SUMMARY REPORT
453 IRIS LANE (FORMERLY 1146 IRIS 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 SUMMARY REPORT
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Prepared by:



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Contract Number: N62470-14-D-9016

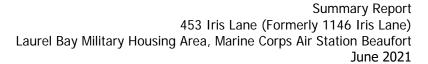
CTO WE52

**JUNE 2021** 



# **Table of Contents**

1.0	INTRODUC	CTION 1
1.1 1.2		ND INFORMATION
2.0	SAMPLING	ACTIVITIES AND RESULTS3
2.1 2.2 2.3 2.4	SOIL ANAL	ATER ANALYTICAL RESULTS
3.0	PROPERTY	STATUS5
4.0	REFERENC	ES6
Table Table		Tables  Laboratory Analytical Results - Soil  Laboratory Analytical Results - Groundwater
		Appendices
Apper Apper Apper Apper	ndix B ndix C	Multi-Media Selection Process for LBMH UST Assessment Reports Laboratory Analytical Report - Groundwater Regulatory Correspondence





## **List of Acronyms**

bgs below ground surface

BTEX benzene, toluene, ethylbenzene, and xylenes

CTO Contract Task Order

COPC constituents of potential concern

ft feet

IDIQ Indefinite Delivery, Indefinite Quantity

IGWA Initial Groundwater Assessment

JV Joint Venture

LBMH Laurel Bay Military Housing MCAS Marine Corps Air Station

NAVFAC Mid-Lant Naval Facilities Engineering Command Mid-Atlantic

NFA No Further Action

PAH polynuclear aromatic hydrocarbon

QAPP Quality Assurance Program Plan

RBSL risk-based screening level

SCDHEC South Carolina Department of Health and Environmental Control

Site LBMH area at MCAS Beaufort, South Carolina

UST underground storage tank
VISL vapor intrusion screening level



#### 1.0 INTRODUCTION

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

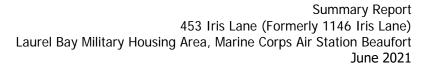
As of January 2014, the LBMH addresses were re-numbered to comply with the E-911 emergency response addressing system; however, in order to remain consistent with historical sampling and reporting for LBMH area, the residences will continue to be referenced with their original address numbers in sample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

This report summarizes the results the environmental investigation activities associated with the storage of home heating oil and the potential release of petroleum constituents at the referenced property. Based on the results of the investigation, a No Further Action (NFA) determination has been made by the South Carolina Department of Health and Environmental Control (SCDHEC) for 453 Iris Lane (Formerly 1146 Iris 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.

#### 1.2 UST Removal and Assessment Process

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

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

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



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

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

#### 2.0 SAMPLING ACTIVITIES AND RESULTS

The following section presents the sampling activities and associated results for 453 Iris Lane (Formerly 1146 Iris Lane). Details regarding the soil investigation at this site are provided in the SCDHEC UST Assessment Report – 1146 Iris Lane (MCAS Beaufort, 2008) and SCDHEC UST Assessment Report – 1146 Iris 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 Investigation of Ground Water at Leaking Heating Oil UST Sites Report – (Resolution Consultants, 2008) and the Initial Groundwater Investigation Report – November and December 2015 (Resolution Consultants, 2016). The laboratory report that includes the pertinent IGWA analytical results for this site is presented in Appendix C.

### 2.1 UST Removal and Soil Sampling

In July 2007 and March 2011, two 280 gallon heating oil USTs were removed at 453 Iris Lane (Formerly 1146 Iris Lane). Tank 1 was removed on July 26, 2007 from the front landscaped bed



area adjacent to the front concrete porch. Tank 2 was removed on March 15, 2011 from the center of the front grassed area. The former UST locations are indicated in the figures of the UST Assessment Reports (Appendix B). The USTs were removed, cleaned, and shipped offsite for recycling. There was no visual evidence (i.e., staining or sheen) of petroleum impact at the time of the UST removal. According to the UST Assessment Reports (Appendix B), the depths to the bases of the USTs were 5'5" (Tank 1) and 5'1" (Tank 2) bgs and a single soil sample was collected for each at that depth. An additional soil sample was collected from the side of the excavation at a depth of 3'6" for Tank 1. The samples were collected from the fill port side of the former USTs to represent a worst case scenario.

Following UST removal, a soil sample was collected from the base of each excavation and the side in the excavation for Tank 1 and shipped to an offsite laboratory for analysis of the petroleum COPCs. Sampling was performed in accordance with applicable South Carolina regulation R.61-92, Part 280 (SCDHEC, 2017) and assessment guidelines.

