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## Phase II Environmental Site Assessment Report

ExxonMobil Station #2-6140  
9901 Georgetown Pike  
Great Falls, Virginia

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## 1.0 INTRODUCTION

ExxonMobil Environmental Services Company on behalf of ExxonMobil Corporation (ExxonMobil) retained Environmental Resolutions, Inc. (ERI) to complete a Phase II Environmental Site Assessment (Phase II ESA) of ExxonMobil Station #2-6140 located at 9901 Georgetown Pike, Great Falls, Virginia (the Property). The Property is referenced as ExxonMobil Station #2-6140, and consists of an active retail petroleum fuel station and a convenience store that also operates a vehicle service and repair facility.

The purpose of the Phase II ESA was to evaluate the Recognized Environmental Conditions (RECs) previously identified in the December 2008 *Phase I Environmental Site Assessment* (Phase I ESA) prepared by EMG of Hunt Valley, Maryland. These RECs were identified as:

- REC-1: Three (3) active underground storage tanks (USTs) including one (1) 12,000-gallon gasoline UST and two (2) 10,000-gallon gasoline USTs, and a dispenser island area are currently used at the Property for storage of petroleum fuels for retail sale. The tanks are reported to have been operational since 1989. Considering the long-term use of these USTs at the Property, the potential exists for adverse impact to the Property. Furthermore, a strong gasoline odor was noted throughout the Property;
- REC-2: Two (2) hydraulic lifts are currently in use at the Property; and
- REC-3: According to review of available information, four (4) 1,000-gallon used-oil USTs formerly in use at the Property were removed from the ground (one in 1995; three unknown). One (1) 1,000-gallon heating oil UST, formerly in use at the Property, was removed from the ground in 1995. The former locations and conditions of these USTs could not be identified.

Further information on each REC is contained in the Phase I ESA report. Based on the identification of the above-referenced RECs, the following scope of work (SOW) was developed and approved:

- A site-wide ground penetrating radar (GPR) survey;
- Installation of five (5) groundwater monitoring wells;
- Collection and laboratory analysis of soil samples for volatile organic compounds (VOCs) using EPA Method 8260B; and total petroleum hydrocarbons – gasoline range organics/diesel range organics (TPH-GRO/DRO) using EPA Method 8015; and
- Collection and laboratory analysis of aqueous groundwater samples for VOCs using EPA Method 8260B; and TPH-GRO/DRO/oil range organics (ORO) using EPA Method 8015.

Subject to the limitations listed in section 6.0, the objectives of this evaluation were:

- 1) To provide sufficient information regarding the nature and extent of contamination to assist in making informed business decisions about the property, and
- 2) To provide the level of knowledge necessary to satisfy the innocent purchaser defense under Comprehensive Environmental Response Compensation Liability Act (CERCLA).

Unless otherwise noted, the Phase II ESA was prepared in accordance with ASTM E 1903-97, *Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process*. This Phase II ESA documents the results of the implementation of this approved SOW.

## 2.0 BACKGROUND

### 2.1 Site Description and Features

The Property is located at 9901 Georgetown Pike in Great Falls, Virginia. **Figure 1** shows the approximate location of the Property on the United States Geological Survey (USGS) topographic quadrangle map for Vienna, Virginia. The approximate geographical coordinates for the Property are 38 degrees, 59 minutes, 53.2 seconds North (Latitude) by 77 degrees 17 minutes, 18.2 seconds West (Longitude). The approximate ground surface elevation is about 343 feet above mean sea level (AMSL).

The 0.63-acre property is currently used as an active petroleum filling station and includes a convenience store and an automotive repair facility. There are four (4) dispenser islands with four (4) double-sided multi-product dispensers on the Property. The UST field contains three (3) USTs consisting of one (1) 12,000-gallon gasoline UST and two (2) 10,000-gallon gasoline USTs, and is located near the southeast corner of the Property. Two (2) tank field observation wells provide monitoring points at the northwest and northeast corners of the tank field. **Figure 2** shows a Site Map with the approximate locations of the existing site features at the time of the Phase I ESA site reconnaissance.

The Property is zoned commercial by the City of Great Falls, Virginia. The surrounding properties are mixed commercial along the Georgetown Pike corridor. **Figure 3** shows a Local Area Map depicting the area within a 300-meter radius surrounding the Property, based on field information collected from the Phase I ESA site reconnaissance and property research. According to the Phase I ESA, there is one (1) reported public water-supply (PWS) well located within a one-eighth mile radius of the Property, to the southeast. This PWS well is also listed on the Virginia Wells database as plotted between one-eighth and one-quarter mile north-northwest of the Property. In addition, there is one (1) private potable well located between one-half and one mile north of the Property; further information is contained in the Phase I ESA report about the aforementioned wells. Based on ERI's site reconnaissance and interviews with the station manager, there is one (1) private potable well located in the northeast corner of the property. According to the station manager, the well services the station.

### 2.2 Physical Setting

The Property is located in the Outer Piedmont subprovince of Virginia, in the Piedmont physiographic province. The anticipated predominant soil type in the area was identified as Mather Gorge Formation, Schist. The bedrock stratigraphic unit underlying the unconsolidated soil was identified as a portion of the Cambrian System of the Paleozoic Era (Virginia Division of Mineral Resources, 1993).

Soils encountered during the current investigation consisted predominantly of silt with varying amounts of clay and sand. Gravel was encountered in boring MW1 at a depth of 30 feet bgs. Refusal was encountered at approximately 10.3 feet below ground surface (bgs) in soil boring SB4. Bedrock was not encountered during drilling. The current investigation extended to a maximum depth of 42 feet bgs. Groundwater was encountered at depths ranging from 30 to 36 feet bgs.

Based on review of the topographic mapping and on the available background information, the local groundwater flow was anticipated to be to the east. Actual geologic and hydrogeologic conditions observed during the Phase II ESA field activities indicated apparent groundwater flow to be to the southeast. Groundwater elevations observed during the July 24, 2009 groundwater sampling event can be found in **Table 2**. **Figure 4** provides a groundwater monitoring map, which includes contour lines used to calculate a hydraulic gradient of 0.027 feet per foot.

### **2.3 Adjacent Property Land Use**

The immediately adjoining properties are summarized as follows:

- The Property is bordered to the north by Georgetown Pike followed by a multi-tenant commercial building occupied by Great Falls Cleaners, Mediterranean Café, Romantica Deli and Pizza and 7-Eleven.
- The Property is bordered to the south by an office building.
- The Property is bordered to the east by Walker Road followed by a Shell gasoline station and vehicle repair facility. The Shell station was identified as having two closed Pollution Complaints and was undergoing subsurface construction activities at the time the Phase II activities were conducted at the Exxon station.
- The Property is bordered to the west by a multi-tenant commercial facility occupied by Paul's Shoe Repair, EMS, Inc., The Superior Cleaners, The Vacuum Center and Great Falls Eye Care.

### **2.4 Existing/Former Environmental Cases**

The Property has had one (1) historic pollution complaint (PC), which is currently reported as closed with No Further Action required by the Virginia Department of Environmental Quality (VADEQ). The PC number (94-3879) was opened on May 12, 1994 into the Leaking Underground Storage Tanks (LUST) program for a suspected release due to the presence of water in the plus grade gasoline UST. Further investigation revealed that the water had accumulated in the UST due to normal operating conditions. The water was removed and an inventory reconciliation verified the quantity of gasoline in the UST. Based on this information, the VADEQ closed this case on August 18, 1994.

No active PC numbers are listed in the VADEQ databases for the Property.

## **3.0 PHASE II ACTIVITIES**

All fieldwork was conducted based on the ExxonMobil approved Phase II SOW (**Attachment A**).

### **3.1 Field Explorations and Methods**

On June 15, 2009, ERI oversaw a site-wide GPR survey. On July 20 – 22, 2009, ERI oversaw the installation of five (5) soil borings, four (4) of which were converted into groundwater monitoring wells at the Property. The locations and depths of the soil borings/monitoring wells were in accordance with the approved SOW, with the following approved modifications:

- Based on the presence of identified electric lines, a propane tank and the USTs, well MW2 was moved approximately 80 feet northeast to provide a monitoring point between the Property and the adjacent Shell station to the east.
- Based on the presence of identified pavement scarring, the location of monitoring well MW3 was moved approximately 40 feet to the north.
- Based on the presence of pine trees and a steep slope to the south, the proposed location of monitoring well MW4 was initially moved approximately 50 feet south. However, due to the presence of a septic system in the newly proposed location, monitoring well MW4 was not installed.
- Monitoring well MW5 was moved west of the dispenser island due to the location of pine trees, a steep slope and a septic system to the south of the station building.
- Based the constraints mentioned above with installing wells MW4 and MW5, soil boring SB4 was advanced southwest of the building in order to address REC-2.
- Soil and groundwater samples were analyzed for methyl tertiary butyl ether (MTBE) using EPA Method 8260B.
- Water from the on-site potable well was sampled and analyzed for VOCs and MTBE using EPA Method 8260B.

Prior to the initiation of subsurface investigation activities, each proposed boring/well location was cleared in accordance with the requirements of the approved ExxonMobil Subsurface Investigation Protocol. Once final field locations were established, each of the proposed boring/well locations was then air-knifed to a minimum of four feet bgs.

