	D1
<b>Surrogates</b>								
	Result	Units	Recovery	Limits				
1,2-Dichloroethane-d4	24.6	ug/L	82.0%	(72 - 142)				
Dibromofluoromethane	28.2	ug/L	93.8%	(74 - 132)				
Toluene-d8	32.4	ug/L	108.0%	(75 - 133)				
2-Fluorobiphenyl	44	ug/L	90.4%	(41 - 114)				
Nitrobenzene-d5	48	ug/L	97.4%	(33 - 140)				
4-Bromofluorobenzene	32	ug/L	107.0%	(73 - 119)				
Terphenyl-d14	46	ug/L	93.8%	(14 - 185)				

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07/16/07 (SN)  
Raymond J. Marzano  
Laboratory Manager



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May 16, 2007

Ms. Amanda Bell  
ECOR Solutions  
1075 Andrew Drive  
Suite I  
West Chester, PA 19380

Lab ID #: 9683778003  
Received: 05/03/07 11:33  
Discard: 05/30/07

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN003 | NWS EARLE

Page: 4 Of 7  
PO#: N0100.174  
COC Number:

Sample ID: 16-MW-10

Matrix: Waste Water

Date Collected: 05/02/07 10:41

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
<b>VOLATILE ORGANICS</b>								
Benzene	1.0 U	ug/L	1.0	EPA 624	05/11/07 09:04	05/11/07	DXN	A
Ethylbenzene	1.0 U	ug/L	1.0	EPA 624	05/11/07 05:04	05/11/07	DXN	A
Methyl t-Butyl Ether	1.0 U	ug/L	1.0	EPA 624	05/11/07 05:04	05/11/07	DXN	A
Toluene	1.0 U	ug/L	1.0	EPA 624	05/11/07 05:04	05/11/07	DXN	A
Total Xylenes	0.94J	ug/L	3.0	EPA 624	05/11/07 05:04	05/11/07	DXN	A
<b>SEMIVOLATILES</b>								
Naphthalene	0.6J	ug/L	1	EPA 625	05/15/07 11:12	05/08/07	DRS	D1
<b>Surrogates</b>								
	Result	Units	Recovery	Limits				
1,2-Dichloroethane-d4	24.7	ug/L	82.3%	(72 - 142)				
Dibromofluoromethane	27.7	ug/L	92.4%	(74 - 132)				
Toluene-d8	30.7	ug/L	102.0%	(75 - 133)				
2-Fluorobiphenyl	42	ug/L	88.8%	(41 - 114)				
Nitrobenzene-d5	44	ug/L	92.2%	(33 - 140)				
4-Bromofluorobenzene	32	ug/L	107.0%	(73 - 119)				
Terphenyl-d14	45	ug/L	93.0%	(14 - 185)				

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Raymond J. Martrano  
Laboratory Manager

07/16/07



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May 16, 2007

Ms. Amanda Bell  
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West Chester, PA 19380

Lab ID #: 9683778004  
Received: 05/03/07 11:33  
Discard: 05/30/07

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN003|NWS EARLE

Page: 5 Of 7  
PO#: N0100.174  
COC Number:

Sample ID: FB-3  
Date Collected: 05/02/07 10:30

Matrix: Waste Water  
Collected by: Collected by Customer

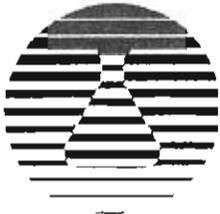
Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
<b>VOLATILE ORGANICS</b>								
Benzene	1.0 U	ug/L	1.0	EPA 624	05/10/07 17:45	05/10/07	DXN	B
Ethylbenzene	1.0 U	ug/L	1.0	EPA 624	05/10/07 17:45	05/10/07	DXN	B
Methyl t-Butyl Ether	1.0 U	ug/L	1.0	EPA 624	05/10/07 17:45	05/10/07	DXN	B
Toluene	1.0 U	ug/L	1.0	EPA 624	05/10/07 17:45	05/10/07	DXN	B
Total Xylenes	3.0 U	ug/L	3.0	EPA 624	05/10/07 17:45	05/10/07	DXN	B
<b>SEMIVOLATILES</b>								
Naphthalene	1 U	ug/L	1	EPA 625	05/15/07 12:00	05/08/07	DRS	D1
Surrogates	Result	Units	Recovery	Limits				
1,2-Dichloroethane-d4	23.6	ug/L	78.7%	(72 - 142)				
Dibromofluoromethane	26.6	ug/L	88.8%	(74 - 132)				
Toluene-d8	31.8	ug/L	106.0%	(75 - 133)				
2-Fluorobiphenyl	42	ug/L	84.4%	(41 - 114)				
Nitrobenzene-d5	45	ug/L	90.9%	(33 - 140)				
4-Bromofluorobenzene	30.3	ug/L	101.0%	(73 - 119)				
Terphenyl-d14	47	ug/L	94.3%	(14 - 185)				

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Raymond J. Martrano  
Laboratory Manager



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## Certificate of Analysis

May 16, 2007

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ECOR Solutions  
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Suite I  
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Lab ID #: 9683778005  
Received: 05/03/07 11:33  
Discard: 05/30/07

Page: 6 Of 7

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN003|NWS EARLE

PO#: N0100.174

COC Number:

Sample ID: 18-MW-01

Matrix: Waste Water

Date Collected: 05/02/07 12:17

Collected by: Collected by Customer

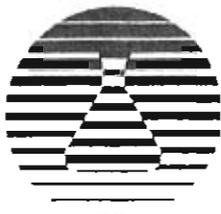
Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
<b>VOLATILE ORGANICS</b>								
Benzene	1.0 U	ug/L	1.0	EPA 624	05/11/07 05:40	05/11/07	DXN	A
Ethylbenzene	1.0 U	ug/L	1.0	EPA 624	05/11/07 05:40	05/11/07	DXN	A
Methyl t-Butyl Ether	1.0 U	ug/L	1.0	EPA 624	05/11/07 05:40	05/11/07	DXN	A
Toluene	1.0 U	ug/L	1.0	EPA 624	05/11/07 05:40	05/11/07	DXN	A
Total Xylenes	3.0 U	ug/L	3.0	EPA 624	05/11/07 05:40	05/11/07	DXN	A
<b>SEMIVOLATILES</b>								
Naphthalene	1 U	ug/L	1	EPA 625	05/15/07 14:26	05/08/07	DRS	C1
Surrogates	Result	Units	Recovery	Limits				
1,2-Dichloroethane-d4	24.4	ug/L	81.5%	(72 - 142)				
Dibromofluoromethane	26	ug/L	86.8%	(74 - 132)				
Toluene-d8	31.4	ug/L	105.0%	(75 - 133)				
2-Fluorobiphenyl	39	ug/L	81.5%	(41 - 114)				
Nitrobenzene-d5	41	ug/L	86.5%	(33 - 140)				
4-Bromofluorobenzene	32.1	ug/L	107.0%	(73 - 119)				
Terphenyl-d14	42	ug/L	88.8%	(14 - 185)				

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Raymond J. Martrano  
Laboratory Manager

07/16/07 (SV)



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Certificate of Analysis

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ECOR Solutions  
1075 Andrew Drive  
Suite I  
West Chester, PA 19380

Lab ID #: 9683778006  
Received: 05/03/07 11:33  
Discard: 05/30/07

Page: 7 Of 7

Project Name: NWS EARLE - LTM PROJECT  
Workorder ID: EWN003|NWS EARLE

PO#: N0100.174  
COC Number:

Sample ID: TB-2

Matrix: Waste Water

Date Collected: 05/03/07 11:33

Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By	Cntr
VOLATILE ORGANICS								
Benzene	1.0 U	ug/L	1.0	EPA 624	05/10/07 17:09	05/10/07	DXN	B
Ethylbenzene	1.0 U	ug/L	1.0	EPA 624	05/10/07 17:09	05/10/07	DXN	B
Methyl t-Butyl Ether	1.0 U	ug/L	1.0	EPA 624	05/10/07 17:09	05/10/07	DXN	B
Toluene	1.0 U	ug/L	1.0	EPA 624	05/10/07 17:09	05/10/07	DXN	B
Total Xylenes	3.0 U	ug/L	3.0	EPA 624	05/10/07 17:09	05/10/07	DXN	B
Surrogates								
	Result	Units	Recovery	Limits				
1,2-Dichloroethane-d4	23.8	ug/L	79.2%	(72 - 142)				
Dibromofluoromethane	26.8	ug/L	89.3%	(74 - 132)				
Toluene-d8	31.9	ug/L	106.0%	(75 - 133)				
4-Bromofluorobenzene	29.8	ug/L	99.4%	(73 - 119)				

