

**SUMMARY** REPORT

311 EAGLE LANE (FORMERLY 1408 EAGLE LANE)  
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:



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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
PPV	Public-Private Venture
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
UFP SAP	Uniform Federal Policy Sampling and Analysis Plan
USEPA	United States Environmental Protection Agency
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 311 Eagle Lane (Formerly 1408 Eagle Lane). 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.

In 2015, the Public-Private Venture (PPV) responsible for the management of the residential area at LBMH initiated a plan to replace outdated homes in the LBMH area. The plan includes the demolition of existing homes and subsequent construction of new homes. In discussions with the PPV it was revealed that construction of the new homes could occur on portions of the property where the USTs were formerly located. In response to this plan, MCAS Beaufort assessed subsurface soil gas concentrations in the area of the former USTs at select properties within the demolition areas. The subject property of this report is one of the properties within the planned demolition area which was selected for a soil gas evaluation. It should be noted that the house at the subject property has since been demolished and this property is an empty lot. There are no current plans for construction in this 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*

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(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. A multi-media investigation selection process tree, applicable to the LBMH UST investigations, is presented as Appendix A.

In accordance with the multi-media investigation selection process (Appendix A), groundwater analytical results are typically compared to the site specific groundwater vapor intrusion screening levels (VISLs) to evaluate the potential for vapor intrusion into existing homes and the necessity for an investigation associated with this media. However, as previously stated, this property did not have an existing home and instead was among those selected for an evaluation of soil gas because of the planned demolition and construction activities.

## 2.0 SAMPLING ACTIVITIES AND RESULTS

The following section presents the sampling activities and associated results for 311 Eagle Lane (Formerly 1408 Eagle Lane). The sampling activities at 311 Eagle Lane (Formerly 1408 Eagle Lane) comprised a soil investigation, IGWA sampling, and a soil gas investigation. Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 1408 Eagle Lane* (MCAS Beaufort, 2011). 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 – May and June 2015* (Resolution Consultants, 2015). The laboratory report that includes the pertinent IGWA analytical results for this site is presented in Appendix C. Details regarding the vapor intrusion investigation at this site are provided in the *Vapor Intrusion Report – July 2015, January 2016, and May 2016* (Resolution Consultants, 2017). The laboratory report that includes the pertinent soil gas analytical results for this site is presented in Appendix D.

### 2.1 UST Removal and Soil Sampling

On May 3, 2011, a single 280 gallon heating oil UST was removed from the landscaped area near the driveway at 311 Eagle Lane (Formerly 1408 Eagle Lane). The former UST location is indicated on Figures 2 and 3 of the UST Assessment Report (Appendix B). The UST was removed and properly disposed of (i.e., shipped offsite for recycling or transported to a landfill). 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 6'4" 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 311 Eagle Lane (Formerly 1408 Eagle Lane) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated April 7, 2015, SCDHEC requested an IGWA for 311 Eagle Lane (Formerly 1408 Eagle Lane) to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letter is provided in Appendix E.

### **2.3 Groundwater Sampling**

On June 18, 2015, a temporary monitoring well was installed at 311 Eagle Lane (Formerly 1408 Eagle Lane), 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 – May and June 2015* (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 – May and June 2015* (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 311 Eagle Lane (Formerly 1408 Eagle Lane) 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.

## **2.5 Soil Gas Sampling**

On May 4, 2016, a temporary subsurface soil gas well was installed at 311 Eagle Lane (Formerly 1408 Eagle Lane) in accordance with the SCDHEC approved *Uniform Federal Policy Sampling and Analysis Plan (UFP SAP) for Vapor Media, Revision 2* (Resolution Consultants, 2016). Soil gas sampling was conducted at this property to assess the potential risk for vapor intrusion associated with the possible construction of a new home on top of former the UST location. The soil gas well was placed in the same general location as the former heating oil UST and the IGWA sample location. The former UST location is indicated on Figures 2 and 3 of the UST Assessment Report (Appendix B). Further details are provided in the *Vapor Intrusion Report – July 2015, January 2016, and May 2016* (Resolution Consultants, 2017).

The sampling strategy for this phase of the investigation required a one-time sampling event of the soil gas well. The subsurface soil gas well at 311 Eagle Lane (Formerly 1408 Eagle Lane) was sampled on May 6, 2016. A soil gas sample was collected and shipped to an offsite laboratory for analysis of the petroleum COPCs. Upon completion of soil gas sampling, the temporary well was abandoned in accordance with the *UFP SAP for Vapor Media, Revision 2* (Resolution Consultants, 2016). Field forms are provided in the *Vapor Intrusion Report – July 2015, January 2016, and May 2016* (Resolution Consultants, 2017).

## **2.6 Soil Gas Analytical Results**

A summary of the laboratory analytical results and USEPA (United States Environmental Protection Agency) VISLs is presented in Table 3. A copy of the laboratory analytical data report is included in Appendix D.

The soil gas results collected from 311 Eagle Lane (Formerly 1408 Eagle Lane) were below the USEPA VISLs, which indicated that subsurface soil gas 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**

The house at 311 Eagle Lane (Formerly 1408 Eagle Lane) was demolished and the property is an empty lot. There are no current plans for construction in this area. Based on the analytical results for groundwater, SCDHEC made the determination that NFA was required for 311 Eagle Lane (Formerly 1408 Eagle Lane). The NFA determination for groundwater was obtained in a

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letter dated February 22, 2016. Based on the analytical results for soil gas, it was determined that there was not a vapor intrusion concern at this property and a recommendation was made for no additional vapor intrusion assessment activities. SCDHEC approved the no further vapor intrusion investigation recommendation for 311 Eagle Lane (Formerly 1408 Eagle Lane) in a letter dated June 20, 2017. SCDHEC's letters are provided in Appendix E.

#### **4.0 REFERENCES**

Marine Corps Air Station Beaufort, 2011. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 1408 Eagle Lane, Laurel Bay Military Housing Area*, September 2011.

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

Resolution Consultants, 2016. *Uniform Federal Policy Sampling and Analysis Plan for Vapor Media, Revision 2, for Laurel Bay Military Housing Area Marine Corps Air Station Beaufort, Beaufort, South Carolina*, March 2016.

Resolution Consultants, 2017. *Vapor Intrusion Report – July 2015, January 2016, and May 2016 for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina*, May 2017.

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.

United States Environmental Protection Agency, 2015. *USEPA OSWER Vapor Intrusion Assessment, Vapor Intrusion Screening Level Calculator, Version 3.4*, June 2015.

## Tables

**Table 1**  
**Laboratory Analytical Results - Soil**  
**311 Eagle Lane (Formerly 1408 Eagle Lane)**  
**Laurel Bay Military Housing Area**  
**Marine Corps Air Station Beaufort**  
**Beaufort, South Carolina**

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Results Sample Collected 05/03/11
<b>Volatile Organic Compounds Analyzed by EPA Method 8260B (mg/kg)</b>		
Benzene	0.007	ND
Ethylbenzene	1.15	<b>0.0280</b>
Naphthalene	0.036	<b>0.0401</b>
Toluene	1.45	<b>0.0214</b>
Xylenes, Total	14.5	<b>0.133</b>
<b>Semivolatile Organic Compounds Analyzed by EPA Method 8270D (mg/kg)</b>		
Benzo(a)anthracene	0.066	ND
Benzo(b)fluoranthene	0.066	<b>0.0990</b>
Benzo(k)fluoranthene	0.066	<b>0.0553</b>
Chrysene	0.066	<b>0.0644</b>
Dibenz(a,h)anthracene	0.066	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 1.1 (SCDHEC, February 2011).

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**  
**311 Eagle Lane (Formerly 1408 Eagle Lane)**  
**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 06/18/15
<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>2.5</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:**

(1) South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 3.0 (SCDHEC, May 2015).

(2) Site-specific groundwater VISLs were calculated using the EPA JE Model Spreadsheets (Version 3.1, February 2004) and conservative modeling inputs representative of a small single-story house with an 8 foot ceiling. Site-specific groundwater VISLs were developed based on a target risk level of  $1 \times 10^{-6}$ , 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

**Table 3**  
**Laboratory Analytical Results - Vapor**  
**311 Eagle Lane (Formerly 1408 Eagle Lane)**  
**Laurel Bay Military Housing Area**  
**Marine Corps Air Station Beaufort**  
**Beaufort, South Carolina**

Constituent	USEPA VISL <sup>(1)</sup>	Results Sample Collected 05/06/16
<b>Volatile Organic Compounds Analyzed by USEPA Method TO-15 (µg/m<sup>3</sup>)</b>		
Benzene	12	ND
Toluene	17000	<b>0.85</b>
Ethylbenzene	37	<b>0.92</b>
m,p-Xylenes	350	<b>3.3</b>
o-Xylene	350	<b>1.4</b>
Naphthalene	2.8	<b>1.2</b>

**Notes:**

<sup>(1)</sup> United States Environmental Protection Agency Exterior Soil Gas Vapor Intrusion Screening Level (VISL) from VISL Calculator (Version 3.4, June 2015).

VISLs are based on a residual exposure scenario and a target risk level of  $1 \times 10^{-6}$  and a hazard quotient of 0.1.

Bold font indicates the analyte was detected.