Under the oversight of ERI, the soil borings were installed to their terminal depths, with collection of soil samples at 5-foot intervals unless otherwise stated. Soil samples were screened for total organic vapors (TOVs) utilizing a photoionization detector (PID) calibrated to an isobutylene standard. One soil sample from each soil boring was submitted for laboratory analysis based on the highest PID reading and/or the observed depth to water. Soil samples were placed in laboratory-provided glassware, packed on ice in shipping containers, and submitted under proper chain of custody to the analytical laboratory.

With the exception of location SB4, permanent groundwater monitoring wells were installed at each of the soil boring locations using 2-inch diameter, slotted, Schedule 40 polyvinyl chloride (PVC) screen and solid PVC riser to grade. The annular space between the well screen and the borehole wall was backfilled with clean, well-rounded silica sand and topped with a hydrated bentonite seal. The remaining annular space was backfilled with native soil, and the monitoring well was completed with a metal flush-mount protective cover within a concrete pad. Well construction information was recorded by the supervising field scientist and was used to generate the soil boring logs/well construction diagrams included in **Attachment B**.

Between each boring/monitoring well location, non-disposable drilling equipment and hand tools were decontaminated with a high-pressure water rinse. Each monitoring well was subsequently developed/surged prior to groundwater sampling to settle the sand pack and to promote effective hydraulic connection with the surrounding formation. Decontamination and development fluids were handled in accordance with state and local regulations.

Specific details related to the drilling and monitoring well installation activities at the Property are listed below.

<b>Date Performed</b>	<b>July 20 through 22, 2009</b>
<b>Well ID</b>	MW1, MW2, MW3, SB4 and MW5
<b>Driller</b>	Geosearch, Inc. of Fitchburg, Massachusetts
<b>Drilling Method Utilized</b>	Hollow-Stem Auger
<b>Completion Depths</b>	MW1: 37 feet MW2: 42 feet MW3: 37 feet SB4: 10.3 feet MW5: 42 feet
<b>Screened Interval</b>	MW1: 20 – 35 feet MW2: 25 - 40 feet MW3: 25 – 35 feet SB4: - N/A – Soil boring only MW5: 30 – 40 feet
<b>Material Utilized</b>	2-inch diameter, 0.010-inch, machine-slotted, schedule-40 PVC well screen with a flush-threaded, 2-inch diameter, solid PVC casing
<b>Annular Space</b>	<p style="text-align: center;"><u>Monitoring Wells</u></p> <p>MW1 and MW3: #2 Sand to one foot above the well screen  MW2: #2 Sand to two feet above the well screen  MW5: #2 Sand to 1.5 feet above the well screen  MW1: Bentonite chips to 17.5 feet bgs  MW2: Bentonite chips to 21 feet bgs  MW3: Bentonite chips to 22 feet bgs  MW5: Bentonite chips to 26.5 feet bgs  Native soil to one foot bgs  Concrete to grade</p> <p style="text-align: center;"><u>Soil Boring</u></p> <p>Bentonite chips to 4 feet bgs  Native soil to grade</p>

<p><b>Soil Sample Intervals</b></p>	<p>MW1: 5, 10, 15, 20, 25, 30 and 35 feet  MW2: 5, 10, 15, 20, 25, 30, 35 and 40 feet  MW3: 10, 15, 20, 25, 30 and 35 feet  SB4: 5 and 10 feet  MW5: 5, 10, 15, 20, 25, 30, 35 and 40 feet</p>
<p><b>Soil Analyses Conducted</b></p>	<p>Full List VOCs plus MTBE via EPA Method 8260B  TPH-GRO/DRO via EPA Method 8015</p>

### 3.2 Well Elevation and Survey Procedures

Upon completion of the monitoring wells, each location was field-surveyed to determine relative top of casing (TOC) elevations. Lateral locations of the monitoring wells were field-measured and the resulting estimated locations are shown on **Figure 4**; however, the locations are considered approximate.

### 3.3 Groundwater Sampling and Analysis Procedures

Prior to the collection of groundwater samples, each of the recently installed groundwater monitoring wells at the Property was gauged with an oil-water interface probe to determine the water level and check for the presence of liquid phase hydrocarbons (LPH). Depth to groundwater and depth to product were measured from the TOC. The resulting data was then used to calculate the groundwater elevation, hydraulic gradient and groundwater flow direction for the property, as documented on the Groundwater Monitoring Map included as **Figure 4**. The measured depths and calculated elevations are shown in **Table 2**.

On July 24, 2009, field sampling personnel collected representative groundwater samples from the recently-installed monitoring wells. A minimum of three (3) well volumes was purged from each monitoring well prior to the collection of groundwater samples. Purging and sample collection was accomplished using a disposable bailer. Aqueous samples were placed in laboratory-provided glassware, packed on ice in shipping containers, and submitted under proper chain of custody to the analytical laboratory.

Equipment used for groundwater sampling consisted of new, disposable materials, or was properly decontaminated between sample locations. Sampling personnel exchanged nitrile sampling gloves between each sample location to minimize the potential for sample cross-contamination. Investigative-derived waste such as disposable polyethylene tubing and used nitrile gloves was properly handled as non-hazardous solid waste for disposal.

<b>Date Performed</b>	<b>July 24, 2009</b>
<b>Wells Gauged/ Sampled</b>	MW1, MW2, MW3 and MW5
<b>Wells Gauged Only</b>	None
<b>Liquid Phase Hydrocarbons</b>	None Detected
<b>Minimum/Maximum Depth to Water</b>	30.45 feet/33.67 feet in groundwater monitoring wells
<b>Hydraulic Gradient</b>	0.027 feet per foot
<b>Groundwater Flow Direction</b>	Southeast
<b>Hydrocarbon Dist./Groundwater Contour Map</b>	<b>Figure 4</b>
<b>Aqueous Analyses Conducted</b>	Full List VOCs plus MTBE via EPA Method 8260B TPH-GRO/DRO via EPA Method 8015

### 3.4 Tank Field Observation Wells

On July 24, 2009, two (2) tank field observation wells (TF1 and TF2) were gauged with an oil-water interface probe to determine the water level and check for the presence of LPH. LPH was not detected in either tank field observation well. Tank field observation wells TF1 and TF2 were dry.

### 3.5 Potable Well

On July 22, 2009, the potable well was sampled. The potable water samples were collected from the men's restroom after running the water for approximately 20 minutes. The samples were analyzed for VOCs plus MTBE using EPA Method 8260B.

The VADEQ was notified on August 11, 2009 of the presence of MTBE in the potable water and groundwater at the Property.

## 4.0 EVALUATION AND PRESENTATION OF RESULTS

### 4.1 Soil Sampling Results

Soil analytical results for the collected samples are summarized in **Table 1**, along with the soil sample location and depth. The laboratory analytical report and the corresponding chain of custody are included in **Attachment C**.

## **4.2 Groundwater Sampling Results**

Groundwater analytical results from the collected groundwater monitoring well samples are summarized in **Table 2a**. The laboratory analytical report and the corresponding chain of custody are included in **Attachment D**.

## **4.3 Potable Well Sampling Results**

Potable water analytical results from the collected samples are summarized in **Table 2b**. The laboratory analytical report and the corresponding chain of custody are included in **Attachment C**.

## **5.0 DISCUSSION OF FINDINGS AND CONCLUSIONS**

As discussed in section 1.0, the previously performed Phase I ESA identified a series of RECs for the property, and the resulting SOW was developed in order to evaluate the nature and extent of contamination at each REC. The following table summarizes the results of the Phase II ESA:

<b>REC-1:</b>	Current gasoline USTs, dispensers and product piping;
<b>SOW:</b>	Installation of three groundwater monitoring wells (MW1, MW2 and MW3) in the vicinity of the USTs and dispensers.
<b>Results:</b>	Monitoring wells MW1, MW2 and MW3 were installed in the vicinity of the current UST field and dispensers. Soil samples collected from the wells indicated the detection of petroleum constituents in wells MW1 and MW2 as shown in <b>Table 2</b> . Groundwater samples collected from the wells indicated the detection of petroleum constituents in wells MW1, MW2 and MW3 as shown in <b>Table 1</b> . No free-phase product was observed or detected during boring/well installation activities.
<b>REC-2:</b>	Current hydraulic lifts
<b>SOW:</b>	Installation of two groundwater monitoring wells (MW4 and MW5) in the vicinity of the station building.
<b>Results:</b>	Monitoring well MW4 was not installed due to the location of a septic system south of the station. However, soil boring SB4 was advanced to 10.3 feet southwest of the building. Due to the presence of a septic system, the location of well MW5 was moved west of the dispensers. Soil samples collected from boring SB4 indicated the detection of TPH-DRO as shown in <b>Table 2</b> . Groundwater samples collected from well MW5 indicate the detection of TPH-DRO and MTBE as shown in <b>Table 1</b> . No free-phase product was observed or detected during boring/well installation activities.
<b>REC-3:</b>	<b>Former used-oil USTs</b>
<b>SOW:</b>	Perform GPR around building to determine presence/absence of former UST.
<b>Results:</b>	A site-wide GPR survey was conducted at the site on June 15, 2009. The survey did not detect any subsurface disturbances characteristic of USTs in the vicinity of the station building, with the exception of the current UST system.

Based on the results of the evaluation of the identified RECs, hazardous substances or petroleum products have been released or disposed at the property.

