

**SUMMARY REPORT  
21 JASMINE STREET (FORMERLY 1171 JASMINE STREET)  
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  
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 21 Jasmine Street (Formerly 1171 Jasmine Street). 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 21 Jasmine Street (Formerly 1171 Jasmine Street). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 1171 Jasmine Street* (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 August 16, 2007, a single 280 gallon heating oil UST was removed from the front of the house at 21 Jasmine Street (Formerly 1171 Jasmine Street). The former UST location is indicated in the figure of the UST Assessment Report (Appendix B). The UST was 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 depth to the base of the UST was 5' bgs and a single soil sample was collected from that depth. An additional soil sample was collected from the side of the excavation at a depth of 4'4" bgs. The samples were collected from the fill port side of the former UST to represent a worst case scenario.

Following UST removal, soil samples were collected from the base and side of the 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 location 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 21 Jasmine Street (Formerly 1171 Jasmine Street) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated July 16, 2008, SCDHEC requested an IGWA for 21 Jasmine Street (Formerly 1171 Jasmine Street) 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 25, 2008, three temporary monitoring wells were installed at 21 Jasmine Street (Formerly 1171 Jasmine Street), 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 wells were placed in the same general location as the former heating oil UST. The former UST location is indicated in the figure 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 wells. 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 wells were 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 21 Jasmine Street (Formerly 1171 Jasmine Street) 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 UST 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 21 Jasmine Street (Formerly 1171 Jasmine Street). This NFA determination was obtained in a letter dated December 18, 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 – 1171 Jasmine Street, Laurel Bay Military Housing Area*, January 2008.

Resolution Consultants, 2008. *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*, November 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**  
**21 Jasmine Street (Formerly 1171 Jasmine Street)**  
**Laurel Bay Military Housing Area**  
**Marine Corps Air Station Beaufort**  
**Beaufort, South Carolina**

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Results Samples Collected 08/16/07	
		1171 Jasmine Bottom 01	1171 Jasmine Side 2
Volatile Organic Compounds Analyzed by EPA Method 8260B (mg/kg)			
Benzene	0.003	0.35	0.0145
Ethylbenzene	1.15	2.63	0.178
Naphthalene	0.036	16.3	1.63
Toluene	0.627	3.52	0.167
Xylenes, Total	13.01	17.4	1.23
Semivolatile Organic Compounds Analyzed by EPA Method 8270D (mg/kg)			
Benzo(a)anthracene	0.66	0.29	1.28
Benzo(b)fluoranthene	0.66	0.34	1.04
Benzo(k)fluoranthene	0.66	0.111	0.457
Chrysene	0.66	0.355	1.16
Dibenz(a,h)anthracene	0.66	ND	ND

**Notes:**

<sup>(1)</sup> 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**  
**21 Jasmine Street (Formerly 1171 Jasmine Street)**  
**Laurel Bay Military Housing Area**  
**Marine Corps Air Station Beaufort**  
**Beaufort, South Carolina**

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Site-Specific Groundwater VISLs (µg/L) <sup>(2)</sup>	Results Sample Collected 07/25/08		
			1171 Jasmine A	1171 Jasmine B	1171 Jasmine C
Volatile Organic Compounds Analyzed by EPA Method 8260B (µg/L)					
Benzene	5	16.24	ND	ND	ND
Ethylbenzene	700	45.95	ND	ND	ND
Naphthalene	25	29.33	ND	ND	ND
Toluene	1000	105,445	ND	ND	ND
Xylenes, Total	10,000	2,133	ND	ND	ND
Semivolatile Organic Compounds Analyzed by EPA Method 8270D (µg/L)					
Benzo(a)anthracene	10	NA	ND	ND	ND
Benzo(b)fluoranthene	10	NA	ND	ND	ND
Benzo(k)fluoranthene	10	NA	ND	ND	ND
Chrysene	10	NA	ND	ND	ND
Dibenz(a,h)anthracene	10	NA	ND	ND	ND

**Notes:**

<sup>(1)</sup> 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).

<sup>(2)</sup> 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  $1 \times 10^{-6}$ , 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.