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Raymond J. Martrano  
Laboratory Manager  
07/16/07

## **APPENDIX E**

### **SAMPLE LOGS AND FIELD NOTES**



# GROUNDWATER SAMPLE LOG SHEET

page 1 of 1

Project Site Name: NWS Earle  
 Project No.: N100174

Sample ID No.: 16 MW-08  
 Sample Location: Colts Neck  
 Sampled By: AB, JG

SAMPLING DATA:	FINAL VALUES:						
Date: <u>8/17/06</u>	Color (Visual)	Ph (Standard)	S.C. (mS/cm)	Temp (°C)	Turbidity (NTU)	DO (mg/l)	ORP (MV)
Time: <u>1059</u>	<u>clear</u>	<u>6.19</u>	<u>0.093</u>	<u>18.56</u>	<u>46.9</u>	<u>10.12</u>	<u>35.1</u>
Purge Method: <u>Low Flow</u>							

PURGE DATA:	
Date: <u>8/17/06</u>	Purge Calculations:
Purge Method: <u>Low Flow</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>—</u>	<u>2"</u> : 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>2"</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>19.50</u>	4": 0.65275      12": 5.87477
Static Water Level (DTW): <u>11.78</u>	
Static Product Level (DTP): <u>—</u>	
One Casing Volume (gal): <u>1.28 x 3 = 3.8</u>	
Start Purge (hrs): <u>0952</u>	
End Purge (hrs): <u>1059</u>	
Total Purge Time (min): <u>67</u>	
Total Vol. Purged (gal/L):	Purge Vol = 3 × PF × (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>2</u>
<u>625 + Naphthalene</u>	<u>—</u>	<u>Amber Lrk</u>	<u>2</u>

OBSERVATIONS/NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	





# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: ND100.174

Sample ID No.: 16 MW-10  
 Sample Location: Colts Neck  
 Sampled By: AB, JB

SAMPLING DATA:	FINAL VALUES:						
Date: <u>8/17/06</u>	Color	Ph	S.C.	Temp	Turbidity	DO	ORP
Time: <u>0922</u>	(Visual)	(Standard)	(mS/cm)	(°C)	(NTU)	(mg/l)	(MV)
Purge Method: <u>Low Flow</u>	<u>clear</u>	<u>5.95</u>	<u>0.500</u>	<u>16.62</u>	<u>16.5</u>	<u>11.74</u>	

PURGE DATA:		Purge Calculations:	
Date:	<u>8/17/06</u>	1":	0.04080
Purge Method:	<u>Low Flow</u>	2":	0.16319
PID Reading (ppm):	<u>—</u>	3":	0.36717
Well Casing Diameter & Material:	<u>2"</u>	4":	0.65275
Total Well Depth (TD):	<u>18.94</u>	6":	1.46869
Static Water Level (DTW):	<u>9.73</u>	8":	2.61101
Static Product Level (DTP):	<u>—</u>	10":	4.07970
One Casing Volume (gal):	<u>1.44 x 3 = 4.32</u>	12":	5.87477
Start Purge (hrs):	<u>0821</u>		
End Purge (hrs):	<u>0922</u>		
Total Purge Time (min):	<u>61</u>		
Total Vol. Purged (gal/L):			

Purge Vol = 3 x PF x (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>2</u>
<u>625 + Naphthalene</u>	<u>—</u>	<u>Amber Litr</u>	<u>2</u>

**OBSERVATIONS/NOTES:**

Circle if Applicable: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; text-align: center;">MS/MSD</td> <td>Duplicate ID No.: <u>DUP-2</u></td> </tr> </table>	MS/MSD	Duplicate ID No.: <u>DUP-2</u>	Signature(s): <div style="border: 1px solid black; height: 40px; width: 100%;"></div>
MS/MSD	Duplicate ID No.: <u>DUP-2</u>		





## GROUNDWATER SAMPLE LOG SHEET

page 1 of 2

Project Site Name: NWS Earle  
 Project No.: NO100, 174

Sample ID No.: 16 MW-11  
 Sample Location: Goats Neck  
 Sampled By: AB, JG

SAMPLING DATA:	FINAL VALUES:						
Date: <u>8/16/06</u>	Color (Visual)	Ph (Standard)	S.C. (mS/cm)	Temp (°C)	Turbidity (NTU)	DO (mg/l)	ORP (MV)
Time: <u>1655</u>	<u>Clear</u>	<u>4.26</u>	<u>0.212</u>	<u>14.72</u>	<u>9.58</u>	<u>392.76</u>	<u>185.3</u>
Purge Method: <u>Low Flow</u>							

PURGE DATA:	
Date: <u>8/16/06</u>	Purge Calculations:
Purge Method: <u>Low Flow</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>—</u>	② 2": 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>2"</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>15.36</u>	4": 0.65275      12": 5.87477
Static Water Level (DTW): <u>4.25</u>	
Static Product Level (DTP): <u>—</u>	
One Casing Volume (gal): <u>1.7 x 3 = 5.1</u>	
Start Purge (hrs): <u>1620</u>	
End Purge (hrs): <u>1655</u>	
Total Purge Time (min): <u>35</u>	
Total Vol. Purged (gal/L):	Purge Vol = 3 × PF × (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>2</u>
<u>625 + Naphthalene</u>	<u>—</u>	<u>Amber LTR</u>	<u>2</u>

**OBSERVATIONS/NOTES:**

<b>Circle if Applicable:</b>	<b>Signature(s):</b>		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">MS/MSD</td> <td>Duplicate ID No.: <u>DUP-1</u></td> </tr> </table>	MS/MSD	Duplicate ID No.: <u>DUP-1</u>	
MS/MSD	Duplicate ID No.: <u>DUP-1</u>		





# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: NO100-174

Sample ID No.: 16-MW15  
 Sample Location: Colts Neck  
 Sampled By: ABJG

SAMPLING DATA:	FINAL VALUES:						
Date: <u>8/16/06</u>	Color	Ph	S.C.	Temp	Turbidity	DO	ORP
Time: <u>1248</u>	(Visual)	(Standard)	(mS/cm)	(°C)	(NTU)	(mg/l)	(MV)
Purge Method: <u>Low flow</u>	<u>clear</u>	<u>4.50</u>	<u>0.179</u>	<u>18.20</u>	<u>18.4</u>	<u>3.32</u>	<u>218.9</u>

PURGE DATA:		Purge Calculations:	
Date:	<u>8/16/06</u>	1":	<u>0.04080</u>
Purge Method:	<u>Low Flow</u>	2":	<u>0.16319</u>
PID Reading (ppm):	<u>-</u>	3":	<u>0.36717</u>
Well Casing Diameter & Material:	<u>1" PVC</u>	4":	<u>0.65275</u>
Total Well Depth (TD):	<u>11.39</u>	6":	<u>1.46869</u>
Static Water Level (DTW):	<u>5.11</u>	8":	<u>2.61101</u>
Static Product Level (DTP):	<u>-</u>	10":	<u>4.07970</u>
One Casing Volume (gal):	<u>.24 x 3 = .80</u>	12":	<u>5.87477</u>
Start Purge (hrs):	<u>1143</u>		
End Purge (hrs):	<u>1248</u>		
Total Purge Time (min):	<u>65</u>		
Total Vol. Purged (gal/L):			

Purge Vol = 3 × PF × (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
<u>U24 + MTBE</u>	<u>HCl</u>	<u>V6A</u>	<u>2</u>

OBSERVATIONS/NOTES:

Circle if Applicable:	Signature(s):		
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">MS/MSD</td> <td style="width: 50%;">Duplicate ID No.:</td> </tr> </table>	MS/MSD	Duplicate ID No.:	
MS/MSD	Duplicate ID No.:		





# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: N0100.174

Sample ID No.: 16 MW-24  
 Sample Location: Co. 173 Neck  
 Sampled By: AB, JB

SAMPLING DATA:	FINAL VALUES:						
Date: <u>8/16/06</u>	Color (Visual)	Ph (Standard)	S.C. (mS/cm)	Temp (°C)	Turbidity (NTU)	DO (mg/l)	ORP (MV)
Time: <u>1555</u>	<u>clear</u>	<u>5.21</u>	<u>0.098</u>	<u>13.90</u>	<u>6.53</u>	<u>419.72</u>	<u>90.2</u>
Purge Method: <u>Low Flow</u>							