The analytical testing of both soil and groundwater samples indicated the presence of petroleum constituents. In soil, MTBE was detected in samples collected from two wells, with a maximum detection of 14.2 milligrams per kilogram (mg/kg) in monitoring well MW2. TPH constituents were detected in soil samples collected from two wells and soil boring SB4, with a maximum detection of TPH-DRO at 24.1 mg/kg in boring SB4.

In groundwater, BTEX constituents were detected in two monitoring wells, with a maximum detection of xylenes at 131 micrograms per liter (ug/L) in well MW2. MTBE was detected in four groundwater monitoring wells and the on-site potable water well, with a maximum detection of 193,000 ug/L in

groundwater monitoring well MW1. TPH constituents were detected in three wells, with a maximum detection of TPH-GRO at 105,000 ug/L in well MW1.

The VADEQ does not utilize action levels for the detection of petroleum constituents during an on-site investigation; any detection of petroleum-related constituents is reportable. The results of the Phase II ESA investigation will be reported to the Northern Regional Office of the VADEQ in accordance with the requirements of the Virginia Petroleum Program Regulations.

Unless otherwise noted, this Phase II ESA was prepared in substantive accordance with ASTM E 1903-97. Any variations from the previously approved SOW are noted, and any data insufficiencies that prevent conclusions related to the evaluation of the RECs are provided in the appropriate section.

## **6.0 LIMITATIONS**

ERI performed the services for this Phase II ESA in accordance with the professional standard of care defined as that level of services provided by similar professionals under like circumstances. No guarantee or warranty is expressed or implied.

This report may be used only by the client, in accordance with the governing contract, only for the purposes stated, and within a reasonable time from its issuance. Any party other than ExxonMobil, or its assignees who wish to use this report, shall notify both ExxonMobil and ERI prior to such intended use to obtain written approval from both parties.

## **7.0 REFERENCES**

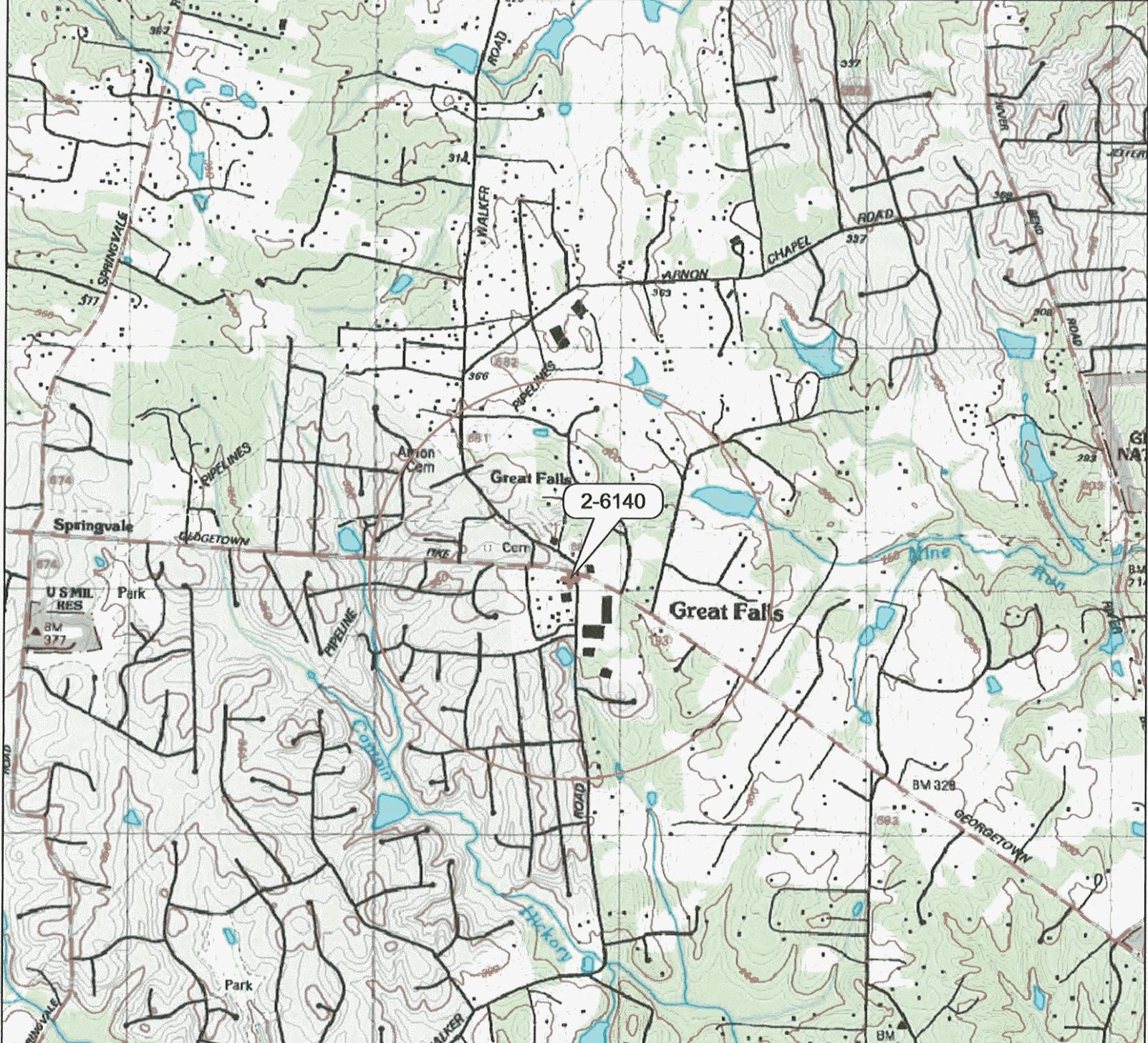
United States Geological Survey (USGS) Topographic Quadrangle Map, Vienna, Virginia, 1994, 1998 Photorevised.

Phase I ESA, December 5, 2008, prepared by EMG on behalf of Groundwater & Environmental Services, Inc.

Virginia Division of Mineral Resources, 1993, Geologic Map of Virginia: Virginia Division of Mineral Resources, scale 1:500,000.

**FIGURES**

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FN 1058 SITE LOCATION MAP

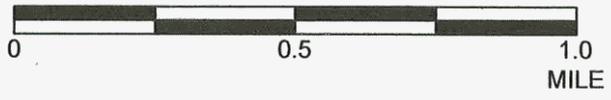
**EXPLANATION**



1/2-mile radius circle



**APPROXIMATE SCALE**



SOURCE:  
Modified from a map  
provided by  
USGS 7.5 minute series



**SITE LOCATION MAP**

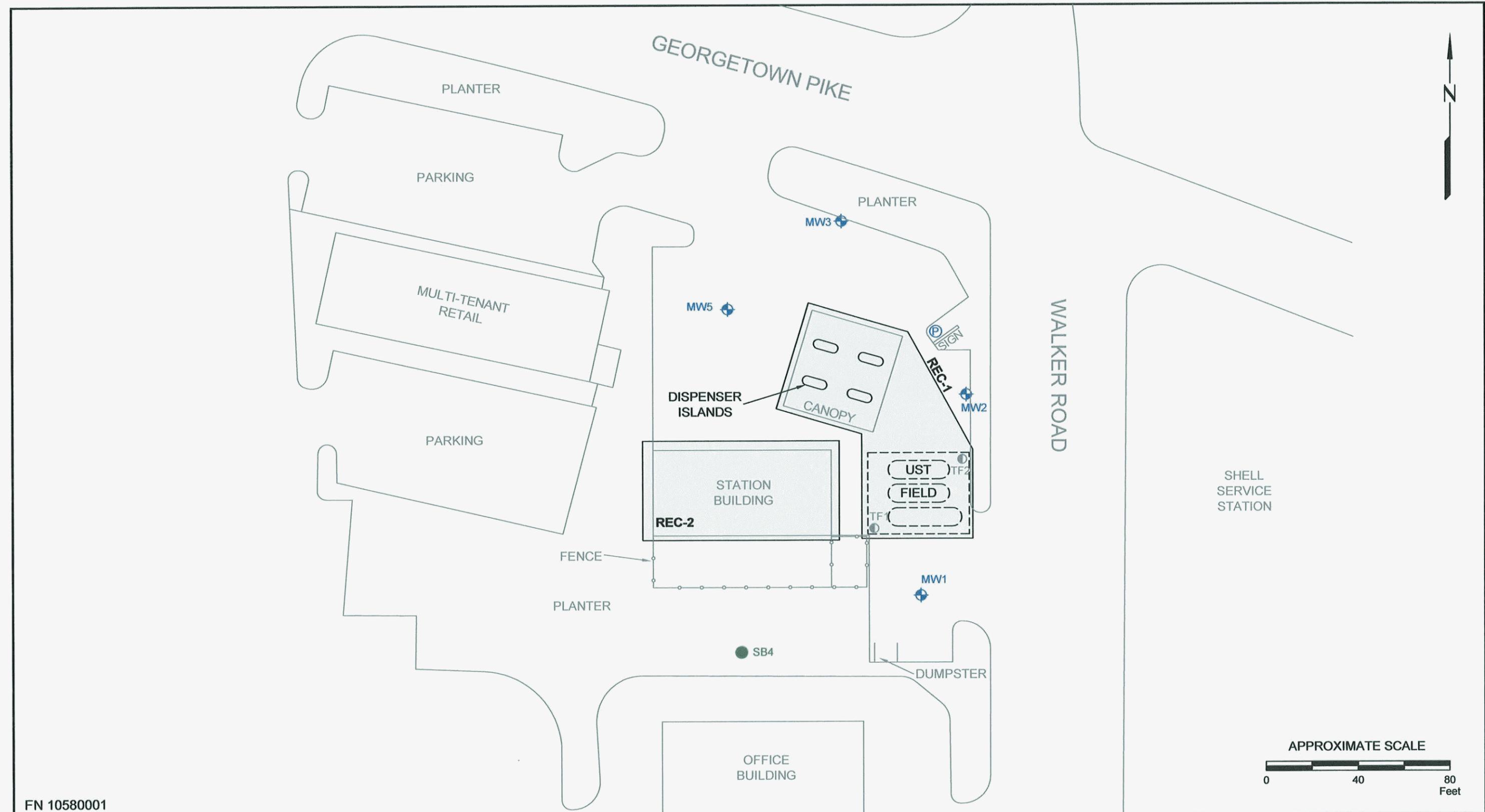
ExxonMobil Station #2-6140  
9901 Georgetown Pike  
Great Falls, Virginia