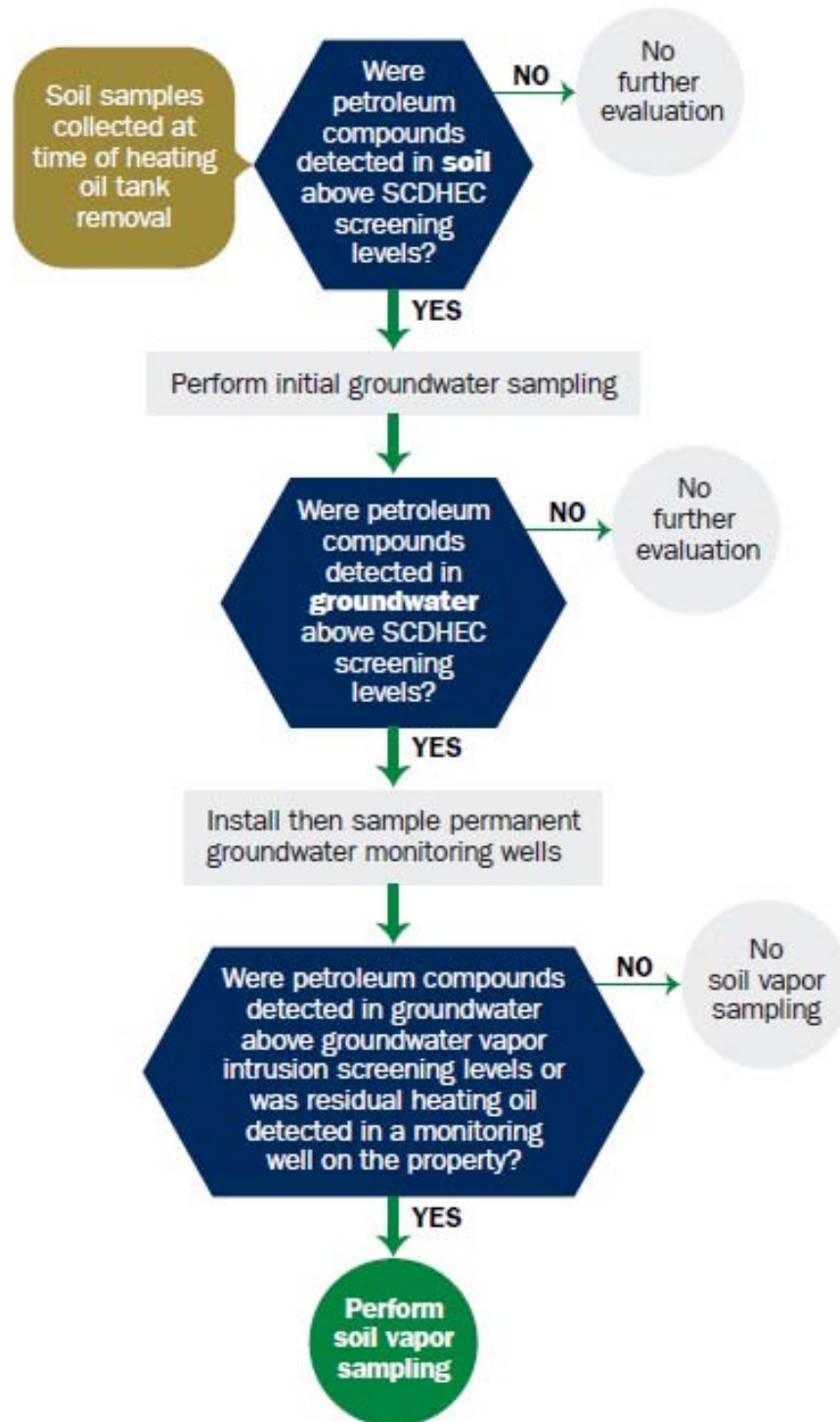
RBSL - Risk-Based Screening Level

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	State	Zip Code	
Beaufort	SC	29906	
Area Code	Telephone Number	Contact Person	
843-379-3305		Luke Asterman	

**II. SITE IDENTIFICATION AND LOCATION**

Permit I.D. #	N/A		
Facility Name or Company Site Identifier	Actus Lend Lease, LLC		
Street Address or State Road (as applicable)	1171 JASMINE ST.		
City	State	ZIP	County
Beaufort	SC	29906	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

Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
#2 Fuel					
280 G					
Steel					
60"					
N					
N					
Removal					
8/16/07					
N					
Y					

- A. Product...(ex. Gas, Kerosene).....
- B. Capacity...(ex. 1k, 2k).....
- 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.....

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). Republic- Broadhurst Landfill

Solidification & Subtitle D Landfill

O. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST

UST HAD BEEN PREVIOUSLY CUT AND ABANDONED IN PLACE -  
FILLED WITH SAND

## 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					
N/A					
-0-					
Electric Pump					
Y					
N					
N					

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

## VII. BRIEF SITE DESCRIPTION AND HISTORY

RESIDENTIAL HOME HEATING OIL TANK

# 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 #
						M. Jones	
1	BOTTOM	S	SAND	60"	8-16-07	A. Manney	ND
2	SIDE	S	SAND	52"	8-16-07	A. Manney	ND
3							
4							
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 8260B : Volatile Organic Compounds

- Preservatives: 2 ea. Sodium Bisulfate; 1 ea. Methanol

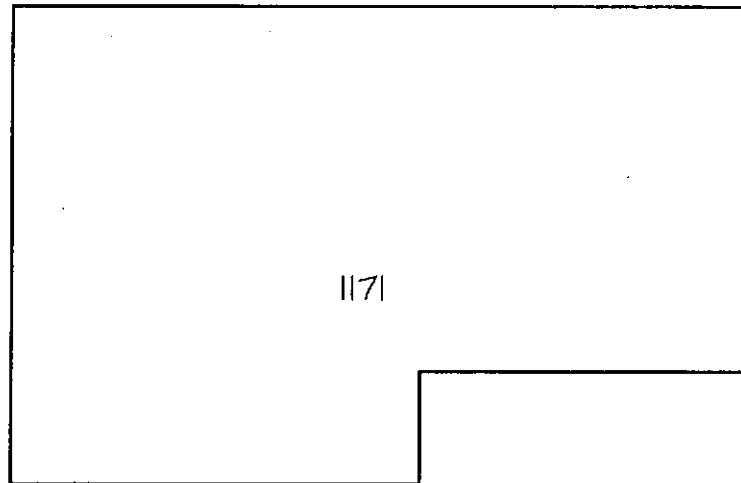
EPA Method 8270 : Polyaromatic Hydrocarbons

- No Preservative

One (1) sidewall and one (1) bottom sample were secured from each UST excavation. Samples were stored and shipped in an insulated cooler with wet 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>		✓



1171

A B  
TANK I  
BASE 60"

JASMINE STREET

TANK I EXCAVATION

A-SOIL TEST SIDE SAMPLE @ 52"

B-SOIL TEST BOTTOM SAMPLE @ 60"



CUSTOMER :

BEAUFORT MILITARY COMPLEX FAMILY HOUSING

SITE ADDRESS :

1171 JASMINE STREET

SCALE :

1/16" = 1'-0"

SUPPLIER :

EPG INC.