## 2.2 Soil Analytical Results

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

The soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form (Appendix B). The results of the soil sampling at the former UST locations 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 453 Iris Lane (Formerly 1146 Iris Lane) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In letters dated July 16, 2008 and July 1, 2015 regarding Tank 1 and Tank 2, respectively, SCDHEC requested an IGWA for 453 Iris Lane (Formerly 1146 Iris Lane) to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letters are provided in Appendix D.

### 2.3 Groundwater Sampling

On July 25, 2008 and December 2, 2015, temporary monitoring wells were installed at 453 Iris Lane (Formerly 1146 Iris 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 wells were placed in the same general location as the former heating oil USTs. The former UST locations are indicated in the figures of the UST Assessment Reports (Appendix B). Further details are provided in the *Investigation of Ground Water at Leaking Heating Oil UST Sites Report* (Resolution Consultants, 2008) and the *Initial Groundwater Investigation Report – November and December 2015* (Resolution Consultants, 2016).

The sampling strategy for this phase of the investigation required a one-time sampling event of the temporarily installed monitoring wells. Following well installation and development, groundwater samples were collected using low-flow methods and shipped to an offsite laboratory for analysis of the petroleum COPCs. Upon completion of groundwater sampling, the temporary well was abandoned in accordance with the South Carolina Well Standards and Regulations R.61-71 (SCDHEC, 2016). Field forms are provided in the *Investigation of Ground Water at Leaking Heating Oil UST Sites Report* (Resolution Consultants, 2008) and the *Initial Groundwater Investigation Report – November and December 2015* (Resolution Consultants, 2016).

## 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 453 Iris Lane (Formerly 1146 Iris 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 USTs at concentrations that present a potential risk to human health and the environment.

#### 3.0 PROPERTY STATUS

Based on the analytical results for groundwater, SCDHEC made the determination that NFA was required for 453 Iris Lane (Formerly 1146 Iris Lane). This NFA determination was obtained in letters dated December 19, 2008 and June 8, 2016, regarding Tank 1 and Tank 2, respectively. SCDHEC's NFA letters are provided in Appendix D.



#### 4.0 REFERENCES

- Marine Corps Air Station Beaufort, 2008. South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report 1146

  Iris Lane, Laurel Bay Military Housing Area, January 2008.
- Marine Corps Air Station Beaufort, 2011. South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report 1146

  Iris Lane, Laurel Bay Military Housing Area, June 2011.
- Resolution Consultants, 2008. Investigation of Ground Water at Leaking Heating Oil UST Sites
  Report for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military
  Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina, November
  2008.
- Resolution Consultants, 2016. *Initial Groundwater Investigation Report November and December 2015 for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina*, April 2016.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2013. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 2.0*, April 2013.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2015. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.0*, May 2015.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2016. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.1*, February 2016.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2017. *R.61-92, Part 280, Underground Storage Tank Control Regulations*, March 2017.





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

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

# **Tables**



# Table 1 Laboratory Analytical Results - Soil 453 Iris Lane (Formerly 1146 Iris Lane) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort Beaufort, South Carolina

		Results Samples Collected 07/26/07 and 03/15/11				
Constituent	SCDHEC RBSLs (1)	1146 Iris Side 02 07/26/07	1146 Iris 03/15/11			
<b>Volatile Organic Compounds Analyzed</b>	by EPA Method 8260B (mg/kg)		•			
Benzene	0.003	ND	ND	ND		
Ethylbenzene	1.15	ND	ND	0.00555		
Naphthalene	0.036	ND	0.000409	0.0407		
Toluene	0.627	ND	ND	ND		
Xylenes, Total	13.01	ND	ND	0.0184		
Semivolatile Organic Compounds Analy	yzed by EPA Method 8270D (mg/kg)					
Benzo(a)anthracene	0.66	ND	0.696	ND		
Benzo(b)fluoranthene	0.66	ND	0.663	ND		
Benzo(k)fluoranthene	0.66	ND	0.254	ND		
Chrysene	0.66	ND	0.938	ND		
Dibenz(a,h)anthracene	0.66	ND	ND	ND		

#### Notes:

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

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

# Table 2 Laboratory Analytical Results - Groundwater 453 Iris Lane (Formerly 1146 Iris Lane) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort Beaufort, South Carolina