PURGE DATA:		Purge Calculations:	
Date:	<u>8/16/06</u>	1":	0.04080
Purge Method:	<u>Low Flow</u>	2":	0.16319
PID Reading (ppm):	<u>—</u>	3":	0.36717
Well Casing Diameter & Material:	<u>2"</u>	4":	0.65275
Total Well Depth (TD):	<u>16.83</u>	6":	1.46869
Static Water Level (DTW):	<u>5.12</u>	8":	2.61101
Static Product Level (DTP):	<u>—</u>	10":	4.07970
One Casing Volume (gal):	<u>1.7 x 3 = 5.1</u>	12":	5.87477
Start Purge (hrs):	<u>1522</u>		
End Purge (hrs):	<u>1555</u>		
Total Purge Time (min):	<u>33</u>		
Total Vol. Purged (gal/L):			

Purge Vol = 3 × PF × (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>2</u>

OBSERVATIONS/NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	









## GROUNDWATER SAMPLE LOG SHEET

page 1 of 2

Project Site Name: NWS Eagle  
 Project No.: ND100.174

Sample ID No.: 18-MW01  
 Sample Location: Colts Neck  
 Sampled By: AB, JG

SAMPLING DATA:	FINAL VALUES:						
Date: <u>8/17/06</u>	Color (Visual)	Ph (Standard)	S.C. (mS/cm)	Temp (°C)	Turbidity (NTU)	DO (mg/l)	ORP (MV)
Time: <u>1335</u>	<u>Clear</u>	<u>5.49</u>	<u>0.406</u>	<u>15.14</u>	<u>5.79</u>	<u>13.18</u>	<u>159.4</u>
Purge Method: <u>Low Flow</u>							

PURGE DATA:	
Date: <u>8/17/06</u>	Purge Calculations:
Purge Method: <u>Low Flow</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>      </u>	2": 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>4"</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>20.20</u>	<u>(4")</u> 0.65275      12": 5.87477
Static Water Level (DTW): <u>9.50</u>	
Static Product Level (DTP): <u>      </u>	
One Casing Volume (gal): <u>11 x 0.65 x 3 = 7.2 x 3 = 21.6</u>	
Start Purge (hrs): <u>1228</u>	
End Purge (hrs): <u>1335</u>	
Total Purge Time (min): <u>67</u>	
Total Vol. Purged (gal/L): <u>      </u>	Purge Vol = 3 x PF x (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VDA</u>	<u>6</u>
<u>625 + Naphthalene</u>	<u>      </u>	<u>Amber Liter</u>	<u>6</u>

**OBSERVATIONS/NOTES:**

Circle if Applicable: <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; padding: 2px 5px; margin-right: 20px;">MS/MSD</div>         Duplicate ID No.:       </div>	Signature(s):
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# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: No 100.170

Sample ID No.: 16-MW-08  
 Sample Location: Colts Neck, NJ  
 Sampled By: AB, JB

SAMPLING DATA:	FINAL VALUES:						
Date: <u>11/29/06</u>	Color	Ph	S.C.	Temp	Turbidity	DO	ORP
Time: <u>1525</u>	(Visual)	(Standard)	(mS/cm)	(°C)	(NTU)	(mg/l)	(MV)
Purge Method: <u>OED Micropurge</u>	<u>Clear</u>	<u>4.90</u>	<u>0.102</u>	<u>15.46</u>	<u>39.8</u>	<u>0.45</u>	<u>77.9</u>

PURGE DATA:	
Date: <u>11/29/06</u>	Purge Calculations:
Purge Method: <u>OED Micropurge</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>—</u>	2": <u>0.16319</u> 8": 2.61101
Well Casing Diameter & Material: <u>2" PVC</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>19.45</u>	4": 0.65275      12": 5.87477
Static Water Level (DTW): <u>9.63</u>	
Static Product Level (DTP): <u>—</u>	
One Casing Volume (gal): <u>9.8 x .16 x 1.57 x 3 x 4.7</u>	
Start Purge (hrs): <u>1423</u>	
End Purge (hrs): <u>1525</u>	
Total Purge Time (min): <u>62</u>	
Total Vol. Purged (gal/L):	Purge Vol = 3 x PF x (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
Method <u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>6</u>
Method <u>625 Naphthalene</u>	<u>Ø</u>	<u>1 L AG</u>	<u>4</u>

OBSERVATIONS/NOTES:

Circle if Applicable: <table style="width: 100%;"> <tr> <td style="width: 50%; text-align: center;">MS/MSD</td> <td style="width: 50%;">Duplicate ID No.: <u>DUP-2</u></td> </tr> </table>	MS/MSD	Duplicate ID No.: <u>DUP-2</u>	Signature(s):  
MS/MSD	Duplicate ID No.: <u>DUP-2</u>		





# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: NW18.170

Sample ID No.: 16-MW-10  
 Sample Location: Gilts Neck, NJ  
 Sampled By: AB, JB

SAMPLING DATA:	FINAL VALUES:						
Date: <u>11/29/06</u>	Color	Ph	S.C.	Temp	Turbidity	DO	ORP
Time: <u>1103</u>	(Visual)	(Standard)	(mS/cm)	(°C)	(NTU)	(mg/l)	(MV)
Purge Method: <u>QED Microprobe</u>	<u>clear</u>	<u>5.58</u>	<u>0.605</u>	<u>16.29</u>	<u>28.1</u>	<u>0.37</u>	<u>-10.6</u>

PURGE DATA:	
Date: <u>11/29/06</u>	Purge Calculations:
Purge Method: <u>QED Microprobe</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>—</u>	<u>2"</u> 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>2" PVC</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>18.94</u>	4": 0.65275      12": 5.87477
Static Water Level (DTW): <u>8.05</u>	
Static Product Level (DTP): <u>—</u>	
One Casing Volume (gal): <u>10.9 x 0.16 x 1.74 x 3 ≈ 9.2</u>	
Start Purge (hrs): <u>0956</u>	
End Purge (hrs): <u>1103</u>	
Total Purge Time (min): <u>67</u>	
Total Vol. Purged (gal/L):	Purge Vol = 3 × PF × (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
Method <u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>9</u>
Method <u>625 Naphthalene</u>	<u>—</u>	<u>1 L AG</u>	<u>6</u>

OBSERVATIONS/NOTES:

Circle if Applicable: <div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid black; border-radius: 50%; padding: 2px 5px; text-align: center;">MS/MSD</div> <div>Duplicate ID No.:</div> </div>	Signature(s):  
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# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: ND100,170

Sample ID No.: 16-MW-11  
 Sample Location: Cotts Neck, NJ  
 Sampled By: AB, JG

SAMPLING DATA:	FINAL VALUES:						
Date: <u>11/29/06</u>	Color (Visual)	Ph (Standard)	S.C. (mS/cm)	Temp (°C)	Turbidity (NTU)	DO (mg/l)	ORP (MV)
Time: <u>1347</u>	<u>clear</u>	<u>4.15</u>	<u>0.297</u>	<u>13.62</u>	<u>13.8</u>	<u>0.47</u>	<u>184.9</u>
Purge Method: <u>RED Micropurge</u>							

PURGE DATA:		Purge Calculations:	
Date: <u>11/29/06</u>	Purge Method: <u>RED Micropurge</u>	1": 0.04080	6": 1.46869
PID Reading (ppm): <u>                    </u>		2": 0.16319	8": 2.61101
Well Casing Diameter & Material: <u>2" PVC</u>		3": 0.36717	10": 4.07970
Total Well Depth (TD): <u>19.37</u>		4": 0.65275	12": 5.87477
Static Water Level (DTW): <u>2.74</u>			
Static Product Level (DTP): <u>                    </u>			
One Casing Volume (gal): <u>12.6 x 0.16 x 2.0 x 3 x 6.0</u>			
Start Purge (hrs): <u>1255</u>			
End Purge (hrs): <u>1347</u>			
Total Purge Time (min): <u>52</u>			
Total Vol. Purged (gal/L): <u>                    </u>			

Purge Vol = 3 × PF × (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
Method 624 + MTBE	HCl	VOA	3
Method 625 Naphthalene	Ø	1 L AG	2

OBSERVATIONS/NOTES:

Circle if Applicable:	Signature(s):		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">MS/MSD</td> <td style="width: 50%;">Duplicate ID No.:</td> </tr> </table>	MS/MSD	Duplicate ID No.:	
MS/MSD	Duplicate ID No.:		





# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: NO100, 170

Sample ID No.: 16-MW-15  
 Sample Location: Coits Neck, NJ  
 Sampled By: AB, JG

SAMPLING DATA:	FINAL VALUES:						
Date: <u>11/28/06</u>	Color (Visual)	Ph (Standard)	S.C. (mS/cm)	Temp (°C)	Turbidity (NTU)	DO (mg/l)	ORP (MV)
Time: <u>1302</u>	<u>clear</u>	<u>4.36</u>	<u>0.225</u>	<u>13.17</u>	<u>11.2</u>	<u>1.09</u>	<u>207.8</u>
Purge Method: <u>GED Microspurge</u>							

PURGE DATA:	
Date: <u>11/28/06</u>	Purge Calculations:
Purge Method: <u>GED Microspurge</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>---</u>	2": 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>2" PVC</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>11.40</u>	4": 0.65275      12": 5.87477
Static Water Level (DTW): <u>3.21</u>	
Static Product Level (DTP): <u>---</u>	
One Casing Volume (gal): <u>8.2 x 16 ≈ 1.3 x 3 ≈ 3.9</u>	
Start Purge (hrs): <u>1102</u>	
End Purge (hrs): <u>1302</u>	
Total Purge Time (min): <u>120</u>	
Total Vol. Purged (gal/L):	Purge Vol = 3 × PF × (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
<u>Method 624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>3</u>

OBSERVATIONS/NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	





# GROUNDWATER SAMPLE LOG SHEET

page 1 of 2

Project Site Name: NWS Earle  
 Project No.: NO100-170

Sample ID No.: 16-MW-24  
 Sample Location: Colts Neck, NJ  
 Sampled By: AB JB

SAMPLING DATA:	FINAL VALUES:						
Date: <u>11/28/06</u>	Color (Visual)	Ph (Standard)	S.C. (mS/cm)	Temp (°C)	Turbidity (NTU)	DO (mg/l)	ORP (MV)
Time: <u>1538</u>	<u>clear</u>	<u>4.87</u>	<u>0.098</u>	<u>12.74</u>	<u>14.4</u>	<u>0.62</u>	<u>76.0</u>
Purge Method: <u>AED Micropurge</u>							

PURGE DATA:		Purge Calculations:	
Date: <u>11/28/06</u>	Purge Method: <u>AED Micropurge</u>	1": 0.04080	6": 1.46869
PID Reading (ppm): <u>—</u>	Well Casing Diameter & Material: <u>2" PVC</u>	2": 0.16319	8": 2.61101
Total Well Depth (TD): <u>16.85</u>	Total Well Depth (TD): <u>16.85</u>	3": 0.36717	10": 4.07970
Static Water Level (DTW): <u>3.83</u>	Static Water Level (DTW): <u>3.83</u>	4": 0.65275	12": 5.87477
Static Product Level (DTP): <u>—</u>	Static Product Level (DTP): <u>—</u>		
One Casing Volume (gal): <u>13.0 x 0.16 x 2.1 x 3 x 6.3</u>	Start Purge (hrs): <u>1516</u>		
Start Purge (hrs): <u>1516</u>	End Purge (hrs): <u>1538</u>		
End Purge (hrs): <u>1538</u>	Total Purge Time (min): <u>22</u>		
Total Purge Time (min): <u>22</u>	Total Vol. Purged (gal/L):		
Total Vol. Purged (gal/L):		Purge Vol = 3 x PF x (DTW - TD)	

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
Method <u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>3</u>

**OBSERVATIONS/NOTES:**

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	





# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Nwas Earle  
 Project No.: NO100, 170

Sample ID No.: 16-MW-25  
 Sample Location: Colts Neck, NJ  
 Sampled By: AB, JG

SAMPLING DATA:	FINAL VALUES:						
Date: <u>11/28/06</u>	Color (Visual)	Ph (Standard)	S.C. (mS/cm)	Temp (°C)	Turbidity (NTU)	DO (mg/l)	ORP (MV)
Time: <u>1500</u>	<u>clear</u>	<u>4.16</u>	<u>0.078</u>	<u>13.14</u>	<u>11.4</u>	<u>1.64</u>	<u>100.2</u>
Purge Method: <u>DED Microperme</u>							

PURGE DATA:		Purge Calculations:	
Date: <u>11/28/06</u>	Purge Method: <u>DED Microperme</u>	1": 0.04080	6": 1.46869
PID Reading (ppm): _____	Well Casing Diameter & Material: <u>2" PVC</u>	2" 0.16319	8": 2.61101
Total Well Depth (TD): _____	Total Well Depth (TD): <u>5.42</u>	3": 0.36717	10": 4.07970
Static Water Level (DTW): _____	Static Water Level (DTW): <u>18.87</u>	4": 0.65275	12": 5.87477
Static Product Level (DTP): _____	One Casing Volume (gal): <u>13.4 x .16 ≈ 2.14 x 3 ≈ 6.42</u>		
Start Purge (hrs): <u>1415</u>	Start Purge (hrs): _____		
End Purge (hrs): <u>1500</u>	End Purge (hrs): _____		
Total Purge Time (min): <u>45</u>	Total Purge Time (min): _____		
Total Vol. Purged (gal/L): _____	Total Vol. Purged (gal/L): _____		

Purge Vol = 3 × PF × (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
<u>Methal 624 + MTBE</u>	<u>HCl</u>	<u>VDA</u>	<u>3</u>

OBSERVATIONS/NOTES:

Circle If Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	





# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: NO100.170

Sample ID No.: 18-MW-01  
 Sample Location: Galt Neck NS  
 Sampled By: AB, JG

SAMPLING DATA:	FINAL VALUES:						
Date: <u>11/29/06</u>	Color (Visual)	Ph (Standard)	S.C. (mS/cm)	Temp (°C)	Turbidity (NTU)	DO (mg/l)	ORP (MV)
Time: <u>0930</u>	<u>clear</u>	<u>5.78</u>	<u>0.119</u>	<u>15.94</u>	<u>26.4</u>	<u>4.33</u>	<u>181.4</u>
Purge Method: <u>GED Micropurge</u>							

PURGE DATA:		Purge Calculations:	
Date: <u>11/29/06</u>	Purge Method: <u>GED Micropurge</u>	1": 0.04080	6": 1.46869
PID Reading (ppm): <u>—</u>	Well Casing Diameter & Material: <u>4"</u>	2": 0.16319	8": 2.61101
Total Well Depth (TD): <u>20.14</u>	Total Well Depth (TD): <u>20.14</u>	3": 0.36717	10": 4.07970
Static Water Level (DTW): <u>8.08</u>	Static Water Level (DTW): <u>8.08</u>	4": <u>0.65275</u>	12": 5.87477
Static Product Level (DTP): <u>—</u>	Static Product Level (DTP): <u>—</u>		
One Casing Volume (gal): <u>12 x .65 x 7.8 x 3 = 23.4</u>	Start Purge (hrs): <u>0814</u>		
End Purge (hrs): <u>0930</u>	End Purge (hrs): <u>0930</u>		
Total Purge Time (min): <u>76</u>	Total Purge Time (min): <u>76</u>		
Total Vol. Purged (gal/L):	Total Vol. Purged (gal/L):	Purge Vol = 3 x PF x (DTW - TD)	

Analysis	Preservative	Container Requirements	Collected
Method <u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>9 6</u>
Method <u>625 Naphthalene</u>	<u>Ø</u>	<u>1 L AG</u>	<u>3 4</u>

**OBSERVATIONS/NOTES:**

Circle if Applicable: <u>MS/MSD</u>	Signature(s):
Duplicate ID No.: <u>DUP-1</u>	







# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: NO100.174

Sample ID No.: 16-MW-08  
 Sample Location: Wits Neck, NJ  
 Sampled By: JB, GF

SAMPLING DATA:	FINAL VALUES:						
Date: <u>2/7/07</u>	Color	Ph	S.C.	Temp	Turbidity	DO	ORP
Time: <u>1317</u>	(Visual)	(Standard)	(mS/cm)	(°C)	(NTU)	(mg/l)	(MV)
Purge Method: <u>RED Micropurge</u>	<u>Clear</u>	<u>5.39</u>	<u>0.499</u>	<u>12.96</u>	<u>10.82</u>	<u>0.54</u>	<u>48.8</u>