DATE :

9/22/2007

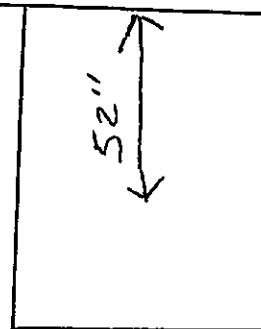
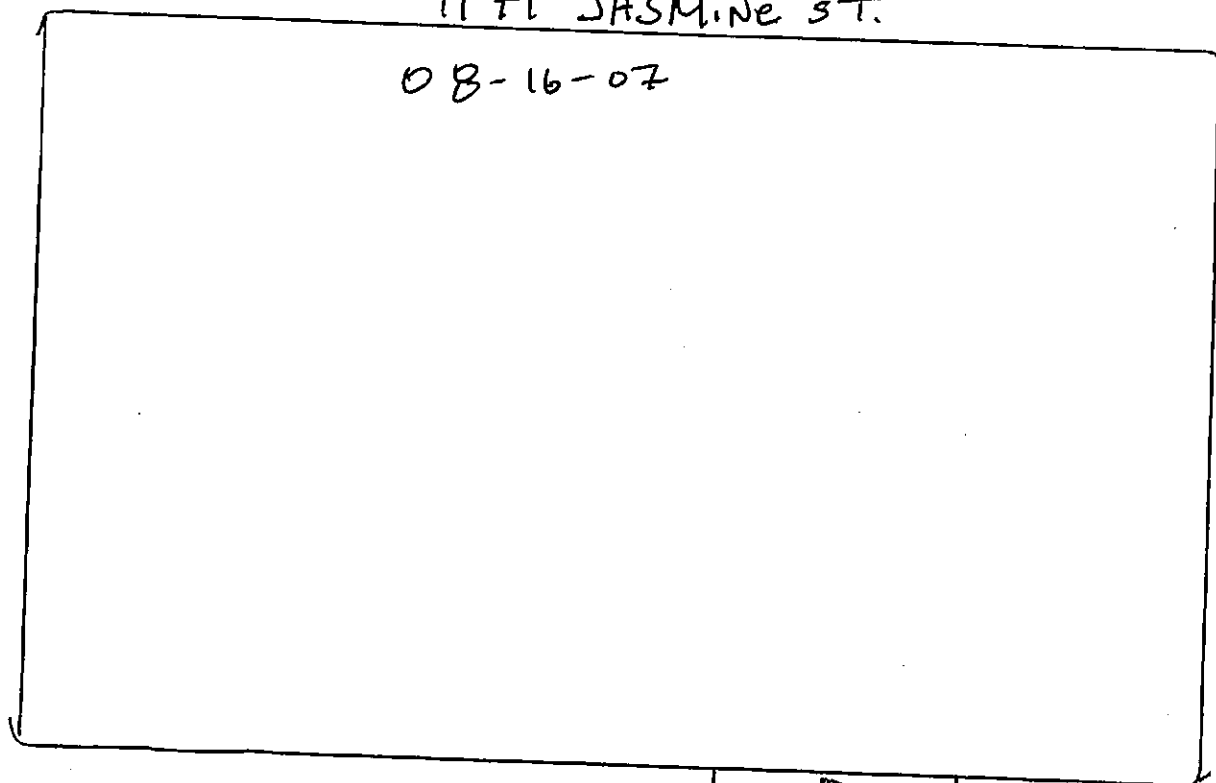
EPG INC.

P.O. BOX 1096

MOUNT PLEASANT, SC 29465-1096

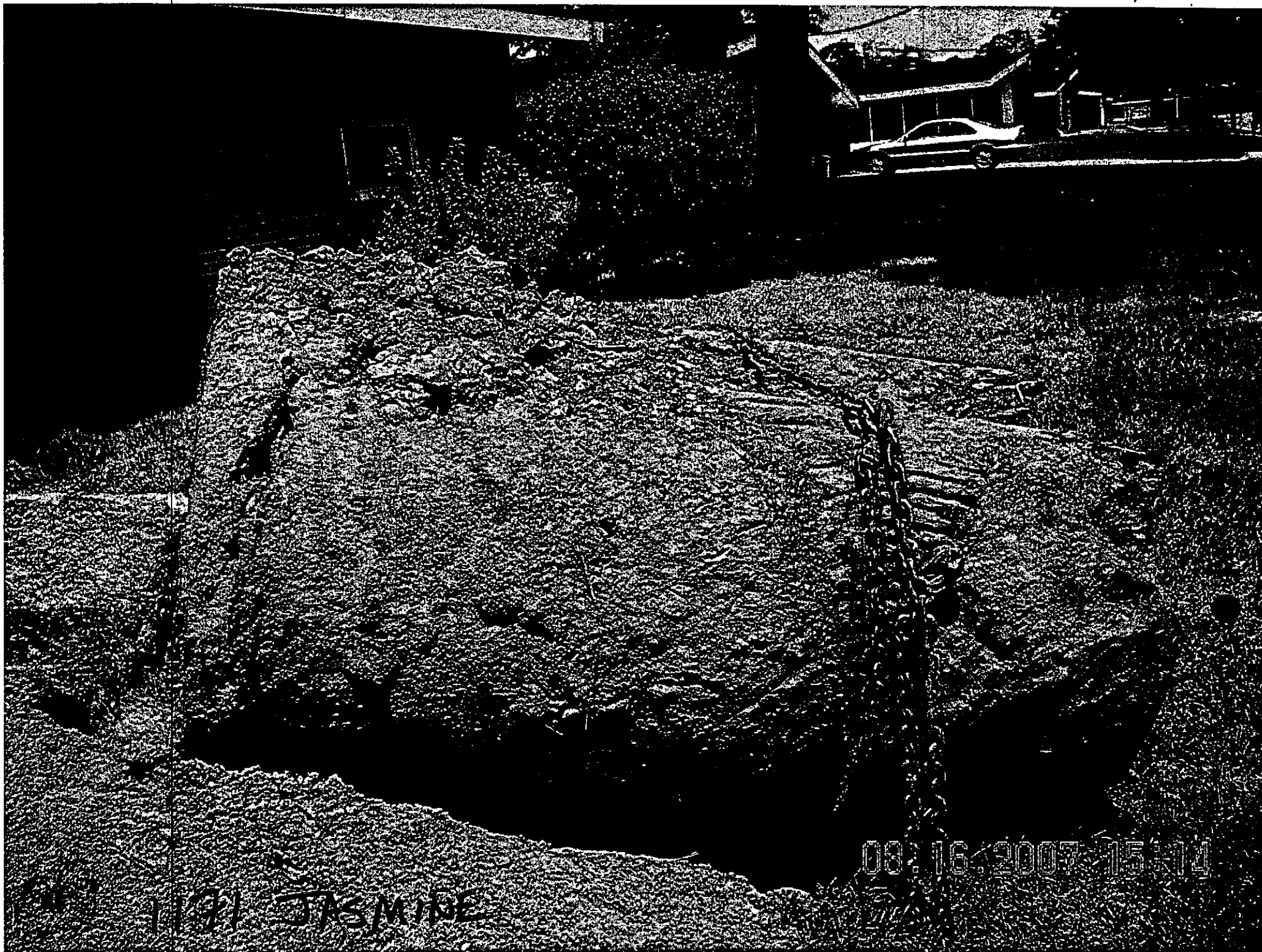
1171 JASMINE ST.