Constituent	SCDHEC RBSLs (1)	Site-Specific Groundwater VISLs (µg/L) <sup>(2)</sup>	Results Sample Collected 07/28/08							
Volatile Organic Compounds Analyzed by EPA Method 8260B (μg/L)										
Benzene	Benzene         5         16.24         ND									
Ethylbenzene	700	45.95	ND							
Naphthalene	25	29.33	ND							
Toluene	1000	105,445	ND							
Xylenes, Total	10,000	2,133	ND							
Semivolatile Organic Compounds Ana	lyzed by EPA Method 8270D	) (μg/L)								
Benzo(a)anthracene	10	NA	ND							
Benzo(b)fluoranthene	10	NA	ND							
Benzo(k)fluoranthene	10	NA	ND							
Chrysene	10	NA	ND							
Dibenz(a,h)anthracene	10	NA	ND							

#### Notes:

<sup>(2)</sup> Site-specific groundwater VISLs were calculated using the EPA JE Model Spreadsheets (Version 3.1, February 2004) and conservative modeling inputs representative of a small single-story house with an 8 foot ceiling. Site-specific groundwater VISLs were developed based on a target risk level of 1x10<sup>-6</sup>, 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

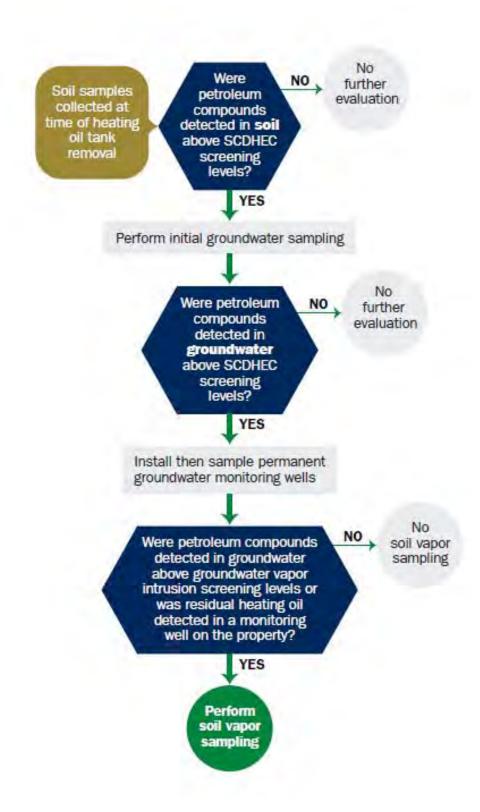
μg/L - micrograms per liter

VISL - Vapor Intrusion Screening Level

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

# Appendix A Multi-Media Selection Process for LBMH





**Appendix A - Multi-Media Selection Process for LBMH** 

# Appendix B UST Assessment Reports



#### Attachment 1

# South Carolina Department of Health and Environmental Control (SCDHEC)

# Underground Storage Tank (UST) Assessment Report



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

Beaufont Military Compley Family Housing
Owner Name (Corporation, Individual, Public Agency, Other)

1510 Laurel Bay Blyd.

Mailing Address

Beaufont SC 29906

City State Zip Code

843

Area Code Telephone Number Contact Person

II. SITE IDENTIFICATION AND LOCATION

N/A

Permit I.D. # Actus Lend Lense Construction

Facility Name or Company Site Identifier

i 46 RIS LN.

Street Address or State Road (as applicable)

Beaufort, SC 29906 Beaufort

City ZIP County

# III. -- INSURANCE INFORMATION

<b>!</b>
Insurance Statement
The petroleum release reported to DHEC on\(\nu \begin{array}{cccccccccccccccccccccccccccccccccccc
Is there now, or has there ever been an insurance policy or other financial mechanism that covers this UST release? YES NO (check one)
If you answered YES to the above question, please complete the following information:
My policy provider is: The policy deductible is: The policy limit is:
If you have this type of insurance, please include a copy of the policy with this report.
And
I do/do not (circle one) wish to participate in the Superb Program.
IV. CERTIFICATION (To be signed by the UST owner/operator.)
I certify that I have personally examined and am familiar with the information submitted in this and all attached documents; and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.
Name (Type or print.)
Signature To be completed by Notary Public:
Sworn before me this day of, 20
(Name)
Notary Public for the state of

