

**SUMMARY REPORT  
955 WEST LAUREL BAY BOULEVARD (FORMERLY 152 WEST LAUREL  
BAY BOULEVARD)  
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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**Norfolk, Virginia 23511-3095**

**Prepared by:**

**CDM - AECOM**  
**Multimedia Joint Venture**

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**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 955 West Laurel Bay Boulevard (Formerly 152 West Laurel Bay Boulevard). 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

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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*

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*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, May 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 955 West Laurel Bay Boulevard (Formerly 152 West Laurel Bay Boulevard). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 152 Laurel Bay Boulevard* (MCAS Beaufort, 2009). The UST Assessment Report is provided in Appendix B. Details regarding the IGWA sampling activities at this site are provided in the *Initial Groundwater Investigation Report – July 2013* (Resolution Consultants, 2015). 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 March 23 2009, a single 280 gallon heating oil UST was removed from the front landscaped bed area adjacent to the driveway at 955 West Laurel Bay Boulevard (Formerly 152 West Laurel Bay Boulevard). The former UST location is indicated on Figures 2 and 3 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 5'11" bgs and a single soil sample was collected from that depth. The sample was collected from the fill port side of the former UST to represent a worst case scenario.

Following UST removal, a soil sample was collected from the base 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 955 West Laurel Bay Boulevard (Formerly 152 West Laurel Bay Boulevard) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated July 22, 2009, SCDHEC requested an IGWA for 955 West Laurel Bay Boulevard (Formerly 152 West Laurel Bay Boulevard) 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 22, 2013, a temporary monitoring well was installed at 955 West Laurel Bay Boulevard (Formerly 152 West Laurel Bay Boulevard), 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 UST. The former UST location is indicated on Figures 2 and 3 of the UST Assessment Report

(Appendix B). Further details are provided in the *Initial Groundwater Investigation Report – July 2013* (Resolution Consultants, 2015).

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 *Initial Groundwater Investigation Report – July 2013* (Resolution Consultants, 2015).

## **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 955 West Laurel Bay Boulevard (Formerly 152 West Laurel Bay Boulevard) 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 955 West Laurel Bay Boulevard (Formerly 152 West Laurel Bay Boulevard). This NFA determination was obtained in a letter dated August 6, 2015. SCDHEC's NFA letter is provided in Appendix D.

## **4.0 REFERENCES**

Marine Corps Air Station Beaufort, 2009. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 152 Laurel Bay Boulevard, Laurel Bay Military Housing Area*, June 2009.

Resolution Consultants, 2015. *Initial Groundwater Investigation Report – July 2013 for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina*, June 2015.

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**  
**955 West Laurel Bay Blvd (Formerly 152 West Laurel Bay Blvd)**  
**Laurel Bay Military Housing Area**  
**Marine Corps Air Station Beaufort**  
**Beaufort, South Carolina**

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Results Sample Collected 03/23/09
<b>Volatile Organic Compounds Analyzed by EPA Method 8260B (mg/kg)</b>		
Benzene	0.003	ND
Ethylbenzene	1.15	<b>0.0397</b>
Naphthalene	0.036	<b>0.0644</b>
Toluene	0.627	ND
Xylenes, Total	13.01	<b>0.0275</b>
<b>Semivolatile Organic Compounds Analyzed by EPA Method 8270D (mg/kg)</b>		
Benzo(a)anthracene	0.66	<b>6.61</b>
Benzo(b)fluoranthene	0.66	<b>3.87</b>
Benzo(k)fluoranthene	0.66	<b>2.73</b>
Chrysene	0.66	<b>6.51</b>
Dibenz(a,h)anthracene	0.66	<b>0.452</b>

**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**  
**955 West Laurel Bay Blvd (Formerly 152 W Laurel Bay Blvd)**  
**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 11/05/15
<b>Volatile Organic Compounds Analyzed by EPA Method 8260B (µg/L)</b>			
Benzene	5	16.24	ND
Ethylbenzene	700	45.95	ND
Naphthalene	25	29.33	<b>0.20</b>
Toluene	1000	105,445	ND
Xylenes, Total	10,000	2,133	ND
<b>Semivolatile Organic Compounds Analyzed by EPA Method 8270D (µg/L)</b>			
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:**

<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.

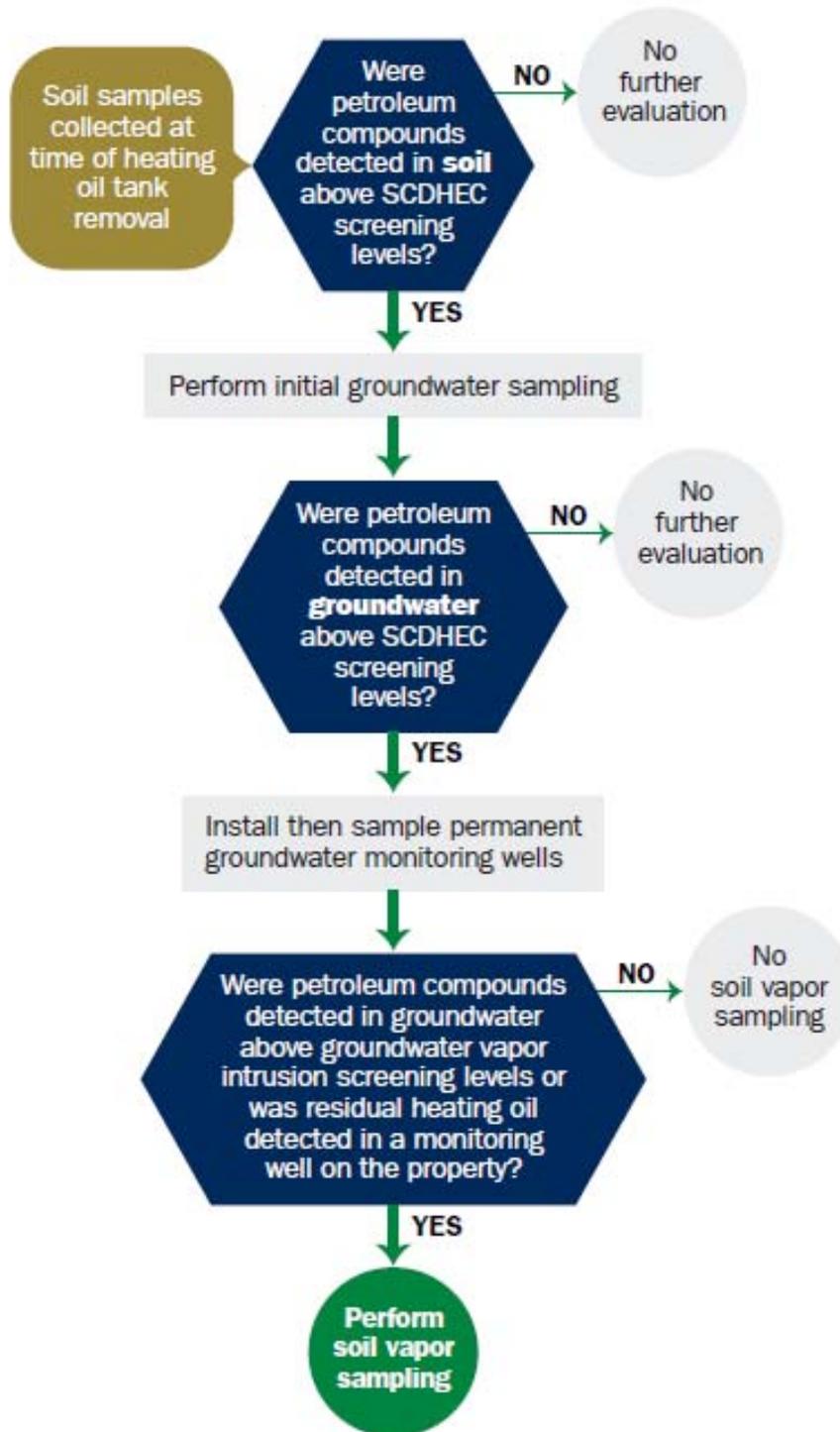
RBSL - Risk-Based Screening Level

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**

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) 896-7957

04234

RECEIVED

JUN 29 2009

SITE ASSESSMENT,  
REMEDICATION &  
REVITALIZATION

**I. OWNERSHIP OF UST (S)**

MCAS Beaufort, Commanding Officer Attn: NREAO (Craig Ehde)		
Owner Name (Corporation, Individual, Public Agency, Other)		
P.O. Box 55001		
Mailing Address		
Beaufort,	South Carolina	29904-5001
City	State	Zip Code
843	228-7317	Craig Ehde
Area Code	Telephone Number	Contact Person

**II. SITE IDENTIFICATION AND LOCATION**

Permit I.D. #	
Laurel Bay Military Housing Area, Marine Corps Air Station, Beaufort, SC	
Facility Name or Company Site Identifier	
152 Laurel Bay Blvd, Laurel Bay Military Housing Area	
Street Address or State Road (as applicable)	
Beaufort,	Beaufort
City	County

### III. INSURANCE INFORMATION

#### Insurance Statement

The petroleum release reported to DHEC on \_\_\_\_\_ at Permit ID Number \_\_\_\_\_ 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.