**PURGE DATA:**

Date: <u>2/6/07 / 2/7/07</u>	Purge Calculations:
Purge Method: <u>RED Micropurge</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>---</u>	2": 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>2" PVC</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>19.45</u>	4": 0.65275      12": 5.87477
Static Water Level (DTW): <u>9.68 (2/6/07)      10.79 (2/7/07)</u>	
Static Product Level (DTP): <u>---</u>	
One Casing Volume (gal): <u>9.77 x .16 x 1.56 x 3 x 4.7 gal</u>	
Start Purge (hrs): <u>1440 (2/6/07)      1218 (2/7/07)</u>	
End Purge (hrs): <u>1605      1317</u>	
Total Purge Time (min): <u>85      59</u>	
Total Vol. Purged (gal/L):	Purge Vol = 3 x PF x (DTW - TD)

**SAMPLE COLLECTION INFORMATION:**

Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VDA</u>	<u>2</u> + <u>FB-1</u>
<u>625</u>	<u>0</u>	<u>1L AG</u>	<u>2</u>

**OBSERVATIONS/NOTES:**

FB-1 @ 1720 2/6/07 after unsuccessful attempt at sampling 16-MW-08  
Pump in well making a gurgling noise during refill part of cycle

Circle if Applicable:	Signature(s):
MS/MSD	
Duplicate ID No.:	



PURGE DATA SHEET

Date: 2/6/07

Sample ID No.: 16-MW-08

+/- .2 3%      > 10%      10%      3%      +/- 10 mV

Time	Water Level	Flow	pH	Cond.	Turb.	DO	Temp.	ORP	Comments
(hrs)	(ft. below TOC)	(mL/min)	(SU)	(mS/cm)	(NTU)	(mg/L)	(Celsius)	(mV)	
1445		900	5.35	0.075	51100	1.75	12.47	89.5	
1450	11.70		5.17	0.092	71100	1.32	12.68	85.1	
1455	11.55	720	5.02	0.100	522	1.19	12.61	83.8	
1500	11.55		4.97	0.111	292	1.18	12.64	77.2	
1505	11.55		5.00	0.131	164	1.05	12.63	69.4	
1510			4.96	0.151	115	0.96	12.63	67.9	
1515			4.94	0.179	84.3	0.91	12.60	65.6	
1520			4.91	0.209	48.0	0.87	12.63	63.6	
1525			4.93	0.236	30.7	0.83	12.62	60.5	
1530			4.99	0.264	21.4	0.82	12.73	55.7	
1535			5.03	0.291	19.1	0.74	12.61	51.9	
1540			5.07	0.304	13.5	0.76	12.68	49.2	
1545			5.08	0.327	12.3	0.75	12.79	46.0	
1550			5.12	0.351	12.4	0.69	12.74	42.2	
1555			5.15	0.366	10.84	0.69	12.69	39.6	
1600			5.16	0.379	9.24	0.66	12.63	38.1	
1605	Pump not working, water tanks again								switched out CO <sub>2</sub> tank - 1st tank lasted ~3.5 hrs
1610	pack up for day @ 1710								water pumps out then stops after five minutes - switch CO <sub>2</sub> tanks again, begin pumping again @ 1630, stops again after unsuccessful attempt to set pump to work.

Signature(s): [Handwritten Signature]





# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: ND100.174

Sample ID No.: 16-MW-10  
 Sample Location: Colts Neck, NJ  
 Sampled By: JG, GF

SAMPLING DATA:	FINAL VALUES:						
Date: <u>2/7/07</u>	Color	Ph	S.C.	Temp	Turbidity	DO	ORP
Time: <u>0915</u>	(Visual)	(Standard)	(mS/cm)	(°C)	(NTU)	(mg/l)	(MV)
Purge Method: <u>OED Micropurge</u>	<u>Clear</u>	<u>5.60</u>	<u>0.624</u>	<u>13.37</u>	<u>44.8</u>	<u>0.58</u>	<u>-3.7</u>

**PURGE DATA:**

Date: <u>2/7/07</u>	Purge Calculations:
Purge Method: <u>OED Micropurge</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>—</u>	2": 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>2" PVC</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>18.94</u>	4": 0.65275      12": 5.87477
Static Water Level (DTW): <u>8.54</u>	
Static Product Level (DTP): <u>—</u>	
One Casing Volume (gal): <u>10.4 x .16 ≈ 1.66 x 3 ≈ 5.0 gal</u>	
Start Purge (hrs): <u>0757</u>	
End Purge (hrs): <u>0915</u>	
Total Purge Time (min): <u>78</u>	
Total Vol. Purged (gal/L):	Purge Vol = 3 × PF × (DTW - TD)

**SAMPLE COLLECTION INFORMATION:**

Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>8</u>
<u>625</u>	<u>Ø</u>	<u>1 L AG</u>	<u>8</u>

**OBSERVATIONS/NOTES:**

Circle if Applicable: <input checked="" type="checkbox"/> MS/MSD	Duplicate ID No.: <u>DUP-1</u>	Signature(s): 
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PURGE DATA SHEET

Date: 2/7/07

Sample ID No.: 16-MW-10

+/- .2    3%    10%    10%    3%    1/2 10mV

Time	Water Level	Flow	pH	Cond.	Turb.	DO	Temp.	ORP	Comments
(hrs)	(ft. below TOC)	(mL/min)	(SU)	(mS/cm)	(NTU)	(mg/L)	(Celsius)	(mV)	
0800	8.71	1200	5.81	0.606	>1200	1.92	12.86	2.5	
0805	8.75		5.56	0.615	71200	1.46	12.97	5.2	
0810	8.85		5.53	0.618	>1100	1.20	13.07	4.9	
0815	8.85		5.52	0.617	607	1.05	13.13	4.8	
0820			5.55	0.621	330	0.95	13.14	2.8	
0825			5.32	0.622	219	0.85	13.20	3.3	
0830			5.56	0.624	163	0.79	13.27	0.6	
0835			5.56	0.622	143	0.76	13.27	0.6	
0840			5.58	0.622	134	0.73	13.19	-0.7	
0845			5.59	0.625	106.8	0.67	13.27	-1.7	
0850			5.58	0.622	91.8	0.66	13.23	-2.0	
0855			5.60	0.623	76.1	0.67	13.30	-2.3	
0900			5.60	0.623	55.3	0.67	13.34	-2.6	
0905			5.61	0.623	48.6	0.62	13.28	-3.7	
0910			5.60	0.624	45.7	0.60	13.35	-3.2	
0915			5.60	0.624	44.8	0.58	13.37	-3.7	
0920	30								

Signature(s): [Signature]



# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: N0100.174

Sample ID No.: 16-MW-11  
 Sample Location: Colts Neck, NJ  
 Sampled By: JB, GF

SAMPLING DATA:	FINAL VALUES:						
Date: <u>2/8/07</u>	Color	Ph	S.C.	Temp	Turbidity	DO	ORP
Time: <u>1239</u>	(Visual)	(Standard)	(mS/cm)	(°C)	(NTU)	(mg/l)	(MV)
Purge Method: <u>RED Micropurge</u>	<u>Clear</u>	<u>4.13</u>	<u>0.384</u>	<u>4.69</u>	<u>10.72</u>	<u>0.86</u>	<u>188.6</u>

**PURGE DATA:**

Date: <u>2/8/07</u>	Purge Calculations:
Purge Method: <u>RED Micropurge</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): _____	2": 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>2" PVC</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>15.37</u>	4": 0.65275      12": 5.87477
Static Water Level (DTW): <u>2.99</u>	
Static Product Level (DTP): _____	
One Casing Volume (gal): <u>12.58 x .16 x 1.98 x 3 x 5.9 gal</u>	
Start Purge (hrs): <u>1149</u>	
End Purge (hrs): <u>1239</u>	
Total Purge Time (min): <u>50</u>	
Total Vol. Purged (gal/L): _____	Purge Vol = 3 x PF x (DTW - TD)

**SAMPLE COLLECTION INFORMATION:**

Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VDA</u>	<u>2 + FB-3 = 4</u>
<u>625</u>	<u>Ø</u>	<u>1 L AG</u>	<u>2 + FB-3 = 4</u>