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FIGURE

1



FN 10580001



### SITE MAP

ExxonMobil Station #2-6140  
 9901 Georgetown Pike  
 Great Falls, Virginia

#### EXPLANATION

- MW5 Groundwater monitoring well
- Potable well
- SB4 Soil boring
- REC Recognized environmental condition
- TF2 Tank field well
- REC-1 Current gasoline USTs and dispenser islands
- REC-2 Hydraulic lifts

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1058

FIGURE

2



FN 1058 LOCAL AREA MAP

**EXPLANATION**



300-, 100-meter radius circle



ExxonMobil Station #2-6140



**APPROXIMATE SCALE**



SOURCE:  
Modified from a map  
provided by  
Google



**LOCAL AREA MAP**

ExxonMobil Station #2-6140  
9901 Georgetown Pike  
Great Falls, Virginia

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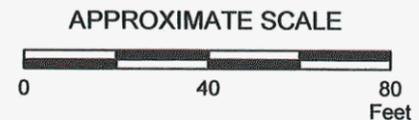
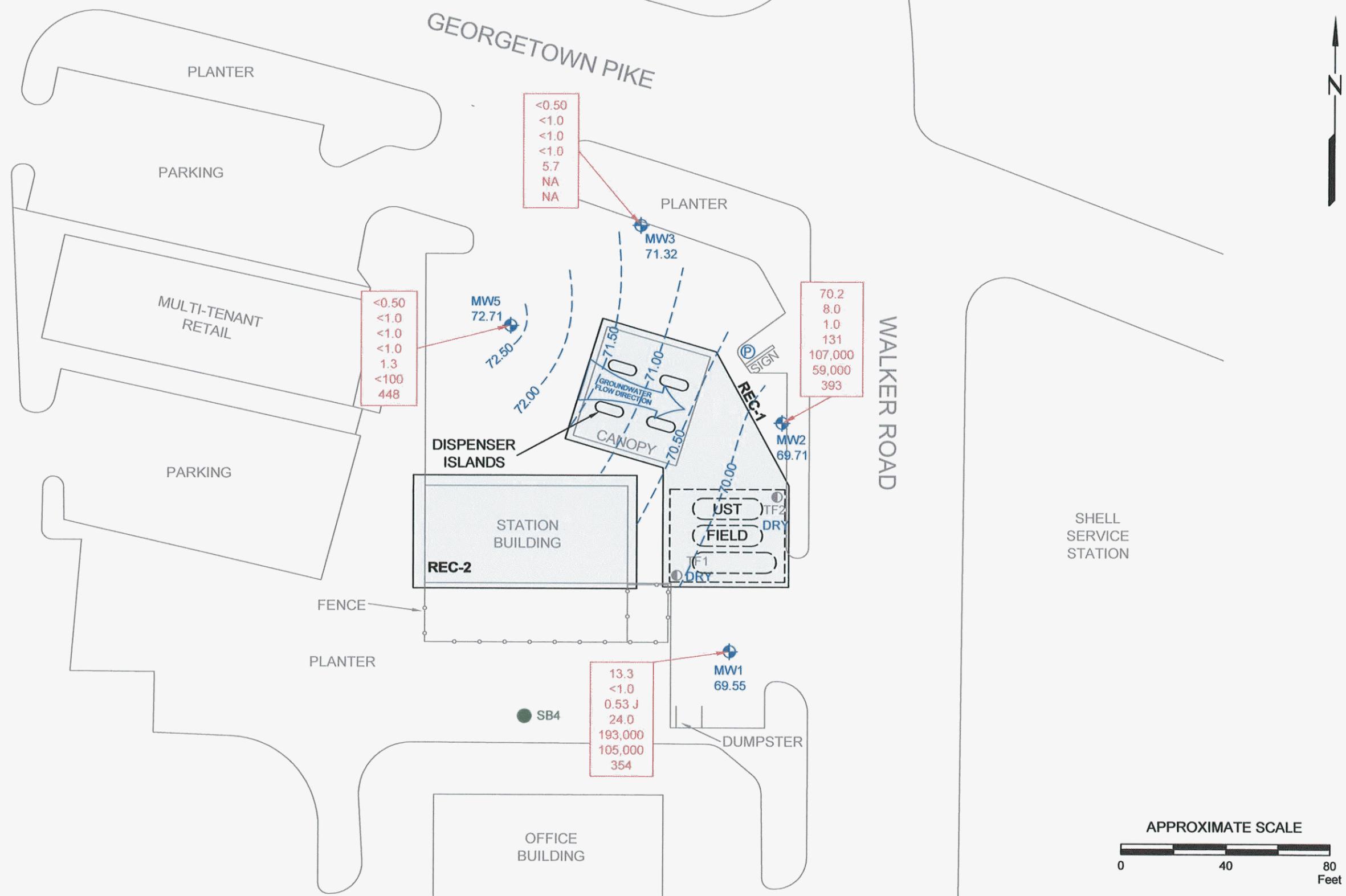
FIGURE

3

Results reported in micrograms per liter.

- Benzene
- Toluene
- Ethylbenzene
- Total Xylenes
- Methyl Tertiary Butyl Ether
- Total Gasoline Range Organics
- Total Diesel Range Organics

- < Less than the stated laboratory reporting limit
- J Estimated value between method detection limit and practical quantitation limit
- NA Not analyzed



FN 1058 09 3QTR

## GROUNDWATER MONITORING MAP - JULY 24, 2009

ExxonMobil Station #2-6140  
9901 Georgetown Pike  
Great Falls, Virginia



### EXPLANATION

- MW5 Groundwater monitoring well
- Groundwater elevation in feet; datum is relative to northeast corner of the station building
- Line of equal groundwater elevation
- Potable well

- TF2 Tank field well
- SB4 Soil boring
- REC Recognized environmental condition
- REC-1 Current gasoline USTs and dispenser islands
- REC-2 Hydraulic lifts

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1058

FIGURE

4

## TABLES

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TABLE 1  
 SOIL ANALYTICAL DATA  
 EXXONMOBIL STATION #2-6140  
 9901 GEORGETOWN PIKE  
 GREAT FALLS, VIRGINIA  
 ERI 1058

Sample ID	Date	Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	TPHg (mg/kg)	TPHd (mg/kg)	TPHo (mg/kg)	MTBE (mg/kg)
S-35-MW1	7/21/2009	35	<0.023	<0.23	<0.092	<0.092	5.81 J	<18	NA	7.08
S-35-MW2	7/21/2009	35	<0.035	<0.35	<0.14	<0.14	8.45	<19	NA	14.2
S-30-MW3	7/22/2009	30	<0.048	<0.48	<0.19	<0.19	<9.6	<24	NA	<0.19
S-40-MW5	7/22/2009	40	<0.031	<0.31	<0.13	<0.13	<6.3	<20	NA	<0.13
S-10-SB4	7/20/2009	10	<0.046	<0.46	<0.18	<0.18	<9.1	24.1	NA	<0.18

Explanation:  
 NA = not analyzed  
 MTBE = methyl tertiary butyl ether analyzed by Environmental Protection Agency Method 8260B  
 TPHg = total petroleum hydrocarbons as gasoline  
 TPHd = total petroleum hydrocarbons as diesel  
 TPHo = total petroleum hydrocarbons as motor oil  
 mg/kg = milligrams per kilogram  
 < = not detected at or above stated laboratory reporting limit  
 J = estimated value between method detection limit and practical quantitation limit

TABLE 2a  
GROUNDWATER MONITORING AND ANALYTICAL DATA - WATER LEVEL MEASUREMENTS AND GROUNDWATER ANALYSES  
EXXONMOBIL STATION #2-8140  
9901 GEORGETOWN PIKE  
GREAT FALLS, VIRGINIA  
ERI 1058