08-16-07



BASE 60"

18 FT



08:16:2007-15:14

11/11/07 JASMINE

## **SITE MAP**

**You must supply a scaled site map. It should include all buildings, road names, utilities, tank and dispenser island locations, labeled sample locations, extent of excavation, and any other pertinent information.**

(Attach Site Map Here)

## SUMMARY OF ANALYSIS RESULTS

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)fluoranthene								
Benzo(k)fluoranthene								
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)fluoranthene								
Benzo(k)fluoranthene								
Chrysene								
Dibenz(a,h)anthracene								
TPH (EPA 3550)								

# **SUMMARY OF ANALYSIS RESULTS (cont'd)**

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)anthracen e	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)

## ANALYTICAL TESTING CORPORATION

### Compliance Monitoring

Client #:

City/State/Zip Code:

**Telephone Number:**

Sampler Signature: Nick Jones

Project #: EP-2362

Site/Location ID: \_\_\_\_\_ State: \_\_\_\_\_

Report To: John Mahoney

Invoice To:

Quote #: PO#:

LABORATORY COMMENTS:

Init Lab Temp:

Rec Lab Temp: 5

Custody Seals: Y N N/A

Bottles Supplied by Test America

0626 4331 4931  
Method of Shipment: Fed Ex to TA-D. Madrid

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

Work Order: OQH0566  
Project: LAUREL BAY  
Project Number: EP-2362

Sampled: 08/15/07-08/17/07  
Received: 08/23/07

## LABORATORY REPORT

Sample ID: 1165 JASMINE-SIDE-02 - Lab Number: OQH0566-06 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
<b>Polynuclear Aromatic Hydrocarbons by EPA Method 8270 - Cont.</b>											
50-32-8	Benzo (a) pyrene	23.6	U	ug/kg dry	23.6	192	1	08/31/07 22:38	JLS	EPA 8270C	7H27033
90-12-0	1-Methylnaphthalene	96.2	U	ug/kg dry	96.2	192	1	08/31/07 22:38	JLS	EPA 8270C	7H27033
218-01-9	Chrysene	22.9	U	ug/kg dry	22.9	192	1	08/31/07 22:38	JLS	EPA 8270C	7H27033
53-70-3	Dibenz (a,h) anthracene	25.2	U	ug/kg dry	25.2	192	1	08/31/07 22:38	JLS	EPA 8270C	7H27033
206-44-0	Fluoranthene	27.6	U	ug/kg dry	27.6	192	1	08/31/07 22:38	JLS	EPA 8270C	7H27033
86-73-7	Fluorene	75.0	U	ug/kg dry	75.0	192	1	08/31/07 22:38	JLS	EPA 8270C	7H27033
193-39-5	Indeno (1,2,3-cd) pyrene	24.8	U	ug/kg dry	24.8	192	1	08/31/07 22:38	JLS	EPA 8270C	7H27033
91-57-6	2-Methylnaphthalene	81.7	U	ug/kg dry	81.7	192	1	08/31/07 22:38	JLS	EPA 8270C	7H27033
91-20-3	Naphthalene	77.0	U	ug/kg dry	77.0	192	1	08/31/07 22:38	JLS	EPA 8270C	7H27033
85-01-8	Phenanthrene	45.2	U	ug/kg dry	45.2	192	1	08/31/07 22:38	JLS	EPA 8270C	7H27033
129-00-0	Pyrene	38.9	U	ug/kg dry	38.9	192	1	08/31/07 22:38	JLS	EPA 8270C	7H27033
Surrogate: 2-Fluorobiphenyl (24-121%)		55 %									
Surrogate: Nitrobenzene-d5 (19-111%)		52 %									
Surrogate: Terphenyl-d14 (44-171%)		68 %									

