

**SUMMARY REPORT
287 BIRCH ROAD (FORMERLY 294 BIRCH ROAD)
LAUREL BAY MILITARY HOUSING AREA
MARINE CORPS AIR STATION BEAUFORT
BEAUFORT, SC**

**Revision: 0
Prepared for:**

**Department of the Navy
Naval Facilities Engineering Command, Mid-Atlantic
9324 Virginia Avenue
Norfolk, Virginia 23511-3095**

and



**Naval Facilities Engineering Command Atlantic
9324 Virginia Avenue
Norfolk, Virginia 23511-3095**

JUNE 2021

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Prepared by:

CDM - AECOM
Multimedia Joint Venture

**CDM - AECOM Multimedia Joint Venture
10560 Arrowhead Drive, Suite 500
Fairfax, Virginia 22030**

**Contract Number: N62470-14-D-9016
CTO WE52
JUNE 2021**

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List of Acronyms

bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CTO	Contract Task Order
COPC	constituents of potential concern
ft	feet
IDIQ	Indefinite Delivery, Indefinite Quantity
IGWA	Initial Groundwater Assessment
JV	Joint Venture
LBMH	Laurel Bay Military Housing
MCAS	Marine Corps Air Station
NAVFAC Mid-Lant	Naval Facilities Engineering Command Mid-Atlantic
NFA	No Further Action
PAH	polynuclear aromatic hydrocarbon
QAPP	Quality Assurance Program Plan
RBSL	risk-based screening level
SCDHEC	South Carolina Department of Health and Environmental Control
Site	LBMH area at MCAS Beaufort, South Carolina
UST	underground storage tank
VISL	vapor intrusion screening level

1.0 INTRODUCTION

The CDM - AECOM Multimedia Joint Venture (JV) was contracted by the Naval Facilities Engineering Command, Mid-Atlantic (NAVFAC Mid-Lant) to provide reporting services for the heating oil underground storage tanks (USTs) located in Laurel Bay Military Housing (LBMH) area at the Marine Corps Air Station (MCAS) Beaufort, South Carolina (Site). This work has been awarded under Contract Task Order (CTO) WE52 of the Indefinite Delivery, Indefinite Quantity (IDIQ) Multimedia Environmental Compliance Contract (Contract No. N62470-14-D-9016).

As of January 2014, the LBMH addresses were re-numbered to comply with the E-911 emergency response addressing system; however, in order to remain consistent with historical sampling and reporting for LBMH area, the residences will continue to be referenced with their original address numbers in sample nomenclature and reporting documents.

This report summarizes the results the environmental investigation activities associated with the storage of home heating oil and the potential release of petroleum constituents at the referenced property. Based on the results of the investigation, a No Further Action (NFA) determination has been made by the South Carolina Department of Health and Environmental Control (SCDHEC) for 287 Birch Road (Formerly 294 Birch Road). This NFA determination indicates that there are no unacceptable risks to human health or the environment for the petroleum constituents associated with the home heating oil USTs. The following information is included in this report:

- Background information;
- Sampling activities and results; and
- A determination of the property status.

1.1 Background Information

The LBMH area is located approximately 3.5 miles west of MCAS Beaufort. The area is approximately 970 acres in size and serves as an enlisted and officer family housing area. The area is configured with single family and duplex residential structures, and includes recreation, open space, and community facilities. The community includes approximately 1,300 housing units, including legacy Capehart style homes and newer duplex style homes. The housing area

is bordered on the west by salt marshes and the Broad River, and to the north, east and south by uplands. Forested areas lie along the northern and northeastern borders.

Capehart style homes within the LBMH area were formerly heated using heating oil stored in USTs at each residence. There were 1,100 Capehart style housing units in the LBMH area. The newer duplex homes within the LBMH area never utilized heating oil tanks. Heating oil has not been used at Laurel Bay since the mid-1980s. As was the accepted practice at the time, USTs were drained, filled with dirt, capped, and left in place when they were removed from service. Residential USTs are not regulated in the State of South Carolina (i.e., there are no federal or state laws governing installation, management, or removal).

In 2007, MCAS Beaufort began a voluntary program to remove the unregulated, residential USTs and conduct sampling activities to determine if, and to what extent, petroleum constituents may have impacted the surrounding environment. MCAS Beaufort coordinated with SCDHEC to develop removal procedures that were consistent with procedural requirements for regulated USTs. All tank removal activities and follow-on actions are conducted in coordination with SCDHEC. To date, all known USTs have been removed from all residential properties within the LBMH area.

1.2 UST Removal and Assessment Process

During the UST removal process, a soil sample was collected from beneath the UST excavations (approximately 4 to 6 feet [ft] below ground surface [bgs]) and analyzed for a predetermined list of constituents of potential concern (COPCs) associated with the petroleum compounds found in home heating oil. These COPCs, derived from the *Quality Assurance Program Plan (QAPP) for the Underground Storage Tank Management Division, Revision 3.1* (SCDHEC, 2016) and the *Underground Storage Tank Assessment Instructions for Permanent Closure and Change-In-Service*, (SCDHEC, 2018), are as follows:

- benzene, toluene, ethylbenzene, and xylenes (BTEX),
- naphthalene, and
- five select polynuclear aromatic hydrocarbon (PAHs): benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and dibenz(a,h)anthracene.

Soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form. In accordance with SCDHEC's *QAPP for the UST Management*

Division (SCDHEC, 2016), the soil screening levels consists of SCDHEC risk-based screening levels (RBSLs). It should be noted that the RBSLs for select PAHs were revised in Revision 2.0 of the QAPP (SCDHEC, 2013) and were revised again in Revision 3.0 (SCDHEC, 2015). The screening levels used for evaluation at each site were those levels that were in effect at the time of reporting and review by SCDHEC.

The results of the soil sampling at each former UST location were used to determine if a potential for groundwater contamination exists (i.e., soil results greater than RBSLs) and subsequently to select properties for follow-up initial groundwater assessment (IGWA) sampling. The results of the IGWA sampling (if necessary) are used to determine the presence or absence of the aforementioned COPCs in groundwater and identify whether former UST locations will require additional delineation of COPCs in groundwater. In order to delineate the extent of impact to groundwater, permanent wells are installed and a sampling program is established for those former UST locations where IGWA sampling has indicated the presence of COPCs in excess of the SCDHEC RBSLs for groundwater. Groundwater analytical results are also compared to the site specific groundwater vapor intrusion screening levels (VISLs) to evaluate the potential for vapor intrusion and the necessity for an investigation associated with this media. A multi-media investigation selection process tree, applicable to the LBMH UST investigations, is presented as Appendix A.

2.0 SAMPLING ACTIVITIES AND RESULTS

The following section presents the sampling activities and associated results for 287 Birch Road (Formerly 294 Birch Road). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 294 Birch Road* (MCAS Beaufort, 2008). The UST Assessment Report is provided in Appendix B. Details regarding the IGWA sampling activities at this site are provided in the *Investigation of Ground Water at Leaking Heating Oil UST Sites Report* (Resolution Consultants, 2008). The laboratory report that includes the pertinent IGWA analytical results for this site is presented in Appendix C.

2.1 UST Removal and Soil Sampling

On June 29, 2007, two 280 gallon heating oil USTs were removed at 287 Birch Road (Formerly 294 Birch Road). Tank 1 was removed from the front yard, adjacent to the house. Tank 2 was removed from the front yard area adjacent to Tank 1. The former UST locations are indicated in the figures of the UST Assessment Report (Appendix B). The USTs were removed, cleaned, and

shipped offsite for recycling. There was no visual evidence (i.e., staining or sheen) of petroleum impact at the time of the UST removal. According to the UST Assessment Report (Appendix B), the depths to the bases of the USTs were 4'8" (Tank 1) and 4'0" (Tank 2) bgs and a single soil sample was collected for each at that depth. An additional soil sample was collected at the side of the excavation for each tank at a depth of 3'8" (Tank 1) and 2'10" (Tank 2). The samples were collected from the fill port side of the former USTs to represent a worst case scenario.

Following UST removal, a soil sample was collected from the base and side of each excavation and shipped to an offsite laboratory for analysis of the petroleum COPCs. Sampling was performed in accordance with applicable South Carolina regulation R.61-92, Part 280 (SCDHEC, 2017) and assessment guidelines.

2.2 Soil Analytical Results

A summary of the laboratory analytical results and SCDHEC RBSLs is presented in Table 1. A copy of the laboratory analytical data report is included in the UST Assessment Report presented in Appendix B. The laboratory analytical data report includes the soil results for the additional PAHs that were analyzed, but do not have associated RBSLs.

The soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form (Appendix B). The results of the soil sampling at the former UST locations (Tanks 1 and 2) were used by MCAS Beaufort, in consultation with SCDHEC, to determine a path forward (i.e., additional sampling or NFA) for the property. The soil results collected from the former UST locations (Tanks 1 and 2) at 287 Birch Road (Formerly 294 Birch Road) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated September 8, 2008, SCDHEC requested IGWAs be conducted at the former UST locations (Tanks 1 and 2) at 287 Birch Road (Formerly 294 Birch Road) to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letter is provided in Appendix D.