**OBSERVATIONS/NOTES:**

FB-3 collected @ 1245

Circle if Applicable:	Duplicate ID No.:	Signature(s): <u>[Signature]</u>
MS/MSD		







PURGE DATA SHEET

Date: 2/6/07

Sample ID No.: 16-MW-15

Time	Water Level	Flow	pH	Cond.	Turb.	DO	Temp.	ORP	Comments
(hrs)	(ft. below TOC)	(mL/min)	(SU)	(mS/cm)	(NTU)	(mg/L)	(Celsius)	(mV)	
1131	3.85	55	6.83	0.225	6.05	9.79	3.00	229.7	
1136	3.86		6.42	0.190	5.95	9.03	3.20	241.7	
1141	3.90		5.83	0.172	6.71	7.92	3.86	251.9	
1146	3.89		5.37	0.171	6.10	6.89	4.06	257.2	
1151	3.85		4.84	0.168	5.00	5.91	4.34	259.3	
1156	3.85		4.61	0.167	5.73	5.19	4.43	257.4	
1201	3.85		4.60	0.167	5.48	4.49	4.56	256.9	
1206			4.50	0.166	4.63	4.36	4.48	256.9	
1211			4.37	0.166	4.41	3.98	4.64	256.4	
1216			4.33	0.166	4.80	3.69	4.63	255.9	
1221			4.32	0.164	5.15	3.57	4.44	254.9	
1226			4.31	0.166	4.70	3.59	4.48	240.9	
1231			4.30	0.167	3.90	3.27	4.28	244.0	
1236			4.31	0.168	3.47	3.17	4.96	245.0	
1241			4.30	0.166	3.28	3.01	4.77	245.6	
1246			4.31	0.165	3.28	2.92	4.79	246.2	
1251			4.31	0.164	3.14	2.61	4.93	246.6	
1256			4.32	0.165	3.01	2.54	4.83	247.1	
1301			4.32	0.168	2.35	2.40	4.95	246.2	
1306			4.32	0.164	2.07	2.42	4.91	246.9	
1311			4.31	0.167	2.11	2.33	5.04	247.0	
1316			4.31	0.167	1.88	2.62	4.99	246.9	
1320			4.31	0.167	0.65	2.45	5.05	247.7	

Signature(s): [Signature]



GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: NO100.174

Sample ID No.: 16-MW-24  
 Sample Location: Colts Neck, NJ  
 Sampled By: JB, GF

SAMPLING DATA:		FINAL VALUES:					
Date: <u>2/7/07</u>	Color	Ph	S.C.	Temp	Turbidity	DO	ORP
Time: <u>1550</u>	(Visual)	(Standard)	(mS/cm)	(°C)	(NTU)	(mg/l)	(MV)
Purge Method: <u>GED Micropurge</u>	<u>Clear</u>	<u>4.93</u>	<u>0.104</u>	<u>9.87</u>	<u>2.62</u>	<u>0.76</u>	<u>110.6</u>

PURGE DATA:

Date: <u>2/7/07</u>	Purge Calculations:
Purge Method: <u>GED Micropurge</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>—</u>	2": 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>2" PVC</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>16.85</u>	4": 0.65275      12": 5.87477
Static Water Level (DTW): <u>4.01</u>	
Static Product Level (DTP): <u>—</u>	
One Casing Volume (gal): <u>12.84 x .16 x 2.05 x 3 x 6.2 gal</u>	
Start Purge (hrs): <u>1505</u>	
End Purge (hrs): <u>1550</u>	
Total Purge Time (min): <u>45</u>	
Total Vol. Purged (gal/L):	Purge Vol = 3 x PF x (DTW - TD)

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>2 + FB-2</u>

OBSERVATIONS/NOTES:  
Collected FB-2 (624 + 625) after last well @ 1620  
Discharge tubing has frozen column of ice ~ 5ft long - pull out pump/tubing + let ice thaw before purging

Circle if Applicable:		Signature(s): <u>[Signature]</u>
MS/MSD	Duplicate ID No.:	





# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
Project No.: NO100.174

Sample ID No.: 16-MW-25  
Sample Location: Colts Neck, NJ  
Sampled By: JG, BF

SAMPLING DATA:		FINAL VALUES:						
Date: <u>2/8/07</u>		Color (Visual)	Ph (Standard)	S.C. (mS/cm)	Temp (°C)	Turbidity (NTU)	DO (mg/l)	ORP (MV)
Time: <u>1102</u>		<u>clear</u>	<u>4.47</u>	<u>0.086</u>	<u>9.44</u>	<u>10.01</u>	<u>1.91</u>	<u>130.4</u>
Purge Method: <u>OED Micropax</u>								

**PURGE DATA:**

Date: <u>2/8/07</u>	Purge Calculations:
Purge Method: <u>OED Micropax</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>—</u>	2": 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>2" PVC</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>16.87</u>	4": 0.65275      12": 5.87477
Static Water Level (DTW): <u>6.21</u>	
Static Product Level (DTP): <u>—</u>	
One Casing Volume (gal): <u>12.166 x .16 x 2.0 x 3 x 6.0 gal</u>	
Start Purge (hrs): <u>0901</u>	
End Purge (hrs): <u>1102</u>	
Total Purge Time (min): <u>121</u>	
Total Vol. Purged (gal/L):	Purge Vol = 3 x PF x (DTW - TD)

**SAMPLE COLLECTION INFORMATION:**

Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>2</u>

**OBSERVATIONS/NOTES:**  
color of purge water blue-green w/ sulfur malodor when 1st began purging

Circle if Applicable:		Signature(s) <u>[Signature]</u>
MS/MSD	Duplicate ID No.:	



PURGE DATA SHEET

Date: 2/8/07

Sample ID No.: 16-MW-25

Time	Water Level	Flow	pH	Cond.	Turb.	DO	Temp.	ORP	Comments
(hrs)	(ft. below TOC)	(mL/min)	(SU)	(mS/cm)	(NTU)	(mg/L)	(Celsius)	(mV)	
0906	6.30	690	3.99	0.083		2.12	8.83	148.6	
0916	Missed sampling while reconnecting tubing - stopped purging @ 0911, restarted @ 0916								
0916	6.30		4.11	0.081	63.2	2.60	9.02	146.3	175 µl
0921	6.30		4.04	0.081	45.6	1.98	9.44	165.3	
0926			4.09	0.080	41.0	2.01	9.46	160.5	3.5 µl
0931			4.16	0.080	25.8	2.04	9.82	162.4	
0936			4.25	0.081	22.4	2.03	9.72	149.9	5.25 µl
0941			4.31	0.081	*	2.09	9.73	153.3	* changed gas tank ~ 9:42
0946			4.02	0.079	31.9	2.15	8.89	167.2	7.0 µl
0951			4.19	0.084	26.1	2.10	9.42	163.4	
0956			4.14	0.082		2.09	9.50	168.5	
1006	pump stopped - pump not working - switch out air tanks, still not working								
1006	bring micropurge into vent to warm up the lines, restart purging @ 1042								
1042			4.12	0.092	9.74	2.05	8.67	170.2	
1047			4.55	0.091	7.66	1.80	9.02	128.8	
1052			4.40	0.085	9.04	1.83	9.16	139.3	
1057			4.48	0.084	9.82	1.90	9.44	135.7	
1102			4.47	0.086	10.01	1.91	9.44	130.4	
1107									

Signature(s): [Signature]



# GROUNDWATER SAMPLE LOG SHEET

page 1 of 2

Project Site Name: NWS Earle  
 Project No.: N0100.174

Sample ID No.: 18-MW-01  
 Sample Location: 0173 Neck, NJ  
 Sampled By: Jb. GP

SAMPLING DATA:	FINAL VALUES:						
Date: <u>2/7/07</u>	Color	Ph	S.C.	Temp	Turbidity	DO	ORP
Time: <u>1136</u>	(Visual)	(Standard)	(mS/cm)	(°C)	(NTU)	(mg/l)	(MV)
Purge Method: <u>GED Micropurge</u>	<u>Clear</u>	<u>5.51</u>	<u>0.495</u>	<u>13.83</u>	<u>10.65</u>	<u>2.17</u>	<u>109.0</u>

**PURGE DATA:**

Date: <u>2/7/07</u>	Purge Calculations:
Purge Method: <u>GED Micropurge</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>—</u>	2": 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>4"</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>20.14</u>	<u>4"</u> : 0.65275      12": 5.87477
Static Water Level (DTW): <u>8.62</u>	
Static Product Level (DTP): <u>—</u>	
One Casing Volume (gal): <u>11.5 x .65 x 7.5 x 3 ≈ 22.5, 1</u>	
Start Purge (hrs): <u>0956</u>	
End Purge (hrs): <u>1136</u>	
Total Purge Time (min): <u>100</u>	
Total Vol. Purged (gal/L):	Purge Vol = 3 × PF × (DTW - TD)