## LABORATORY REPORT

Sample ID: 1171 JASMINE-BOTTOM-01 - Lab Number: OQH0566-07 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
<b>General Chemistry Parameters</b>											
NA	% Solids	87.2		%	0.100	0.100	1	08/22/07 16:45	RRP	EPA 160.3	7H23023
<b>Volatile Organic Compounds by EPA Method 8260B</b>											
1-43-2	Benzene	350		ug/kg dry	53.4	146	500	08/27/07 18:26	JWT	EPA 8260B	7H24014
00-41-4	Ethylbenzene	2630		ug/kg dry	61.7	146	500	08/27/07 18:26	JWT	EPA 8260B	7H24014
1-20-3	Naphthalene	16300		ug/kg dry	80.6	146	500	08/27/07 18:26	JWT	EPA 8260B	7H24014
08-88-3	Toluene	3520		ug/kg dry	126	146	500	08/27/07 18:26	JWT	EPA 8260B	7H24014
330-20-7	Xylenes, total	17400		ug/kg dry	75.8	146	500	08/27/07 18:26	JWT	EPA 8260B	7H24014
Surrogate: 1,2-Dichloroethane-d4 (73-137%)		100 %									
Surrogate: 4-Bromofluorobenzene (59-118%)		101 %									
Surrogate: Dibromofluoromethane (55-145%)		107 %									
Surrogate: Toluene-d8 (80-117%)		107 %									
<b>Polynuclear Aromatic Hydrocarbons by EPA Method 8270</b>											
3-32-9	Acenaphthene	1270		ug/kg dry	84.8	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
08-96-8	Acenaphthylene	112	U	ug/kg dry	112	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
20-12-7	Anthracene	401		ug/kg dry	61.0	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
6-55-3	Benzo (a) anthracene	290		ug/kg dry	20.7	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
25-99-2	Benzo (b) fluoranthene	340		ug/kg dry	20.2	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
37-08-9	Benzo (k) fluoranthene	111	I	ug/kg dry	20.2	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
31-24-2	Benzo (g,h,i) perylene	75.3	I	ug/kg dry	19.9	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
3-32-8	Benzo (a) pyrene	193		ug/kg dry	23.6	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
9-12-0	1-Methylnaphthalene	18100		ug/kg dry	961	1910	10	09/01/07 13:21	JLS	EPA 8270C	7H27033
18-01-9	Chrysene	355		ug/kg dry	22.9	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
3-70-3	Dibenz (a,h) anthracene	25.1	U	ug/kg dry	25.1	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033

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

Work Order: OQH0566  
Project: LAUREL BAY  
Project Number: EP-2362

Sampled: 08/15/07-08/17/07  
Received: 08/23/07

## LABORATORY REPORT

Sample ID: 1171 JASMINE-BOTTOM-01 - Lab Number: OQH0566-07 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
<b>Polynuclear Aromatic Hydrocarbons by EPA Method 8270 - Cont.</b>											
206-44-0	Fluoranthene	1050		ug/kg dry	27.5	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
86-73-7	Fluorene	1810		ug/kg dry	74.9	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
193-39-5	Indeno (1,2,3-cd) pyrene	69.5	I	ug/kg dry	24.8	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
91-57-6	2-Methylnaphthalene	24200		ug/kg dry	816	1910	10	09/01/07 13:21	JLS	EPA 8270C	7H27033
91-20-3	Naphthalene	76.9	U	ug/kg dry	76.9	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
35-01-8	Phenanthrene	5420		ug/kg dry	45.2	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
129-00-0	Pyrene	1630		ug/kg dry	38.9	191	1	08/31/07 23:00	JLS	EPA 8270C	7H27033
Surrogate: 2-Fluorobiphenyl (24-121%)		67 %									
Surrogate: Nitrobenzene-d5 (19-111%)		82 %									
Surrogate: Terphenyl-d14 (44-171%)		133 %									

## LABORATORY REPORT

Sample ID: 1171 JASMINE-SIDE-2 - Lab Number: OQH0566-08 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
<b>General Chemistry Parameters</b>											
NA	% Solids	86.8		%	0.100	0.100	1	08/22/07 16:45	RRP	EPA 160.3	7H23023
<b>Volatile Organic Compounds by EPA Method 8260B</b>											
1-43-2	Benzene	14.5		ug/kg dry	4.82	13.2	50	08/27/07 16:54	JWT	EPA 8260B	7H24014
00-41-4	Ethylbenzene	178		ug/kg dry	5.57	13.2	50	08/27/07 16:54	JWT	EPA 8260B	7H24014
1-20-3	Naphthalene	1630		ug/kg dry	7.28	13.2	50	08/27/07 16:54	JWT	EPA 8260B	7H24014
08-88-3	Toluene	167		ug/kg dry	11.4	13.2	50	08/27/07 16:54	JWT	EPA 8260B	7H24014
330-20-7	Xylenes, total	1230		ug/kg dry	6.84	13.2	50	08/27/07 16:54	JWT	EPA 8260B	7H24014
urrogate: 1,2-Dichloroethane-d4 (73-137%)		98 %									
urrogate: 4-Bromofluorobenzene (59-118%)		100 %									
urrogate: Dibromofluoromethane (55-145%)		105 %									
urrogate: Toluene-d8 (80-117%)		104 %									
<b>Polynuclear Aromatic Hydrocarbons by EPA Method 8270</b>											
3-32-9	Acenaphthene	629		ug/kg dry	85.3	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
38-96-8	Acenaphthylene	113	U	ug/kg dry	113	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
20-12-7	Anthracene	267		ug/kg dry	61.4	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
5-55-3	Benzo (a) anthracene	1280		ug/kg dry	20.8	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
35-99-2	Benzo (b) fluoranthene	1040		ug/kg dry	20.3	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
37-08-9	Benzo (k) fluoranthene	457		ug/kg dry	20.3	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
91-24-2	Benzo (g,h,i) perylene	174	I	ug/kg dry	20.0	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
3-32-8	Benzo (a) pyrene	575		ug/kg dry	23.7	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
1-12-0	1-Methylnaphthalene	4870		ug/kg dry	96.6	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
8-01-9	Chrysene	1160		ug/kg dry	23.0	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
1-20-3	Dibenz (a,h) anthracene	25.3	U	ug/kg dry	25.3	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
16-44-0	Fluoranthene	3160		ug/kg dry	27.7	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
1-73-7	Fluorene	75.3	U	ug/kg dry	75.3	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
13-39-5	Indeno (1,2,3-cd) pyrene	187	I	ug/kg dry	24.9	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033