2.3 Groundwater Sampling

On July 29, 2008, a temporary monitoring well was installed at 287 Birch Road (Formerly 294 Birch Road), in accordance with the South Carolina Well Standards and Regulations (R.61-71.H-I, updated June 24, 2016). In order to provide data that can be used to determine whether COPCs are migrating to underlying groundwater, the monitoring well was

placed in the same general location as the former heating oil USTs (Tanks 1 and 2). The former UST locations are indicated in the figures of the UST Assessment Report (Appendix B). Further details are provided in the *Investigation of Ground Water at Leaking Heating Oil UST Sites Report* (Resolution Consultants, 2008).

The sampling strategy for this phase of the investigation required a one-time sampling event of the temporarily installed monitoring well. Following well installation and development, groundwater samples were collected using low-flow methods and shipped to an offsite laboratory for analysis of the petroleum COPCs. Upon completion of groundwater sampling, the temporary well was abandoned in accordance with the South Carolina Well Standards and Regulations R.61-71 (SCDHEC, 2016). Field forms are provided in the *Investigation of Ground Water at Leaking Heating Oil UST Sites Report* (Resolution Consultants, 2008).

2.4 Groundwater Analytical Results

A summary of the laboratory analytical results and SCDHEC RBSLs is presented in Table 2. A copy of the laboratory analytical data report is included in Appendix C.

The groundwater results collected from 287 Birch Road (Formerly 294 Birch Road) were less than the SCDHEC RBSLs and the site specific groundwater VISLs (Table 2), which indicated that the groundwater was not impacted by COPCs associated with the former USTs at concentrations that present a potential risk to human health and the environment.

3.0 PROPERTY STATUS

Based on the analytical results for groundwater, SCDHEC made the determination that NFA was required for 287 Birch Road (Formerly 294 Birch Road). This NFA determination was obtained in a letter dated December 19, 2008. SCDHEC's NFA letter is provided in Appendix D.

4.0 REFERENCES

Marine Corps Air Station Beaufort, 2008. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 294 Birch Road, Laurel Bay Military Housing Area*, January 2008.

Resolution Consultants, 2008. *Initial Groundwater Investigation of Ground Water at Leaking Heating Oil UST Sites Report for Laurel Bay Military Housing Area, Multiple Properties*,

Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina, September 2008.

South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2013. *Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 2.0*, April 2013.

South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2015. *Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 3.0*, May 2015.

South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2016. *Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 3.1*, February 2016.

South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2017. *R.61-92, Part 280, Underground Storage Tank Control Regulations*, March 2017.

South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2018. *Underground Storage Tank Assessment Instructions for Permanent Closure and Change-In-Service*, March 2018.

South Carolina Department of Health and Environmental Control Bureau of Water, 2016. *R.61-71, Well Standards*, June 2016.

Tables

Table 1
Laboratory Analytical Results - Soil
287 Birch Road (Formerly 294 Birch Road)
Laurel Bay Military Housing Area
Marine Corps Air Station Beaufort
Beaufort, South Carolina

Constituent	SCDHEC RBSLs ⁽¹⁾	Results Samples Collected 07/31/07			
		294 Birch Bot-01	294 Birch Sid 02	294 Birch Bot-03	294 Birch Sid-04
Volatile Organic Compounds Analyzed by EPA Method 8260B (mg/kg)					
Benzene	0.003	0.000619	0.000444	0.00108	0.00062
Ethylbenzene	1.15	0.000548	0.000463	0.000661	ND
Naphthalene	0.036	0.00229	ND	ND	ND
Toluene	0.627	0.0031	0.00295	0.00469	0.00321
Xylenes, Total	13.01	0.00169	0.000887	0.00231	0.00138
Semivolatile Organic Compounds Analyzed by EPA Method 8270D (mg/kg)					
Benzo(a)anthracene	0.66	0.100	0.316	ND	ND
Benzo(b)fluoranthene	0.66	0.0967	0.189	ND	ND
Benzo(k)fluoranthene	0.66	0.0299	0.0917	ND	ND
Chrysene	0.66	0.126	0.296	ND	ND
Dibenz(a,h)anthracene	0.66	ND	ND	ND	ND

Notes:

⁽¹⁾ South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 1.0 and 1.1 (SCDHEC, May 2001 and SCDHEC, February 2011) and the Underground Storage Tank Assessment Guidelines (SCDHEC, February 2006).

Bold font indicates the analyte was detected.

Bold font and shading indicates the concentration exceeds the SCDHEC RBSL.

EPA - United States Environmental Protection Agency

mg/kg - milligrams per kilogram

ND - not detected at the reporting limit (or method detection limit if shown on the laboratory report). The soil laboratory report is provided in Appendix B.

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

Table 2
Laboratory Analytical Results - Groundwater
287 Birch Road (Formerly 294 Birch Road)
Laurel Bay Military Housing Area
Marine Corps Air Station Beaufort
Beaufort, South Carolina

Constituent	SCDHEC RBSLs ⁽¹⁾	Site-Specific Groundwater VISLs (µg/L) ⁽²⁾	Results Samples Collected 07/29/08
Volatile Organic Compounds Analyzed by EPA Method 8260B (µg/L)			
Benzene	5	16.24	ND
Ethylbenzene	700	45.95	ND
Naphthalene	25	29.33	ND
Toluene	1000	105,445	ND
Xylenes, Total	10,000	2,133	ND
Semivolatile Organic Compounds Analyzed by EPA Method 8270D (µg/L)			
Benzo(a)anthracene	10	NA	ND
Benzo(b)fluoranthene	10	NA	ND
Benzo(k)fluoranthene	10	NA	ND
Chrysene	10	NA	ND
Dibenz(a,h)anthracene	10	NA	ND

Notes:

⁽¹⁾ South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 3.1 (SCDHEC, February 2016).

⁽²⁾ Site-specific groundwater VISLs were calculated using the EPA JE Model Spreadsheets (Version 3.1, February 2004) and conservative modeling inputs representative of a small single-story house with an 8 foot ceiling. Site-specific groundwater VISLs were developed based on a target risk level of 1×10^{-6} , a target hazard quotient of 1 (per target organ), and a default residential exposure scenario, assuming exposure for 24 hours/day, 350 days/year, for 26 years. Modeling was performed for a range of depths to groundwater for application as appropriate in different areas of the Laurel Bay Military Housing Area. The most conservative levels are presented for comparison. Refer to Appendix H of the Uniform Federal Policy Sampling Analysis and Sampling Plan for Vapor Media, Revision 4 (Resolution Consultants, April 2017) for additional information.

Bold font indicates the analyte was detected.

Bold font and shading indicates the concentration exceeds the SCDHEC RBSL and/or the Site-Specific Groundwater VISL.

EPA - United States Environmental Protection Agency

JE - Johnson & Ettinger

NA - Not Applicable

ND - not detected at the reporting limit (or method detection limit if shown on the laboratory report). The groundwater laboratory report is provided in Appendix C.

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

µg/L - micrograms per liter

VISL - Vapor Intrusion Screening Level

Appendix A
Multi-Media Selection Process for LBMH



Appendix A - Multi-Media Selection Process for LBMH

Appendix B
UST Assessment Report

Attachment 1
South Carolina Department of Health and Environmental Control (SCDHEC)
Underground Storage Tank (UST) Assessment Report

Date Received _____
State Use Only _____

Submit Completed Form To:
UST Program
SCDHEC
2600 Bull Street
Columbia, South Carolina 29201
Telephone (803) 896-6240

I. OWNERSHIP OF UST (S)

Owner Name (Corporation, Individual, Public Agency, Other) Beaufort Military Complex Family Housing
Mailing Address 1510 Laurel Bay Blvd.
City Beaufort State SC Zip Code 29906
Area Code 843 Telephone Number 379-3305 Contact Person Kyle Broadfoot

II. SITE IDENTIFICATION AND LOCATION

Permit I.D. # N/A
Facility Name or Company Site Identifier Actus LEND Lease Construction
Street Address or State Road (as applicable) 294 Birch
City Beaufort, SC ZIP 29906 County Beaufort

III. INSURANCE INFORMATION

Insurance Statement

The petroleum release reported to DHEC on N/A at Permit ID # may qualify to receive state monies to pay for appropriate site rehabilitation activities. Before participation is allowed in the State Clean-up fund, written confirmation of the existence or non-existence of an environmental insurance policy is required. **This section must be completed.**

Is there now, or has there ever been an insurance policy or other financial mechanism that covers this UST release? YES NO (check one)

If you answered YES to the above question, please complete the following information:

My policy provider is: _____
The policy deductible is: _____
The policy limit is: _____

If you have this type of insurance, please include a copy of the policy with this report.

And

I do/**do not** (circle one) wish to participate in the Superb Program.