Well Name	Date	Well Elev (feet)	GW Depth (feet)	GW Elev (feet)	LPH (feet)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	TPHg (ug/l)	TPHd (ug/l)	TPHo (ug/l)	MTBE (ug/l)
Screen interval 20-35 feet													
MW1	7/24/2009	100.00	30.45	69.55	No	13.3	<1.0	0.53 J	24.0	105000	354	NA	193000
Screen interval 25-40 feet													
MW2	7/24/2009	102.90	33.19	69.71	No	70.2	8.0	1.0	131	59000	393	NA	107000
Screen interval 25-35 feet													
MW3	7/24/2009	104.99	33.67	71.32	No	<0.50	<1.0	<1.0	<1.0	NA	NA	NA	5.7
Screen interval 30-40 feet													
MW5	7/24/2009	103.43	30.72	72.71	No	<0.50	<1.0	<1.0	<1.0	<100	448	NA	1.3
Screen interval													
MR (a)	7/22/2009				No	5.5	<1.0	<1.0	<1.0	NA	NA	NA	10400
Screen interval													
TF1	7/24/2009	101.72			No	DRY							
Screen interval													
TF2	7/24/2009	101.86			No	DRY							

Explanation:  
ELEV = elevation  
GW = groundwater  
NA = not analyzed  
MTBE = methyl tertiary butyl ether analyzed by Environmental Protection Agency Method 8260B  
TPHg = total petroleum hydrocarbons as gasoline  
TPHd = total petroleum hydrocarbons as diesel  
TPHo = total petroleum hydrocarbons as motor oil  
LPH = liquid phase hydrocarbons, thickness measured in feet  
ug/l = micrograms per liter  
a = sample collected from men's restroom to analyze potable drinking water  
< = not detected at or above stated laboratory reporting limit  
J = estimated value between method detection limit and practical quantitation limit

TABLE 2b  
GROUNDWATER MONITORING AND ANALYTICAL DATA - CONSTITUENTS DETECTED IN POTABLE WATER BY FULL SCAN 8260B  
(Except BTEX and MTBE)  
EXXONMOBIL STATION #2-6140  
9901 GEORGETOWN PIKE  
GREAT FALLS, VIRGINIA  
ERI 1058

Date Collected: 7/22/2009

Constituent	MR (a) (ug/l)
Chloroform	2.5
1,2-Cis-Dichloroethylene	635
1,2-Trans Dichloroethylene	3.2
Tetrachloroethene	14.4
Trichloroethene	13.3

Explanation:

ug/l = micrograms per liter

Note: Table only reflects concentrations above the laboratory reporting limit. Refer to the laboratory report for the reporting limit and dilution factor.

a = sample collected from men's restroom to analyze potable drinking water

ATTACHMENT A

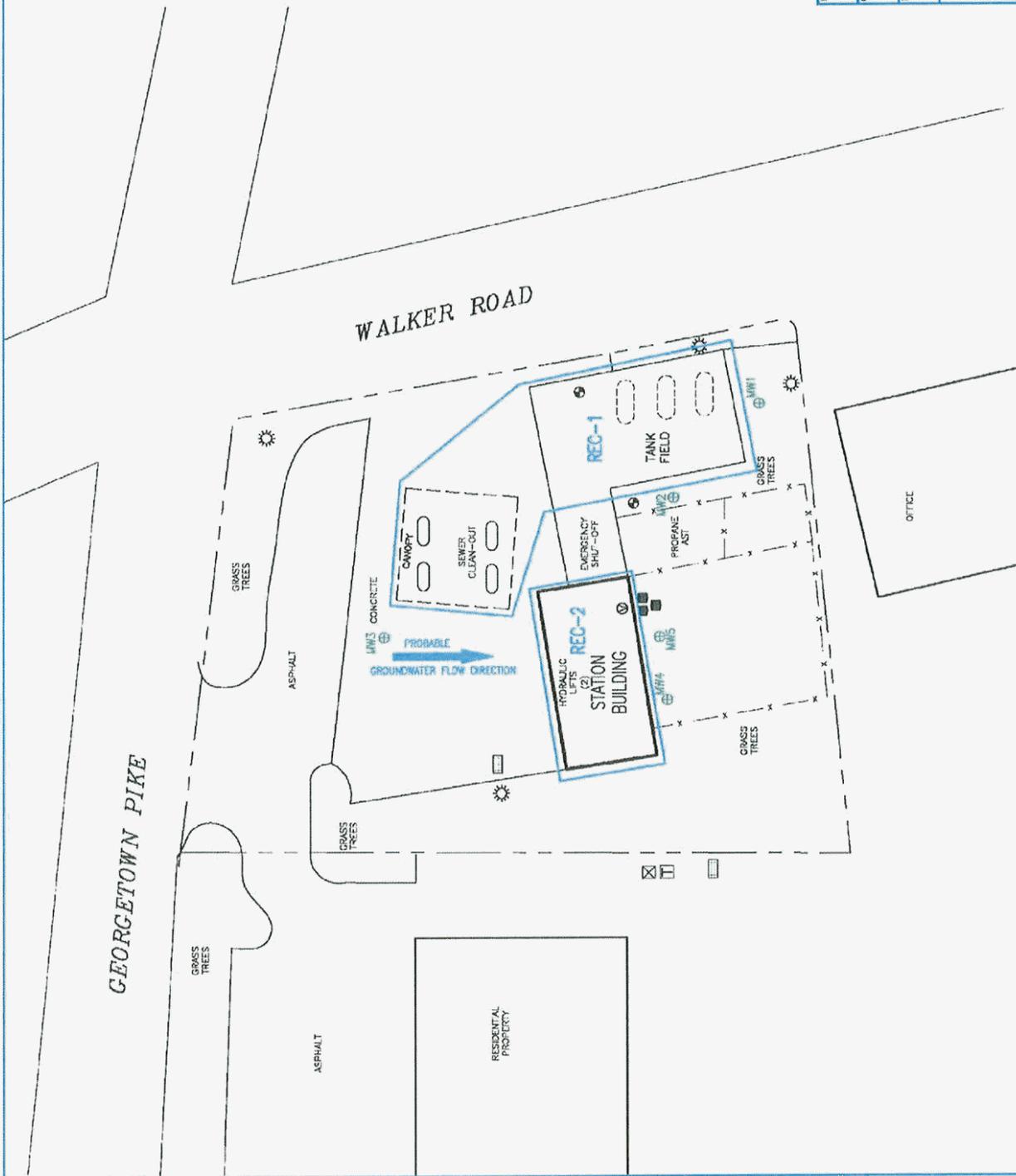
Phase II Scope of Work





**LEGEND**

- PROPERTY BOUNDARY
- x- FENCE
- 55 GALLON DRUM
- TRANSFORMER
- ⊠ DUMPSTER
- ☼ LIGHT POLE
- DISPENSER ISLAND
- UNDERGROUND STORAGE TANK
- ⊕ MONITORING WELL
- ⊖ CATCH BASIN
- ⊗ VENT PIPE
- ⊕ MIP
- ⊕ REC PROPOSED MONITORING WELL
- ⊕ REC RECOGNIZED ENVIRONMENTAL CONDITION
- ⊕ REC-1 CURRENT GASOLINE USTs AND DISPENSER ISLANDS
- ⊕ REC-2 HYDRAULIC LIFTS



DATE: 12-23-08	FIGURE: 40
SCALE IN FEET: 1" = 40'	
NORTH	
Groundwater & Environmental Services, Inc. 2142 PRIEST BRIDGE COURT, SUITE 1, CROFTON, MD 21114	
REVIEWED BY: [Signature]	
CHECKED BY: [Signature]	
SOIL BORING/MONITORING WELL MAP	
EXXON SERVICE STATION #2-6140 9901 GEORGETOWN PIKE GREAT FALLS, VIRGINIA	
PHASE II SCOPE OF WORK	

**ATTACHMENT B**

---

Soil Boring Logs



# BORING LOG MW1

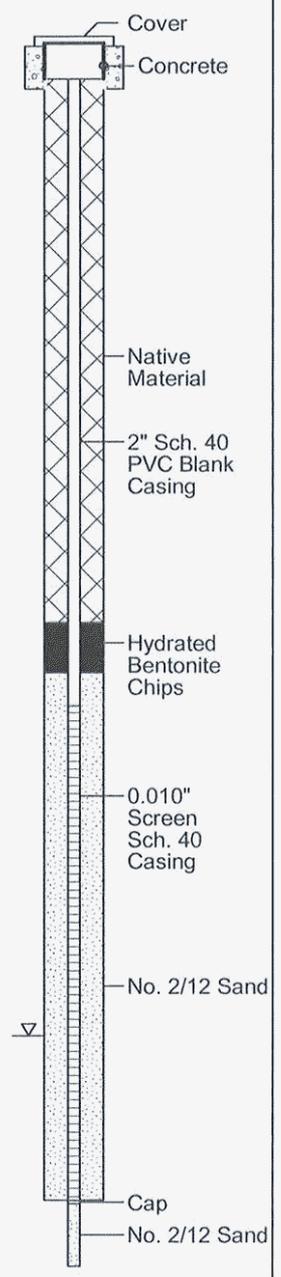
(Page 1 of 1)

Date Drilled: : 07/20/09  
 Drilling Co.: : Geosearch, Inc.  
 Drilling Method: : Hollow-Stem Auger  
 Sampling Method: : Split Spoon  
 Borehole Diameter: : 8"  
 Casing Diameter: : 2"  
 Location N-S : 63'5" S of SE crnr of station  
 Location E-W : 38'10" E of SE crnr of station  
 Total Depth: : 37' bgs  
 First GW Depth: : 30' bgs