### IV. REQUEST FOR SUPERB FUNDING

I **DO** / **DO NOT** wish to participate in the SUPERB Program. (Circle one.)

### V. CERTIFICATION (To be signed by the UST owner)

**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*

**VI. UST INFORMATION**

152 Laurel Bay Blvd				
Heating oil				
280 gal				
Late 1950s				
Steel				
Mid 1980s				
5'11"				
No				
No				
Removed				
3/23/09				
Yes				
Yes				

- 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)  
The tank was removed from the ground and disposed of at a Subtitle D landfill. See Attachment "A."

N. Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests)  
The tank was filled with sand.

O. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST  
Corrosion, pitting and holes were found on the entire surface.

## VII. 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.....

152 Laurel Bay Blvd				
Steel /Copper				
N/A				
N/A				
Suction				
Yes*				
Yes				
No				
Early 1950s				

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

Corrosion and pitting were found on the surface of the steel pipe.  
 The copper supply and return piping was sound.

\*Steel piping was removed. Copper pipe was cut and capped at the edge of the excavation.

## VIII. BRIEF SITE DESCRIPTION AND HISTORY

The USTs at the residences are constructed of single wall steel and formerly contained fuel oil for heating. These USTs were installed in the late 1950s and last used in the mid 1980s.

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## IX. 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>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<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>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<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>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<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>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<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>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 96012001

B.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
152	Laurel Bay Blvd Excav at Fill end	Soil	Clay	5'11"	3/23/09 1035 hrs	S. Pratt	
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

\* = Depth Below the Surrounding Land Surface



## XII. RECEPTORS

	Yes	No
<p>A. Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?</p> <p style="padding-left: 40px;">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 style="padding-left: 40px;">If yes, indicate type of well, distance, and direction on site map.</p>		X
<p>C. Are there any underground structures (e.g., basements) Located within 100 feet of the UST system?</p> <p style="padding-left: 40px;">If yes, indicate type of structure, distance, and direction on site map.</p>		X
<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?      *Sewer, water, electricity, cable, fiber optic</p> <p style="padding-left: 40px;">If yes, indicate the type of utility, distance, and direction on the site map.</p>	X*	
<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 style="padding-left: 40px;">If yes, indicate the area of contaminated soil on the site map.</p>		X

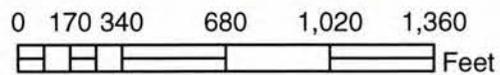
### **XIII. SITE MAP**

**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)



**152 Laurel Bay Blvd**



<b>SBG-EEG, Inc.</b>	
Small Business Group, Inc. 10179 Hwy 78 Ladson, SC 29456	
Ph. (843) 879-0400	
Drawn By:	L. DiAsio
Dwg Date:	Apr 2009

**FIGURE 1: LOCATION MAP**  
**152 LAUREL BAY BLVD., LAUREL BAY**  
**MCAS BEAUFORT SC**

860' BROAD RIVER



152 LAUREL BAY BLVD.  
LAUREL BAY MILITARY HOUSING  
MCAS BEAUFORT, SC

UST 152 LAUREL BAY BLVD

DRIVEWAY

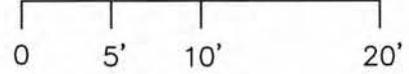
PORCH

SIDEWALK

WASTE WATER

POWER POLE

GRAPHIC SCALE

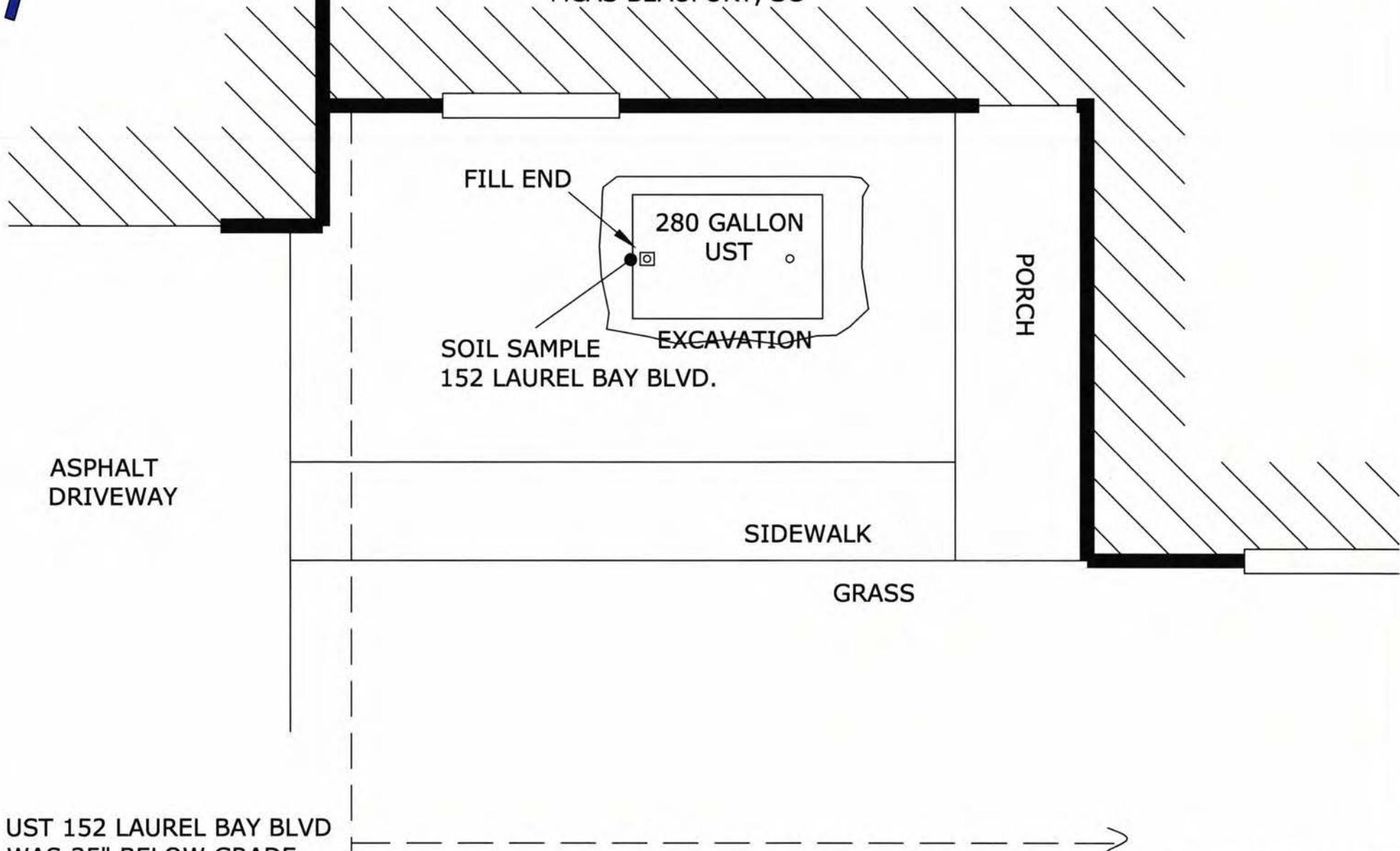
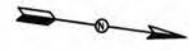


**SBG-EEG**  
10179 HWY 78  
LADSON, SC 29456  
ph. (843) 879-0400

FIGURE 2 SITE MAP  
152 LAUREL BAY BLVD., LAUREL BAY  
MCAS BEAUFORT SC  
SCALE: GRAPHIC      DWG DATE APR 2009

152 LAUREL BAY BLVD.  
LAUREL BAY MILITARY HOUSING  
MCAS BEAUFORT, SC

860' BROAD RIVER



ASPHALT DRIVEWAY

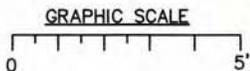
FILL END  
280 GALLON UST  
EXCAVATION  
SOIL SAMPLE  
152 LAUREL BAY BLVD.

PORCH

SIDEWALK

GRASS

UST 152 LAUREL BAY BLVD  
WAS 35" BELOW GRADE



<b>SBG-EEG</b> 10179 HWY 78 LADSON, SC 29456 ph. (843) 879-0400	<b>FIGURE 3 UST SAMPLE LOCATIONS</b> 152 LAUREL BAY BLVD., LAUREL BAY MCAS BEAUFORT SC	
	SCALE: GRAPHIC	DWG DATE APR 2009



Picture 1: Site of UST 152 Laurel Bay Blvd.



Picture 2: UST 152 Laurel Bay Blvd being removed from the excavation.