Bold font and shading indicates the concentration exceeds the residential VISL.

USEPA - United States Environmental Protection Agency

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

RBSL - Risk-Based Screening Level

µg/m<sup>3</sup> - micrograms per cubic meter

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

Rec'd 9/30/11

Attachment 1

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

<b>Date Received</b>   <b>State Use Only</b>
---

Submit Completed Form To:  
 UST Program  
 SCDHEC  
 2600 Bull Street  
 Columbia, South Carolina 29201  
 Telephone (803) 896-7957

**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	
1408 Eagle Lane, Laurel Bay Military Housing Area	
Street Address or State Road (as applicable)	
Beaufort,	Beaufort
City	County

Attachment 2

### 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

- 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.....

1408Eagle				
Heating oil				
280 gal				
Late 1950s				
Steel				
Mid 1980s				
6'4"				
No				
No				
Removed				
5/3/2011				
Yes				
Yes				

- M. Method of disposal for any USTs removed from the ground (attach disposal manifests)  
UST 1408Eagle was removed from the ground and disposed 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)  
UST 1408Eagle had been previously filled with sand by others.
- 
- O. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST  
Corrosion, pitting and holes were found throughout the tank.
-

## 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.....

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 vent pipe. The copper supply and return lines were sound.

1408Eagle				
Steel & Copper				
N/A				
N/A				
Suction				
No				
Yes				
No				
Late 1950s				

## 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.

## 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>		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	



## X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 84009

B.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
1408 Eagle	Excav at fill end	Soil	Sandy	6'4"	5/3/11 1345 hrs	P. Shaw	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

\* = Depth Below the Surrounding Land Surface

## XI. 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.

Sampling was performed in accordance with SC DHEC R.61-92 Part 280 and SC DHEC Assessment Guidelines. Sample containers were prepared by the testing laboratory. The grab method was utilized to fill the sample containers leaving as little head space as possible and immediately capped. Soil samples were extracted from area below tank. The samples were marked, logged, and immediately placed in a sample cooler packed with ice to maintain an approximate temperature of 4 degrees Centigrade. Tools were thoroughly cleaned and decontaminated with the seven step decon process after each use. The samples remained in custody of SBG-EEG, Inc. until they were transferred to Test America Incorporated for analysis as documented in the Chain of Custody Record.

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## XII. RECEPTORS

	Yes	No
<p>A. Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?      *~750' &amp; 770' to stormwater canals</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>		X
<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>		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 &amp; fiber optic</p> <p>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>If yes, indicate the area of contaminated soil on the site map.</p>		X

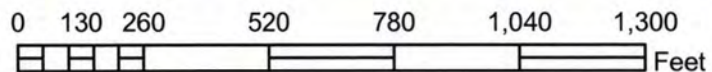
### **XIII. SITE MAP**

**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)



**1408 EAGLE LANE**



**SBG-EEG, Inc.**

398 E. 5th North Street, Suite C  
Summerville SC 29483-6954

Ph. (843) 875-1930

Drawn By: L. DiAsio

Dwg Date: JULY 2011

**FIGURE 1: LOCATION MAP**  
**1408 EAGLE LANE**  
**LAUREL BAY, BEAUFORT SC**



STORMWATER DRAINAGE  
CANAL  $\approx$  770'

&  $\approx$  750'



1408 EAGLE LANE  
LAUREL BAY MILITARY HOUSING  
MCAS BEAUFORT, SC

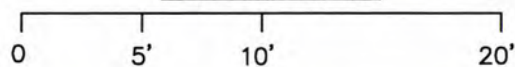
UST 1408EAGLE



TREE



GRAPHIC SCALE



***SBG-EEG***

398 E. 5 NORTH ST., SUITE C  
SUMMERVILLE, SC  
29483-6954

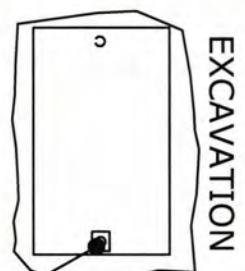
FIGURE 2 SITE MAP  
1408 EAGLE LANE, LAUREL BAY  
MCAS BEAUFORT SC

SCALE: GRAPHIC

DWG DATE JULY 2011



UST 1408EAGLE,  
280 GAL.



EXCAVATION

SOIL SAMPLE  
1408 EAGLE

FILL END



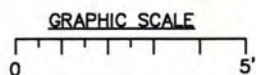
GRASS

ASPHALT DRIVEWAY

STORMWATER DRAINAGE  
CANAL  $\approx$  770'



&  $\approx$  750'



UST 1408EAGLE WAS  
40" BELOW GRADE.

**SBG-EEG**

398 E. 5 NORTH ST., SUITE C  
SUMMERVILLE, SC  
29483-6954

FIGURE 3 UST SAMPLE LOCATIONS  
1408 EAGLE LANE LAUREL BAY  
MCAS BEAUFORT SC

SCALE: GRAPHIC

DWG DATE JULY 2011





Picture 1: Location of UST 1408Eagle.



Picture 2: UST 1408Eagle excavation in progress.



#### 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>	UST 1408Eagle							
<b>Benzene</b>	ND							
<b>Toluene</b>	0.0214 mg/kg							
<b>Ethylbenzene</b>	0.0280 mg/kg							
<b>Xylenes</b>	0.133 mg/kg							
<b>Naphthalene</b>	0.0401 mg/kg							
<b>Benzo (a) anthracene</b>	ND							
<b>Benzo (b) fluoranthene</b>	0.0990 mg/kg							
<b>Benzo (k) fluoranthene</b>	0.0553 mg/kg							
<b>Chrysene</b>	0.0644 mg/kg							
<b>Dibenz (a, h) anthracene</b>	ND							
<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.

CoC	RBSL (µg/l)	W-1	W-2	W -3	W -4
<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)

May 20, 2011

1:48:05PM

Client: EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn: Tom McElwee

Work Order: NUE1252  
Project Name: Laurel Bay Housing Project  
Project Nbr: 1027  
P/O Nbr: 1027  
Date Received: 05/07/11

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
1383 Dove	NUE1252-01	05/02/11 11:45
1408 Eagle	NUE1252-02	05/03/11 13:45
1362 Cardinal	NUE1252-03	05/04/11 16:00
1435 Dove	NUE1252-04	05/05/11 15:45

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.

South Carolina Certification Number: 84009

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

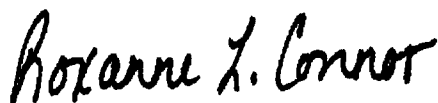
These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

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:



Roxanne Connor

Program Manager - Conventional Accounts

Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NUE1252  
Project Name: Laurel Bay Housing Project  
Project Number: 1027  
Received: 05/07/11 09:15

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
<b>Sample ID: NUE1252-01 (1383 Dove - Soil) Sampled: 05/02/11 11:45</b>										
General Chemistry Parameters										
% Dry Solids	80.5		%	0.500	0.500	1	05/18/11 14:24	SW-846	AMS	11E4197
Volatile Organic Compounds by EPA Method 8260B										
Benzene	ND		mg/kg dry	0.00120	0.00218	1	05/12/11 17:53	SW846 8260B	KKK	11E2166
Ethylbenzene	ND		mg/kg dry	0.00107	0.00218	1	05/12/11 17:53	SW846 8260B	KKK	11E2166
Naphthalene	ND		mg/kg dry	0.00185	0.00545	1	05/12/11 17:53	SW846 8260B	KKK	11E2166
Toluene	ND		mg/kg dry	0.000970	0.00218	1	05/12/11 17:53	SW846 8260B	KKK	11E2166
Xylenes, total	ND		mg/kg dry	0.00207	0.00545	1	05/12/11 17:53	SW846 8260B	KKK	11E2166
Surr: 1,2-Dichloroethane-d4 (67-138%)	92 %					1	05 12 11 17:53	SW846 8260B	KKK	11E2166
Surr: Dibromofluoromethane (75-125%)	100 %					1	05 12 11 17:53	SW846 8260B	KKK	11E2166
Surr: Toluene-d8 (76-129%)	88 %					1	05 12 11 17:53	SW846 8260B	KKK	11E2166
Surr: 4-Bromofluorobenzene (67-147%)	96 %					1	05 12 11 17:53	SW846 8260B	KKK	11E2166
Polyaromatic Hydrocarbons by EPA 8270D										
Acenaphthene	ND		mg/kg dry	0.0171	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Acenaphthylene	ND		mg/kg dry	0.0245	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Anthracene	ND		mg/kg dry	0.0110	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Benzo (a) anthracene	ND		mg/kg dry	0.0135	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Benzo (a) pyrene	ND		mg/kg dry	0.00979	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Benzo (b) fluoranthene	ND		mg/kg dry	0.0465	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0110	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Benzo (k) fluoranthene	ND		mg/kg dry	0.0453	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Chrysene	ND		mg/kg dry	0.0379	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0184	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Fluoranthene	ND		mg/kg dry	0.0135	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Fluorene	0.0734	J	mg/kg dry	0.0245	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0379	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Naphthalene	ND		mg/kg dry	0.0171	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Phenanthrene	0.145		mg/kg dry	0.0122	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Pyrene	ND		mg/kg dry	0.0282	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
1-Methylnaphthalene	0.173		mg/kg dry	0.0147	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
2-Methylnaphthalene	0.266		mg/kg dry	0.0257	0.0820	1	05/14/11 17:49	SW846 8270D	JLS	11E2121
Surr: Terphenyl-d14 (18-120%)	86 %					1	05 14 11 17:49	SW846 8270D	JLS	11E2121
Surr: 2-Fluorobiphenyl (14-120%)	56 %					1	05 14 11 17:49	SW846 8270D	JLS	11E2121
Surr: Nitrobenzene-d5 (17-120%)	55 %					1	05 14 11 17:49	SW846 8270D	JLS	11E2121

Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NUE1252  
Project Name: Laurel Bay Housing Project  
Project Number: 1027  
Received: 05/07/11 09:15

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
<b>Sample ID: NUE1252-02 (1408 Eagle - Soil) Sampled: 05/03/11 13:45</b>										
General Chemistry Parameters										
% Dry Solids	82.9		%	0.500	0.500	1	05/18/11 14:24	SW-846	AMS	11E4197
Volatile Organic Compounds by EPA Method 8260B										
Benzene	ND		mg/kg dry	0.00107	0.00195	1	05/12/11 18:22	SW846 8260B	KKK	11E2166
Ethylbenzene	0.0280		mg/kg dry	0.000953	0.00195	1	05/12/11 18:22	SW846 8260B	KKK	11E2166
Naphthalene	0.0401		mg/kg dry	0.00165	0.00486	1	05/12/11 18:22	SW846 8260B	KKK	11E2166
Toluene	0.0214		mg/kg dry	0.000866	0.00195	1	05/12/11 18:22	SW846 8260B	KKK	11E2166
Xylenes, total	0.133		mg/kg dry	0.00185	0.00486	1	05/12/11 18:22	SW846 8260B	KKK	11E2166
Surr: 1,2-Dichloroethane-d4 (67-138%)	94 %					1	05 12 11 18:22	SW846 8260B	KKK	11E2166
Surr: Dibromofluoromethane (75-125%)	101 %					1	05 12 11 18:22	SW846 8260B	KKK	11E2166
Surr: Toluene-d8 (76-129%)	103 %					1	05 12 11 18:22	SW846 8260B	KKK	11E2166
Surr: 4-Bromofluorobenzene (67-147%)	110 %					1	05 12 11 18:22	SW846 8260B	KKK	11E2166
Polyaromatic Hydrocarbons by EPA 8270D										
Acenaphthene	ND		mg/kg dry	0.0167	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Acenaphthylene	ND		mg/kg dry	0.0239	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Anthracene	ND		mg/kg dry	0.0107	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Benzo (a) anthracene	ND		mg/kg dry	0.0131	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Benzo (a) pyrene	0.0517	J	mg/kg dry	0.00954	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Benzo (b) fluoranthene	0.0990		mg/kg dry	0.0453	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0107	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Benzo (k) fluoranthene	0.0553	J	mg/kg dry	0.0441	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Chrysene	0.0644	J	mg/kg dry	0.0370	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0179	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Fluoranthene	ND		mg/kg dry	0.0131	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Fluorene	ND		mg/kg dry	0.0239	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0370	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Naphthalene	0.0708	J	mg/kg dry	0.0167	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Phenanthrene	ND		mg/kg dry	0.0119	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Pyrene	0.197		mg/kg dry	0.0274	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
1-Methylnaphthalene	0.111		mg/kg dry	0.0143	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
2-Methylnaphthalene	0.112		mg/kg dry	0.0250	0.0799	1	05/14/11 18:15	SW846 8270D	JLS	11E2121
Surr: Terphenyl-d14 (18-120%)	47 %					1	05 14 11 18:15	SW846 8270D	JLS	11E2121
Surr: 2-Fluorobiphenyl (14-120%)	32 %					1	05 14 11 18:15	SW846 8270D	JLS	11E2121
Surr: Nitrobenzene-d5 (17-120%)	29 %					1	05 14 11 18:15	SW846 8270D	JLS	11E2121

Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NUE1252  
Project Name: Laurel Bay Housing Project  
Project Number: 1027  
Received: 05/07/11 09:15

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
<b>Sample ID: NUE1252-03 (1362 Cardinal - Soil) Sampled: 05/04/11 16:00</b>										
General Chemistry Parameters										
% Dry Solids	82.4		%	0.500	0.500	1	05/18/11 14:24	SW-846	AMS	11E4197
Volatile Organic Compounds by EPA Method 8260B										
Benzene	0.0309		mg/kg dry	0.000985	0.00179	1	05/12/11 18:52	SW846 8260B	KKK	11E2166
Ethylbenzene	1.43		mg/kg dry	0.0430	0.0877	50	05/13/11 14:07	SW846 8260B	KKK	11E3547
Naphthalene	6.72		mg/kg dry	0.0745	0.219	50	05/13/11 14:07	SW846 8260B	KKK	11E3547
Toluene	0.0640		mg/kg dry	0.000797	0.00179	1	05/12/11 18:52	SW846 8260B	KKK	11E2166
Xylenes, total	6.39		mg/kg dry	0.0833	0.219	50	05/13/11 14:07	SW846 8260B	KKK	11E3547
Surr: 1,2-Dichloroethane-d4 (67-138%)	98 %					1	05 12 11 18:52	SW846 8260B	KKK	11E2166
Surr: 1,2-Dichloroethane-d4 (67-138%)	78 %					50	05 13 11 14:07	SW846 8260B	KKK	11E3547
Surr: Dibromofluoromethane (75-125%)	108 %					1	05 12 11 18:52	SW846 8260B	KKK	11E2166
Surr: Dibromofluoromethane (75-125%)	82 %					50	05 13 11 14:07	SW846 8260B	KKK	11E3547
Surr: Toluene-d8 (76-129%)	214 %	ZX				1	05 12 11 18:52	SW846 8260B	KKK	11E2166
Surr: Toluene-d8 (76-129%)	96 %					50	05 13 11 14:07	SW846 8260B	KKK	11E3547
Surr: 4-Bromofluorobenzene (67-147%)	285 %	ZX				1	05 12 11 18:52	SW846 8260B	KKK	11E2166
Surr: 4-Bromofluorobenzene (67-147%)	108 %					50	05 13 11 14:07	SW846 8260B	KKK	11E3547
Polyaromatic Hydrocarbons by EPA 8270D										
Acenaphthene	0.613		mg/kg dry	0.0168	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
Acenaphthylene	ND		mg/kg dry	0.0239	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
Anthracene	0.447		mg/kg dry	0.0108	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
Benzo (a) anthracene	0.203		mg/kg dry	0.0132	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
Benzo (a) pyrene	0.0746	J	mg/kg dry	0.00958	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
Benzo (b) fluoranthene	0.106		mg/kg dry	0.0455	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0108	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
Benzo (k) fluoranthene	0.0774	J	mg/kg dry	0.0443	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
Chrysene	0.206		mg/kg dry	0.0371	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0180	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
Fluoranthene	0.797		mg/kg dry	0.0132	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
Fluorene	1.70		mg/kg dry	0.0239	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0371	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
Naphthalene	6.17		mg/kg dry	0.168	0.802	10	05/14/11 19:59	SW846 8270D	JLS	11E2121
Phenanthrene	4.01		mg/kg dry	0.0120	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
Pyrene	0.800		mg/kg dry	0.0275	0.0802	1	05/14/11 18:41	SW846 8270D	JLS	11E2121
1-Methylnaphthalene	14.2		mg/kg dry	0.144	0.802	10	05/14/11 19:59	SW846 8270D	JLS	11E2121
2-Methylnaphthalene	22.8		mg/kg dry	0.251	0.802	10	05/14/11 19:59	SW846 8270D	JLS	11E2121
Surr: Terphenyl-d14 (18-120%)	78 %					1	05 14 11 18:41	SW846 8270D	JLS	11E2121
Surr: 2-Fluorobiphenyl (14-120%)	51 %					1	05 14 11 18:41	SW846 8270D	JLS	11E2121
Surr: Nitrobenzene-d5 (17-120%)	12 %	ZX				1	05 14 11 18:41	SW846 8270D	JLS	11E2121

Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NUE1252  
Project Name: Laurel Bay Housing Project  
Project Number: 1027  
Received: 05/07/11 09:15