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

Work Order: OQH0566  
Project: LAUREL BAY  
Project Number: EP-2362

Sampled: 08/15/07-08/17/07  
Received: 08/23/07

## LABORATORY REPORT

Sample ID: 1171 JASMINE-SIDE-2 - Lab Number: OQH0566-08 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
<b>Polynuclear Aromatic Hydrocarbons by EPA Method 8270 - Cont.</b>											
91-57-6	2-Methylnaphthalene	2900		ug/kg dry	82.1	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
91-20-3	Naphthalene	77.3	U	ug/kg dry	77.3	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
85-01-8	Phenanthrene	2930		ug/kg dry	45.4	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
129-00-0	Pyrene	2230		ug/kg dry	39.1	192	1	08/31/07 23:23	JLS	EPA 8270C	7H27033
Surrogate: 2-Fluorobiphenyl (24-121%)		55 %									
Surrogate: Nitrobenzene-d5 (19-111%)		97 %									
Surrogate: Terphenyl-d14 (44-171%)		96 %									

## LABORATORY REPORT

Sample ID: 1127 IRIS-BOTTOM-01 - Lab Number: OQH0566-09 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
<b>General Chemistry Parameters</b>											
NA	% Solids	86.8		%	0.100	0.100	1	08/24/07 16:05	RRP	EPA 160.3	7H24048
<b>Volatile Organic Compounds by EPA Method 8260B</b>											
1-43-2	Benzene	0.221	I	ug/kg dry	0.115	0.315	1	08/27/07 15:09	JWT	EPA 8260B	7H24014
00-41-4	Ethylbenzene	0.170	I	ug/kg dry	0.133	0.315	1	08/27/07 15:09	JWT	EPA 8260B	7H24014
1-20-3	Naphthalene	0.656		ug/kg dry	0.174	0.315	1	08/27/07 15:09	JWT	EPA 8260B	7H24014
08-88-3	Toluene	0.587		ug/kg dry	0.272	0.315	1	08/27/07 15:09	JWT	EPA 8260B	7H24014
330-20-7	Xylenes, total	0.624		ug/kg dry	0.164	0.315	1	08/27/07 15:09	JWT	EPA 8260B	7H24014
Surrogate: 1,2-Dichloroethane-d4 (73-137%)		117 %									
Surrogate: 4-Bromofluorobenzene (59-118%)		102 %									
Surrogate: Dibromofluoromethane (55-145%)		114 %									
Surrogate: Toluene-d8 (80-117%)		108 %									
<b>General Chemistry Parameters</b>											
solids	% Dry Solids	86.8	SPS	%	0.500	0.500	1	09/04/07 11:07	AXJ	SW-846	7085500
<b>Polycyclic Aromatic Hydrocarbons by EPA 8270C</b>											
3-32-9	Acenaphthene	0.0406	U	mg/kg dry	0.0406	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	
38-96-8	Acenaphthylene	0.0496	U	mg/kg dry	0.0496	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	
20-12-7	Anthracene	0.0718	I	mg/kg dry	0.0451	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	
5-55-3	Benzo (a) anthracene	0.704	I4	mg/kg dry	0.0417	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	
3-32-8	Benzo (a) pyrene	0.332		mg/kg dry	0.0451	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	
5-99-2	Benzo (b) fluoranthene	0.369		mg/kg dry	0.0429	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	
1-24-2	Benzo (g,h,i) perylene	0.0895		mg/kg dry	0.0305	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	
17-08-9	Benzo (k) fluoranthene	0.508	I4	mg/kg dry	0.0519	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	
8-01-9	Chrysene	0.778	I4	mg/kg dry	0.0440	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	
1-70-3	Dibenz (a,h) anthracene	0.0293	U	mg/kg dry	0.0293	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	
16-44-0	Fluoranthene	1.64	I4	mg/kg dry	0.0474	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	
1-73-7	Fluorene	0.0485	U	mg/kg dry	0.0485	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	
13-39-5	Indeno (1,2,3-cd) pyrene	0.106		mg/kg dry	0.0384	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	
-20-3	Naphthalene	0.0451	U	mg/kg dry	0.0451	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	
-01-8	Phenanthrene	0.653	I4	mg/kg dry	0.0451	0.0756	1	08/30/07 20:37	RLB	SW846 8270C7085614	

## **Did You Remember to Include the Following?**

- **Permit ID Number**
- **Sample Collection and Storage Methods**
- **Preservative used in the sample containers**
- **Scaled Site Map with ALL Requested Information**
- **Laboratory Chain-of-Custody Form**
- **Certified Analytical Results**
- **Completed and Notarized Insurance Statement**
- **A Copy of Your Environmental Insurance Policy  
(if applicable)**
- **Samples from all Dispenser Islands and Piping Runs**
- **Photographs (if available)**