IV. CERTIFICATION (To be signed by the UST owner/operator.)

I certify that I have personally examined and am familiar with the information submitted in this and all attached documents; and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Name (Type or print.) _____

Signature _____

To be completed by Notary Public:

Sworn before me this _____ day of _____, 20____.

(Name)

Notary Public for the state of _____
Please affix State seal if you are commissioned outside South Carolina

V. UST INFORMATION

- A. Product...(ex. Gas, Kerosene).....
- B. Capacity...(ex. 1k, 2k)..... (APPROX)
- C. Age.....
- D. Construction Material...(ex. Steel, FRP).....
- E. Month/Year of Last Use.....
- F. Depth (ft.) To Base of Tank.....
- G. Spill Prevention Equipment Y/N.....
- H. Overfill Prevention Equipment Y/N.....
- I. Method of Closure Removed/Filled.....
- J. Date Tanks Removed/Filled.....
- K. Visible Corrosion or Pitting Y/N.....
- L. Visible Holes Y/N.....

Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
#2					
DIESEL	SAME				
280G					
280G 280G					
Steel	STEEL				
56"	48"				
N	N				
N	N				
Removed	REMOVED				
6-29-07	6-29-07				
N	Y				
N	Y				

M. Method of disposal for any USTs removed from the ground (attach disposal manifests)

Recycling - Scrap Steel

N. Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests)

BROADHURST LANDFILL SCREVEN, GA
SOLIDIFICATION + SUBTITLE D LANDFILL

O. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST
TANK 02 HAD PREVIOUSLY BEEN CUT OPEN AND FILLED W/ SAND.
IT HAD MANY SMALL HOLES ALONG THE BOTTOM.

VI. PIPING INFORMATION

- A. Construction Material..(ex. Steel, FRP).....
- B. Distance from UST to Dispenser.....
- C. Number of Dispensers.....
- D. Type of System Pressure or Suction.....
- E. Was Piping Removed from the Ground? Y/N
- F. Visible Corrosion or Pitting Y/N.....
- G. Visible Holes Y/N.....
- H. Age.....

Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
Steel	STEEL				
N/A	N/A				
-0-	0				
Electra PUMP	PUMP				
Y	Y				
N	N				
N	N				

I. If any corrosion, pitting, or holes were observed, describe the location and extent for each piping run.

Mild Corrosion WAS VISIBLE ON ALL PIPING -

VII. BRIEF SITE DESCRIPTION AND HISTORY

Home Heating Oil TANK - RESIDENTIAL

VIII. SITE CONDITIONS

	Yes	No	Unk
<p>A. Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells?</p> <p>If yes, indicate depth and location on the site map.</p>	X		
<p>B. Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells?</p> <p>If yes, indicate location on site map and describe the odor (strong, mild, etc.)</p>	X		
<p>C. Was water present in the UST excavation, soil borings, or trenches?</p> <p>If yes, how far below land surface (indicate location and depth)?</p>		X	
<p>D. Did contaminated soils remain stockpiled on site after closure?</p> <p>If yes, indicate the stockpile location on the site map.</p> <p>Name of DHEC representative authorizing soil removal:</p>		X	
<p>E. Was a petroleum sheen or free product detected on any excavation or boring waters?</p> <p>If yes, indicate location and thickness.</p>		X	

IX. SAMPLE INFORMATION

A.

SCDHEC Lab Certification Number DW: 84009002

B.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
						ECHYARD	
1	BOTTOM	S	SAND	56"	6-29-07 935	ARMSTRONG	ND
2	SIDE	S	CLAY	44"	6-29-07 945	ARMSTRONG	ND
3	BOTTOM	S	MIX	48"	6-29-07 955		ND
4	SIDE	S	MIX	34"	6-29-07 1005		ND
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

* = Depth Below the Surrounding Land Surface

X.

SAMPLING METHODOLOGY

Provide a detailed description of the methods used to collect and store the samples. Also include the preservative used for each sample. Please use the space provided below.

EPA Method 8260 B Volatile Organic Compounds
- Preservative: 2% Sodium Bisulfate 1EA
EPA Method 8270 PolyAromatic Hydrocarbons
- No Preservative

One (1) Sidewall and One (1) Bottom
Sample were secured from tank excavation
Samples were stored and shipped in an
insulated cooler w/ ice.

XI. RECEPTORS

	Yes	No
<p>A. Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?</p> <p>If yes, indicate type of receptor, distance, and direction on site map.</p>		X
<p>B. Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?</p> <p>If yes, indicate type of well, distance, and direction on site map.</p>		✓
<p>C. Are there any underground structures (e.g., basements) located within 100 feet of the UST system?</p> <p>If yes, indicate type of structure, distance, and direction on site map.</p>		✓
<p>D. Are there any underground utilities (e.g., telephone, electricity, gas, water, sewer, storm drain) located within 100 feet of the UST system that could potentially come in contact with the contamination?</p> <p>If yes, indicate the type of utility, distance, and direction on the site map.</p>		✓
<p>E. Has contaminated soil been identified at a depth less than 3 feet below land surface in an area that is not capped by asphalt or concrete?</p> <p>If yes, indicate the area of contaminated soil on the site map.</p>		✓

SUMMARY OF ANALYSIS RESULTS

N/A

Enter the soil analytical data for each soil boring for all COC in the table below and on the following page.

CoC	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SB-8
Benzene								
Toluene								
Ethylbenzene								
Xylenes								
Naphthalene								
Benzo(a)anthracene								
Benzo(b)flouranthene								
Benzo(k)flouranthene								
Chrysene								
Dibenz(a,h)anthracene								
TPH (EPA 3550)								

CoC	SB-9	SB-10	SB-11	SB-12	SB-13	SB-14	SB-15	SB-16
Benzene								
Toluene								
Ethylbenzene								
Xylenes								
Naphthalene								
Benzo(a)anthracene								
Benzo(b)flouranthene								
Benzo(k)flouranthene								
Chrysene								
Dibenz(a,h)anthracene								
TPH (EPA 3550)								

SUMMARY OF ANALYSIS RESULTS (cont'd)

N/A

Enter the ground water analytical data for each sample for all CoC in the table below. If free product is present, indicate the measured thickness to the nearest 0.01 feet.

CoC	RBSL (µg/l)	W-1	W-2	W-3	W-4
Free Product Thickness	None				
Benzene	5				
Toluene	1,000				
Ethylbenzene	700				
Xylenes	10,000				
Total BTEX	N/A				
MTBE	40				
Naphthalene	25				
Benzo(a)anthracene	10				
Benzo(b)flouranthene	10				
Benzo(k)flouranthene	10				
Chrysene	10				
Dibenz(a,h)anthracene	10				
EDB	.05				
1,2-DCA	.05				
Lead	Site specific				

ANALYTICAL RESULTS

You must submit the laboratory report and chain-of-custody form for the samples. These samples must be analyzed by a South Carolina certified laboratory.

**(Attach Certified Analytical Results and Chain-of-Custody Here)
(Please see Form #4)**

Client: EPG, INC.
 PO BOX 1096
 MT PLEASANT, SC 29465
 Attn: JOHN MAHONEY

Work Order: OQH0084
 Project: LAUREL BAY
 Project Number: EP2362

Sampled: 07/30/07-07/31
 Received: 08/03/07

LABORATORY REPORT
 Sample ID: 398 ACRON SID-04 - Lab Number: OQH0084-08 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
Polynuclear Aromatic Hydrocarbons by EPA Method 8270 - Cont.											
1-57-6	2-Methylnaphthalene	386		ug/kg dry	97.6	229					
1-20-3	Naphthalene	92.0	Y	ug/kg dry	92.0	229	1	08/12/07 14:59	REM	EPA 8270C	7H09030
5-01-8	Phenanthrene	460	Y,U	ug/kg dry	54.0	229	1	08/12/07 14:59	REM	EPA 8270C	7H09030
29-00-0	Pyrene	46.5	Y	ug/kg dry	46.5	229	1	08/12/07 14:59	REM	EPA 8270C	7H09030
	urrogate: 2-Fluorobiphenyl (24-121%)	66 %	Y,U	ug/kg dry			1	08/12/07 14:59	REM	EPA 8270C	7H09030
	urrogate: Nitrobenzene-d5 (19-111%)	68 %									
	urrogate: Terphenyl-d14 (44-171%)	107 %									