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
<b>Sample ID: NUE1252-04 (1435 Dove - Soil) Sampled: 05/05/11 15:45</b>										
General Chemistry Parameters										
% Dry Solids	79.6		%	0.500	0.500	1	05/18/11 14:24	SW-846	AMS	11E4197
Volatile Organic Compounds by EPA Method 8260B										
Benzene	0.00243		mg/kg dry	0.00114	0.00208	1	05/12/11 19:21	SW846 8260B	KKK	11E2166
Ethylbenzene	0.109		mg/kg dry	0.00102	0.00208	1	05/12/11 19:21	SW846 8260B	KKK	11E2166
Naphthalene	1.51		mg/kg dry	0.0811	0.238	50	05/13/11 13:38	SW846 8260B	KKK	11E3547
Toluene	0.00479		mg/kg dry	0.000926	0.00208	1	05/12/11 19:21	SW846 8260B	KKK	11E2166
Xylenes, total	0.458		mg/kg dry	0.00198	0.00520	1	05/12/11 19:21	SW846 8260B	KKK	11E2166
Surr: 1,2-Dichloroethane-d4 (67-138%)	87 %					1	05 12 11 19:21	SW846 8260B	KKK	11E2166
Surr: 1,2-Dichloroethane-d4 (67-138%)	82 %					50	05 13 11 13:38	SW846 8260B	KKK	11E3547
Surr: Dibromofluoromethane (75-125%)	97 %					1	05 12 11 19:21	SW846 8260B	KKK	11E2166
Surr: Dibromofluoromethane (75-125%)	86 %					50	05 13 11 13:38	SW846 8260B	KKK	11E3547
Surr: Toluene-d8 (76-129%)	110 %					1	05 12 11 19:21	SW846 8260B	KKK	11E2166
Surr: Toluene-d8 (76-129%)	95 %					50	05 13 11 13:38	SW846 8260B	KKK	11E3547
Surr: 4-Bromofluorobenzene (67-147%)	132 %					1	05 12 11 19:21	SW846 8260B	KKK	11E2166
Surr: 4-Bromofluorobenzene (67-147%)	95 %					50	05 13 11 13:38	SW846 8260B	KKK	11E3547
Polyaromatic Hydrocarbons by EPA 8270D										
Acenaphthene	0.109		mg/kg dry	0.0176	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Acenaphthylene	ND		mg/kg dry	0.0251	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Anthracene	0.0794	J	mg/kg dry	0.0113	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Benzo (a) anthracene	ND		mg/kg dry	0.0138	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Benzo (a) pyrene	ND		mg/kg dry	0.0100	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Benzo (b) fluoranthene	ND		mg/kg dry	0.0476	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0113	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Benzo (k) fluoranthene	ND		mg/kg dry	0.0464	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Chrysene	ND		mg/kg dry	0.0389	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0188	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Fluoranthene	ND		mg/kg dry	0.0138	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Fluorene	0.273		mg/kg dry	0.0251	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0389	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Naphthalene	0.334		mg/kg dry	0.0176	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Phenanthrene	0.630		mg/kg dry	0.0125	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Pyrene	0.0606	J	mg/kg dry	0.0288	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
1-Methylnaphthalene	1.16		mg/kg dry	0.0150	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
2-Methylnaphthalene	1.51		mg/kg dry	0.0263	0.0840	1	05/14/11 19:07	SW846 8270D	JLS	11E2121
Surr: Terphenyl-d14 (18-120%)	83 %					1	05 14 11 19:07	SW846 8270D	JLS	11E2121
Surr: 2-Fluorobiphenyl (14-120%)	56 %					1	05 14 11 19:07	SW846 8270D	JLS	11E2121
Surr: Nitrobenzene-d5 (17-120%)	53 %					1	05 14 11 19:07	SW846 8270D	JLS	11E2121



Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NUE1252  
Project Name: Laurel Bay Housing Project  
Project Number: 1027  
Received: 05/07/11 09:15

## SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extract Vol	Date	Analyst	Extraction Method
<b>Polyaromatic Hydrocarbons by EPA 8270D</b>							
SW846 8270D	11E2121	NUE1252-01	30.44	1.00	05/12/11 14:25	JJR	EPA 3550C
SW846 8270D	11E2121	NUE1252-02	30.34	1.00	05/12/11 14:25	JJR	EPA 3550C
SW846 8270D	11E2121	NUE1252-03	30.42	1.00	05/12/11 14:25	JJR	EPA 3550C
SW846 8270D	11E2121	NUE1252-03RE1	30.42	1.00	05/12/11 14:25	JJR	EPA 3550C
SW846 8270D	11E2121	NUE1252-04	30.08	1.00	05/12/11 14:25	JJR	EPA 3550C
<b>Volatile Organic Compounds by EPA Method 8260B</b>							
SW846 8260B	11E2166	NUE1252-01	5.70	5.00	05/02/11 11:45	TSP	EPA 5035
SW846 8260B	11E2166	NUE1252-02	6.20	5.00	05/03/11 13:45	TSP	EPA 5035
SW846 8260B	11E2166	NUE1252-03	6.78	5.00	05/04/11 16:00	TSP	EPA 5035
SW846 8260B	11E3547	NUE1252-03RE1	6.92	5.00	05/04/11 16:00	TSP	EPA 5035
SW846 8260B	11E2166	NUE1252-04	6.04	5.00	05/05/11 15:45	TSP	EPA 5035
SW846 8260B	11E3547	NUE1252-04RE1	6.59	5.00	05/05/11 15:45	TSP	EPA 5035

Client EEG - Small Business Group, Inc. (2449)  
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**PROJECT QUALITY CONTROL DATA**  
**Blank**

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
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**Volatile Organic Compounds by EPA Method 8260B**

**11E2166-BLK1**

Benzene	<0.00110		mg/kg wet	11E2166	11E2166-BLK1	05/12/11 11:58
Ethylbenzene	<0.000980		mg/kg wet	11E2166	11E2166-BLK1	05/12/11 11:58
Naphthalene	<0.00170		mg/kg wet	11E2166	11E2166-BLK1	05/12/11 11:58
Toluene	<0.000890		mg/kg wet	11E2166	11E2166-BLK1	05/12/11 11:58
Xylenes, total	<0.00190		mg/kg wet	11E2166	11E2166-BLK1	05/12/11 11:58
Surrogate: 1,2-Dichloroethane-d4	94%			11E2166	11E2166-BLK1	05/12/11 11:58
Surrogate: Dibromofluoromethane	105%			11E2166	11E2166-BLK1	05/12/11 11:58
Surrogate: Toluene-d8	92%			11E2166	11E2166-BLK1	05/12/11 11:58
Surrogate: 4-Bromofluorobenzene	94%			11E2166	11E2166-BLK1	05/12/11 11:58

**11E3547-BLK1**

Benzene	<0.00110		mg/kg wet	11E3547	11E3547-BLK1	05/13/11 12:39
Ethylbenzene	<0.000980		mg/kg wet	11E3547	11E3547-BLK1	05/13/11 12:39
Naphthalene	<0.00170		mg/kg wet	11E3547	11E3547-BLK1	05/13/11 12:39
Toluene	<0.000890		mg/kg wet	11E3547	11E3547-BLK1	05/13/11 12:39
Xylenes, total	<0.00190		mg/kg wet	11E3547	11E3547-BLK1	05/13/11 12:39
Surrogate: 1,2-Dichloroethane-d4	88%			11E3547	11E3547-BLK1	05/13/11 12:39
Surrogate: Dibromofluoromethane	94%			11E3547	11E3547-BLK1	05/13/11 12:39
Surrogate: Toluene-d8	95%			11E3547	11E3547-BLK1	05/13/11 12:39
Surrogate: 4-Bromofluorobenzene	97%			11E3547	11E3547-BLK1	05/13/11 12:39

**11E3547-BLK2**

Benzene	<0.0550		mg/kg wet	11E3547	11E3547-BLK2	05/13/11 13:08
Ethylbenzene	<0.0490		mg/kg wet	11E3547	11E3547-BLK2	05/13/11 13:08
Naphthalene	<0.0850		mg/kg wet	11E3547	11E3547-BLK2	05/13/11 13:08
Toluene	<0.0445		mg/kg wet	11E3547	11E3547-BLK2	05/13/11 13:08
Xylenes, total	<0.0950		mg/kg wet	11E3547	11E3547-BLK2	05/13/11 13:08
Surrogate: 1,2-Dichloroethane-d4	85%			11E3547	11E3547-BLK2	05/13/11 13:08
Surrogate: Dibromofluoromethane	94%			11E3547	11E3547-BLK2	05/13/11 13:08
Surrogate: Toluene-d8	94%			11E3547	11E3547-BLK2	05/13/11 13:08
Surrogate: 4-Bromofluorobenzene	96%			11E3547	11E3547-BLK2	05/13/11 13:08

**Polyaromatic Hydrocarbons by EPA 8270D**

**11E2121-BLK1**

Acenaphthene	<0.0140		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Acenaphthylene	<0.0200		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Anthracene	<0.00900		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Benzo (a) anthracene	<0.0110		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Benzo (a) pyrene	<0.00800		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Benzo (b) fluoranthene	<0.0380		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Benzo (g,h,i) perylene	<0.00900		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Benzo (k) fluoranthene	<0.0370		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11

Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NUE1252  
Project Name: Laurel Bay Housing Project  
Project Number: 1027  
Received: 05/07/11 09:15

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

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
<b>Polyaromatic Hydrocarbons by EPA 8270D</b>						
<b>11E2121-BLK1</b>						
Chrysene	<0.0310		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Dibenz (a,h) anthracene	<0.0150		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Fluoranthene	<0.0110		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Fluorene	<0.0200		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Indeno (1,2,3-cd) pyrene	<0.0310		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Naphthalene	<0.0140		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Phenanthrene	<0.0100		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Pyrene	<0.0230		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
1-Methylnaphthalene	<0.0120		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
2-Methylnaphthalene	<0.0210		mg/kg wet	11E2121	11E2121-BLK1	05/14/11 15:11
Surrogate: Terphenyl-d14	81%			11E2121	11E2121-BLK1	05/14/11 15:11
Surrogate: 2-Fluorobiphenyl	60%			11E2121	11E2121-BLK1	05/14/11 15:11
Surrogate: Nitrobenzene-d5	61%			11E2121	11E2121-BLK1	05/14/11 15:11

Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
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## PROJECT QUALITY CONTROL DATA

### Duplicate

Analyte	Orig. Val.	Duplicate	Q	Units	RPD	Limit	Batch	Sample Duplicated	% Rec.	Analyzed Date/Time
<b>General Chemistry Parameters</b>										
<b>11E4197-DUP1</b>										
% Dry Solids	77.2	78.4		%	2	20	11E4197	NUE1226-09		05/18/11 14:24

Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
Ladson, SC 29456  
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Work Order: NUE1252  
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Received: 05/07/11 09:15

## PROJECT QUALITY CONTROL DATA LCS

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
<b>Volatile Organic Compounds by EPA Method 8260B</b>								
<b>11E2166-BS1</b>								
Benzene	50.0	48.5		ug/kg	97%	78 - 126	11E2166	05/12/11 10:28
Ethylbenzene	50.0	49.4		ug/kg	99%	79 - 130	11E2166	05/12/11 10:28
Naphthalene	50.0	42.4		ug/kg	85%	72 - 150	11E2166	05/12/11 10:28
Toluene	50.0	44.3		ug/kg	89%	76 - 126	11E2166	05/12/11 10:28
Xylenes, total	150	150		ug/kg	100%	80 - 130	11E2166	05/12/11 10:28
Surrogate: 1,2-Dichloroethane-d4	50.0	43.4			87%	67 - 138	11E2166	05/12/11 10:28
Surrogate: Dibromofluoromethane	50.0	51.6			103%	75 - 125	11E2166	05/12/11 10:28
Surrogate: Toluene-d8	50.0	43.9			88%	76 - 129	11E2166	05/12/11 10:28
Surrogate: 4-Bromofluorobenzene	50.0	48.6			97%	67 - 147	11E2166	05/12/11 10:28
<b>11E3547-BS1</b>								
Benzene	50.0	47.4		ug/kg	95%	78 - 126	11E3547	05/13/11 11:04
Ethylbenzene	50.0	47.0		ug/kg	94%	79 - 130	11E3547	05/13/11 11:04
Naphthalene	50.0	38.8		ug/kg	78%	72 - 150	11E3547	05/13/11 11:04
Toluene	50.0	47.2		ug/kg	94%	76 - 126	11E3547	05/13/11 11:04
Xylenes, total	150	141		ug/kg	94%	80 - 130	11E3547	05/13/11 11:04
Surrogate: 1,2-Dichloroethane-d4	50.0	41.3			83%	67 - 138	11E3547	05/13/11 11:04
Surrogate: Dibromofluoromethane	50.0	44.6			89%	75 - 125	11E3547	05/13/11 11:04
Surrogate: Toluene-d8	50.0	48.3			97%	76 - 129	11E3547	05/13/11 11:04
Surrogate: 4-Bromofluorobenzene	50.0	49.1			98%	67 - 147	11E3547	05/13/11 11:04
<b>Polyaromatic Hydrocarbons by EPA 8270D</b>								
<b>11E2121-BS1</b>								
Acenaphthene	1.67	1.25		mg/kg wet	75%	49 - 120	11E2121	05/14/11 15:38
Acenaphthylene	1.67	1.06		mg/kg wet	64%	52 - 120	11E2121	05/14/11 15:38
Anthracene	1.67	1.49		mg/kg wet	89%	58 - 120	11E2121	05/14/11 15:38
Benzo (a) anthracene	1.67	1.40		mg/kg wet	84%	57 - 120	11E2121	05/14/11 15:38
Benzo (a) pyrene	1.67	1.35		mg/kg wet	81%	55 - 120	11E2121	05/14/11 15:38
Benzo (b) fluoranthene	1.67	1.56		mg/kg wet	94%	51 - 123	11E2121	05/14/11 15:38
Benzo (g,h,i) perylene	1.67	1.31		mg/kg wet	79%	49 - 121	11E2121	05/14/11 15:38
Benzo (k) fluoranthene	1.67	1.24		mg/kg wet	74%	42 - 129	11E2121	05/14/11 15:38
Chrysene	1.67	1.31		mg/kg wet	79%	55 - 120	11E2121	05/14/11 15:38
Dibenz (a,h) anthracene	1.67	1.39		mg/kg wet	84%	50 - 123	11E2121	05/14/11 15:38
Fluoranthene	1.67	1.46		mg/kg wet	88%	58 - 120	11E2121	05/14/11 15:38
Fluorene	1.67	1.30		mg/kg wet	78%	54 - 120	11E2121	05/14/11 15:38
Indeno (1,2,3-cd) pyrene	1.67	1.35		mg/kg wet	81%	50 - 122	11E2121	05/14/11 15:38
Naphthalene	1.67	1.09		mg/kg wet	65%	28 - 120	11E2121	05/14/11 15:38
Phenanthrene	1.67	1.43		mg/kg wet	86%	56 - 120	11E2121	05/14/11 15:38
Pyrene	1.67	1.46		mg/kg wet	87%	56 - 120	11E2121	05/14/11 15:38
1-Methylnaphthalene	1.67	1.05		mg/kg wet	63%	36 - 120	11E2121	05/14/11 15:38
2-Methylnaphthalene	1.67	1.16		mg/kg wet	69%	36 - 120	11E2121	05/14/11 15:38

Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
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**PROJECT QUALITY CONTROL DATA**  
**LCS - Cont.**

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
<b>Polyaromatic Hydrocarbons by EPA 8270D</b>								
<b>11E2121-BS1</b>								
<i>Surrogate: Terphenyl-d14</i>	50.0	43.8			88%	18 - 120	11E2121	05/14/11 15:38
<i>Surrogate: 2-Fluorobiphenyl</i>	50.0	30.3			61%	14 - 120	11E2121	05/14/11 15:38
<i>Surrogate: Nitrobenzene-d5</i>	50.0	27.7			55%	17 - 120	11E2121	05/14/11 15:38

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Project Number: 1027  
Received: 05/07/11 09:15

## PROJECT QUALITY CONTROL DATA

### LCS Dup

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
<b>Volatile Organic Compounds by EPA Method 8260B</b>												
<b>11E2166-BSD1</b>												
Benzene		48.3		ug/kg	50.0	97%	78 - 126	0.5	50	11E2166		05/12/11 10:57
Ethylbenzene		48.9		ug/kg	50.0	98%	79 - 130	1	50	11E2166		05/12/11 10:57
Naphthalene		41.1		ug/kg	50.0	82%	72 - 150	3	50	11E2166		05/12/11 10:57
Toluene		44.4		ug/kg	50.0	89%	76 - 126	0.2	50	11E2166		05/12/11 10:57
Xylenes, total		147		ug/kg	150	98%	80 - 130	2	50	11E2166		05/12/11 10:57
Surrogate: 1,2-Dichloroethane-d4		43.4		ug/kg	50.0	87%	67 - 138			11E2166		05/12/11 10:57
Surrogate: Dibromofluoromethane		51.9		ug/kg	50.0	104%	75 - 125			11E2166		05/12/11 10:57
Surrogate: Toluene-d8		44.0		ug/kg	50.0	88%	76 - 129			11E2166		05/12/11 10:57
Surrogate: 4-Bromofluorobenzene		48.5		ug/kg	50.0	97%	67 - 147			11E2166		05/12/11 10:57
<b>11E3547-BSD1</b>												
Benzene		48.4		ug/kg	50.0	97%	78 - 126	2	50	11E3547		05/13/11 11:34
Ethylbenzene		47.4		ug/kg	50.0	95%	79 - 130	0.8	50	11E3547		05/13/11 11:34
Naphthalene		41.6		ug/kg	50.0	83%	72 - 150	7	50	11E3547		05/13/11 11:34
Toluene		47.8		ug/kg	50.0	96%	76 - 126	1	50	11E3547		05/13/11 11:34
Xylenes, total		143		ug/kg	150	95%	80 - 130	0.8	50	11E3547		05/13/11 11:34
Surrogate: 1,2-Dichloroethane-d4		42.3		ug/kg	50.0	85%	67 - 138			11E3547		05/13/11 11:34
Surrogate: Dibromofluoromethane		46.3		ug/kg	50.0	93%	75 - 125			11E3547		05/13/11 11:34
Surrogate: Toluene-d8		48.7		ug/kg	50.0	97%	76 - 129			11E3547		05/13/11 11:34
Surrogate: 4-Bromofluorobenzene		48.7		ug/kg	50.0	97%	67 - 147			11E3547		05/13/11 11:34

Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NUE1252  
Project Name: Laurel Bay Housing Project  
Project Number: 1027  
Received: 05/07/11 09:15