Project No.: : 091058  
 Site: : ExxonMobil Station #2-6140, Great Falls, VA  
 Logged By: : Eric Koosha / Scott Peret  
 Reviewed By: : Steve M. Zigan, P.G. 1812  
 Signature: : *Steve M. Zigan*

Depth (ft)	Blow Count / 6"	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels	DESCRIPTION (% clay/silt/sand/gravel)
						<input type="checkbox"/> No Recovery <input type="checkbox"/> Sampled Interval <input checked="" type="checkbox"/> Described Sample <input checked="" type="checkbox"/> Preserved Sample	<input type="checkbox"/> Groundwater After Completion <input type="checkbox"/> Groundwater During Drilling	
0								CONCRETE: 6"
5	1.4				MH			SILT: red-yellow, damp, uniform, non-plastic, micaceous, unconsolidated, good recovery (5/95/0/0)
10	0.0				MH			SILT with Clay: red-yellow to rust-red, damp, uniform, non-plastic, unconsolidated to 10.8' bgs, buff yellow to white gray with gray mottles and lamina in splintery, brittle texture, micaceous, good recovery, few black (organic) lamina occasionally in base of core (15/85/0/0)
15	0.0				MH			SILT: red-brown, damp, matrix uniform, brittle, friable, non-plastic, micaceous, few small, fine gravel sized nodules, unconsolidated, smooth texture
20	0.0				MH			SILT with Gravel: light yellow-brown, gravel is green-black, dry, uniform; @ 21.2' bgs, few fine, rounded, smooth, soapstone gravel, fractured white rock; angular, well graded, coarse-grained sand, micaceous, good recovery (10/65/5/20)
25	2.4				MH			SILT: gray-brown, with semi-lithified clasts of siltstone, few white-gray thin lamina densely spaced with black (organic) particles throughout bottom 4 inches, micaceous (10/90/0/0)
30	0.0				GM			Silty GRAVEL with Sand: white, saturated, angular, fractured rock, well graded with silty fines (more clay noticeable) poor recovery (5/25/20/50)
35	225				GM			Silty GRAVEL with sand: white, saturated, angular, well graded, few silty fines, fractured rock, moderate recovery (0/25/25/50)
Borehole cleared to 6"4" bgs on 07/20/09 with air knife excavation tools.								

Well: MW1  
Elevation: 100.00'



08-31-2009 L:\Virginia Borelogs\1058 MW1.bor

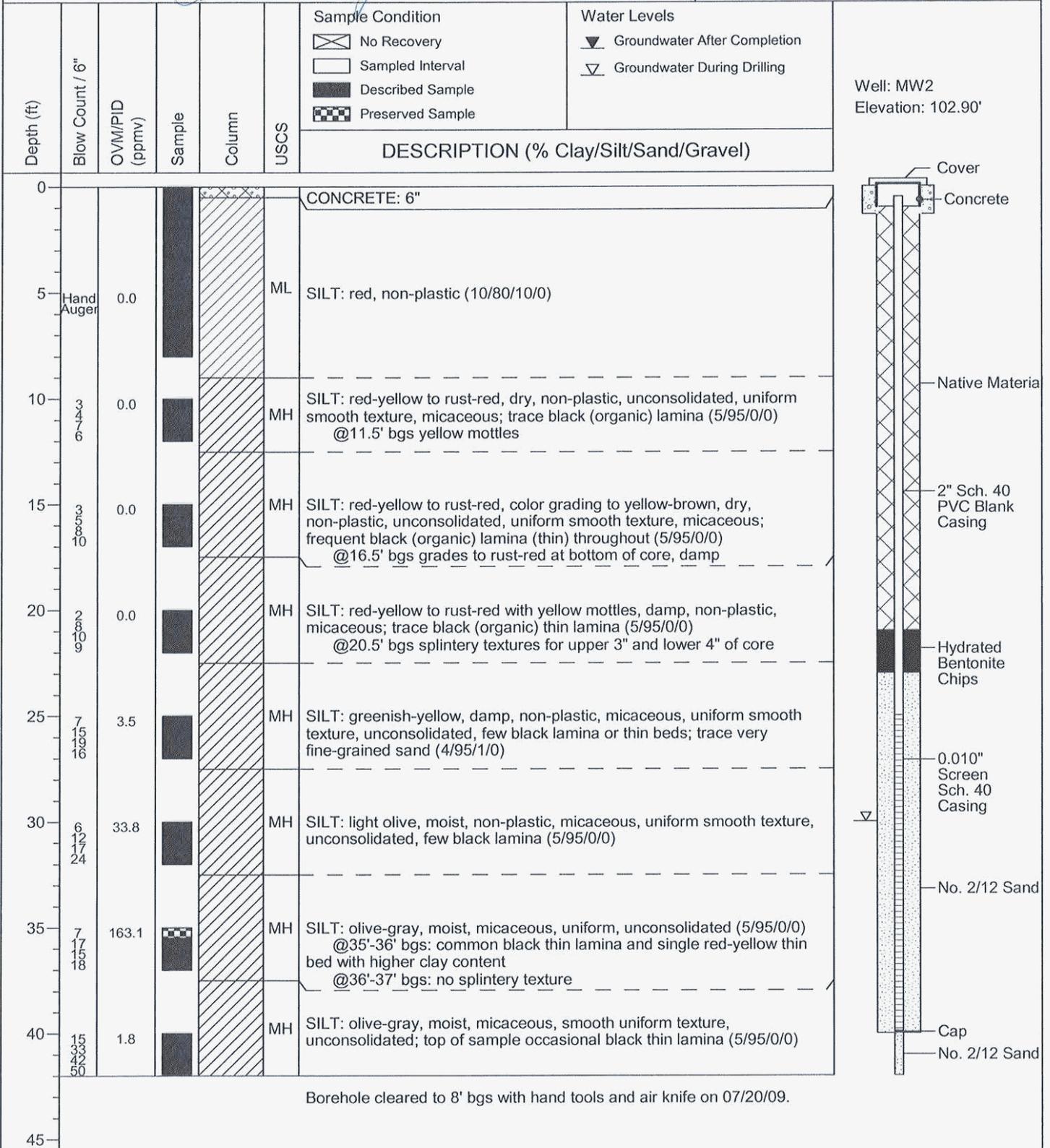


# BORING LOG MW2

(Page 1 of 1)

Date Drilled: : 07/21/09  
 Drilling Co.: : Geosearch, Inc.  
 Drilling Method: : Hollow-Stem Auger  
 Sampling Method: : Split Spoon  
 Borehole Diameter: : 8"  
 Casing Diameter: : 2"  
 Location N-S : 24.1' N of NE crnr of station  
 Location E-W : 63.5' E of NE crnr of station  
 Total Depth: : 42' bgs  
 First GW Depth: : 30' bgs

Project No.: : 091058  
 Site: : ExxonMobil Station #2-6140, Great Falls, VA  
 Logged By: : Eric Koosha / Scott Peret  
 Reviewed By: : Steve M. Zigan, P.G. 1812  
 Signature: : *Steve M. Zigan*





# BORING LOG MW3

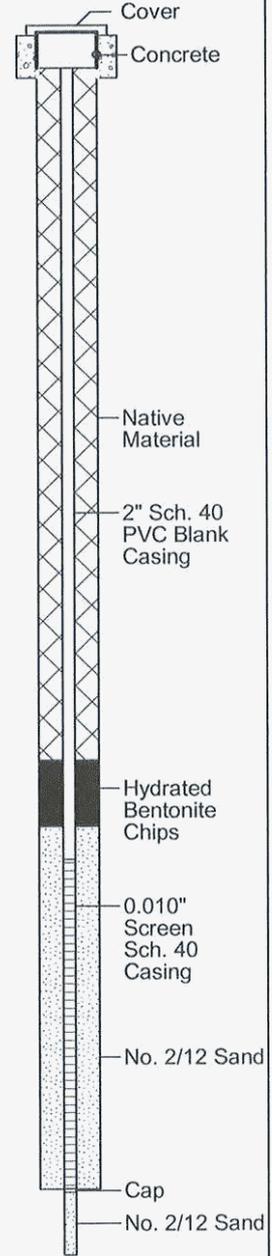
(Page 1 of 1)

Date Drilled: : 07/22/09  
 Drilling Co.: : Geosearch, Inc  
 Drilling Method: : Hollow-Stem Auger  
 Sampling Method: : Split Spoon  
 Borehole Diameter: : 8"  
 Casing Diameter: : 2"  
 Location N-S : 99'10" N of SE crnr of station  
 Location E-W : 4'7" E of SE crnr of station  
 Total Depth: : 37'  
 First GW Depth: : N/A

Project No.: : 091058  
 Site: : ExxonMobil Station #2-6140, Great Falls, VA  
 Logged By: : Eric Koosha / Scott Peret  
 Reviewed By: : Steve M. Zigan, P.G. 1812  
 Signature: : *Steve M. Zigan*