#### XIV. 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.

<b>CoC</b>	152 Laurel Bay Blvd						
<b>Benzene</b>	ND						
<b>Toluene</b>	ND						
<b>Ethylbenzene</b>	0.0397 mg/kg						
<b>Xylenes</b>	0.0275 mg/kg						
<b>Naphthalene</b>	0.0644 mg/kg						
<b>Benzo (a) anthracene</b>	6.61 mg/kg						
<b>Benzo (b) fluoranthene</b>	3.87 mg/kg						
<b>Benzo (k) fluoranthene</b>	2.73 mg/kg						
<b>Chrysene</b>	6.51 mg/kg						
<b>Dibenz (a, h) anthracene</b>	0.452 mg/kg						
<b>TPH (EPA 3550)</b>							

<b>CoC</b>							
<b>Benzene</b>							
<b>Toluene</b>							
<b>Ethylbenzene</b>							
<b>Xylenes</b>							
<b>Naphthalene</b>							
<b>Benzo (a) anthracene</b>							
<b>Benzo (b) fluoranthene</b>							
<b>Benzo (k) fluoranthene</b>							
<b>Chrysene</b>							
<b>Dibenz (a, h) anthracene</b>							
<b>TPH (EPA 3550)</b>							

**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.

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

## **XV. 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)

April 10, 2009 10:47:19AM

Client: EEG - Env. Enterprise Group (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn: Tom McElwee

Work Order: NSC2487  
Project Name: Laurel Bay Housing Project  
Project Nbr: [none]  
P/O Nbr: 08087  
Date Received: 03/27/09

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
152 Laural Bay Blvd	NSC2487-01	03/23/09 10:35
156 Laural Bay Blvd-1	NSC2487-02	03/24/09 10:30
156 Laural Bay Blvd-2	NSC2487-03	03/24/09 14:30
160 Cypress	NSC2487-04	03/25/09 10:00

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

This material is intended only for the use of the individual(s) or entity to whom it is addressed, and may contain information that is privileged and confidential. If you are not the intended recipient, or the employee or agent responsible for delivering this material to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this material is strictly prohibited. If you have received this material in error, please notify us immediately at 615-726-0177.

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

All solids results are reported in wet weight unless specifically stated.

Estimated uncertainty is available upon request.

This report has been electronically signed.

Report Approved By:



Ken A. Hayes

Senior Project Manager

Client EEG - Env. Enterprise Group (2449)  
 10179 Highway 78  
 Ladson, SC 29456  
 Attn Tom McElwee

Work Order: NSC2487  
 Project Name: Laurel Bay Housing Project  
 Project Number: [none]  
 Received: 03/27/09 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NSC2487-01 (152 Laural Bay Blvd - Soil) Sampled: 03/23/09 10:35</b>								
Polyaromatic Hydrocarbons by EPA 8270D								
Acenaphthene	0.501		mg/kg dry	0.0818	1	03/30/09 15:33	SW846 8270D	9034242
Acenaphthylene	ND		mg/kg dry	0.0818	1	03/30/09 15:33	SW846 8270D	9034242
Anthracene	2.43		mg/kg dry	0.0818	1	03/30/09 15:33	SW846 8270D	9034242
Benzo (a) anthracene	6.61		mg/kg dry	0.409	5	03/31/09 14:42	SW846 8270D	9034242
Benzo (a) pyrene	3.13		mg/kg dry	0.0818	1	03/30/09 15:33	SW846 8270D	9034242
Benzo (b) fluoranthene	3.87		mg/kg dry	0.0818	1	03/30/09 15:33	SW846 8270D	9034242
Benzo (g,h,i) perylene	0.976		mg/kg dry	0.0818	1	03/30/09 15:33	SW846 8270D	9034242
Benzo (k) fluoranthene	2.73		mg/kg dry	0.0818	1	03/30/09 15:33	SW846 8270D	9034242
Chrysene	6.51		mg/kg dry	0.409	5	03/31/09 14:42	SW846 8270D	9034242
Dibenz (a,h) anthracene	0.452		mg/kg dry	0.0818	1	03/30/09 15:33	SW846 8270D	9034242
Fluoranthene	14.7		mg/kg dry	0.409	5	03/31/09 14:42	SW846 8270D	9034242
Fluorene	1.67		mg/kg dry	0.0818	1	03/30/09 15:33	SW846 8270D	9034242
Indeno (1,2,3-cd) pyrene	1.10		mg/kg dry	0.0818	1	03/30/09 15:33	SW846 8270D	9034242
Naphthalene	ND		mg/kg dry	0.0818	1	03/30/09 15:33	SW846 8270D	9034242
Phenanthrene	9.87		mg/kg dry	0.409	5	03/31/09 14:42	SW846 8270D	9034242
Pyrene	13.4		mg/kg dry	0.409	5	03/31/09 14:42	SW846 8270D	9034242
Surr: Terphenyl-d14 (26-128%)	89 %					03/30/09 15:33	SW846 8270D	9034242
Surr: 2-Fluorobiphenyl (19-109%)	76 %					03/30/09 15:33	SW846 8270D	9034242
Surr: Nitrobenzene-d5 (22-104%)	84 %					03/30/09 15:33	SW846 8270D	9034242
General Chemistry Parameters								
% Dry Solids	81.3		%	0.500	1	04/02/09 09:42	SW-846	9040045
Selected Volatile Organic Compounds by EPA Method 8260B								
Benzene	ND		mg/kg dry	0.00222	1	03/31/09 20:10	SW846 8260B	9034691
Ethylbenzene	0.0397		mg/kg dry	0.00222	1	03/31/09 20:10	SW846 8260B	9034691
Naphthalene	0.0644		mg/kg dry	0.00458	1	04/01/09 17:36	SW846 8260B	9040118
Toluene	ND		mg/kg dry	0.00222	1	03/31/09 20:10	SW846 8260B	9034691
Xylenes, total	0.0275		mg/kg dry	0.00458	1	04/01/09 17:36	SW846 8260B	9040118
Surr: 1,2-Dichloroethane-d4 (41-150%)	100 %					03/31/09 20:10	SW846 8260B	9034691
Surr: 1,2-Dichloroethane-d4 (41-150%)	99 %					04/01/09 17:36	SW846 8260B	9040118
Surr: Dibromofluoromethane (55-139%)	96 %					03/31/09 20:10	SW846 8260B	9034691
Surr: Dibromofluoromethane (55-139%)	96 %					04/01/09 17:36	SW846 8260B	9040118
Surr: Toluene-d8 (57-148%)	174 %	ZX				03/31/09 20:10	SW846 8260B	9034691
Surr: Toluene-d8 (57-148%)	144 %					04/01/09 17:36	SW846 8260B	9040118
Surr: 4-Bromofluorobenzene (58-150%)	1370 %	ZX				03/31/09 20:10	SW846 8260B	9034691
Surr: 4-Bromofluorobenzene (58-150%)	123 %					04/01/09 17:36	SW846 8260B	9040118

Client EEG - Env. Enterprise Group (2449)  
 10179 Highway 78  
 Ladson, SC 29456  
 Attn Tom McElwee

Work Order: NSC2487  
 Project Name: Laurel Bay Housing Project  
 Project Number: [none]  
 Received: 03/27/09 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NSC2487-02 (156 Laural Bay Blvd-1 - Soil) Sampled: 03/24/09 10:30</b>								
<b>Polyaromatic Hydrocarbons by EPA 8270D</b>								
Acenaphthene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Acenaphthylene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Anthracene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Benzo (a) anthracene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Benzo (a) pyrene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Benzo (b) fluoranthene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Benzo (k) fluoranthene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Chrysene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Fluoranthene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Fluorene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Naphthalene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Phenanthrene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
Pyrene	ND		mg/kg dry	0.0833	1	03/30/09 15:56	SW846 8270D	9034242
<i>Surr: Terphenyl-d14 (26-128%)</i>	66 %					03/30/09 15:56	SW846 8270D	9034242
<i>Surr: 2-Fluorobiphenyl (19-109%)</i>	64 %					03/30/09 15:56	SW846 8270D	9034242
<i>Surr: Nitrobenzene-d5 (22-104%)</i>	60 %					03/30/09 15:56	SW846 8270D	9034242
<b>General Chemistry Parameters</b>								
% Dry Solids	78.2		%	0.500	1	04/02/09 09:42	SW-846	9040045
<b>Selected Volatile Organic Compounds by EPA Method 8260B</b>								
Benzene	ND		mg/kg dry	0.00210	1	03/31/09 20:40	SW846 8260B	9034691
Ethylbenzene	ND		mg/kg dry	0.00210	1	03/31/09 20:40	SW846 8260B	9034691
Naphthalene	ND		mg/kg dry	0.00524	1	03/31/09 20:40	SW846 8260B	9034691
Toluene	ND		mg/kg dry	0.00210	1	03/31/09 20:40	SW846 8260B	9034691
Xylenes, total	ND		mg/kg dry	0.00524	1	03/31/09 20:40	SW846 8260B	9034691
<i>Surr: 1,2-Dichloroethane-d4 (41-150%)</i>	104 %					03/31/09 20:40	SW846 8260B	9034691
<i>Surr: Dibromofluoromethane (55-139%)</i>	97 %					03/31/09 20:40	SW846 8260B	9034691
<i>Surr: Toluene-d8 (57-148%)</i>	104 %					03/31/09 20:40	SW846 8260B	9034691
<i>Surr: 4-Bromofluorobenzene (58-150%)</i>	114 %					03/31/09 20:40	SW846 8260B	9034691