LABORATORY REPORT
 Sample ID: 294 BIRCH BOT-01 - Lab Number: OQH0084-09 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters											
A	% Solids	75.8		%	0.100	0.100	1	08/07/07 14:10	RRP	EPA 160.3	7H07029
Volatile Organic Compounds by EPA Method 8260B											
43-2	Benzene	0.619	Y,I	ug/kg dry	0.436	1.19	1	08/05/07 01:14	JWT	EPA 8260B	7H04004
0-41-4	Ethylbenzene	0.548	Y,I	ug/kg dry	0.504	1.19	1	08/05/07 01:14	JWT	EPA 8260B	7H04004
20-3	Naphthalene	2.29	Y	ug/kg dry	0.658	1.19	1	08/05/07 01:14	JWT	EPA 8260B	7H04004
8-88-3	Toluene	3.10	Y	ug/kg dry	1.03	1.19	1	08/05/07 01:14	JWT	EPA 8260B	7H04004
30-20-7	Xylenes, total	1.69	Y	ug/kg dry	0.618	1.19	1	08/05/07 01:14	JWT	EPA 8260B	7H04004
	urrogate: 1,2-Dichloroethane-d4 (73-137%)	122 %	Y	ug/kg dry			1	08/05/07 01:14	JWT	EPA 8260B	7H04004
	urrogate: 4-Bromofluorobenzene (59-118%)	93 %									
	urrogate: Dibromofluoromethane (55-145%)	108 %									
	urrogate: Toluene-d8 (80-117%)	98 %									
Polynuclear Aromatic Hydrocarbons by EPA Method 8270											
32-9	Acenaphthene	157	Y,I	ug/kg dry	97.6	220					
96-8	Acenaphthylene	129	Y,U	ug/kg dry	129	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
12-7	Anthracene	212	Y,I	ug/kg dry	70.3	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
55-3	Benzo (a) anthracene	100	Y,I	ug/kg dry	23.9	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
99-2	Benzo (b) fluoranthene	96.7	Y,I	ug/kg dry	23.2	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
08-9	Benzo (k) fluoranthene	29.9	Y,I	ug/kg dry	23.2	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
24-2	Benzo (g,h,i) perylene	22.9	Y,U	ug/kg dry	22.9	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
12-8	Benzo (a) pyrene	48.4	Y,I	ug/kg dry	27.1	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
2-0	1-Methylnaphthalene	226	Y	ug/kg dry	111	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
01-9	Chrysene	126	Y,I	ug/kg dry	26.4	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
0-3	Dibenz (a,h) anthracene	28.9	Y,U	ug/kg dry	28.9	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
44-0	Fluoranthene	150	Y,I	ug/kg dry	31.7	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
3-7	Fluorene	86.2	Y,U	ug/kg dry	86.2	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
39-5	Indeno (1,2,3-cd) pyrene	28.5	Y,U	ug/kg dry	28.5	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
7-6	2-Methylnaphthalene	293	Y	ug/kg dry	93.9	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
3-3	Naphthalene	88.5	Y,U	ug/kg dry	88.5	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
1-8	Phenanthrene	460	Y	ug/kg dry	52.0	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030

TestAmerica - Orlando, FL
 Enid Ortiz For Shali Brown
 Project Manager

Client: EPG, INC.
 PO BOX 1096
 MT PLEASANT, SC 29465
 Attn: JOHN MAHONEY

Work Order: OQH0084
 Project: LAUREL BAY
 Project Number: EP2362

Sampled: 07/30/07-07/31/07
 Received: 08/03/07

LABORATORY REPORT

Sample ID: 294 BIRCH BOT-01 - Lab Number: OQH0084-09 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
Polynuclear Aromatic Hydrocarbons by EPA Method 8270 - Cont.											
129-00-0	Pyrene	258	Y	ug/kg dry	44.8	220	1	08/12/07 15:21	REM	EPA 8270C	7H09030
	Surrogate: 2-Fluorobiphenyl (24-121%)	62 %									
	Surrogate: Nitrobenzene-d5 (19-111%)	62 %									
	Surrogate: Terphenyl-d14 (44-171%)	102 %									

LABORATORY REPORT

Sample ID: 294 BIRCH SID-02 - Lab Number: OQH0084-10 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters											
1A	% Solids	76.0		%	0.100	0.100	1	08/07/07 14:10	RRP	EPA 160.3	7H07029
Volatile Organic Compounds by EPA Method 8260B											
1-43-2	Benzene	0.444	Y,I	ug/kg dry	0.353	0.965	1	08/05/07 01:30	JWT	EPA 8260B	7H04004
00-41-4	Ethylbenzene	0.463	Y,I	ug/kg dry	0.408	0.965	1	08/05/07 01:30	JWT	EPA 8260B	7H04004
1-20-3	Naphthalene	0.533	Y,U	ug/kg dry	0.533	0.965	1	08/05/07 01:30	JWT	EPA 8260B	7H04004
08-88-3	Toluene	2.95	Y	ug/kg dry	0.833	0.965	1	08/05/07 01:30	JWT	EPA 8260B	7H04004
330-20-7	Xylenes, total	0.887	Y,I	ug/kg dry	0.501	0.965	1	08/05/07 01:30	JWT	EPA 8260B	7H04004
	Surrogate: 1,2-Dichloroethane-d4 (73-137%)	128 %									
	Surrogate: 4-Bromofluorobenzene (59-118%)	90 %									
	Surrogate: Dibromofluoromethane (55-145%)	107 %									
	Surrogate: Toluene-d8 (80-117%)	97 %									
Polynuclear Aromatic Hydrocarbons by EPA Method 8270											
1-32-9	Acenaphthene	344	Y	ug/kg dry	97.4	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
18-96-8	Acenaphthylene	128	Y,U	ug/kg dry	128	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
10-12-7	Anthracene	361	Y	ug/kg dry	70.1	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
1-55-3	Benzo (a) anthracene	316	Y	ug/kg dry	23.8	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
15-99-2	Benzo (b) fluoranthene	189	Y,I	ug/kg dry	23.1	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
7-08-9	Benzo (k) fluoranthene	91.7	Y,I	ug/kg dry	23.1	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
1-24-2	Benzo (g,h,i) perylene	22.8	Y,U	ug/kg dry	22.8	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
1-32-8	Benzo (a) pyrene	119	Y,I	ug/kg dry	27.0	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
1-12-0	1-Methylnaphthalene	428	Y	ug/kg dry	110	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
8-01-9	Chrysene	296	Y	ug/kg dry	26.3	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
1-70-3	Dibenz (a,h) anthracene	28.9	Y,U	ug/kg dry	28.9	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
1-6-44-0	Fluoranthene	586	Y	ug/kg dry	31.6	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
1-73-7	Fluorene	394	Y	ug/kg dry	86.0	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
1-3-39-5	Indeno (1,2,3-cd) pyrene	28.4	Y,U	ug/kg dry	28.4	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
1-57-6	2-Methylnaphthalene	243	Y	ug/kg dry	93.7	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
1-20-3	Naphthalene	88.2	Y,U	ug/kg dry	88.2	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
1-01-8	Phenanthrene	671	Y	ug/kg dry	51.8	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
1-129-00-0	Pyrene	513	Y	ug/kg dry	44.6	220	1	08/12/07 15:43	REM	EPA 8270C	7H09030
	Surrogate: 2-Fluorobiphenyl (24-121%)	77 %									
	Surrogate: Nitrobenzene-d5 (19-111%)	77 %									
	Surrogate: Terphenyl-d14 (44-171%)	120 %									

Client: EPG, INC.
 PO BOX 1096
 MT PLEASANT, SC 29465
 Attn: JOHN MAHONEY

Work Order: OQH0084
 Project: LAUREL BAY
 Project Number: EP2362

Sampled: 07/30/07-07/31/07
 Received: 08/03/07

LABORATORY REPORT
 Sample ID: 294 BIRCH BOT-03 - Lab Number: OQH0084-11 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters											
NA	% Solids	80.0		%	0.100	0.100	1	08/07/07 14:10	RRP	EPA 160.3	7H07029
Volatile Organic Compounds by EPA Method 8260B											
71-43-2	Benzene	1.08	Y,I	ug/kg dry	0.550	1.50	1	08/05/07 01:47	JWT	EPA 8260B	7H04004
100-41-4	Ethylbenzene	0.661	Y,I	ug/kg dry	0.635	1.50	1	08/05/07 01:47	JWT	EPA 8260B	7H04004
91-20-3	Naphthalene	0.830	Y,U	ug/kg dry	0.830	1.50	1	08/05/07 01:47	JWT	EPA 8260B	7H04004
108-88-3	Toluene	4.69	Y	ug/kg dry	1.30	1.50	1	08/05/07 01:47	JWT	EPA 8260B	7H04004
1330-20-7	Xylenes, total	2.31	Y	ug/kg dry	0.780	1.50	1	08/05/07 01:47	JWT	EPA 8260B	7H04004
Surrogate: 1,2-Dichloroethane-d4 (73-137%)		117 %									
Surrogate: 4-Bromofluorobenzene (59-118%)		93 %									
Surrogate: Dibromofluoromethane (55-145%)		106 %									
Surrogate: Toluene-d8 (80-117%)		97 %									
Polynuclear Aromatic Hydrocarbons by EPA Method 8270											
13-32-9	Acenaphthene	92.5	Y,U	ug/kg dry	92.5	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
108-96-8	Acenaphthylene	122	Y,U	ug/kg dry	122	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
20-12-7	Anthracene	66.5	Y,U	ug/kg dry	66.5	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
6-55-3	Benzo (a) anthracene	22.6	Y,U	ug/kg dry	22.6	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
05-99-2	Benzo (b) fluoranthene	22.0	Y,U	ug/kg dry	22.0	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
07-08-9	Benzo (k) fluoranthene	22.0	Y,U	ug/kg dry	22.0	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
91-24-2	Benzo (g,h,i) perylene	21.7	Y,U	ug/kg dry	21.7	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
0-32-8	Benzo (a) pyrene	25.7	Y,U	ug/kg dry	25.7	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
0-12-0	1-Methylnaphthalene	105	Y,U	ug/kg dry	105	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
18-01-9	Chrysene	25.0	Y,U	ug/kg dry	25.0	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
3-70-3	Dibenz (a,h) anthracene	27.4	Y,U	ug/kg dry	27.4	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
06-44-0	Fluoranthene	30.0	Y,U	ug/kg dry	30.0	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
6-73-7	Fluorene	81.7	Y,U	ug/kg dry	81.7	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
93-39-5	Indeno (1,2,3-cd) pyrene	27.0	Y,U	ug/kg dry	27.0	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
1-57-6	2-Methylnaphthalene	89.0	Y,U	ug/kg dry	89.0	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
1-20-3	Naphthalene	83.8	Y,U	ug/kg dry	83.8	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
5-01-8	Phenanthrene	49.2	Y,U	ug/kg dry	49.2	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
29-00-0	Pyrene	42.4	Y,U	ug/kg dry	42.4	209	1	08/12/07 16:06	REM	EPA 8270C	7H09030
Surrogate: 2-Fluorobiphenyl (24-121%)		52 %									
Surrogate: Nitrobenzene-d5 (19-111%)		53 %									
Surrogate: Terphenyl-d14 (44-171%)		95 %									