**Appendix C**  
**Laboratory Analytical Report - Groundwater**

## ANALYTICAL RESULTS

Project: LAUREL BAY SAMPLING 7/25/08

Pace Project No.: 9224353

Sample: 1171 JASMINE A		Lab ID: 9224353008	Collected: 07/25/08 15:30	Received: 07/29/08 14:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM SPE</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3535						
Acenaphthene	ND ug/L		2.0	1	07/31/08 00:00	08/12/08 02:00	83-32-9	
Acenaphthylene	ND ug/L		1.5	1	07/31/08 00:00	08/12/08 02:00	208-96-8	
Anthracene	ND ug/L		0.050	1	07/31/08 00:00	08/12/08 02:00	120-12-7	
Benzo(a)anthracene	ND ug/L		0.10	1	07/31/08 00:00	08/12/08 02:00	56-55-3	
Benzo(a)pyrene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:00	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.30	1	07/31/08 00:00	08/12/08 02:00	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:00	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:00	207-08-9	
Chrysene	ND ug/L		0.10	1	07/31/08 00:00	08/12/08 02:00	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:00	53-70-3	
Fluoranthene	ND ug/L		0.30	1	07/31/08 00:00	08/12/08 02:00	206-44-0	
Fluorene	ND ug/L		0.31	1	07/31/08 00:00	08/12/08 02:00	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:00	193-39-5	
1-Methylnaphthalene	ND ug/L		2.0	1	07/31/08 00:00	08/12/08 02:00	90-12-0	
2-Methylnaphthalene	ND ug/L		2.0	1	07/31/08 00:00	08/12/08 02:00	91-57-6	
Naphthalene	ND ug/L		1.5	1	07/31/08 00:00	08/12/08 02:00	91-20-3	
Phenanthrene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:00	85-01-8	
Pyrene	ND ug/L		0.10	1	07/31/08 00:00	08/12/08 02:00	129-00-0	
Nitrobenzene-d5 (S)	49 %		50-150	1	07/31/08 00:00	08/12/08 02:00	4165-60-0	1g
2-Fluorobiphenyl (S)	55 %		50-150	1	07/31/08 00:00	08/12/08 02:00	321-60-8	
Terphenyl-d14 (S)	68 %		50-150	1	07/31/08 00:00	08/12/08 02:00	1718-51-0	

<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260						
Benzene	ND ug/L		1.0	1		08/01/08 01:55	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		08/01/08 01:55	100-41-4	
Naphthalene	ND ug/L		1.0	1		08/01/08 01:55	91-20-3	
Toluene	ND ug/L		1.0	1		08/01/08 01:55	108-88-3	
m&p-Xylene	ND ug/L		2.0	1		08/01/08 01:55	1330-20-7	
o-Xylene	ND ug/L		1.0	1		08/01/08 01:55	95-47-6	
4-Bromofluorobenzene (S)	94 %		87-109	1		08/01/08 01:55	460-00-4	
Dibromofluoromethane (S)	103 %		85-115	1		08/01/08 01:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	104 %		79-120	1		08/01/08 01:55	17060-07-0	
Toluene-d8 (S)	101 %		70-120	1		08/01/08 01:55	2037-26-5	

Sample: 1171 JASMINE B		Lab ID: 9224353009	Collected: 07/25/08 16:20	Received: 07/29/08 14:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM SPE</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3535						
Acenaphthene	ND ug/L		2.0	1	07/31/08 00:00	08/12/08 02:23	83-32-9	
Acenaphthylene	ND ug/L		1.5	1	07/31/08 00:00	08/12/08 02:23	208-96-8	
Anthracene	ND ug/L		0.050	1	07/31/08 00:00	08/12/08 02:23	120-12-7	
Benzo(a)anthracene	ND ug/L		0.10	1	07/31/08 00:00	08/12/08 02:23	56-55-3	
Benzo(a)pyrene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:23	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.30	1	07/31/08 00:00	08/12/08 02:23	205-99-2	

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## ANALYTICAL RESULTS

Project: LAUREL BAY SAMPLING 7/25/08

Pace Project No.: 9224353

Sample: 1171 JASMINE B		Lab ID: 9224353009	Collected: 07/25/08 16:20	Received: 07/29/08 14:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM SPE</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3535						
Benzo(g,h,i)perylene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:23	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:23	207-08-9	
Chrysene	ND ug/L		0.10	1	07/31/08 00:00	08/12/08 02:23	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:23	53-70-3	
Fluoranthene	ND ug/L		0.30	1	07/31/08 00:00	08/12/08 02:23	206-44-0	
Fluorene	ND ug/L		0.31	1	07/31/08 00:00	08/12/08 02:23	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:23	193-39-5	
1-Methylnaphthalene	ND ug/L		2.0	1	07/31/08 00:00	08/12/08 02:23	90-12-0	
2-Methylnaphthalene	ND ug/L		2.0	1	07/31/08 00:00	08/12/08 02:23	91-57-6	
Naphthalene	ND ug/L		1.5	1	07/31/08 00:00	08/12/08 02:23	91-20-3	
Phenanthrene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:23	85-01-8	
Pyrene	ND ug/L		0.10	1	07/31/08 00:00	08/12/08 02:23	129-00-0	
Nitrobenzene-d5 (S)	41 %		50-150	1	07/31/08 00:00	08/12/08 02:23	4165-60-0	1g
2-Fluorobiphenyl (S)	51 %		50-150	1	07/31/08 00:00	08/12/08 02:23	321-60-8	
Terphenyl-d14 (S)	59 %		50-150	1	07/31/08 00:00	08/12/08 02:23	1718-51-0	
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260						
Benzene	ND ug/L		1.0	1		08/01/08 02:19	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		08/01/08 02:19	100-41-4	
Naphthalene	ND ug/L		1.0	1		08/01/08 02:19	91-20-3	
Toluene	ND ug/L		1.0	1		08/01/08 02:19	108-88-3	
m&p-Xylene	ND ug/L		2.0	1		08/01/08 02:19	1330-20-7	
o-Xylene	ND ug/L		1.0	1		08/01/08 02:19	95-47-6	
4-Bromofluorobenzene (S)	96 %		87-109	1		08/01/08 02:19	460-00-4	
Dibromofluoromethane (S)	103 %		85-115	1		08/01/08 02:19	1868-53-7	
1,2-Dichloroethane-d4 (S)	105 %		79-120	1		08/01/08 02:19	17060-07-0	
Toluene-d8 (S)	101 %		70-120	1		08/01/08 02:19	2037-26-5	