Client EEG - Env. Enterprise Group (2449)  
 10179 Highway 78  
 Ladson, SC 29456  
 Attn Tom McElwee

Work Order: NSC2487  
 Project Name: Laurel Bay Housing Project  
 Project Number: [none]  
 Received: 03/27/09 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NSC2487-03 (156 Laural Bay Blvd-2 - Soil) Sampled: 03/24/09 14:30</b>								
<b>Polyaromatic Hydrocarbons by EPA 8270D</b>								
Acenaphthene	0.117		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Acenaphthylene	ND		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Anthracene	ND		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Benzo (a) anthracene	ND		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Benzo (a) pyrene	ND		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Benzo (b) fluoranthene	ND		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Benzo (k) fluoranthene	ND		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Chrysene	ND		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Fluoranthene	ND		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Fluorene	ND		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Naphthalene	0.100		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Phenanthrene	0.667		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
Pyrene	ND		mg/kg dry	0.0845	1	03/30/09 16:19	SW846 8270D	9034242
<i>Surr: Terphenyl-d14 (26-128%)</i>	67 %					03/30/09 16:19	SW846 8270D	9034242
<i>Surr: 2-Fluorobiphenyl (19-109%)</i>	62 %					03/30/09 16:19	SW846 8270D	9034242
<i>Surr: Nitrobenzene-d5 (22-104%)</i>	60 %					03/30/09 16:19	SW846 8270D	9034242
<b>General Chemistry Parameters</b>								
% Dry Solids	79.3		%	0.500	1	04/02/09 09:42	SW-846	9040045
<b>Selected Volatile Organic Compounds by EPA Method 8260B</b>								
Benzene	ND		mg/kg dry	0.00200	1	03/31/09 21:10	SW846 8260B	9034691
Ethylbenzene	0.111		mg/kg dry	0.00200	1	03/31/09 21:10	SW846 8260B	9034691
Naphthalene	1.07		mg/kg dry	0.291	50	04/01/09 20:07	SW846 8260B	9040118
Toluene	ND		mg/kg dry	0.00200	1	03/31/09 21:10	SW846 8260B	9034691
Xylenes, total	0.0931		mg/kg dry	0.00499	1	03/31/09 21:10	SW846 8260B	9034691
<i>Surr: 1,2-Dichloroethane-d4 (41-150%)</i>	98 %					03/31/09 21:10	SW846 8260B	9034691
<i>Surr: 1,2-Dichloroethane-d4 (41-150%)</i>	103 %					04/01/09 20:07	SW846 8260B	9040118
<i>Surr: Dibromofluoromethane (55-139%)</i>	94 %					03/31/09 21:10	SW846 8260B	9034691
<i>Surr: Dibromofluoromethane (55-139%)</i>	96 %					04/01/09 20:07	SW846 8260B	9040118
<i>Surr: Toluene-d8 (57-148%)</i>	119 %					03/31/09 21:10	SW846 8260B	9034691
<i>Surr: Toluene-d8 (57-148%)</i>	98 %					04/01/09 20:07	SW846 8260B	9040118
<i>Surr: 4-Bromofluorobenzene (58-150%)</i>	146 %					03/31/09 21:10	SW846 8260B	9034691
<i>Surr: 4-Bromofluorobenzene (58-150%)</i>	109 %					04/01/09 20:07	SW846 8260B	9040118

Client EEG - Env. Enterprise Group (2449)  
 10179 Highway 78  
 Ladson, SC 29456  
 Attn Tom McElwee

Work Order: NSC2487  
 Project Name: Laurel Bay Housing Project  
 Project Number: [none]  
 Received: 03/27/09 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NSC2487-04 (160 Cypress - Soil) Sampled: 03/25/09 10:00</b>								
Polyaromatic Hydrocarbons by EPA 8270D								
Acenaphthene	0.465		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Acenaphthylene	ND		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Anthracene	0.341		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Benzo (a) anthracene	0.332		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Benzo (a) pyrene	0.166		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Benzo (b) fluoranthene	0.206		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Benzo (k) fluoranthene	0.162		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Chrysene	0.339		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Fluoranthene	0.742		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Fluorene	1.48		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Naphthalene	1.99		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Phenanthrene	3.24		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Pyrene	0.767		mg/kg dry	0.0879	1	03/30/09 16:42	SW846 8270D	9034242
Surr: Terphenyl-d14 (26-128%)	76 %					03/30/09 16:42	SW846 8270D	9034242
Surr: 2-Fluorobiphenyl (19-109%)	65 %					03/30/09 16:42	SW846 8270D	9034242
Surr: Nitrobenzene-d5 (22-104%)	72 %					03/30/09 16:42	SW846 8270D	9034242
General Chemistry Parameters								
% Dry Solids	75.5		%	0.500	1	04/02/09 09:42	SW-846	9040045
Selected Volatile Organic Compounds by EPA Method 8260B								
Benzene	0.00269		mg/kg dry	0.00240	1	03/31/09 21:41	SW846 8260B	9034691
Ethylbenzene	1.64		mg/kg dry	0.126	50	03/31/09 22:11	SW846 8260B	9034691
Naphthalene	12.5		mg/kg dry	3.15	500	04/01/09 20:38	SW846 8260B	9040118
Toluene	ND		mg/kg dry	0.00240	1	03/31/09 21:41	SW846 8260B	9034691
Xylenes, total	0.357		mg/kg dry	0.00599	1	03/31/09 21:41	SW846 8260B	9034691
Surr: 1,2-Dichloroethane-d4 (41-150%)	103 %					03/31/09 21:41	SW846 8260B	9034691
Surr: 1,2-Dichloroethane-d4 (41-150%)	99 %					03/31/09 22:11	SW846 8260B	9034691
Surr: 1,2-Dichloroethane-d4 (41-150%)	97 %					04/01/09 20:38	SW846 8260B	9040118
Surr: Dibromofluoromethane (55-139%)	98 %					03/31/09 21:41	SW846 8260B	9034691
Surr: Dibromofluoromethane (55-139%)	92 %					03/31/09 22:11	SW846 8260B	9034691
Surr: Dibromofluoromethane (55-139%)	93 %					04/01/09 20:38	SW846 8260B	9040118
Surr: Toluene-d8 (57-148%)	128 %					03/31/09 21:41	SW846 8260B	9034691
Surr: Toluene-d8 (57-148%)	103 %					03/31/09 22:11	SW846 8260B	9034691
Surr: Toluene-d8 (57-148%)	105 %					04/01/09 20:38	SW846 8260B	9040118
Surr: 4-Bromofluorobenzene (58-150%)	130 %					03/31/09 21:41	SW846 8260B	9034691
Surr: 4-Bromofluorobenzene (58-150%)	115 %					03/31/09 22:11	SW846 8260B	9034691
Surr: 4-Bromofluorobenzene (58-150%)	104 %					04/01/09 20:38	SW846 8260B	9040118

Client BEG - Env. Enterprise Group (2449)  
 10179 Highway 78  
 Ladson, SC 29456  
 Attn Tom McElwee

Work Order: NSC2487  
 Project Name: Laurel Bay Housing Project  
 Project Number: [none]  
 Received: 03/27/09 08:00

### SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
<b>Polyaromatic Hydrocarbons by EPA 8270D</b>							
SW846 8270D	9034242	NSC2487-01	30.22	1.00	03/28/09 09:00	DMG	EPA 3550B
SW846 8270D	9034242	NSC2487-01RE1	30.22	1.00	03/28/09 09:00	DMG	EPA 3550B
SW846 8270D	9034242	NSC2487-02	30.87	1.00	03/28/09 09:00	DMG	EPA 3550B
SW846 8270D	9034242	NSC2487-03	30.01	1.00	03/28/09 09:00	DMG	EPA 3550B
SW846 8270D	9034242	NSC2487-04	30.28	1.00	03/28/09 09:00	DMG	EPA 3550B
<b>Selected Volatile Organic Compounds by EPA Method 8260B</b>							
SW846 8260B	9034691	NSC2487-01	5.55	5.00	03/23/09 10:35	JRL	EPA 5035
SW846 8260B	9040118	NSC2487-01RE1	6.72	5.00	03/23/09 10:35	JRL	EPA 5035
SW846 8260B	9040118	NSC2487-01RE2	6.37	5.00	03/23/09 10:35	JRL	EPA 5035
SW846 8260B	9034691	NSC2487-02	6.10	5.00	03/24/09 10:30	JRL	EPA 5035
SW846 8260B	9034691	NSC2487-03	6.32	5.00	03/24/09 14:30	JRL	EPA 5035
SW846 8260B	9040118	NSC2487-03RE1	5.42	5.00	03/24/09 14:30	JRL	EPA 5035
SW846 8260B	9034691	NSC2487-04	5.53	5.00	03/25/09 10:00	JRL	EPA 5035
SW846 8260B	9034691	NSC2487-04RE1	5.26	5.00	03/25/09 10:00	JRL	EPA 5035
SW846 8260B	9040118	NSC2487-04RE2	5.26	5.00	03/25/09 10:00	JRL	EPA 5035