**SAMPLE COLLECTION INFORMATION:**

Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VDA</u>	<u>4</u>
<u>625</u>	<u>Ø</u>	<u>1 L AG</u>	<u>4</u>

**OBSERVATIONS/NOTES:**

Circle if Applicable:	Signature(s):
MS/MSD	<u>[Signatures]</u>
Duplicate ID No.: <u>DUP-2</u>	







## GROUNDWATER SAMPLE LOG SHEET

page 1 of 2

Project Site Name: NWS Earle  
 Project No.: ND100.174

Sample ID No.: 16-MW-25  
 Sample Location: Gib Neck, NJ  
 Sampled By: JG, GF

**SAMPLING DATA:**

**FINAL VALUES:**

Date: <u>4/30/07</u>	Color (Visual)	Ph (Standard)	S.C. (mS/cm)	Temp (°C)	Turbidity (NTU)	DO (mg/l)	ORP (MV)
Time: <u>1550</u>	<u>Clear</u>	<u>3.64</u>	<u>0.057</u>	<u>10.25</u>	<u>9.93</u>	<u>2.17</u>	<u>150.1</u>
Purge Method: <u>GED Micropurge</u>							

**PURGE DATA:**

Date: <u>4/30/07</u>	Purge Calculations:
Purge Method: <u>GED Micropurge</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>---</u>	2": 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>2" PVC</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>18.70</u>	4": 0.65275      12": 5.87477
Static Water Level (DTW): <u>5.10</u>	
Static Product Level (DTP): <u>---</u>	
One Casing Volume (gal): <u>13.6 x .16 x 2.18 x 3 x 6.54</u>	
Start Purge (hrs): <u>1450</u>	
End Purge (hrs): <u>1550</u>	
Total Purge Time (min): <u>40 45</u>	
Total Vol. Purged (gal/L): <u>~ 8 gal</u>	Purge Vol = 3 x PF x (DTW - TD)

**SAMPLE COLLECTION INFORMATION:**

Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>2</u>

**OBSERVATIONS/NOTES:**

Tubing pinched near pump  
FB-1 collected @ 1615

**Circle if Applicable:**

Signature(s):

MS/MSD

Duplicate ID No.:

*[Handwritten Signature]*



PURGE DATA SHEET

Date: 4/30/07

Sample ID No.: 16-MW-25

Time (hrs)	Water Level (ft. below TOC)	Flow (mL/min)	pH (SU)	Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1455	5.05	660	5.11	0.043	89.2	4.13	10.66	107.4	
1500	4.50		4.19	0.045	51.4	3.39	10.59	114.3	~1.7 g/d
1505			3.94	0.049	29.0	2.93	10.29	135.6	
1510			3.80	0.051	22.1	2.76	10.22	141.6	~3.4 g/d
1515			3.76	0.053	21.2	2.64	10.21	143.9	
1520			3.73	0.055	17.4	2.55	10.19	146.3	~5.1 g/d
1525									
1530									
1535									
1540									
1545									
1550									

Signature(s): [Signature]



# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Fark  
Project No.: NO100, 174

Sample ID No.: 16-MW-15  
Sample Location: Gitz Neck, NJ  
Sampled By: SB, GF

**SAMPLING DATA:****FINAL VALUES:**

Date: <u>5/1/07</u>	Color (Visual)	Ph (Standard)	S.C. (mS/cm)	Temp (°C)	Turbidity (NTU)	DO (mg/l)	ORP (MV)
Time: <u>1250</u>	<u>clear</u>	<u>4.67</u>	<u>0.187</u>	<u>13.03</u>	<u>1.77</u>	<u>1.51</u>	<u>119.9</u>
Purge Method: <u>AED Micropurge</u>							

**PURGE DATA:**

Date: 5/1/07  
Purge Method: AED Micropurge  
PID Reading (ppm): —  
Well Casing Diameter & Material: 2" PVC  
Total Well Depth (TD): 11.38  
Static Water Level (DTW): 3.51  
Static Product Level (DTP): —  
One Casing Volume (gal): 7.87 x .16 ≈ 1.26 x 3 ≈ 3.8 gal  
Start Purge (hrs): 1050  
End Purge (hrs): 1250  
Total Purge Time (min): 120  
Total Vol. Purged (gal/L): ~1.7 gal

**Purge Calculations:**  
~~1"~~ 0.04080      6": 1.46869  
~~2"~~ 0.16319      8": 2.61101  
3": 0.36717      10": 4.07970  
4": 0.65275      12": 5.87477

Purge Vol = 3 × PF × (DTW - TD)

**SAMPLE COLLECTION INFORMATION:**

Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>2 x 3 = 6</u>

**OBSERVATIONS/NOTES:**

Collected 16-SW-01 @ 1150 + 16-SW-02 @ 1155

**Circle if Applicable:**

MS/MSD

Duplicate ID No.:

Signature(s):





# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: NO100,174

Sample ID No.: 16-MW-24  
 Sample Location: Golts Neck, NJ  
 Sampled By: JG, GF

SAMPLING DATA:	FINAL VALUES:						
Date: <u>5/1/07</u>	Color	Ph	S.C.	Temp	Turbidity	DO	ORP
Time: <u>Clear</u>	(Visual)	(Standard)	(mS/cm)	(°C)	(NTU)	(mg/l)	(MV)
Purge Method: <u>RED Micropurge</u>	<u>Clear</u>	<u>5.20</u>	<u>0.083</u>	<u>8.85</u>	<u>4.20</u>	<u>1.17</u>	<u>65.0</u>

PURGE DATA:	
Date: <u>5/1/07</u>	Purge Calculations:
Purge Method: <u>RED Micropurge</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>—</u>	② 2": 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>2" PVC</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>16.88</u>	4": 0.65275      12": 5.87477
Static Water Level (DTW): <u>4.00</u>	
Static Product Level (DTP): <u>—</u>	
One Casing Volume (gal): <u>14.9 x 16 ≈ 2.38 x 3 ≈ 7.1 gal</u>	
Start Purge (hrs): <u>1312</u>	
End Purge (hrs): <u>1347</u>	
Total Purge Time (min): <u>35</u>	
Total Vol. Purged (gal/L): <u>~14</u>	Purge Vol = 3 × PF × (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
<u>G24 + MTBE</u>	<u>HCl</u>	<u>VofA</u>	<u>2</u>

OBSERVATIONS/NOTES:

Circle if Applicable:		Signature(s) 
MS/MSD	Duplicate ID No.:	





# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
Project No.: No 100, 174

Sample ID No.: 16-MW-11  
Sample Location: 6175 Neck, NJ  
Sampled By: SB, GF

SAMPLING DATA:		FINAL VALUES:						
Date: <u>5/1/07</u>	Color	Ph	S.C.	Temp	Turbidity	DO	ORP	
Time: <u>1517</u>	(Visual)	(Standard)	(mS/cm)	(°C)	(NTU)	(mg/l)	(MV)	
Purge Method: <u>RED Micropurge</u>	<u>Clear</u>	<u>4.25</u>	<u>0.379</u>	<u>10.45</u>	<u>2.74</u>	<u>0.84</u>	<u>122.1</u>	

PURGE DATA:		Purge Calculations:	
Date: <u>5/1/07</u>	Purge Method: <u>RED Micropurge</u>	1": 0.04080	6": 1.46869
PID Reading (ppm): <u>---</u>	Well Casing Diameter & Material: <u>2" PVC</u>	<u>(2")</u> 0.16319	8": 2.61101
Total Well Depth (TD): <u>15.35</u>	Static Water Level (DTW): <u>2.62</u>	3": 0.36717	10": 4.07970
Static Product Level (DTP): <u>---</u>	One Casing Volume (gal): <u>12.7 x .16 x 2.03 x 3 x 6.1 gal</u>	4": 0.65275	12": 5.87477
Start Purge (hrs): <u>1407</u>	Total Purge Time (min): <u>65</u>	Purge Vol = 3 x PF x (DTW - TD)	
End Purge (hrs): <u>1517</u>	Total Vol. Purged (gal/L): <u>~120</u>		

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>2 x 5 = 10</u>
<u>625</u>	<u>Ø</u>	<u>1 L AG</u>	<u>2 x 5 = 10</u>

OBSERVATIONS/NOTES:  
  
FB-2 collected @ 1440

Circle if Applicable: MS/MSD Duplicate ID No.: DUP-1 Signature(s): [Signature]