## 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>Volatile Organic Compounds by EPA Method 8260B</b>										
<b>11E2166-MS1</b>										
Benzene	0.00243	0.0802		mg/kg dry	0.0724	107%	42 - 141	11E2166	NUE1252-04	05/12/11 19:51
Ethylbenzene	0.109	0.366	M1	mg/kg dry	0.0724	354%	21 - 165	11E2166	NUE1252-04	05/12/11 19:51
Naphthalene	0.270	1.34	M1	mg/kg dry	0.0724	1480%	10 - 160	11E2166	NUE1252-04	05/12/11 19:51
Toluene	0.00479	0.101		mg/kg dry	0.0724	133%	45 - 145	11E2166	NUE1252-04	05/12/11 19:51
Xylenes, total	0.458	1.43	M1	mg/kg dry	0.217	448%	31 - 159	11E2166	NUE1252-04	05/12/11 19:51
Surrogate: 1,2-Dichloroethane-d4		39.5		ug/kg	50.0	79%	67 - 138	11E2166	NUE1252-04	05/12/11 19:51
Surrogate: Dibromofluoromethane		46.6		ug/kg	50.0	93%	75 - 125	11E2166	NUE1252-04	05/12/11 19:51
Surrogate: Toluene-d8		59.4		ug/kg	50.0	119%	76 - 129	11E2166	NUE1252-04	05/12/11 19:51
Surrogate: 4-Bromofluorobenzene		112	ZX	ug/kg	50.0	223%	67 - 147	11E2166	NUE1252-04	05/12/11 19:51
<b>11E3547-MS1</b>										
Benzene	ND	1.98		mg/kg dry	2.19	90%	42 - 141	11E3547	NUE1252-03RE 1	05/14/11 09:43
Ethylbenzene	1.43	2.61		mg/kg dry	2.19	54%	21 - 165	11E3547	NUE1252-03RE 1	05/14/11 09:43
Naphthalene	6.72	6.66	M2	mg/kg dry	2.19	-3%	10 - 160	11E3547	NUE1252-03RE 1	05/14/11 09:43
Toluene	0.0588	1.84		mg/kg dry	2.19	81%	45 - 145	11E3547	NUE1252-03RE 1	05/14/11 09:43
Xylenes, total	6.39	9.08		mg/kg dry	6.58	41%	31 - 159	11E3547	NUE1252-03RE 1	05/14/11 09:43
Surrogate: 1,2-Dichloroethane-d4		40.6		ug/kg	50.0	81%	67 - 138	11E3547	NUE1252-03RE 1	05/14/11 09:43
Surrogate: Dibromofluoromethane		47.2		ug/kg	50.0	94%	75 - 125	11E3547	NUE1252-03RE 1	05/14/11 09:43
Surrogate: Toluene-d8		48.4		ug/kg	50.0	97%	76 - 129	11E3547	NUE1252-03RE 1	05/14/11 09:43
Surrogate: 4-Bromofluorobenzene		53.6		ug/kg	50.0	107%	67 - 147	11E3547	NUE1252-03RE 1	05/14/11 09:43
<b>Polyaromatic Hydrocarbons by EPA 8270D</b>										
<b>11E2121-MS1</b>										
Acenaphthene	ND	1.10		mg/kg dry	1.87	59%	42 - 120	11E2121	NUE1229-03	05/14/11 16:04
Acenaphthylene	ND	0.956		mg/kg dry	1.87	51%	32 - 120	11E2121	NUE1229-03	05/14/11 16:04
Anthracene	ND	1.25		mg/kg dry	1.87	67%	10 - 200	11E2121	NUE1229-03	05/14/11 16:04
Benzo (a) anthracene	0.0403	1.20		mg/kg dry	1.87	62%	41 - 120	11E2121	NUE1229-03	05/14/11 16:04
Benzo (a) pyrene	ND	1.18		mg/kg dry	1.87	63%	33 - 121	11E2121	NUE1229-03	05/14/11 16:04
Benzo (b) fluoranthene	ND	1.24		mg/kg dry	1.87	66%	26 - 137	11E2121	NUE1229-03	05/14/11 16:04
Benzo (g,h,i) perylene	ND	1.15		mg/kg dry	1.87	61%	21 - 124	11E2121	NUE1229-03	05/14/11 16:04
Benzo (k) fluoranthene	ND	1.13		mg/kg dry	1.87	60%	14 - 140	11E2121	NUE1229-03	05/14/11 16:04
Chrysene	0.0407	1.14		mg/kg dry	1.87	59%	28 - 123	11E2121	NUE1229-03	05/14/11 16:04
Dibenz (a,h) anthracene	ND	1.19		mg/kg dry	1.87	64%	25 - 127	11E2121	NUE1229-03	05/14/11 16:04



Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NUE1252  
Project Name: Laurel Bay Housing Project  
Project Number: 1027  
Received: 05/07/11 09:15

**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>Polyaromatic Hydrocarbons by EPA 8270D</b>										
<b>11E2121-MS1</b>										
Fluoranthene	0.0843	1.32		mg/kg dry	1.87	66%	38 - 120	11E2121	NUE1229-03	05/14/11 16:04
Fluorene	ND	1.20		mg/kg dry	1.87	64%	41 - 120	11E2121	NUE1229-03	05/14/11 16:04
Indeno (1,2,3-cd) pyrene	ND	1.18		mg/kg dry	1.87	63%	25 - 123	11E2121	NUE1229-03	05/14/11 16:04
Naphthalene	ND	1.01		mg/kg dry	1.87	54%	25 - 120	11E2121	NUE1229-03	05/14/11 16:04
Phenanthrene	0.0440	1.25		mg/kg dry	1.87	65%	37 - 120	11E2121	NUE1229-03	05/14/11 16:04
Pyrene	0.0847	1.40		mg/kg dry	1.87	71%	29 - 125	11E2121	NUE1229-03	05/14/11 16:04
1-Methylnaphthalene	ND	0.954		mg/kg dry	1.87	51%	19 - 120	11E2121	NUE1229-03	05/14/11 16:04
2-Methylnaphthalene	ND	1.07		mg/kg dry	1.87	57%	11 - 120	11E2121	NUE1229-03	05/14/11 16:04
Surrogate: Terphenyl-d14		36.8		ug/mL	50.0	74%	18 - 120	11E2121	NUE1229-03	05/14/11 16:04
Surrogate: 2-Fluorobiphenyl		25.1		ug/mL	50.0	50%	14 - 120	11E2121	NUE1229-03	05/14/11 16:04
Surrogate: Nitrobenzene-d5		23.3		ug/mL	50.0	47%	17 - 120	11E2121	NUE1229-03	05/14/11 16:04

Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
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Attn Tom McElwee

Work Order: NUE1252  
Project Name: Laurel Bay Housing Project  
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Received: 05/07/11 09:15

## 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>Volatile Organic Compounds by EPA Method 8260B</b>												
<b>11E2166-MSD1</b>												
Benzene	0.00243	0.0803		mg/kg dry	0.0664	117%	42 - 141	0.1	50	11E2166	NUE1252-04	05/12/11 20:20
Ethylbenzene	0.109	0.522	M1	mg/kg dry	0.0664	622%	21 - 165	35	50	11E2166	NUE1252-04	05/12/11 20:20
Naphthalene	0.270	1.54	M1	mg/kg dry	0.0664	1910%	10 - 160	13	50	11E2166	NUE1252-04	05/12/11 20:20
Toluene	0.00479	0.109	M1	mg/kg dry	0.0664	156%	45 - 145	7	50	11E2166	NUE1252-04	05/12/11 20:20
Xylenes, total	0.458	1.92	M1	mg/kg dry	0.199	735%	31 - 159	29	50	11E2166	NUE1252-04	05/12/11 20:20
Surrogate: 1,2-Dichloroethane-d4		44.9		ug/kg	50.0	90%	67 - 138			11E2166	NUE1252-04	05/12/11 20:20
Surrogate: Dibromofluoromethane		53.5		ug/kg	50.0	107%	75 - 125			11E2166	NUE1252-04	05/12/11 20:20
Surrogate: Toluene-d8		66.0	ZX	ug/kg	50.0	132%	76 - 129			11E2166	NUE1252-04	05/12/11 20:20
Surrogate: 4-Bromofluorobenzene		42.7		ug/kg	50.0	85%	67 - 147			11E2166	NUE1252-04	05/12/11 20:20
<b>11E3547-MSD1</b>												
Benzene	ND	2.32		mg/kg dry	2.19	106%	42 - 141	16	50	11E3547	NUE1252-03R E1	05/14/11 10:12
Ethylbenzene	1.43	3.65		mg/kg dry	2.19	101%	21 - 165	33	50	11E3547	NUE1252-03R E1	05/14/11 10:12
Naphthalene	6.72	8.37		mg/kg dry	2.19	75%	10 - 160	23	50	11E3547	NUE1252-03R E1	05/14/11 10:12
Toluene	0.0588	2.43		mg/kg dry	2.19	108%	45 - 145	27	50	11E3547	NUE1252-03R E1	05/14/11 10:12
Xylenes, total	6.39	12.8		mg/kg dry	6.58	97%	31 - 159	34	50	11E3547	NUE1252-03R E1	05/14/11 10:12
Surrogate: 1,2-Dichloroethane-d4		38.2		ug/kg	50.0	76%	67 - 138			11E3547	NUE1252-03R E1	05/14/11 10:12
Surrogate: Dibromofluoromethane		46.6		ug/kg	50.0	93%	75 - 125			11E3547	NUE1252-03R E1	05/14/11 10:12
Surrogate: Toluene-d8		49.1		ug/kg	50.0	98%	76 - 129			11E3547	NUE1252-03R E1	05/14/11 10:12
Surrogate: 4-Bromofluorobenzene		52.8		ug/kg	50.0	106%	67 - 147			11E3547	NUE1252-03R E1	05/14/11 10:12
<b>Polyaromatic Hydrocarbons by EPA 8270D</b>												
<b>11E2121-MSD1</b>												
Acenaphthene	ND	1.18		mg/kg dry	1.85	64%	42 - 120	7	40	11E2121	NUE1229-03	05/14/11 16:30
Acenaphthylene	ND	1.00		mg/kg dry	1.85	54%	32 - 120	5	30	11E2121	NUE1229-03	05/14/11 16:30
Anthracene	ND	1.36		mg/kg dry	1.85	73%	10 - 200	8	50	11E2121	NUE1229-03	05/14/11 16:30
Benzo (a) anthracene	0.0403	1.35		mg/kg dry	1.85	70%	41 - 120	12	30	11E2121	NUE1229-03	05/14/11 16:30
Benzo (a) pyrene	ND	1.33		mg/kg dry	1.85	72%	33 - 121	12	33	11E2121	NUE1229-03	05/14/11 16:30
Benzo (b) fluoranthene	ND	1.38		mg/kg dry	1.85	75%	26 - 137	11	42	11E2121	NUE1229-03	05/14/11 16:30
Benzo (g,h,i) perylene	ND	1.34		mg/kg dry	1.85	73%	21 - 124	16	32	11E2121	NUE1229-03	05/14/11 16:30
Benzo (k) fluoranthene	ND	1.28		mg/kg dry	1.85	69%	14 - 140	13	39	11E2121	NUE1229-03	05/14/11 16:30
Chrysene	0.0407	1.28		mg/kg dry	1.85	67%	28 - 123	11	34	11E2121	NUE1229-03	05/14/11 16:30
Dibenz (a,h) anthracene	ND	1.38		mg/kg dry	1.85	75%	25 - 127	15	31	11E2121	NUE1229-03	05/14/11 16:30
Fluoranthene	0.0843	1.36		mg/kg dry	1.85	69%	38 - 120	3	35	11E2121	NUE1229-03	05/14/11 16:30
Fluorene	ND	1.30		mg/kg dry	1.85	70%	41 - 120	8	37	11E2121	NUE1229-03	05/14/11 16:30
Indeno (1,2,3-cd) pyrene	ND	1.37		mg/kg dry	1.85	74%	25 - 123	15	32	11E2121	NUE1229-03	05/14/11 16:30

Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NUE1252  
Project Name: Laurel Bay Housing Project  
Project Number: 1027  
Received: 05/07/11 09:15

**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>Polyaromatic Hydrocarbons by EPA 8270D</b>												
<b>11E2121-MSD1</b>												
Naphthalene	ND	1.05		mg/kg dry	1.85	57%	25 - 120	4	42	11E2121	NUE1229-03	05/14/11 16:30
Phenanthrene	0.0440	1.36		mg/kg dry	1.85	71%	37 - 120	9	32	11E2121	NUE1229-03	05/14/11 16:30
Pyrene	0.0847	1.52		mg/kg dry	1.85	77%	29 - 125	8	40	11E2121	NUE1229-03	05/14/11 16:30
1-Methylnaphthalene	ND	0.988		mg/kg dry	1.85	53%	19 - 120	3	45	11E2121	NUE1229-03	05/14/11 16:30
2-Methylnaphthalene	ND	1.09		mg/kg dry	1.85	59%	11 - 120	2	50	11E2121	NUE1229-03	05/14/11 16:30
Surrogate: Terphenyl-d14		41.6		ug/mL	50.0	83%	18 - 120			11E2121	NUE1229-03	05/14/11 16:30
Surrogate: 2-Fluorobiphenyl		26.3		ug/mL	50.0	53%	14 - 120			11E2121	NUE1229-03	05/14/11 16:30
Surrogate: Nitrobenzene-d5		24.4		ug/mL	50.0	49%	17 - 120			11E2121	NUE1229-03	05/14/11 16:30

Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
Ladson, SC 29456  
Attn Tom McElwee

Work Order: NUE1252  
Project Name: Laurel Bay Housing Project  
Project Number: 1027  
Received: 05/07/11 09:15

## CERTIFICATION SUMMARY

### TestAmerica Nashville

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

Client EEG - Small Business Group, Inc. (2449)  
10179 Highway 78  
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## DATA QUALIFIERS AND DEFINITIONS

**J** Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).  
Concentrations within this range are estimated.

**M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

**M2** The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

**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

05/23/11 23:59

**Nashville Division  
2960 Foster Creighton  
Nashville, TN 37204**

**Phone: 615-726-0177**  
**Toll Free: 800-765-0980**  
**Fax: 615-726-3404**

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

**Client Name/Account #: EEG # 2449**

**Address:** 10179 Highway 78

**City/State/Zip:** Ladson, SC 29456

**Project Manager:** Tom McElwee email: [mcelwee@eeginc.net](mailto:mcelwee@eeginc.net)

**Telephone Number: 843.412.2097**

**Sampler Name: (Print)****Sampler Signature:**

Fax No. (543) 879-0401

**Site State: SC**

PO#: 1021

TA Quote #:

**Project ID: Laurel Bay Housing Project**

**Project #:**

<b>Compliance Monitoring?</b>	<b>Yes</b>	<b>No</b>
-------------------------------	------------	-----------

Enforcement Action?	Yes	No
---------------------	-----	----

**Special Instructions:**

Laboratory Comments:

Temperature Upon Receipt: 0-8°C  
VOCs Free of Headspace?

•

Relinquished by: <i>[Signature]</i>	Date: <i>5/6/11</i>	Time: <i>0900</i>	Received by: <i>Fredex</i>	Date:	Time:
Relinquished by:	Date:	Time:	Received by TestAmerica:	Date:	Time:

ATTACHMENT A



# NON-HAZARDOUS MANIFEST

<b>NON-HAZARDOUS MANIFEST</b>		1. Generator's US EPA ID No.		Manifest Doc No.		2. Page 1 of 1					
3. Generator's Mailing Address: MCAS, BEAUFORT LAUREL BAY HOUSING BEAUFORT, SC 29907			Generator's Site Address (If different than mailing):			A. Manifest Number <b>WMNA</b> 00316811					
4. Generator's Phone 843-228-6461			B. State Generator's ID								
5. Transporter 1 Company Name EEG, INC.			6. US EPA ID Number			C. State Transporter's ID					
7. Transporter 2 Company Name			8. US EPA ID Number			D. Transporter's Phone 843-879-0411					
9. Designated Facility Name and Site Address HICKORY HILL LANDFILL 2621 LOW COUNTRY ROAD RIDGELAND, SC 29936			10. US EPA ID Number			E. State Transporter's ID					
						F. Transporter's Phone					
						G. State Facility ID					
						H. State Facility Phone 843-987-4643					
GENERATOR	11. Description of Waste Materials				12. Containers		13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments		
					No.	Type					
	a. HEATING OIL TANKS FILLED WITH SAND										
	WM Profile # 102655SC										
TRANSPORTER	b.										
	WM Profile #										
FACILITY	c.										
	WM Profile #										
d.											
WM Profile #											
J. Additional Descriptions for Materials Listed Above				K. Disposal Location							
				Cell							
				Grid							
15. Special Handling Instructions and Additional Information				1383 Dove 1408 Eagle 1362 Cardinal							
Purchase Order #				EMERGENCY CONTACT / PHONE NO.							
16. GENERATOR'S CERTIFICATE: I hereby certify that the above-described materials are not hazardous wastes as defined by 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 Name				Signature "On behalf of"				Month	Day	Year	
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials										
	Printed Name				Signature				Month	Day	Year
FACILITY	18. Transporter 2 Acknowledgement of Receipt of Materials										
	Printed 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 Name				Signature				Month	Day	Year	

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY  
Pink- FACILITY USE ONLY

Blue- GENERATOR #2 COPY  
Gold- TRANSPORTER #1 COPY

Yellow- GENERATOR #1 COPY



Appendix C  
Laboratory Analytical Report - Groundwater

# Volatile Organic Compounds by GC/MS

Client: <b>AECOM - Resolution Consultants</b>	Laboratory ID: <b>QF17014-020</b>
Description: <b>BEALB1408TW01WG20150618</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>06/18/2015 1415</b>	
Date Received: <b>06/19/2015</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/26/2015 1855	ALL		78249

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzene	71-43-2	8260B	0.45	U	5.0	0.45	0.21	ug/L	1
Ethylbenzene	100-41-4	8260B	0.51	U	5.0	0.51	0.21	ug/L	1
<b>Naphthalene</b>	<b>91-20-3</b>	<b>8260B</b>	<b>2.5</b>	<b>J</b>	<b>5.0</b>	0.96	<b>0.14</b>	<b>ug/L</b>	<b>1</b>
Toluene	108-88-3	8260B	0.48	U	5.0	0.48	0.24	ug/L	1
Xylenes (total)	1330-20-7	8260B	0.57	U	5.0	0.57	0.19	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		91	75-120
1,2-Dichloroethane-d4		97	70-120
Toluene-d8		96	85-120
Dibromofluoromethane		100	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