Client EEG - Env. Enterprise Group (2449)  
 10179 Highway 78  
 Ladson, SC 29456  
 Attn Tom McElwee

Work Order: NSC2487  
 Project Name: Laurel Bay Housing Project  
 Project Number: [none]  
 Received: 03/27/09 08:00

**PROJECT QUALITY CONTROL DATA**  
**Blank**

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
<b>Polyaromatic Hydrocarbons by EPA 8270D</b>						
<b>9034242-BLK1</b>						
Acenaphthene	<0.0310		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Acenaphthylene	<0.0320		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Anthracene	<0.0330		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Benzo (a) anthracene	<0.0380		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Benzo (a) pyrene	<0.0290		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Benzo (b) fluoranthene	<0.0320		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Benzo (g,h,i) perylene	<0.0290		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Benzo (k) fluoranthene	<0.0290		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Chrysene	<0.0390		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Dibenz (a,h) anthracene	<0.0310		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Fluoranthene	<0.0340		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Fluorene	<0.0390		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Indeno (1,2,3-cd) pyrene	<0.0310		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Naphthalene	<0.0410		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Phenanthrene	<0.0340		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Pyrene	<0.0410		mg/kg wet	9034242	9034242-BLK1	03/30/09 12:52
Surrogate: Terphenyl-d14	84%			9034242	9034242-BLK1	03/30/09 12:52
Surrogate: 2-Fluorobiphenyl	74%			9034242	9034242-BLK1	03/30/09 12:52
Surrogate: Nitrobenzene-d5	74%			9034242	9034242-BLK1	03/30/09 12:52

**Selected Volatile Organic Compounds by EPA Method 8260B**

<b>9034691-BLK1</b>						
Benzene	<0.000670		mg/kg wet	9034691	9034691-BLK1	03/31/09 15:01
Ethylbenzene	<0.000670		mg/kg wet	9034691	9034691-BLK1	03/31/09 15:01
Naphthalene	<0.00151		mg/kg wet	9034691	9034691-BLK1	03/31/09 15:01
Toluene	<0.000670		mg/kg wet	9034691	9034691-BLK1	03/31/09 15:01
Xylenes, total	<0.00172		mg/kg wet	9034691	9034691-BLK1	03/31/09 15:01
Surrogate: 1,2-Dichloroethane-d4	102%			9034691	9034691-BLK1	03/31/09 15:01
Surrogate: Dibromofluoromethane	97%			9034691	9034691-BLK1	03/31/09 15:01
Surrogate: Toluene-d8	103%			9034691	9034691-BLK1	03/31/09 15:01
Surrogate: 4-Bromofluorobenzene	102%			9034691	9034691-BLK1	03/31/09 15:01

<b>9040118-BLK1</b>						
Benzene	<0.000670		mg/kg wet	9040118	9040118-BLK1	04/01/09 15:26
Ethylbenzene	<0.000670		mg/kg wet	9040118	9040118-BLK1	04/01/09 15:26
Naphthalene	<0.00151		mg/kg wet	9040118	9040118-BLK1	04/01/09 15:26
Toluene	<0.000670		mg/kg wet	9040118	9040118-BLK1	04/01/09 15:26
Xylenes, total	<0.00172		mg/kg wet	9040118	9040118-BLK1	04/01/09 15:26
Surrogate: 1,2-Dichloroethane-d4	100%			9040118	9040118-BLK1	04/01/09 15:26
Surrogate: Dibromofluoromethane	96%			9040118	9040118-BLK1	04/01/09 15:26
Surrogate: Toluene-d8	103%			9040118	9040118-BLK1	04/01/09 15:26

Client EEG - Env. Enterprise Group (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NSC2487  
Project Name: Laurel Bay Housing Project  
Project Number: [none]  
Received: 03/27/09 08:00

### PROJECT QUALITY CONTROL DATA

#### Blank - Cont.

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
<b>Selected Volatile Organic Compounds by EPA Method 8260B</b>						
<b>9040118-BLK1</b>						
<i>Surrogate: 4-Bromofluorobenzene</i>	103%			9040118	9040118-BLK1	04/01/09 15:26

Client EEG - Env. Enterprise Group (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NSC2487  
Project Name: Laurel Bay Housing Project  
Project Number: [none]  
Received: 03/27/09 08:00

### PROJECT QUALITY CONTROL DATA

#### Duplicate

Analyte	Orig. Val.	Duplicate	Q	Units	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
<b>General Chemistry Parameters</b>									
<b>9040045-DUP1</b>									
% Dry Solids	82.4	82.8		%	0.5	20	9040045	NSC2443-17	04/02/09 09:42

Client EEG - Env. Enterprise Group (2449)  
 10179 Highway 78  
 Ladson, SC 29456  
 Attn Tom McElwee

Work Order: NSC2487  
 Project Name: Laurel Bay Housing Project  
 Project Number: [none]  
 Received: 03/27/09 08:00

**PROJECT QUALITY CONTROL DATA**  
**LCS**

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
<b>Polyaromatic Hydrocarbons by EPA 8270D</b>								
<b>9034242-BS1</b>								
Acenaphthene	1.67	1.29		mg/kg wet	77%	52 - 106	9034242	03/30/09 13:15
Acenaphthylene	1.67	1.29		mg/kg wet	78%	53 - 109	9034242	03/30/09 13:15
Anthracene	1.67	1.45		mg/kg wet	87%	54 - 124	9034242	03/30/09 13:15
Benzo (a) anthracene	1.67	1.39		mg/kg wet	83%	53 - 111	9034242	03/30/09 13:15
Benzo (a) pyrene	1.67	1.43		mg/kg wet	86%	52 - 122	9034242	03/30/09 13:15
Benzo (b) fluoranthene	1.67	1.46		mg/kg wet	88%	48 - 115	9034242	03/30/09 13:15
Benzo (g,h,i) perylene	1.67	1.36		mg/kg wet	82%	46 - 114	9034242	03/30/09 13:15
Benzo (k) fluoranthene	1.67	1.25		mg/kg wet	75%	41 - 121	9034242	03/30/09 13:15
Chrysene	1.67	1.37		mg/kg wet	82%	49 - 113	9034242	03/30/09 13:15
Dibenz (a,h) anthracene	1.67	1.38		mg/kg wet	83%	47 - 117	9034242	03/30/09 13:15
Fluoranthene	1.67	1.28		mg/kg wet	77%	52 - 113	9034242	03/30/09 13:15
Fluorene	1.67	1.30		mg/kg wet	78%	54 - 107	9034242	03/30/09 13:15
Indeno (1,2,3-cd) pyrene	1.67	1.40		mg/kg wet	84%	47 - 115	9034242	03/30/09 13:15
Naphthalene	1.67	1.11		mg/kg wet	67%	34 - 107	9034242	03/30/09 13:15
Phenanthrene	1.67	1.34		mg/kg wet	81%	53 - 108	9034242	03/30/09 13:15
Pyrene	1.67	1.49		mg/kg wet	89%	54 - 113	9034242	03/30/09 13:15
Surrogate: Terphenyl-d14	1.67	1.39			83%	26 - 128	9034242	03/30/09 13:15
Surrogate: 2-Fluorobiphenyl	1.67	1.25			75%	19 - 109	9034242	03/30/09 13:15
Surrogate: Nitrobenzene-d5	1.67	1.15			69%	22 - 104	9034242	03/30/09 13:15

**Selected Volatile Organic Compounds by EPA Method 8260B**

<b>9034691-BS1</b>								
Benzene	50.0	52.6		ug/kg	105%	76 - 130	9034691	03/31/09 13:00
Ethylbenzene	50.0	54.6		ug/kg	109%	80 - 128	9034691	03/31/09 13:00
Naphthalene	50.0	55.0		ug/kg	110%	63 - 144	9034691	03/31/09 13:00
Toluene	50.0	50.9		ug/kg	102%	80 - 125	9034691	03/31/09 13:00
Xylenes, total	150	164		ug/kg	109%	79 - 130	9034691	03/31/09 13:00
Surrogate: 1,2-Dichloroethane-d4	50.0	50.4			101%	41 - 150	9034691	03/31/09 13:00
Surrogate: Dibromofluoromethane	50.0	50.1			100%	55 - 139	9034691	03/31/09 13:00
Surrogate: Toluene-d8	50.0	52.0			104%	57 - 148	9034691	03/31/09 13:00
Surrogate: 4-Bromofluorobenzene	50.0	51.3			103%	58 - 150	9034691	03/31/09 13:00