PURGE DATA SHEET

Date: 5/1/07

Sample ID No.: 16-MW-11

Time	Water Level	Flow	pH	Cond.	Turb.	DO	Temp.	ORP	Comments	
(hrs)	(ft. below TOC)	(mL/min)	(SU)	(mS/cm)	(NTU)	(mg/L)	(Celsius)	(mV)		
1412	2.80	1480	4.25	0.392	339	2.23	10.46	135.2		
1417	2.80		4.20	0.388	263	1.60	10.43	136.4		
1422	2.80		4.21	0.385	85.9	1.22	10.46	135.2		
1427			tank emptied - replaced w/ new @ 1432							
1432			4.26	0.383	53.7	1.26	10.46	128.6		
1437			4.25	0.385	28.9	1.12	10.47	127.9		
1442			4.26	0.385	15.1	1.06	10.48	126.9		
1447			4.27	0.384	10.16	0.99	10.44	123.6		
1452			4.25	0.383	6.69	0.95	10.47	125.2		
1457			4.24	0.382	4.47	0.92	10.47	125.9		
1502			4.29	0.380	3.20	0.87	10.48	127.8		
1507			4.32	0.380	2.81	0.90	10.45	121.5		
1512			4.26	0.380	2.23	0.88	10.42	121.0		
1517			4.25	0.379	2.74	0.84	10.45	122.1		
1522										

Signature(s): [Signature]



# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: NO100,174

Sample ID No.: 16-MW-08  
 Sample Location: 60th Neck, NJ  
 Sampled By: JG, GF

SAMPLING DATA:	FINAL VALUES:						
Date: <u>5/2/07</u>	Color	Ph	S.C.	Temp	Turbidity	DO	ORP
Time: <u>0920</u>	(Visual)	(Standard)	(mS/cm)	(°C)	(NTU)	(mg/l)	(MV)
Purge Method: <u>RED MicroPurge</u>	<u>Clear</u>	<u>5.69</u>	<u>0.402</u>	<u>11.42</u>	<u>15.6</u>	<u>1.06</u>	<u>68.7</u>

PURGE DATA:	
Date: <u>5/2/07</u>	Purge Calculations:
Purge Method: <u>RED MicroPurge</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>—</u>	<u>0</u> " 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>2" PVC</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>19.45</u>	4": 0.65275      12": 5.87477
Static Water Level (DTW): <u>9.78</u>	
Static Product Level (DTP): <u>—</u>	
One Casing Volume (gal): <u>9.67 x 1.6 x 1.55 x 3 ≈ 4.7 gal</u>	
Start Purge (hrs): <u>0810</u>	
End Purge (hrs): <u>0920</u>	
Total Purge Time (min): <u>70</u>	
Total Vol. Purged (gal/L):	Purge Vol = 3 × PF × (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>2x2 = 4</u>
<u>625</u>	<u>Ø</u>	<u>1 L AG</u>	<u>2x2 = 4</u>

**OBSERVATIONS/NOTES:**

<b>Circle if Applicable:</b>	<b>Signature(s):</b>		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">MS/MSD</td> <td style="width: 50%;">Duplicate ID No.: <u>DUP-2</u></td> </tr> </table>	MS/MSD	Duplicate ID No.: <u>DUP-2</u>	
MS/MSD	Duplicate ID No.: <u>DUP-2</u>		





# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: ALWS Earle  
 Project No.: AD100,174

Sample ID No.: 16-MW-10  
 Sample Location: Colls Neck, NJ  
 Sampled By: JG, GF

SAMPLING DATA:	FINAL VALUES:						
Date: <u>5/2/07</u>	Color (Visual)	Ph (Standard)	S.C. (mS/cm)	Temp (°C)	Turbidity (NTU)	DO (mg/l)	ORP (MV)
Time: <u>1041</u>	<u>Clear</u>	<u>5.76</u>	<u>0.530</u>	<u>11.95</u>	<u>20.6</u>	<u>0.83</u>	<u>44.4</u>
Purge Method: <u>RED Micropurge</u>							

PURGE DATA:	
Date: <u>5/2/07</u>	Purge Calculations:
Purge Method: <u>RED Micropurge</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): _____	2": 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>2" PVC</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>19.00</u>	4": 0.65275      12": 5.87477
Static Water Level (DTW): <u>7.45</u>	
Static Product Level (DTP): _____	
One Casing Volume (gal): <u>11.55V, 16 x 1.86 x 3 = 5.6 gal</u>	
Start Purge (hrs): <u>0946</u>	
End Purge (hrs): <u>1041</u>	
Total Purge Time (min): <u>55</u>	
Total Vol. Purged (gal/L): _____	Purge Vol = 3 x PF x (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
<u>6241 MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>2 x 2 = 4</u>
<u>025</u>	<u>Ø</u>	<u>1 L AG</u>	<u>2 x 2 = 4</u>

**OBSERVATIONS/NOTES:**  
 FB-3 collected @ 1030

Circle if Applicable:		Signature(A): 
MS/MSD	Duplicate ID No.:	





# GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWS Earle  
 Project No.: N0100,174

Sample ID No.: 18-MW-01  
 Sample Location: Glits Neck, NJ  
 Sampled By: GF, JG

SAMPLING DATA:	FINAL VALUES:						
Date: <u>5/2/07</u>	Color	Ph	S.C.	Temp	Turbidity	DO	ORP
Time: <u>1217</u>	(Visual)	(Standard)	(mS/cm)	(°C)	(NTU)	(mg/l)	(MV)
Purge Method: <u>GED Mespurge</u>	<u>clear</u>	<u>5.78</u>	<u>0.115</u>	<u>11.74</u>	<u>37.5</u>	<u>2.48</u>	<u>60.9</u>

PURGE DATA:	
Date: <u>5/2/07</u>	Purge Calculations:
Purge Method: <u>GED Mespurge</u>	1": 0.04080      6": 1.46869
PID Reading (ppm): <u>—</u>	2": 0.16319      8": 2.61101
Well Casing Diameter & Material: <u>4" steel</u>	3": 0.36717      10": 4.07970
Total Well Depth (TD): <u>20.28</u>	<u>4"</u> 0.65275      12": 5.87477
Static Water Level (DTW): <u>7.35</u>	
Static Product Level (DTP): <u>—</u>	
One Casing Volume (gal): <u>12.93 x 1.65 = 8.443 x 25.2 gal</u>	
Start Purge (hrs): <u>1057</u>	
End Purge (hrs): <u>1217</u>	
Total Purge Time (min): <u>80</u>	
Total Vol. Purged (gal/L): <u>~25.6</u>	Purge Vol = 3 × PF × (DTW - TD)

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
<u>624 + MTBE</u>	<u>HCl</u>	<u>VOA</u>	<u>2</u>
<u>625</u>	<u>—</u>	<u>1 L AG</u>	<u>2</u>

OBSERVATIONS/NOTES:

Circle if Applicable:		Signature(s): 
MS/MSD	Duplicate ID No.:	



PURGE DATA SHEET

Date: 5/2/07

Sample ID No.: 18-MW-01

Time	Water Level	Flow	pH	Cond.	Turb.	DO	Temp.	ORP	Comments
(hrs)	(ft. below TOC)	(mL/min)	(SU)	(mS/cm)	(NTU)	(mg/L)	(Celsius)	(mV)	
1102	7.70	1280	6.05	0.083	138	6.71	11.32	48.4	
1107	7.85		5.95	0.083	91.2	6.06	11.33	51.3	~9.2 gal
1112	7.85		5.93	0.084	72.1	5.54	11.46	52.2	
1117	7.85		5.91	0.084	68.6	5.11	11.49	53.3	~6.4 gal
1122			5.88	0.085	65.3	4.56	11.52	54.9	
1127			5.88	0.085	66.8	4.31	11.56	56.7	~12.6 gal - change out CO <sub>2</sub> tank @ 1128
1132			5.85	0.085	70.7	4.26	11.56	57.6	
1137			5.84	0.087	61.9	3.93	11.55	58.4	~12.8 gal
1142			5.83	0.089	57.3	3.56	11.65	59.1	
1147			5.82	0.092	52.6	3.53	11.59	59.6	~16 gal
1152			5.81	0.093	50.7	3.30	11.62	60.4	
1157			5.81	0.102	48.6	3.12	11.57	57.6	19.2 gal
1202			5.78	0.105	45.3	3.01	11.61	56.5	
1207			5.78	0.114	41.3	2.69	11.68	59.5	22.4 gal
1212			5.78	0.114	40.4	2.52	11.73	60.7	
1217			5.78	0.115	51.5	2.48	11.74	60.9	25.6 gal

Signature(s): [Handwritten Signature]