Shealy Environmental Services, Inc.  
 106 Vantage Point Drive   West Columbia, SC 29172   (803) 791-9700   Fax (803) 791-9111   www.shealylab.com

# Semivolatile Organic Compounds by GC/MS (SIM)

Client: <b>AECOM - Resolution Consultants</b>	Laboratory ID: <b>QF17014-020</b>
Description: <b>BEALB1408TW01WG20150618</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>06/18/2015 1415</b>	
Date Received: <b>06/19/2015</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D (SIM)	1	06/23/2015 1644	RBH	06/22/2015 1610	77836			

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzo(a)anthracene	56-55-3	8270D (SIM)	0.040	UQ	0.20	0.040	0.019	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D (SIM)	0.040	UQ	0.20	0.040	0.019	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D (SIM)	0.040	UQ	0.20	0.040	0.024	ug/L	1
Chrysene	218-01-9	8270D (SIM)	0.040	UQ	0.20	0.040	0.021	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D (SIM)	0.080	UQ	0.20	0.080	0.040	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Methylnaphthalene-d10		74	15-139
Fluoranthene-d10	N	21	23-154

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

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Appendix D  
Laboratory Analytical Report - Vapor

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** AECOM

**Client Sample ID:** BEALB1408SG01GS20160506

**Client Project ID:** WE56-LBMH Soil Vapor Assessments / 60342031.FI.WI

ALS Project ID: P1602413

ALS Sample ID: P1602413-003

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9

Analyst: Wida Ang

Sampling Media: 6.0 L Silonite Canister

Test Notes:

Container ID: SSC00117

Date Collected: 5/6/16

Date Received: 5/9/16

Date Analyzed: 5/24/16

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.93 Final Pressure (psig): 3.65

Canister Dilution Factor: 1.44

CAS #	Compound	Result µg/m <sup>3</sup>	LOQ µg/m <sup>3</sup>	LOD µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Data Qualifier
71-43-2	Benzene	0.63	0.72	0.63	0.23	U
108-88-3	Toluene	0.85	0.72	0.60	0.24	
100-41-4	Ethylbenzene	0.92	0.72	0.60	0.23	
179601-23-1	m,p-Xylenes	3.3	1.4	1.2	0.43	
95-47-6	o-Xylene	1.4	0.72	0.59	0.22	
91-20-3	Naphthalene	1.2	0.72	0.58	0.26	

U = Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis.

LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Appendix E  
Regulatory Correspondence



W. Marshall Taylor Jr., Acting Director

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

April 7, 2015

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

RE: IGWA  
Laurel Bay Underground Storage Tank Assessment Reports for:  
*See attached sheet*

Dear Mr. Drawdy,

The South Carolina Department of Health and Environmental Control (the Department) received the above referenced Underground Storage Tank Assessment Reports for the addresses listed above. 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).

The Department has reviewed the referenced assessment reports. The submitted analytical results indicate that petroleum constituents are above established Risk-Based Screening Levels and additional investigation is warranted. Specifically, the Department requests that a groundwater sampling proposal be generated to determine if there has been an impact to groundwater at this site.

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 [kriegkm@dhec.sc.gov](mailto:kriegkm@dhec.sc.gov) or 803-898-0255.

Sincerely,

Kent Krieg  
Department of Defense Corrective Action Section  
Bureau of Land and Waste Management  
South Carolina Department of Health and Environmental Control

Cc: Russell Berry (via email)  
Craig Ehde (via email)



Catherine B. Templeton, Director

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

**Attachment to:** Krieg to Drawdy  
**Subject:** IGWA  
**Dated** 4/7/2015

**Laurel Bay Underground Storage Tank Assessment Reports for: (18 addresses/19 tanks)**

1186 Bobwhite	1417 Albatross
1194 Cardinal	1420 Dove
1354 Cardinal	1421 Albatross Tank 1
1362 Cardinal	1421 Albatross Tank 2
1364 Cardinal Tank 1	1427 Albatross
1403 Eagle	1429 Albatross
1404 Eagle	1444 Dove Tank 1
1405 Eagle	1453 Cardinal
1408 Eagle	1455 Cardinal
1410 Eagle	





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

February 22, 2016

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

RE: Approval and Concurrence with Draft Final Initial Groundwater Investigation Report-May and June 2015  
Laurel Bay Military Housing Area Multiple Properties  
Dated October 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 52 stated addresses. For the remaining 91 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-May and June 2015  
 Specific Property Recommendations  
 Dated February 22, 2016

**Draft Final Initial Groundwater Investigation Report for (143 addresses)**

**Permanent Monitoring Well Investigation recommendation (52 addresses)**

273 Birch Drive	1192 Bobwhite Drive
325 Ash Street	1194 Bobwhite Drive
326 Ash Street	1272 Albatross Drive
336 Ash Street	1352 Cardinal Lane
343 Ash Street	1356 Cardinal Lane
353 Ash Street	1359 Cardinal Lane
430 Elderberry Drive	1360 Cardinal Lane
440 Elderberry Drive	1362 Cardinal Lane
456 Elderberry Drive	1370 Cardinal Lane
458 Elderberry Drive	1382 Dove Lane
468 Dogwood Drive	1384 Dove lane
518 Laurel Bay Blvd	1385 Dove Lane
635 Dahlia Drive	1389 Dove Lane
638 Dahlia Drive	1392 Dove Lane
640 Dahlia Drive	1393 Dove Lane
647 Dahlia Drive	1407 Eagle Lane
648 Dahlia Drive	1411 Eagle Lane
650 Dahlia Drive	1418 Albatross Drive
652 Dahlia Drive	1420 Albatross Drive
760 Althea Street	1426 Albatross Drive
1102 Iris Lane	1429 Albatross Drive
1132 Iris Lane	1434 Dove Lane
1133 Iris Lane	1436 Dove Lane
1144 Iris Lane	1440 Dove Lane
1148 Iris Lane	1442 Dove Lane
1186 Bobwhite Drive	1444 Dove Lane

**No Further Action recommendation (91 addresses):**

137 Laurel Bay Blvd	771 Althea Street
139 Laurel Bay Blvd	927 Albacore Street
229 Cypress Street	1015 Foxglove Street
261 Beech Street	1046 Gardenia Drive
276 Birch Drive	1062 Gardenia Drive
278 Birch Drive	1070 Heather Street
291 Birch Drive	1072 Heather Street

300 Ash Street	1107 Iris Lane
304 Ash Street	1126 Iris Lane
314 Ash Street	1129 Iris Lane
322 Ash Street	1138 Iris Lane
323 Ash Street	1161 Jasmine Street
324 Ash Street	1167 Jasmine Street
339 Ash Street	1170 Jasmine Street
344 Ash Street	1190 Bobwhite Drive
348 Ash Street	1219 Cardinal Lane
349 Ash Street	1305 Eagle Lane
362 Aspen Street	1353 Cardinal Lane
376 Aspen Street	1354 Cardinal Lane
380 Aspen Street	1357 Cardinal Lane
383 Aspen Street	1361 Cardinal Lane
387 Acorn Drive	1364 Cardinal Lane
392 Acorn Drive	1368 Cardinal Lane
396 Acorn Drive	1377 Dove Lane
433 Elderberry Drive	1381 Dove Lane
439 Elderberry Drive	1391 Dove Lane
442 Elderberry Drive	1403 Eagle Lane
443 Elderberry Drive	1404 Eagle Lane
444 Elderberry Drive	1405 Eagle Lane
445 Elderberry Drive	1406 Eagle Lane
446 Elderberry Drive	1408 Eagle Lane
448 Elderberry Drive	1410 Eagle Lane
449 Elderberry Drive	1412 Eagle Lane
451 Elderberry Drive	1413 Albatross Drive
453 Elderberry Drive	1414 Albatross Drive
464 Dogwood Drive	1417 Albatross Drive
466 Dogwood Drive	1421 Albatross Drive
467 Dogwood Drive	1422 Albatross Drive
469 Dogwood Drive	1425 Albatross Drive
471 Dogwood Drive	1427 Albatross Drive
475 Dogwood Drive	1430 Dove Lane
516 Laurel Bay Blvd	1432 Dove Lane
531 Laurel Bay Blvd	1438 Dove Lane
532 Laurel Bay Blvd	1453 Cardinal Lane
645 Dahlia Drive	1455 Cardinal Lane
763 Althea Street	





June 20, 2017

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 Draft Final Revision 1 Vapor Intrusion Report July 2015, January 2016 and May 2016, Laurel Bay Military Housing Area, Multiple Properties

RE: Approval Response to Comments and Draft Final Revision 1 Letter Report - Petroleum Vapor Intrusion Investigations - June 2016 and January 2017, Multiple Properties, Laurel Bay Military Housing Area

Dear Mr. Drawdy:

The South Carolina Department of Health and Environmental Control (DHEC) received the above referenced response to comments and errata pages on May 24 and June 7, 2017. 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).

DHEC has reviewed the response to comments and errata pages. Based on this review, DHEC did not generate any additional comments. 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  
Department of Defense Corrective Action Section

Cc: Russell Berry, EQC Region 8  
Shawn Dolan, Resolution Consultants  
Bryan Beck, NAVFAC MIDLANT