<b>9040118-BS1</b>								
Benzene	50.0	51.1		ug/kg	102%	76 - 130	9040118	04/01/09 13:25
Ethylbenzene	50.0	54.0		ug/kg	108%	80 - 128	9040118	04/01/09 13:25
Naphthalene	50.0	53.7		ug/kg	107%	63 - 144	9040118	04/01/09 13:25
Toluene	50.0	50.2		ug/kg	100%	80 - 125	9040118	04/01/09 13:25
Xylenes, total	150	162		ug/kg	108%	79 - 130	9040118	04/01/09 13:25
Surrogate: 1,2-Dichloroethane-d4	50.0	49.1			98%	41 - 150	9040118	04/01/09 13:25
Surrogate: Dibromofluoromethane	50.0	48.6			97%	55 - 139	9040118	04/01/09 13:25
Surrogate: Toluene-d8	50.0	51.8			104%	57 - 148	9040118	04/01/09 13:25

Client EEG - Env. Enterprise Group (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NSC2487  
Project Name: Laurel Bay Housing Project  
Project Number: [none]  
Received: 03/27/09 08:00

**PROJECT QUALITY CONTROL DATA**  
**LCS - Cont.**

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
<b>Selected Volatile Organic Compounds by EPA Method 8260B</b>								
<b>9040118-BS1</b>								
<i>Surrogate: 4-Bromofluorobenzene</i>	50.0	51.0			102%	58 - 150	9040118	04/01/09 13:25

Client EEG - Env. Enterprise Group (2449)  
 10179 Highway 78  
 Ladson, SC 29456  
 Attn Tom McElwee

Work Order: NSC2487  
 Project Name: Laurel Bay Housing Project  
 Project Number: [none]  
 Received: 03/27/09 08:00

### PROJECT QUALITY CONTROL DATA

#### LCS Dup

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Cone	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
<b>Selected Volatile Organic Compounds by EPA Method 8260B</b>												
<b>9034691-BSD1</b>												
Benzene		49.8		ug/kg	50.0	100%	76 - 130	5	43	9034691		03/31/09 13:30
Ethylbenzene		54.6		ug/kg	50.0	109%	80 - 128	0.04	48	9034691		03/31/09 13:30
Naphthalene		55.8		ug/kg	50.0	112%	63 - 144	1	50	9034691		03/31/09 13:30
Toluene		51.3		ug/kg	50.0	103%	80 - 125	0.9	44	9034691		03/31/09 13:30
Xylenes, total		164		ug/kg	150	109%	79 - 130	0.2	48	9034691		03/31/09 13:30
Surrogate: 1,2-Dichloroethane-d4		49.7		ug/kg	50.0	99%	41 - 150			9034691		03/31/09 13:30
Surrogate: Dibromofluoromethane		49.1		ug/kg	50.0	98%	55 - 139			9034691		03/31/09 13:30
Surrogate: Toluene-d8		52.2		ug/kg	50.0	104%	57 - 148			9034691		03/31/09 13:30
Surrogate: 4-Bromofluorobenzene		51.8		ug/kg	50.0	104%	58 - 150			9034691		03/31/09 13:30
<b>9040118-BSD1</b>												
Benzene		51.2		ug/kg	50.0	102%	76 - 130	0.2	43	9040118		04/01/09 13:55
Ethylbenzene		53.3		ug/kg	50.0	107%	80 - 128	1	48	9040118		04/01/09 13:55
Naphthalene		54.4		ug/kg	50.0	109%	63 - 144	1	50	9040118		04/01/09 13:55
Toluene		50.0		ug/kg	50.0	100%	80 - 125	0.5	44	9040118		04/01/09 13:55
Xylenes, total		161		ug/kg	150	107%	79 - 130	0.8	48	9040118		04/01/09 13:55
Surrogate: 1,2-Dichloroethane-d4		49.6		ug/kg	50.0	99%	41 - 150			9040118		04/01/09 13:55
Surrogate: Dibromofluoromethane		49.3		ug/kg	50.0	99%	55 - 139			9040118		04/01/09 13:55
Surrogate: Toluene-d8		51.9		ug/kg	50.0	104%	57 - 148			9040118		04/01/09 13:55
Surrogate: 4-Bromofluorobenzene		52.0		ug/kg	50.0	104%	58 - 150			9040118		04/01/09 13:55

Client EEG - Env. Enterprise Group (2449)  
 10179 Highway 78  
 Ladson, SC 29456  
 Attn Tom McElwee

Work Order: NSC2487  
 Project Name: Laurel Bay Housing Project  
 Project Number: [none]  
 Received: 03/27/09 08:00

**PROJECT QUALITY CONTROL DATA**  
**Matrix Spike**

Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
<b>Polyaromatic Hydrocarbons by EPA 8270D</b>										
<b>9034242-MS1</b>										
Acenaphthene	ND	1.54		mg/kg dry	2.10	73%	28 - 117	9034242	NSC2487-02	03/30/09 13:38
Acenaphthylene	ND	1.54		mg/kg dry	2.10	73%	33 - 113	9034242	NSC2487-02	03/30/09 13:38
Anthracene	ND	1.67		mg/kg dry	2.10	80%	31 - 131	9034242	NSC2487-02	03/30/09 13:38
Benzo (a) anthracene	ND	1.61		mg/kg dry	2.10	77%	29 - 124	9034242	NSC2487-02	03/30/09 13:38
Benzo (a) pyrene	ND	1.68		mg/kg dry	2.10	80%	30 - 127	9034242	NSC2487-02	03/30/09 13:38
Benzo (b) fluoranthene	ND	1.54		mg/kg dry	2.10	73%	26 - 128	9034242	NSC2487-02	03/30/09 13:38
Benzo (g,h,i) perylene	ND	1.56		mg/kg dry	2.10	74%	21 - 122	9034242	NSC2487-02	03/30/09 13:38
Benzo (k) fluoranthene	ND	1.65		mg/kg dry	2.10	78%	20 - 130	9034242	NSC2487-02	03/30/09 13:38
Chrysene	ND	1.63		mg/kg dry	2.10	77%	30 - 119	9034242	NSC2487-02	03/30/09 13:38
Dibenz (a,h) anthracene	ND	1.59		mg/kg dry	2.10	76%	27 - 122	9034242	NSC2487-02	03/30/09 13:38
Fluoranthene	0.0427	1.49		mg/kg dry	2.10	69%	23 - 132	9034242	NSC2487-02	03/30/09 13:38
Fluorene	ND	1.54		mg/kg dry	2.10	74%	38 - 110	9034242	NSC2487-02	03/30/09 13:38
Indeno (1,2,3-ed) pyrene	ND	1.63		mg/kg dry	2.10	77%	24 - 122	9034242	NSC2487-02	03/30/09 13:38
Naphthalene	ND	1.30		mg/kg dry	2.10	62%	14 - 117	9034242	NSC2487-02	03/30/09 13:38
Phenanthrene	ND	1.56		mg/kg dry	2.10	74%	21 - 130	9034242	NSC2487-02	03/30/09 13:38
Pyrene	0.0522	1.81		mg/kg dry	2.10	84%	24 - 133	9034242	NSC2487-02	03/30/09 13:38
Surrogate: Terphenyl-d14		1.56		mg/kg dry	2.10	74%	26 - 128	9034242	NSC2487-02	03/30/09 13:38
Surrogate: 2-Fluorobiphenyl		1.38		mg/kg dry	2.10	66%	19 - 109	9034242	NSC2487-02	03/30/09 13:38
Surrogate: Nitrobenzene-d5		1.17		mg/kg dry	2.10	56%	22 - 104	9034242	NSC2487-02	03/30/09 13:38

**Selected Volatile Organic Compounds by EPA Method 8260B**  
**9034691-MS1**

Benzene	ND	3.27		mg/kg dry	3.15	104%	33 - 146	9034691	NSC2487-04RE	03/31/09 22:41
Ethylbenzene	1.64	4.92		mg/kg dry	3.15	104%	16 - 160	9034691	NSC2487-04RE	03/31/09 22:41
Naphthalene	13.5	16.0		mg/kg dry	3.15	79%	10 - 151	9034691	NSC2487-04RE	03/31/09 22:41
Toluene	ND	3.06		mg/kg dry	3.15	97%	30 - 145	9034691	NSC2487-04RE	03/31/09 22:41
Xylenes, total	1.84	11.6		mg/kg dry	9.44	104%	16 - 159	9034691	NSC2487-04RE	03/31/09 22:41
Surrogate: 1,2-Dichloroethane-d4		52.5		ug/kg	50.0	105%	41 - 150	9034691	NSC2487-04RE	03/31/09 22:41
Surrogate: Dibromofluoromethane		50.2		ug/kg	50.0	100%	55 - 139	9034691	NSC2487-04RE	03/31/09 22:41
Surrogate: Toluene-d8		50.3		ug/kg	50.0	101%	57 - 148	9034691	NSC2487-04RE	03/31/09 22:41
Surrogate: 4-Bromofluorobenzene		55.4		ug/kg	50.0	111%	58 - 150	9034691	NSC2487-04RE	03/31/09 22:41