LABORATORY REPORT
 Sample ID: 294 BIRCH SID-04 - Lab Number: OQH0084-12 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters											
A	% Solids	79.9		%	0.100	0.100	1	08/07/07 14:10	RRP	EPA 160.3	7H07029
Volatile Organic Compounds by EPA Method 8260B											
43-2	Benzene	0.620	Y,I	ug/kg dry	0.516	1.41	1	08/05/07 02:04	JWT	EPA 8260B	7H04004
0-41-4	Ethylbenzene	0.596	Y,U	ug/kg dry	0.596	1.41	1	08/05/07 02:04	JWT	EPA 8260B	7H04004

TestAmerica - Orlando, FL
 Enid Ortiz For Shali Brown
 Project Manager

Client: EPG, INC.
 PO BOX 1096
 MT PLEASANT, SC 29465
 Attn: JOHN MAHONEY

Work Order: OQH0084
 Project: LAUREL BAY
 Project Number: EP2362

Sampled: 07/30/07-07/31/07
 Received: 08/03/07

LABORATORY REPORT
 Sample ID: 294 BIRCH SID-04 - Lab Number: OQH0084-12 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
Volatile Organic Compounds by EPA Method 8260B - Cont.											
11-20-3	Naphthalene	0.778	Y,U	ug/kg dry	0.778	1.41	1	08/05/07 02:04	JWT	EPA 8260B	7H04004
108-88-3	Toluene	3.21	Y	ug/kg dry	1.22	1.41	1	08/05/07 02:04	JWT	EPA 8260B	7H04004
1330-20-7	Xylenes, total	1.38	Y,I	ug/kg dry	0.732	1.41	1	08/05/07 02:04	JWT	EPA 8260B	7H04004
	Surrogate: 1,2-Dichloroethane-d4 (73-137%)	117 %									
	Surrogate: 4-Bromofluorobenzene (59-118%)	93 %									
	Surrogate: Dibromofluoromethane (55-145%)	106 %									
	Surrogate: Toluene-d8 (80-117%)	97 %									
Polynuclear Aromatic Hydrocarbons by EPA Method 8270											
3-32-9	Acenaphthene	92.6	Y,U	ug/kg dry	92.6	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
08-96-8	Acenaphthylene	122	Y,U	ug/kg dry	122	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
20-12-7	Anthracene	66.6	Y,U	ug/kg dry	66.6	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
6-55-3	Benzo (a) anthracene	22.6	Y,U	ug/kg dry	22.6	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
05-99-2	Benzo (b) fluoranthene	22.0	Y,U	ug/kg dry	22.0	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
07-08-9	Benzo (k) fluoranthene	22.0	Y,U	ug/kg dry	22.0	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
91-24-2	Benzo (g,h,i) perylene	21.7	Y,U	ug/kg dry	21.7	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
3-32-8	Benzo (a) pyrene	25.7	Y,U	ug/kg dry	25.7	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
1-12-0	1-Methylnaphthalene	105	Y,U	ug/kg dry	105	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
18-01-9	Chrysene	25.0	Y,U	ug/kg dry	25.0	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
3-70-3	Dibenz (a,b) anthracene	27.4	Y,U	ug/kg dry	27.4	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
16-44-0	Fluoranthene	30.1	Y,U	ug/kg dry	30.1	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
5-73-7	Fluorene	81.8	Y,U	ug/kg dry	81.8	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
13-39-5	Indeno (1,2,3-cd) pyrene	27.1	Y,U	ug/kg dry	27.1	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
-57-6	2-Methylnaphthalene	101	Y,I	ug/kg dry	89.1	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
-20-3	Naphthalene	83.9	Y,U	ug/kg dry	83.9	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
-01-8	Phenanthrene	49.3	Y,U	ug/kg dry	49.3	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
9-00-0	Pyrene	42.5	Y,U	ug/kg dry	42.5	209	1	08/12/07 16:28	REM	EPA 8270C	7H09030
	Surrogate: 2-Fluorobiphenyl (24-121%)	65 %									
	Surrogate: Nitrobenzene-d5 (19-111%)	65 %									
	Surrogate: Terphenyl-d14 (44-171%)	102 %									

LABORATORY REPORT
 Sample ID: 292 BIRCH BOT-01 - Lab Number: OQH0084-13 - Matrix: Solid/Soil

AS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters											
	% Solids	79.2		%	0.100	0.100	1	08/07/07 14:10	RRP	EPA 160.3	7H07029
Volatile Organic Compounds by EPA Method 8260B											
43-2	Benzene	1.19	Y,I	ug/kg dry	0.545	1.49	1	08/05/07 02:21	JWT	EPA 8260B	7H04004
141-4	Ethylbenzene	0.715	Y,I	ug/kg dry	0.630	1.49	1	08/05/07 02:21	JWT	EPA 8260B	7H04004
20-3	Naphthalene	0.823	Y,U	ug/kg dry	0.823	1.49	1	08/05/07 02:21	JWT	EPA 8260B	7H04004
-88-3	Toluene	4.68	Y	ug/kg dry	1.29	1.49	1	08/05/07 02:21	JWT	EPA 8260B	7H04004
0-20-7	Xylenes, total	2.59	Y	ug/kg dry	0.774	1.49	1	08/05/07 02:21	JWT	EPA 8260B	7H04004
	Surrogate: 1,2-Dichloroethane-d4 (73-137%)	121 %									

TestAmerica - Orlando, FL
 Enid Ortiz For Shali Brown
 Project Manager

Test America

ANALYTICAL TESTING CORPORATION

06140084 page 1 of 2

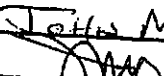
To assist us in using the proper analytical methods,
is this work being conducted for regulatory purposes?
Compliance Monitoring _____

Client Name: EBG Client #: 2411

Address: _____
City/State/Zip Code: _____

Project Manager: John Mahoney

Telephone Number: 813-881-0467 Fax: 813-881-7766

Sampler Name: (Print Name) John Mahoney
Sampler Signature: 

Project Name: LAUREL BAY

Project #: EP 2362

Site/Location ID: _____ State: _____

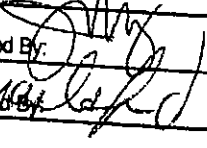
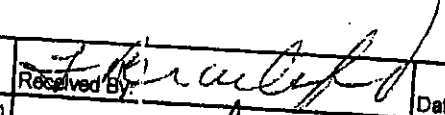
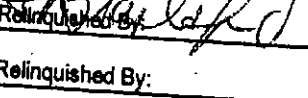
Report To: _____

Invoice To: _____

Quote #: _____ PO#: _____

TAT <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (surcharges may apply)	Date Needed:	Fax Results: Y N	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix SL - Sludge DW - Drinking Water GW - Groundwater S - Soil/Solid MW - Wastewater Specify Other	Preservation & # of Containers								Analyze For:		QC Deliverables <input type="checkbox"/> None <input checked="" type="checkbox"/> Level 2 (Batch QC) <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 Other: _____	REMARKS		
								HNO ₃	HCl	NaOH	H ₂ SO ₄	Methanol	None	Other (Specify)							
X			7/30/07	9:10	G		S														
X			"	9:20	C		S						1	2	2	X	X				
X			"	10:10	G		S						1	2	2	X	X				
X			"	10:15	C		S						1	2	2	X	X				
X			"	10:50	G		S						1	2	2	X	X				
X			"	10:55	C		S						1	2	2	X	X				
X			"	11:10	G		S						1	2	2	X	X				
X			"	11:15	C		S						1	2	2	X	X				
X			7/31/07	9:30	G		S						1	2	2	X	X				
X			7/31/07	09:35	C		S						1	2	2	X	X				