Depth (ft)	Blow Count / 6"	OVM/PID (ppmv)	Sample	Column	USCS	Sample Condition	Water Levels	DESCRIPTION (% clay/silt/sand/gravel)
						<input type="checkbox"/> No Recovery <input type="checkbox"/> Sampled Interval <input type="checkbox"/> Described Sample <input type="checkbox"/> Preserved Sample	<input type="checkbox"/> Groundwater After Completion <input type="checkbox"/> Groundwater During Drilling	
0								ASPHALT: 4"
5					ML			SILT: rust-red, dry, non-plastic, micaceous
10	1 2 5 6	0.0			MH			SILT: rust-red with gray mottles, dry to damp, few thin black lamina, non-plastic, smooth, uniform texture, unconsolidated, micaceous, good recovery (5/95/0/0)
15	2 4 5 6	0.0			MH			SILT: rust-red, damp, red-yellow thin lamina, non-plastic, splintery texture, brittle, non-consolidated, micaceous, good recovery (5/95/0/0)
20	2 6 9 9	0.0			MH			SILT: rust-red, damp, red-yellow thin lamina, good recovery, splintery texture, black mottles but none in lower half of core, micaceous (5/95/0/0)
25	2 7 12 14	0.0			MH			SILT: red-yellow, light gray mottling scattered, moist, with frequent rust-red lamina, few thin black lamina, non-plastic, smooth, uniform texture, unconsolidated, micaceous (5/95/0/0)
30	2 8 11 13	1.4			MH			SILT: yellow-brown and red-yellow, black and light gray mottles, saturated, unconsolidated, micaceous (5/95/0/0)
35	3 3 9 17	0.6			MH			SILT: yellow-brown and red-yellow, black and light gray mottles, saturated, unconsolidated, micaceous (5/95/0/0)

Well: MW3  
 Elevation: 104.99'



Borehole cleared to 8' bgs on 07/21/09 with air knife excavation tools.

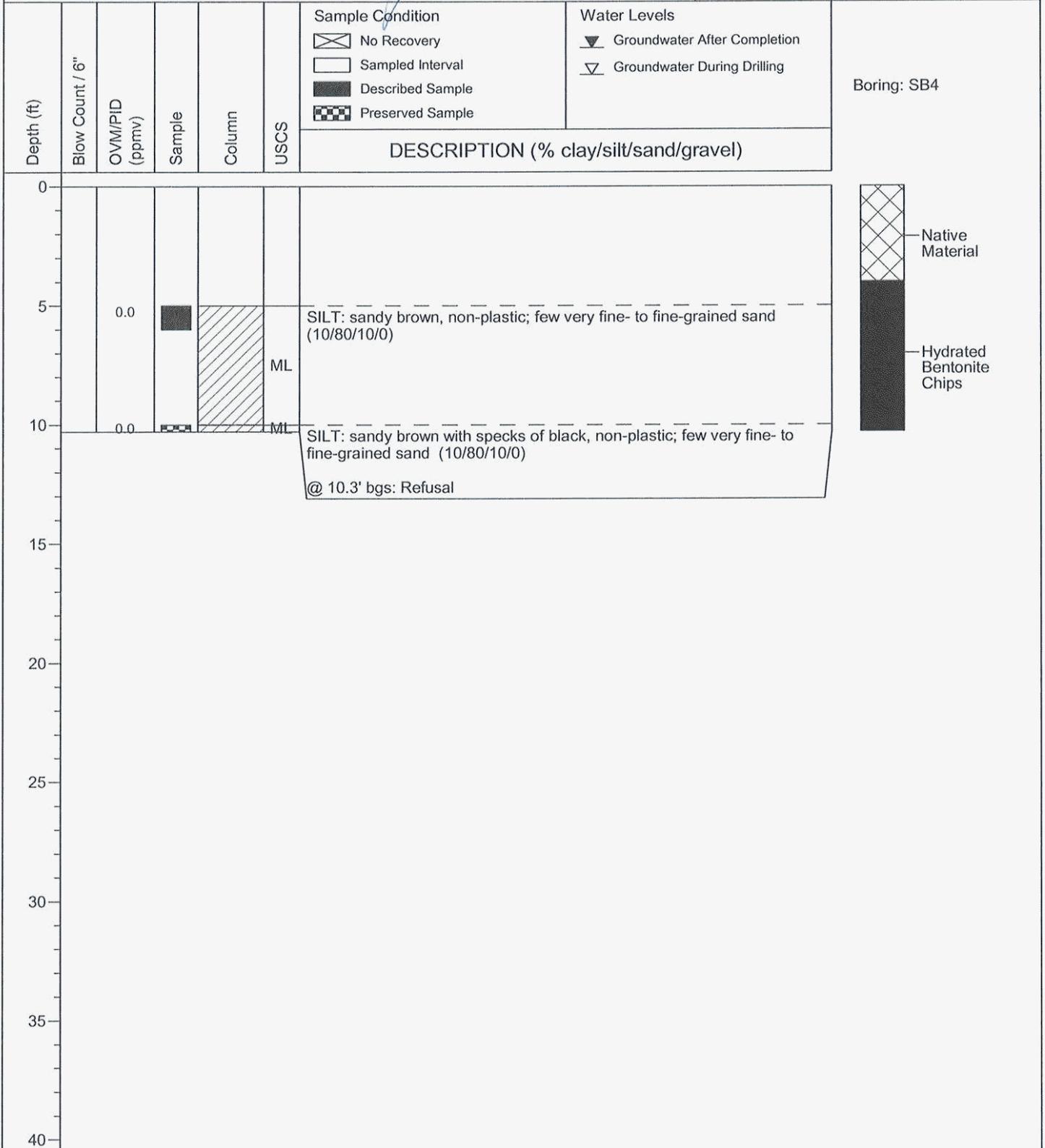


# BORING LOG SB4

(Page 1 of 1)

Date Drilled: : 07/20/09  
 Drilling Co.: : Geosearch, Inc.  
 Drilling Method: : Air Knife  
 Sampling Method: : Hand Auger  
 Borehole Diameter: : 10"  
 Casing Diameter: : N/A  
 Location N-S : 50' S of SE crnr of station  
 Location E-W : 43' W of SE crnr of station  
 Total Depth: : 10.3' bgs  
 First GW Depth: : N/A

Project No.: : 091058  
 Site: : ExxonMobil Station #2-6140, Great Falls, VA  
 Logged By: : Eric Koosha  
 Reviewed By: : Steve M. Zigan, P.G. 1812  
 Signature: : *Steve M. Zigan*



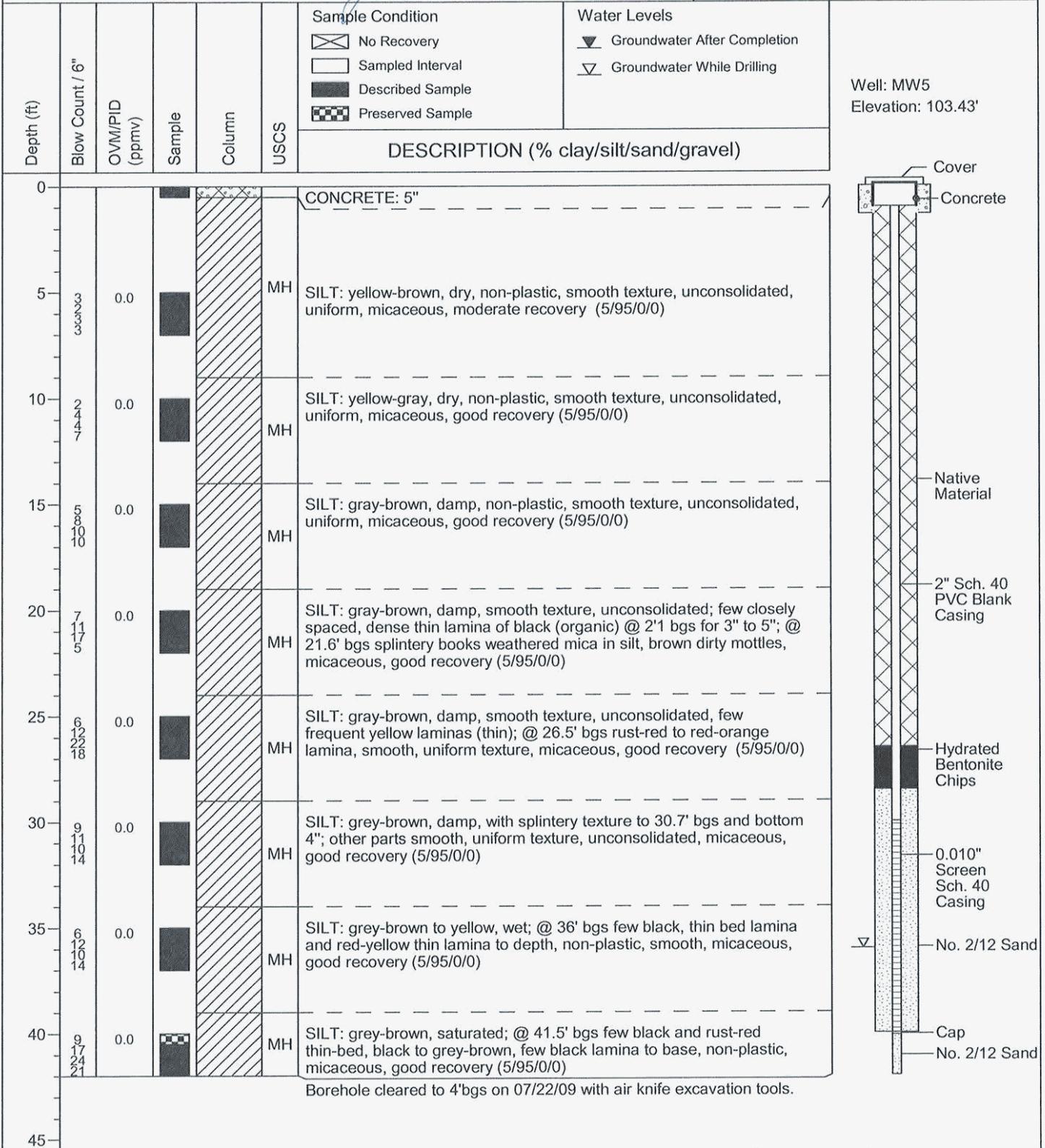


# BORING LOG MW5

(Page 1 of 1)