**9040118-MS1**

Client EEG - Env. Enterprise Group (2449)  
 10179 Highway 78  
 Ladson, SC 29456  
 Attn Tom McElwee

Work Order: NSC2487  
 Project Name: Laurel Bay Housing Project  
 Project Number: [none]  
 Received: 03/27/09 08:00

**PROJECT QUALITY CONTROL DATA**  
**Matrix Spike - Cont.**

Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
<b>Selected Volatile Organic Compounds by EPA Method 8260B</b>										
<b>9040118-MS1</b>										
Benzene	ND	1.83		mg/kg wet	2.40	76%	33 - 146	9040118	NSD0038-01RE I	04/01/09 23:09
Ethylbenzene	4.21	6.19		mg/kg wet	2.40	83%	16 - 160	9040118	NSD0038-01RE I	04/01/09 23:09
Naphthalene	4.41	5.08		mg/kg wet	2.40	28%	10 - 151	9040118	NSD0038-01RE I	04/01/09 23:09
Toluene	1.24	3.02		mg/kg wet	2.40	74%	30 - 145	9040118	NSD0038-01RE I	04/01/09 23:09
Xylenes, total	25.3	30.8		mg/kg wet	7.20	75%	16 - 159	9040118	NSD0038-01RE I	04/01/09 23:09
<i>Surrogate: 1,2-Dichloroethane-d4</i>		47.0		ug/kg	50.0	94%	41 - 150	9040118	NSD0038-01RE I	04/01/09 23:09
<i>Surrogate: Dibromofluoromethane</i>		46.8		ug/kg	50.0	94%	55 - 139	9040118	NSD0038-01RE I	04/01/09 23:09
<i>Surrogate: Toluene-d8</i>		50.3		ug/kg	50.0	101%	57 - 148	9040118	NSD0038-01RE I	04/01/09 23:09
<i>Surrogate: 4-Bromofluorobenzene</i>		57.1		ug/kg	50.0	114%	58 - 150	9040118	NSD0038-01RE I	04/01/09 23:09

Client EEG - Env. Enterprise Group (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NSC2487  
Project Name: Laurel Bay Housing Project  
Project Number: [none]  
Received: 03/27/09 08:00

### PROJECT QUALITY CONTROL DATA

#### Matrix Spike Dup

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
<b>Polyaromatic Hydrocarbons by EPA 8270D</b>												
<b>9034242-MSD1</b>												
Acenaphthene	ND	1.30		mg/kg dry	2.12	61%	28 - 117	17	33	9034242	NSC2487-02	03/30/09 14:01
Acenaphthylene	ND	1.29		mg/kg dry	2.12	61%	33 - 113	18	38	9034242	NSC2487-02	03/30/09 14:01
Anthracene	ND	1.45		mg/kg dry	2.12	69%	31 - 131	14	32	9034242	NSC2487-02	03/30/09 14:01
Benzo (a) anthracene	ND	1.35		mg/kg dry	2.12	64%	29 - 124	17	26	9034242	NSC2487-02	03/30/09 14:01
Benzo (a) pyrene	ND	1.38		mg/kg dry	2.12	65%	30 - 127	19	31	9034242	NSC2487-02	03/30/09 14:01
Benzo (b) fluoranthene	ND	1.47		mg/kg dry	2.12	69%	26 - 128	4	37	9034242	NSC2487-02	03/30/09 14:01
Benzo (g,h,i) perylene	ND	1.33		mg/kg dry	2.12	63%	21 - 122	16	28	9034242	NSC2487-02	03/30/09 14:01
Benzo (k) fluoranthene	ND	1.24		mg/kg dry	2.12	58%	20 - 130	28	35	9034242	NSC2487-02	03/30/09 14:01
Chrysene	ND	1.34		mg/kg dry	2.12	63%	30 - 119	19	31	9034242	NSC2487-02	03/30/09 14:01
Dibenz (a,h) anthracene	ND	1.33		mg/kg dry	2.12	63%	27 - 122	18	32	9034242	NSC2487-02	03/30/09 14:01
Fluoranthene	0.0427	1.31		mg/kg dry	2.12	60%	23 - 132	13	36	9034242	NSC2487-02	03/30/09 14:01
Fluorene	ND	1.30		mg/kg dry	2.12	61%	38 - 110	17	35	9034242	NSC2487-02	03/30/09 14:01
Indeno (1,2,3-cd) pyrene	ND	1.33		mg/kg dry	2.12	63%	24 - 122	20	28	9034242	NSC2487-02	03/30/09 14:01
Naphthalene	ND	1.12		mg/kg dry	2.12	53%	14 - 117	15	34	9034242	NSC2487-02	03/30/09 14:01
Phenanthrene	ND	1.34		mg/kg dry	2.12	63%	21 - 130	15	33	9034242	NSC2487-02	03/30/09 14:01
Pyrene	0.0522	1.51		mg/kg dry	2.12	69%	24 - 133	18	36	9034242	NSC2487-02	03/30/09 14:01
Surrogate: Terphenyl-d14		1.27		mg/kg dry	2.12	60%	26 - 128			9034242	NSC2487-02	03/30/09 14:01
Surrogate: 2-Fluorobiphenyl		1.16		mg/kg dry	2.12	55%	19 - 109			9034242	NSC2487-02	03/30/09 14:01
Surrogate: Nitrobenzene-d5		1.05		mg/kg dry	2.12	49%	22 - 104			9034242	NSC2487-02	03/30/09 14:01
<b>Selected Volatile Organic Compounds by EPA Method 8260B</b>												
<b>9034691-MSD1</b>												
Benzene	ND	3.52		mg/kg dry	3.15	112%	33 - 146	7	43	9034691	NSC2487-04RE 1	03/31/09 23:11
Ethylbenzene	1.64	5.13		mg/kg dry	3.15	111%	16 - 160	4	48	9034691	NSC2487-04RE 1	03/31/09 23:11
Naphthalene	13.5	16.0		mg/kg dry	3.15	78%	10 - 151	0.1	50	9034691	NSC2487-04RE 1	03/31/09 23:11
Toluene	ND	3.29		mg/kg dry	3.15	104%	30 - 145	7	44	9034691	NSC2487-04RE 1	03/31/09 23:11
Xylenes, total	1.84	12.2		mg/kg dry	9.44	110%	16 - 159	5	48	9034691	NSC2487-04RE 1	03/31/09 23:11
Surrogate: 1,2-Dichloroethane-d4		51.2		ug/kg	50.0	102%	41 - 150			9034691	NSC2487-04RE 1	03/31/09 23:11
Surrogate: Dibromofluoromethane		49.2		ug/kg	50.0	98%	55 - 139			9034691	NSC2487-04RE 1	03/31/09 23:11
Surrogate: Toluene-d8		50.7		ug/kg	50.0	101%	57 - 148			9034691	NSC2487-04RE 1	03/31/09 23:11
Surrogate: 4-Bromofluorobenzene		56.6		ug/kg	50.0	113%	58 - 150			9034691	NSC2487-04RE 1	03/31/09 23:11
<b>9040118-MSD1</b>												
Benzene	ND	1.74		mg/kg wet	2.40	73%	33 - 146	5	43	9040118	NSD0038-01R E1	04/01/09 23:39
Ethylbenzene	4.21	6.11		mg/kg wet	2.40	80%	16 - 160	1	48	9040118	NSD0038-01R E1	04/01/09 23:39

Client EEG - Env. Enterprise Group (2449)  
 10179 Highway 78  
 Ladson, SC 29456  
 Attn Tom McElwee

Work Order: NSC2487  
 Project Name: Laurel Bay Housing Project  
 Project Number: [none]  
 Received: 03/27/09 08:00

**PROJECT QUALITY CONTROL DATA**  
**Matrix Spike Dup - Cont.**

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
<b>Selected Volatile Organic Compounds by EPA Method 8260B</b>												
<b>9040118-MSD1</b>												
Naphthalene	4.41	5.09		mg/kg wet	2.40	28%	10 - 151	0.3	50	9040118	NSD0038-01R	04/01/09 23:39
											E1	
Toluene	1.24	2.96		mg/kg wet	2.40	72%	30 - 145	2	44	9040118	NSD0038-01R	04/01/09 23:39
											E1	
Xylenes, total	25.3	30.0		mg/kg wet	7.20	65%	16 - 159	2	48	9040118	NSD0038-01R	04/01/09 23:39
											E1	
Surrogate: 1,2-Dichloroethane-d4		48.5		ug/kg	50.0	97%	41 - 150			9040118	NSD0038-01R	04/01/09 23:39
											E1	
Surrogate: Dibromofluoromethane		46.8		ug/kg	50.0	94%	55 - 139			9040118	NSD0038-01R	04/01/09 23:39
											E1	
Surrogate: Toluene-d8		50.3		ug/kg	50.0	101%	57 - 148			9040118	NSD0038-01R	04/01/09 23:39
											E1	
Surrogate: 4-Bromofluorobenzene		58.0		ug/kg	50.0	116%	58 - 150			9040118	NSD0038-01R	04/01/09 23:39
											E1	