Special Instructions: _____

Relinquished By: 	Date: <u>7/31/07</u>	Time: <u>14:00</u>	Received By: 	Date: <u>8/2/07</u>	Time: <u>14:00</u>
Relinquished By: 	Date: <u>8/2/07</u>	Time: <u>17:30</u>	Received By: <u>AW</u>	Date: <u>8/31/07</u>	Time: <u>9:15</u>

LABORATORY COMMENTS:

Int'l Lab Temp: 6.2

Rec. Lab Temp: _____

Custody Seals: Y N N/A

Bottles Supplied by Test America: Y N

Method of Shipment: FedEx ATA Orlando

816-232-5911 738

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To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring

Client Name: EPG
 Address: _____
 City/State/Zip Code: _____
 Project Manager: John Mahoney
 Telephone Number: 843-881-0467
 Sampler Name: (Print Name) John Mahoney
 Sampler Signature: *[Signature]*

Client #: 2491

Project Name: Lake L. Bay
 Project #: EP2362
 Site/Location ID: _____ State: _____
 Report To: _____
 Invoice To: _____
 Quote #: _____ PO#: _____

TAT <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (surcharges may apply)	Date Needed: _____	Fax Results: Y N	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix	Preservation & # of Containers									Analyze For:	
								SL - Sludge	DW - Drinking Water	GW - Groundwater	S - Soil/Solid	WW - Wastewater	Other	HNO ₃	HCl	NaOH		H ₂ SO ₄
294 BIRCH Bot 03	7/31/07	09:46	G				S											BTEX - NAATA 8260 PAH 8270
294 BIRCH Sid 04	"	09:55	C				S						1	2	2	X	X	
292 BIRCH Bot 01	"	10:30	G				S											
292 BIRCH Sid 02	"	10:35	C				S											
292 BIRCH Bot 03	"	10:50	G				S											
292 BIRCH Sid 04	"	11:00	C				S											

- QC Deliverables
- None
 - Level 2 (Batch QC)
 - Level 3
 - Level 4
 - Other: _____

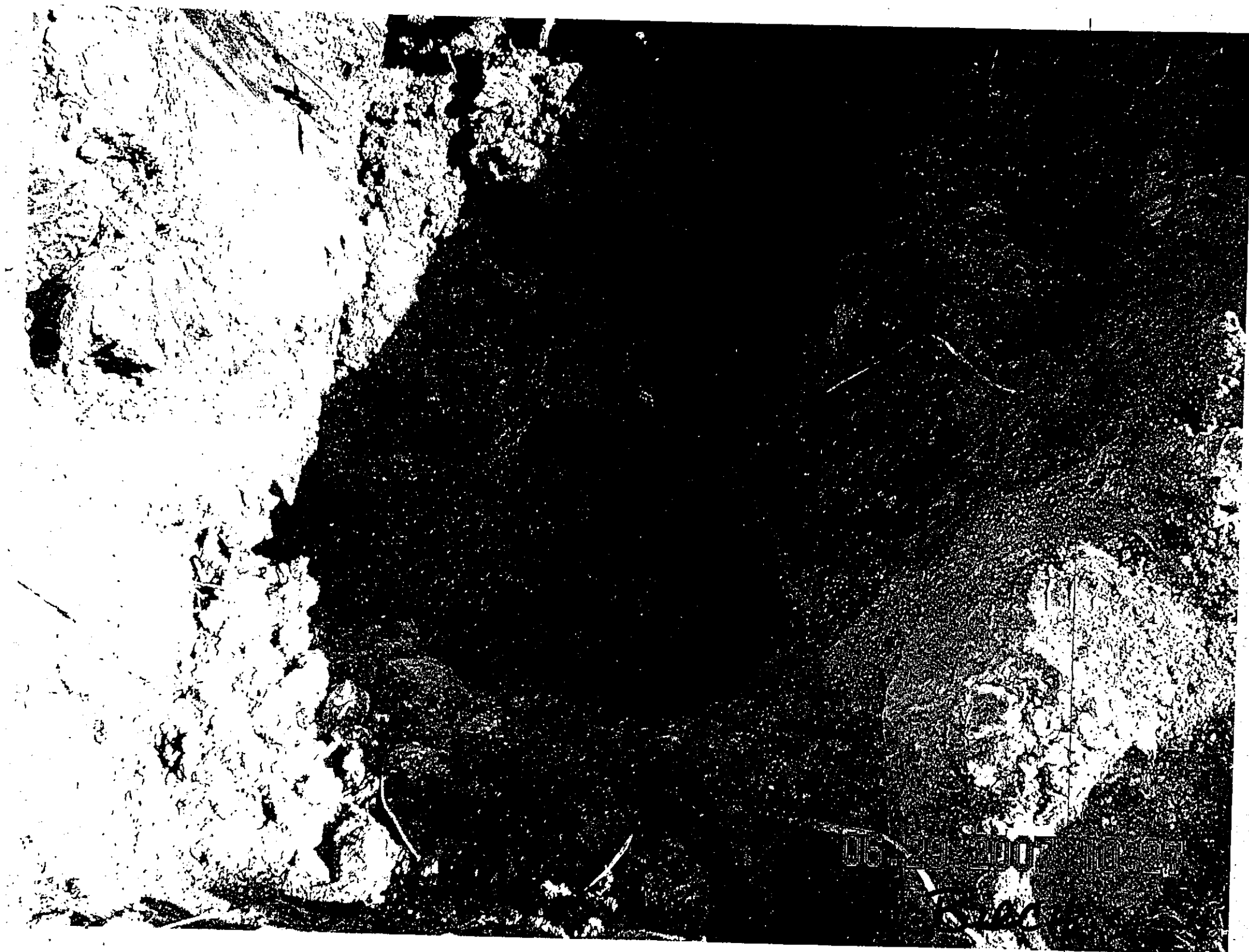
11
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Special Instructions:

Relinquished By: <i>[Signature]</i> Date: <u>8/2/07</u> Time: _____	Relinquished By: <i>[Signature]</i> Date: <u>7/31/07</u> Time: <u>14:00</u>	Received By: <i>[Signature]</i> Date: <u>8/2/07</u> Time: <u>17:30</u>	Relinquished By: <i>[Signature]</i> Date: <u>8/2/07</u> Time: _____	Received By: <i>[Signature]</i> Date: <u>8/1/07</u> Time: <u>14:00</u>	Received By: <i>[Signature]</i> Date: <u>8/1/07</u> Time: <u>17:30</u>
Relinquished By: <i>[Signature]</i> Date: <u>8/2/07</u> Time: _____	Received By: <i>[Signature]</i> Date: <u>8/2/07</u> Time: <u>17:30</u>	Relinquished By: <i>[Signature]</i> Date: _____ Time: _____	Received By: <i>[Signature]</i> Date: <u>8/3/07</u> Time: <u>7:15</u>	Relinquished By: <i>[Signature]</i> Date: _____ Time: _____	Received By: <i>[Signature]</i> Date: _____ Time: _____

LABORATORY COMMENTS:

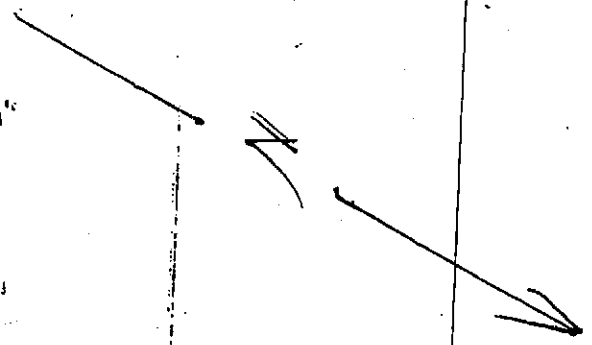
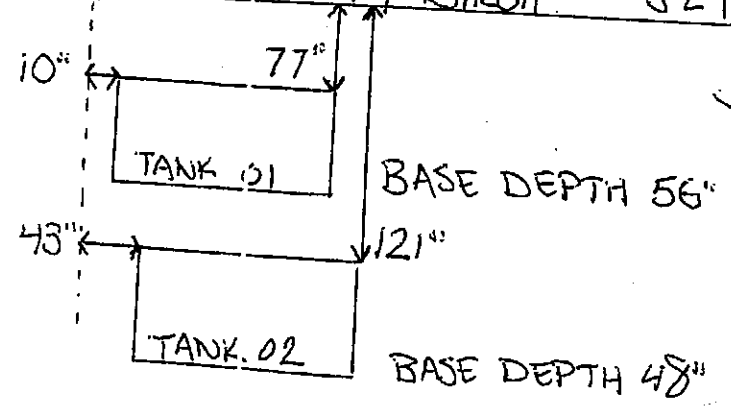
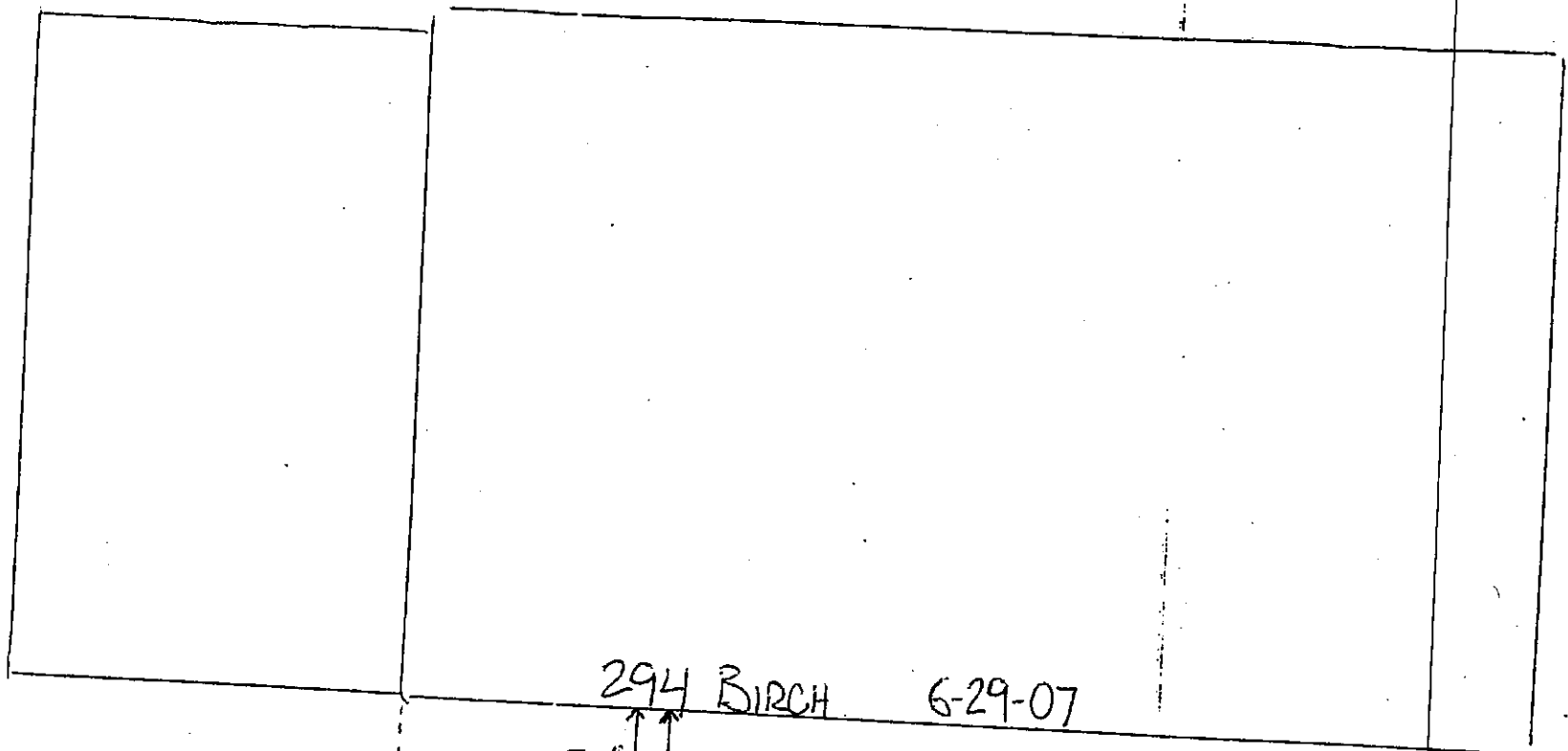
Init Lab Temp: 9.3
 Rec Lab Temp: _____
 Custody Seals: Y
 Bottles Supplied by: N/A
 Method of Shipment: FEDEX - N/A



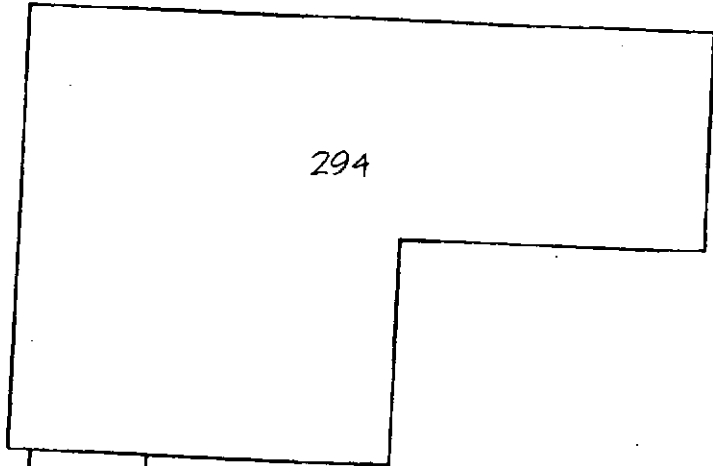


294-105H

06.29.2007 10:55



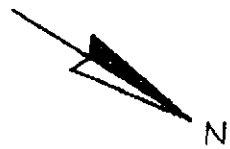
(Mild Petroleum Odor at Bottom of TANK 2 EXCAVATION)



A B X TANK 1 BASE 56"

C D X TANK 2 BASE 48"

BIRCH DRIVE



TANK 1 EXCAVATION

- A-SOIL TEST SIDE SAMPLE @ 45"
- B-SOIL TEST BOTTOM SAMPLE @ 56"
- X-MILD DIESEL ODOR @ BOTTOM OF EXCAVATION

TANK 2 EXCAVATION

- C-SOIL TEST SIDE SAMPLE @ 36"
- D-SOIL TEST BOTTOM SAMPLE @ 48"
- X-MILD DIESEL ODOR @ BOTTOM OF EXCAVATION

CUSTOMER : BEAUFORT MILITARY COMPLEX FAMILY HOUSING	SCALE: 1/16"=1'-0"	EPG INC. P.O. BOX 1096 MOUNT PLEASANT, SC 29465-1096
SITE ADDRESS : 294 BIRCH DRIVE	SUPPLIER : EPG INC.	
	DATE : 9/27/2007	

Appendix C
Laboratory Analytical Report - Groundwater

ANALYTICAL RESULTS

Project: LAUREL BAY SAMPLING 7/29/08
Pace Project No.: 9224564

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: 1164 JASMINE A Lab ID: 9224564011 Collected: 07/29/08 10:10 Received: 07/31/08 13:40 Matrix: Water								
8270 MSSV PAH by SIM SPE Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3535								
Nitrobenzene-d5 (S)	55 %		50-150	1	08/04/08 00:00	08/13/08 02:30	4165-60-0	
2-Fluorobiphenyl (S)	62 %		50-150	1	08/04/08 00:00	08/13/08 02:30	321-60-8	
Terphenyl-d14 (S)	64 %		50-150	1	08/04/08 00:00	08/13/08 02:30	1718-51-0	
8260 MSV Low Level Analytical Method: EPA 8260								
Benzene	ND ug/L		1.0	1		08/05/08 21:29	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		08/05/08 21:29	100-41-4	
Naphthalene	ND ug/L		2.0	1		08/05/08 21:29	91-20-3	
Toluene	ND ug/L		1.0	1		08/05/08 21:29	108-88-3	
m&p-Xylene	ND ug/L		2.0	1		08/05/08 21:29	1330-20-7	
o-Xylene	ND ug/L		1.0	1		08/05/08 21:29	95-47-6	
4-Bromofluorobenzene (S)	98 %		87-109	1		08/05/08 21:29	460-00-4	
Dibromofluoromethane (S)	95 %		85-115	1		08/05/08 21:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	98 %		79-120	1		08/05/08 21:29	17060-07-0	
Toluene-d8 (S)	101 %		70-120	1		08/05/08 21:29	2037-26-5	