Sample: 1171 JASMINE C		Lab ID: 9224353010	Collected: 07/25/08 17:30	Received: 07/29/08 14:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM SPE</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3535						
Acenaphthene	ND ug/L		2.0	1	07/31/08 00:00	08/12/08 02:47	83-32-9	
Acenaphthylene	ND ug/L		1.5	1	07/31/08 00:00	08/12/08 02:47	208-96-8	
Anthracene	ND ug/L		0.050	1	07/31/08 00:00	08/12/08 02:47	120-12-7	
Benzo(a)anthracene	ND ug/L		0.10	1	07/31/08 00:00	08/12/08 02:47	56-55-3	
Benzo(a)pyrene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:47	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.30	1	07/31/08 00:00	08/12/08 02:47	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:47	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:47	207-08-9	
Chrysene	ND ug/L		0.10	1	07/31/08 00:00	08/12/08 02:47	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:47	53-70-3	
Fluoranthene	ND ug/L		0.30	1	07/31/08 00:00	08/12/08 02:47	206-44-0	
Fluorene	ND ug/L		0.31	1	07/31/08 00:00	08/12/08 02:47	86-73-7	

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## ANALYTICAL RESULTS

Project: LAUREL BAY SAMPLING 7/25/08  
Pace Project No.: 9224353

Sample: 1171 JASMINE C		Lab ID: 9224353010	Collected: 07/25/08 17:30		Received: 07/29/08 14:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM SPE</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3535						
Indeno(1,2,3-cd)pyrene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:47	193-39-5	
1-Methylnaphthalene	ND ug/L		2.0	1	07/31/08 00:00	08/12/08 02:47	90-12-0	
2-Methylnaphthalene	ND ug/L		2.0	1	07/31/08 00:00	08/12/08 02:47	91-57-6	
Naphthalene	ND ug/L		1.5	1	07/31/08 00:00	08/12/08 02:47	91-20-3	
Phenanthrene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 02:47	85-01-8	
Pyrene	ND ug/L		0.10	1	07/31/08 00:00	08/12/08 02:47	129-00-0	
Nitrobenzene-d5 (S)	68 %		50-150	1	07/31/08 00:00	08/12/08 02:47	4165-60-0	
2-Fluorobiphenyl (S)	89 %		50-150	1	07/31/08 00:00	08/12/08 02:47	321-60-8	
Terphenyl-d14 (S)	79 %		50-150	1	07/31/08 00:00	08/12/08 02:47	1718-51-0	
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260						
Benzene	ND ug/L		1.0	1		08/01/08 02:43	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		08/01/08 02:43	100-41-4	
Naphthalene	ND ug/L		1.0	1		08/01/08 02:43	91-20-3	
Toluene	ND ug/L		1.0	1		08/01/08 02:43	108-88-3	
m&p-Xylene	ND ug/L		2.0	1		08/01/08 02:43	1330-20-7	
o-Xylene	ND ug/L		1.0	1		08/01/08 02:43	95-47-6	
4-Bromofluorobenzene (S)	95 %		87-109	1		08/01/08 02:43	460-00-4	
Dibromofluoromethane (S)	104 %		85-115	1		08/01/08 02:43	1868-53-7	
1,2-Dichloroethane-d4 (S)	106 %		79-120	1		08/01/08 02:43	17060-07-0	
Toluene-d8 (S)	100 %		70-120	1		08/01/08 02:43	2037-26-5	

Sample: 1116 IRIS A		Lab ID: 9224353011	Collected: 07/25/08 15:00		Received: 07/29/08 14:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM SPE</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3535						
Acenaphthene	ND ug/L		2.0	1	07/31/08 00:00	08/12/08 03:11	83-32-9	
Acenaphthylene	ND ug/L		1.5	1	07/31/08 00:00	08/12/08 03:11	208-96-8	
Anthracene	ND ug/L		0.050	1	07/31/08 00:00	08/12/08 03:11	120-12-7	
Benzo(a)anthracene	ND ug/L		0.10	1	07/31/08 00:00	08/12/08 03:11	56-55-3	
Benzo(a)pyrene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 03:11	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.30	1	07/31/08 00:00	08/12/08 03:11	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 03:11	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 03:11	207-08-9	
Chrysene	ND ug/L		0.10	1	07/31/08 00:00	08/12/08 03:11	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 03:11	53-70-3	
Fluoranthene	ND ug/L		0.30	1	07/31/08 00:00	08/12/08 03:11	206-44-0	
Fluorene	ND ug/L		0.31	1	07/31/08 00:00	08/12/08 03:11	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 03:11	193-39-5	
1-Methylnaphthalene	ND ug/L		2.0	1	07/31/08 00:00	08/12/08 03:11	90-12-0	
2-Methylnaphthalene	ND ug/L		2.0	1	07/31/08 00:00	08/12/08 03:11	91-57-6	
Naphthalene	ND ug/L		1.5	1	07/31/08 00:00	08/12/08 03:11	91-20-3	
Phenanthrene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 03:11	85-01-8	
Pyrene	ND ug/L		0.10	1	07/31/08 00:00	08/12/08 03:11	129-00-0	

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## **Appendix D**

### **Regulatory Correspondence**

BOARD:  
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Secretary



C. Earl Hunter, Commissioner

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

BOARD:  
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Coleman F. Buckhouse, MD

16 July 2008

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

Re: MCAS – Laurel Bay Housing – 1171 Jasmine Street  
Site ID # 03944  
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](mailto: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



C. Earl Hunter, Commissioner

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

18 December 2008

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

Re: MCAS – Laurel Bay Housing – 1171 Jasmine  
**Site ID # 03944**  
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. 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](mailto: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