Client EEG - Env. Enterprise Group (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NSC2487  
Project Name: Laurel Bay Housing Project  
Project Number: [none]  
Received: 03/27/09 08:00

### CERTIFICATION SUMMARY

#### TestAmerica Nashville

Method	Matrix	AIHA	Nelac	South Carolina
SW846 8260B	Soil	N/A	X	X
SW846 8270D	Soil			X
SW-846	Soil			

Client EEG - Env. Enterprise Group (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NSC2487  
Project Name: Laurel Bay Housing Project  
Project Number: [none]  
Received: 03/27/09 08:00

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### DATA QUALIFIERS AND DEFINITIONS

**ZX** Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.  
**ND** Not detected at the reporting limit (or method detection limit if shown)

### METHOD MODIFICATION NOTES



ATTACHMENT A



# NON-HAZARDOUS MANIFEST

CWMH

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

<b>NON-HAZARDOUS MANIFEST</b>		1. Generator's US EPA ID No. <i>SC117502116116911016212</i>		Manifest Document No. <i>10085481</i>		2. Page 1 of 1	
4. Generator's Name and Address <b>MCAS, Beaufort</b> <b>Laurel Bay Housing</b> <b>Beaufort SC 29904</b> 4. Generator's Phone <b>843 228-6460</b>				<b>WMNA</b> <i>10085481</i> B. State Generator's ID			
5. Transporter 1 Company Name <b>EEG, Inc.</b>		6. US EPA ID Number		C. State Transporter's ID		D. Transporter's Phone <b>843 878-0411</b>	
7. Transporter 2 Company Name		8. US EPA ID Number		E. State Transporter's ID		F. Transporter's Phone	
9. Designated Facility Name and Site Address <b>HICKORY HILL LANDFILL</b> <b>ROUTE 1, BOX 121</b> <b>RIDGELAND SC 29936</b>				10. US EPA ID Number		G. State Facility's ID	
						H. Facility's Phone <b>843 987-4843</b>	
11. Description of Waste Materials				12. Containers No.	13. Total Quantity	14. Unit Wt./Vol	I. Misc. Comments
a. Heating Oil Tank filled with Sand				0 0 1			
WM Profile # <b>102055SC</b>							
b. WM Profile #							
c. WM Profile #							
d. WM Profile #							
J. Additional Descriptions for Materials Listed Above Landfill _____ Solidification _____ Bio Remediation _____				K. Disposal Location Cell _____ Level _____ Grid _____			
15. Special Handling Instructions and Additional Information <i>1) 14" Laurel Bay Blvd. 2) 156 Laurel Bay Blvd - 2</i> <i>3) 157 Laurel Bay Blvd 4) 100' pipes</i>				EMERGENCY CONTACT:			
16. GENERATOR'S CERTIFICATION: I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.							
Printed/Typed Name <i>C.H. Herron</i>		Signature "On behalf of" <i>Charles H. Herron</i>		Month Day Year <i>01/31/09</i>			
17. Transporter 1 Acknowledgement of Receipt of Materials							
Printed/Typed Name <i>James Ballewin</i>		Signature <i>James Ballewin</i>		Month Day Year <i>01/31/09</i>			
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name		Signature		Month Day Year			
19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.							
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.							
Printed/Typed Name <i>C. HERRON</i>		Signature		Month Day Year			

GENERATOR

TRANSPORTER

FACILITY

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

# Volatile Organic Compounds by GC/MS

Client: AECOM - Resolution Consultants	Laboratory ID: OG23017-004
Description: BEALB152TW01G20130722	Matrix: Aqueous
Date Sampled: 07/22/2013 1500	
Date Received: 07/23/2013	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/30/2013 1817	RGB		26172

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzene	71-43-2	8260B	ND		0.50	0.25	0.027	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	0.25	0.17	ug/L	1
Naphthalene	91-20-3	8260B	0.20	J	0.50	0.25	0.12	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.25	0.17	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.25	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	70-120
Toluene-d8		88	85-120
Bromofluorobenzene		94	75-120
Dibromofluoromethane		91	85-115

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time      Q = Surrogate failure  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria      L = LCS/LCSD failure  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      S = MS/MSD failure

# Semivolatile Organic Compounds by GC/MS

Client: AECOM - Resolution Consultants	Laboratory ID: OG23017-004
Description: BEALB152TW01G20130722	Matrix: Aqueous
Date Sampled: 07/22/2013 1500	
Date Received: 07/23/2013	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2013 1827	JRG	07/23/2013 1012	25626

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzo(a)anthracene	56-55-3	8270D	ND		0.20	0.10	0.084	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.20	0.10	0.089	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.20	0.10	0.094	ug/L	1
Chrysene	218-01-9	8270D	ND		0.20	0.10	0.055	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.20	0.10	0.059	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		78	50-110
Nitrobenzene-d5		79	40-110
Terphenyl-d14		85	50-135

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time      Q = Surrogate failure  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria      L = LCS/LCSD failure  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      S = MS/MSD failure

**Appendix D**  
**Regulatory Correspondence**



C. Earl Hunter, Commissioner

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

July 22, 2009

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

Re: MCAS – Laurel Bay Housing – 152 Laurel Bay Blvd.  
**Site ID # 04234**  
UST Closure Reports received June 29, 2009  
Beaufort County

Dear Mr. Ehde:

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 803-896-4179 (office phone), 803-896-6245 (fax) or [cookejt@dhec.sc.gov](mailto:cookejt@dhec.sc.gov).

Sincerely,

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

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



Catherine E. Heigel, Director

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

Division of Waste Management  
Bureau of Land and Waste Management

August 6, 2015

Commanding Officer  
Attention: NREAO Mr. William A. Drawdy  
United State Marine Corps Air Station  
Post Office Box 55001  
Beaufort, SC 29904-5001

RE: Approval Response to Comments and Concurrence with Final Initial Groundwater Investigation Report-July 2013  
Laurel Bay Military Housing Area Multiple Properties  
Dated June 2015

Dear Mr. Drawdy,

The South Carolina Department of Health and Environmental Control (the Department) received groundwater data in the above referenced Groundwater Investigation Report for the addresses attached. The regulatory authority for the investigation and cleanup of releases from these tank systems is the South Carolina Pollution Control Act (S.C. Code Ann. §48-1-10 et seq., as amended).

Per the Department's request, groundwater samples were collected from the attached referenced addresses. The Department reviewed the groundwater data and previous investigations and it agrees with the conclusions and recommendations included in the document. To further assess the impact to groundwater, permanent wells should be installed at the 10 stated addresses. For the remaining 25 addresses, there is no indication of contamination on the property and therefore no further investigation is required at this time.

Please note that the Department's decision is based on information provided by the Marine Corps Air Station (MCAS) to date. Any information found to be contradictory to this decision may require additional action. Furthermore, the Department retains the right to request further investigation if deemed necessary.

If you have any questions, please contact me at [petruslb@dhec.sc.gov](mailto:petruslb@dhec.sc.gov) or 803-898-0294.

Sincerely,

Laurel Petrus  
RCRA Federal Facilities Section

*Attachment: Specific Property Recommendations*

Cc: Russell Berry, EQC Region 8 (via email)  
Shawn Dolan, Resolution Consultants (via email)  
Bryan Beck, NAVFAC MIDATLANTIC (via email)  
Craig Ehde (via email)

Attachment to: Petrus to Drawdy  
 Subject: Draft Final Initial Groundwater Investigation Report-July 2013  
 Specific Property Recommendations  
 Dated August 6, 2015

**Draft Final Initial Groundwater Investigation Report for (35 addresses/38 tanks)**

<b>Permanent Monitoring Well Investigation recommendation (10 addresses/11 tanks)</b>	
119 Banyan	156 Laurel Bay
128 Banyan	1033 Foxglove
132 Banyan	1055 Gardenia
135 Birch	1059 Gardenia
148 Laurel Bay	1168 Jasmine
<b>No Further Action recommendation (25 addresses/27 tanks):</b>	
115 Banyan	386 Acorn
116 Banyan	395 Acorn
120 Banyan	399 Acorn
124 Banyan	1021 Foxglove
125 Banyan	1027 Foxglove
136 Birch	1030 Foxglove
140 Laurel Bay	1032 Foxglove
144 Laurel Bay	1053 Gardenia
152 Laurel Bay	1058 Gardenia
160 Cypress	1061 Gardenia
263 Beech	1166 Jasmine
269 Birch	1169 Jasmine
295 Birch	