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: 294 BIRCH A Lab ID: 9224564012 Collected: 07/29/08 18:00 Received: 07/31/08 13:40 Matrix: Water								
8270 MSSV PAH by SIM SPE Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3535								
Acenaphthene	ND ug/L		2.0	1	08/04/08 00:00	08/13/08 02:53	83-32-9	
Acenaphthylene	ND ug/L		1.5	1	08/04/08 00:00	08/13/08 02:53	208-96-8	
Anthracene	ND ug/L		0.050	1	08/04/08 00:00	08/13/08 02:53	120-12-7	
Benzo(a)anthracene	ND ug/L		0.10	1	08/04/08 00:00	08/13/08 02:53	56-55-3	
Benzo(a)pyrene	ND ug/L		0.20	1	08/04/08 00:00	08/13/08 02:53	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.30	1	08/04/08 00:00	08/13/08 02:53	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.20	1	08/04/08 00:00	08/13/08 02:53	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.20	1	08/04/08 00:00	08/13/08 02:53	207-08-9	
Chrysene	ND ug/L		0.10	1	08/04/08 00:00	08/13/08 02:53	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.20	1	08/04/08 00:00	08/13/08 02:53	53-70-3	
Fluoranthene	ND ug/L		0.30	1	08/04/08 00:00	08/13/08 02:53	206-44-0	
Fluorene	0.32 ug/L		0.31	1	08/04/08 00:00	08/13/08 02:53	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.20	1	08/04/08 00:00	08/13/08 02:53	193-39-5	
1-Methylnaphthalene	2.5 ug/L		2.0	1	08/04/08 00:00	08/13/08 02:53	90-12-0	
2-Methylnaphthalene	ND ug/L		2.0	1	08/04/08 00:00	08/13/08 02:53	91-57-6	
Naphthalene	ND ug/L		1.5	1	08/04/08 00:00	08/13/08 02:53	91-20-3	
Phenanthrene	0.42 ug/L		0.20	1	08/04/08 00:00	08/13/08 02:53	85-01-8	
Pyrene	ND ug/L		0.10	1	08/04/08 00:00	08/13/08 02:53	129-00-0	
Nitrobenzene-d5 (S)	57 %		50-150	1	08/04/08 00:00	08/13/08 02:53	4165-60-0	
2-Fluorobiphenyl (S)	55 %		50-150	1	08/04/08 00:00	08/13/08 02:53	321-60-8	
Terphenyl-d14 (S)	68 %		50-150	1	08/04/08 00:00	08/13/08 02:53	1718-51-0	
8260 MSV Low Level Analytical Method: EPA 8260								
Benzene	ND ug/L		1.0	1		08/05/08 21:53	71-43-2	

Date: 08/14/2008 04:20 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAUREL BAY SAMPLING 7/29/08
Pace Project No.: 9224564

Sample: 294 BIRCH A	Lab ID: 9224564012	Collected: 07/29/08 18:00	Received: 07/31/08 13:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Ethylbenzene	ND	ug/L	1.0	1		08/05/08 21:53	100-41-4	
Naphthalene	ND	ug/L	2.0	1		08/05/08 21:53	91-20-3	
Toluene	ND	ug/L	1.0	1		08/05/08 21:53	108-88-3	
m&p-Xylene	ND	ug/L	2.0	1		08/05/08 21:53	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		08/05/08 21:53	95-47-6	
4-Bromofluorobenzene (S)	98	%	87-109	1		08/05/08 21:53	460-00-4	
Dibromofluoromethane (S)	96	%	85-115	1		08/05/08 21:53	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	79-120	1		08/05/08 21:53	17060-07-0	
Toluene-d8 (S)	101	%	70-120	1		08/05/08 21:53	2037-26-5	

Sample: 389 ACORN A	Lab ID: 9224564013	Collected: 07/29/08 14:40	Received: 07/31/08 13:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM SPE		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3535						
Acenaphthene	ND	ug/L	4.5	1	08/04/08 00:00	08/13/08 03:17	83-32-9	
Acenaphthylene	ND	ug/L	3.4	1	08/04/08 00:00	08/13/08 03:17	208-96-8	
Anthracene	0.17	ug/L	0.11	1	08/04/08 00:00	08/13/08 03:17	120-12-7	
Benzo(a)anthracene	0.29	ug/L	0.23	1	08/04/08 00:00	08/13/08 03:17	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.45	1	08/04/08 00:00	08/13/08 03:17	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.68	1	08/04/08 00:00	08/13/08 03:17	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.45	1	08/04/08 00:00	08/13/08 03:17	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.45	1	08/04/08 00:00	08/13/08 03:17	207-08-9	
Chrysene	0.30	ug/L	0.23	1	08/04/08 00:00	08/13/08 03:17	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.45	1	08/04/08 00:00	08/13/08 03:17	53-70-3	
Fluoranthene	ND	ug/L	0.68	1	08/04/08 00:00	08/13/08 03:17	206-44-0	
Fluorene	ND	ug/L	0.70	1	08/04/08 00:00	08/13/08 03:17	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.45	1	08/04/08 00:00	08/13/08 03:17	193-39-5	
1-Methylnaphthalene	ND	ug/L	4.5	1	08/04/08 00:00	08/13/08 03:17	90-12-0	
2-Methylnaphthalene	ND	ug/L	4.5	1	08/04/08 00:00	08/13/08 03:17	91-57-6	
Naphthalene	ND	ug/L	3.4	1	08/04/08 00:00	08/13/08 03:17	91-20-3	
Phenanthrene	0.45	ug/L	0.45	1	08/04/08 00:00	08/13/08 03:17	85-01-8	
Pyrene	0.43	ug/L	0.23	1	08/04/08 00:00	08/13/08 03:17	129-00-0	
Nitrobenzene-d5 (S)	55	%	50-150	1	08/04/08 00:00	08/13/08 03:17	4165-60-0	
2-Fluorobiphenyl (S)	57	%	50-150	1	08/04/08 00:00	08/13/08 03:17	321-60-8	
Terphenyl-d14 (S)	70	%	50-150	1	08/04/08 00:00	08/13/08 03:17	1718-51-0	

8260 MSV Low Level		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		08/05/08 22:17	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		08/05/08 22:17	100-41-4	
Naphthalene	ND	ug/L	2.0	1		08/05/08 22:17	91-20-3	
Toluene	ND	ug/L	1.0	1		08/05/08 22:17	108-88-3	
m&p-Xylene	ND	ug/L	2.0	1		08/05/08 22:17	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		08/05/08 22:17	95-47-6	
4-Bromofluorobenzene (S)	98	%	87-109	1		08/05/08 22:17	460-00-4	

Date: 08/14/2008 04:20 PM

REPORT OF LABORATORY ANALYSIS

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Appendix D
Regulatory Correspondence

BOARD:
Paul C. Aughtry, III
Chairman
Edwin H. Cooper, III
Vice Chairman
Steven G. Kisner
Secretary



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment

BOARD:

Henry C. Scott

M. David Mitchell, MD

Glenn A. McCall

Coleman F. Buckhouse, MD

8 September 2008

Beaufort Military Complex Family Housing
ATTN: Kyle Broadfoot
1510 Laurel Bay Blvd.
Beaufort, SC 29906

Re: MCAS – Laurel Bay Housing – 294 Birch
Site ID # 04040
UST Closure Reports received 31 January 2008
Beaufort County

Dear Mr. Broadfoot:

The purpose of this letter is to verify a release of fuel oil at the referenced residence. According to information received by the Department, the source of the release is from past onsite use of fuel oil USTs. To date, initial activities by the facility have included tank removal and soil sampling. Based on the information contained in the closure report, a potential violation of the South Carolina Pollution Control Act has occurred in that there has been an unauthorized release of petroleum to the environment.

Additional assessment activities are required for this site. Specifically the Department requests that a groundwater sample be collected from this site. Please note, the Department approved a groundwater sampling proposal for Laurel Bay submitted by MCAS under separate cover dated 16 June 2008.

Should you have any questions, please contact me at 803-898-3553 (office phone), 803-898-2893 (fax) or bishopma@dhec.sc.gov.

Sincerely,

Michael Bishop, Hydrogeologist
Groundwater Quality Section
Bureau of Water

cc: Region 8 District EQC (via pdf)
MCAS, Commanding Officer, Attention: S-4 NREAO (William Drawdy) (via pdf)
Technical File (via pdf)



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

19 December 2008

Commanding Officer
ATTN: S-4 NREAO (Craig Ehde)
MCAS
PO Box 55001
Beaufort, SC 29904-5001

Re: MCAS – Laurel Bay Housing – 294 Birch
Site ID # 04040
Groundwater Sampling Results received 6 November 2008
Beaufort County

Dear Mr. Ehde:

Per the Department's request, a groundwater sample was collected from the referenced site. The groundwater results were reported as non-detect and/or below EPA PRG's. Based on the information and analytical data submitted, the Department recognizes that MCAS has adequately addressed the known environmental contamination identified on the property to date in accordance with the approved scope of work. Consequently, no further investigation is required at this time. Please note, this statement pertains only to the portion of the site addressed in the referenced report and does not apply to other areas of the site and/or any other potential regulatory violations. Further, the Department retains the right to request further investigation if deemed necessary.

Should you have any questions, please contact me at 803-896-4179 (office phone), 803-896-6245 (fax) or cookejt@dhec.sc.gov.

Sincerely,
AST Petroleum Restoration
& Site Environmental Investigations Section
Land Revitalization Division
Bureau of Land and Waste Management
SC Dept. of Health & Environmental Control

Jan T. Cooke, Hydrogeologist

B. Thomas Knight, Manager

cc: Region 8 District EQC
Tri-Command Communities; Attn: Mr. Robert Bible; 600 Laurel Bay Road Beaufort, SC
29906
Technical File