Date Drilled: : 07/22/09  
 Drilling Co.: : Geosearch, Inc.  
 Drilling Method: : Hollow-Stem Auger  
 Sampling Method: : Split Spoon  
 Borehole Diameter: : 8"  
 Casing Diameter: : 2"  
 Location N-S : 61'5" N of SE crnr of station  
 Location E-W : 45'4" W of SE crnr of station  
 Total Depth: : 42' bgs  
 First GW Depth: : 36' bgs

Project No.: : 091058  
 Site: : ExxonMobil Station #2-6140, Great Falls, VA  
 Logged By: : Eric Koosha / Scott Peret  
 Reviewed By: : Steve M. Zigan, P.G. 1812  
 Signature: *Steve M. Zigan*



08-31-2009 C:\Documents and Settings\cflasher\Local Settings\Temporary Internet Files\Content.IE5\UNSVEDLM1058%20MW5[1].bor

ATTACHMENT C

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Soil and Potable Well Laboratory Analytical Report



## Technical Report for

### Exxon Service Station

ERIMAT:9901 Georgetown Pike Great Falls VA

XOM 26140

Accutest Job Number: M84626

Sampling Date: 07/24/09

### Report to:

Environmental Resolutions, Inc.

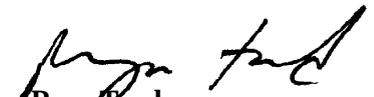
[jgranberry@ERI-US.com](mailto:jgranberry@ERI-US.com)

ATTN: Jennifer Granberry

Total number of pages in report: **16**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

  
Reza Fand  
Lab Director

Client Service contact: Kristen Blanchard 508-481-6200

Certifications: MA (M-MA136) CT (PH-0109) NH (2502) RI (00071) ME (MA0136) FL (E87579)  
NJ (11791) NJ (MA926) NC (653) IL (200018) NAVY USACE

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.



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<b>2.3:</b> M84626-3: W-33.67-MW3 .....	11
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## Sample Summary

Exxon Service Station

Job No: M84626

ERIMAT:9901 Georgetown Pike Great Falls VA  
Project No: XOM 26140

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
M84626-1	07/24/09	17:00 NB	07/28/09	AQ	Ground Water	W-30.45-MW1
M84626-2	07/24/09	16:46 NB	07/28/09	AQ	Ground Water	W-33.19-MW2
M84626-3	07/24/09	15:05 NB	07/28/09	AQ	Ground Water	W-33.67-MW3
M84626-4	07/24/09	16:30 NB	07/28/09	AQ	Ground Water	W-30.72-MW5



## Sample Results

---

## Report of Analysis

---

## Report of Analysis

<b>Client Sample ID:</b>	W-30.45-MW1	<b>Date Sampled:</b>	07/24/09
<b>Lab Sample ID:</b>	M84626-1	<b>Date Received:</b>	07/28/09
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	ERIMAT:9901 Georgetown Pike Great Falls VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P38499.D	1	07/30/09	AMY	n/a	n/a	MSP1273
Run #2	P38526.D	500	07/30/09	AMY	n/a	n/a	MSP1274

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	13.3	0.50	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.31	ug/l	
100-41-4	Ethylbenzene	0.53	1.0	0.32	ug/l	J
1330-20-7	Xylene (total)	24.0	1.0	0.26	ug/l	
1634-04-4	Methyl Tert Butyl Ether	193000 <sup>a</sup>	500	130	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	109%	70-130%
2037-26-5	Toluene-D8	100%	100%	70-130%
460-00-4	4-Bromofluorobenzene	103%	105%	70-130%

(a) Result is from Run# 2

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> W-30.45-MW1		<b>Date Sampled:</b> 07/24/09
<b>Lab Sample ID:</b> M84626-1		<b>Date Received:</b> 07/28/09
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015		
<b>Project:</b> ERIMAT:9901 Georgetown Pike Great Falls VA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	WX46839.D	50	07/29/09	AF	n/a	n/a	GWX2180
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	105	5.0	3.5	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	95%		60-126%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	W-30.45-MW1	
<b>Lab Sample ID:</b>	M84626-1	<b>Date Sampled:</b> 07/24/09
<b>Matrix:</b>	AQ - Ground Water	<b>Date Received:</b> 07/28/09
<b>Method:</b>	SW846-8015 SW846 3510C	<b>Percent Solids:</b> n/a
<b>Project:</b>	ERIMAT:9901 Georgetown Pike Great Falls VA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC29631.D	1	07/31/09	WZ	07/29/09	OP19086	GBC1584
Run #2							

Run #	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (Semi-VOA)	0.354	0.22	0.15	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
3386-33-2	1-Chlorooctadecane	104%		33-150%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	W-33.19-MW2	<b>Date Sampled:</b>	07/24/09
<b>Lab Sample ID:</b>	M84626-2	<b>Date Received:</b>	07/28/09
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	ERIMAT:9901 Georgetown Pike Great Falls VA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P38500.D	1	07/30/09	AMY	n/a	n/a	MSP1273
Run #2	P38527.D	500	07/30/09	AMY	n/a	n/a	MSP1274

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	70.2	0.50	0.22	ug/l	
108-88-3	Toluene	8.0	1.0	0.31	ug/l	
100-41-4	Ethylbenzene	1.0	1.0	0.32	ug/l	
1330-20-7	Xylene (total)	131	1.0	0.26	ug/l	
1634-04-4	Methyl Tert Butyl Ether	107000 <sup>a</sup>	500	130	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%	110%	70-130%
2037-26-5	Toluene-D8	100%	99%	70-130%
460-00-4	4-Bromofluorobenzene	104%	108%	70-130%

(a) Result is from Run# 2

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

<b>Client Sample ID:</b> W-33.19-MW2	
<b>Lab Sample ID:</b> M84626-2	<b>Date Sampled:</b> 07/24/09
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 07/28/09
<b>Method:</b> SW846 8015	<b>Percent Solids:</b> n/a
<b>Project:</b> ERIMAT:9901 Georgetown Pike Great Falls VA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	WX46840.D	25	07/29/09	AF	n/a	n/a	GWX2180
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	59.0	2.5	1.8	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	96%		60-126%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> W-33.19-MW2	
<b>Lab Sample ID:</b> M84626-2	<b>Date Sampled:</b> 07/24/09
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 07/28/09
<b>Method:</b> SW846-8015 SW846 3510C	<b>Percent Solids:</b> n/a
<b>Project:</b> ERIMAT:9901 Georgetown Pike Great Falls VA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC29633.D	1	07/31/09	WZ	07/29/09	OP19086	GBC1584
Run #2							

Run #	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (Semi-VOA)	0.393	0.22	0.15	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
3386-33-2	1-Chlorooctadecane	98%		33-150%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> W-33.67-MW3	
<b>Lab Sample ID:</b> M84626-3	<b>Date Sampled:</b> 07/24/09
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 07/28/09
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a
<b>Project:</b> ERIMAT:9901 Georgetown Pike Great Falls VA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P38525.D	1	07/30/09	AMY	n/a	n/a	MSP1274
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.31	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.32	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.26	ug/l	
1634-04-4	Methyl Tert Butyl Ether	5.7	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> W-30.72-MW5	
<b>Lab Sample ID:</b> M84626-4	<b>Date Sampled:</b> 07/24/09
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 07/28/09
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a
<b>Project:</b> ERIMAT:9901 Georgetown Pike Great Falls VA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P38524.D	1	07/30/09	AMY	n/a	n/a	MSP1274
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

## Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.31	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.32	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.26	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.3	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	104%		70-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> W-30.72-MW5	
<b>Lab Sample ID:</b> M84626-4	<b>Date Sampled:</b> 07/24/09
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 07/28/09
<b>Method:</b> SW846 8015	<b>Percent Solids:</b> n/a
<b>Project:</b> ERIMAT:9901 Georgetown Pike Great Falls VA	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	WX46832.D	1	07/29/09	AF	n/a	n/a	GWX2180
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	0.10	0.070	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	102%		60-126%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	W-30.72-MW5	
<b>Lab Sample ID:</b>	M84626-4	<b>Date Sampled:</b> 07/24/09
<b>Matrix:</b>	AQ - Ground Water	<b>Date Received:</b> 07/28/09
<b>Method:</b>	SW846-8015 SW846 3510C	<b>Percent Solids:</b> n/a
<b>Project:</b>	ERIMAT:9901 Georgetown Pike Great Falls VA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC29635.D	1	07/31/09	WZ	07/29/09	OP19086	GBC1584
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (Semi-VOA)	0.448	0.22	0.16	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
3386-33-2	1-Chlorooctadecane	115%		33-150%		

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (VA)
- Chain of Custody