-	V USI TORMATION		<del></del>				
		Tank 1	Tank _	Tank 3	Tank 4	Tank 5	Tank 6
		#2					
A.	Cato, Indicator,	DIESE	<u> </u>	-			
В.	Capacity. (ex. 1k, 2k)	358g					
C.	Age			•			
D.	Construction Material(ex. Steel, FRP)	Steel					
E.	Month/Year of Last Use						
F.	Depth (ft.) To Base of Tank	65"					
G.	Spill Prevention Equipment Y/N	N					
H.	Overfill Prevention Equipment Y/N	$\mathcal{N}$					
I.	Method of Closure Removed Filled	Rejnoved					
J.	Date Tanks Removed/Filled						
K.	Visible Corrosion or Pitting Y/N	7-26-07					
L.	Visible Holes Y/N	N					
•		N					
M.	Method of disposal for any USTs removed from the g	ground (att	ach dispo	sal man	ifests)		
	Recycling - Scap Stee	1					
N.	Method of disposal for any liquid petroleum, sludges, disposal manifests)  TRATMENT FACILITY	or wastew	aters rem	noved fro	om the U	STs (atta	ch
	- Solidefication A	tuch 5	ubti	HURST	D 2	AND F AND F	:11L
O.	If any corrosion, pitting, or holes were observed, descr	ibe the loc	ation and	l extent f	or each I	JST	
					•	-	

# VI. PIPING INFORMATION

		Tank I	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
A.	Construction Material(ex. Steel, FRP)	Steel					
B.	Distance from UST to Dispenser	NA					
C.	Number of Dispensers	ļ					
D.	Type of System Pressure or Suction	-0- Electra				·	
E.	Was Piping Removed from the Ground? Y/N	PUMP			· · · · •		
F.	Visible Corrosion or Pitting Y/N	4					
G.	Visible Holes Y/N	7	·		;		
H	Age						
		N					
	If any corrosion, pitting, or holes were observed, des  MINOR CORROSION WAS				_		
	VII. BRIEF SITE DESCRIPTION AND	HISTO	RY .				
	Home Heating Oil TA	NK -	Re	SIDE	NTIA	۷	
							,

# VIII. SITE CONDITIONS

	Yes	No	Unk
A. Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells?  If yes, indicate depth and location on the site map.		<b>*</b>	
B. Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells?  If yes, indicate location on site map and describe the odor (strong, mild, etc.)		7	
C. Was water present in the UST excavation, soil borings, or trenches?  If yes, how far below land surface (indicate location and depth)?		*	
D. Did contaminated soils remain stockpiled on site after closure?  If yes, indicate the stockpile location on the site map.  Name of DHEC representative authorizing soil removal:		*	
E. Was a petroleum sheen or free product detected on any excavation or boring waters?  If yes, indicate location and thickness.		*	

SCDHEC Lab Certification Number DW: 84009002

D

В.							<u> </u>
Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA#
					7-26-07	ECHEVA PA	
1	ROTTOM	5	SAUD	65"	II .	ANDRUMY	ND
2	SIDE		-5AND	.42*	940	8 Marcy	ND
3							
4							
5							
6							·
7							
8			,				
9							
10 .				·			
11	·						
12							
13	·						
14							
15							
16							
17							
18							
19							
20							

<sup>\* =</sup> Depth Below the Surrounding Land Surface

# SAMPLING METHODOLOGY

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

EPA Method 8260 B Volatile ORGANIC Compounds
EPA Method 8260 B Volatile ORGANIC Compounds - Presentative: Zea Sodium Bisulfate lea
EPA METHOD 8270 Poly Aromatic Hydro CARBONS
- NO PRESERVATIVE
ONE (1) SIDEWALL And ONE (1) Bottom
ONE (1) SIDEWALL And ONE (1) Bottom  SAMPLE WERE SECURED FROM TANK EXCAVATION  SAMPLES WERE STORED AND Shipped IN AN  INSURATED COOLER W/ ICE.
Samples were stoned and shipped in AN
INSURATED Cooler W/ ICE.

# XI. RECEPTORS

		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?		·×
	If yes, indicate type of receptor, distance, and direction on site map.		/
В.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?		./
	If yes, indicate type of well, distance, and direction on site map.		
C.	Are there any underground structures (e.g., basements) Located within 100 feet of the UST system?		
	If yes, indicate type of structure, distance, and direction on site map.		/
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?		
	If yes, indicate the type of utility, distance, and direction on the site map.		1
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?		
	If yes, indicate the area of contaminated soil on the site map.		

# SUMMARY OF ANALYSIS RESULTS

NIA

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

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

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

NLA

Enter the ground water analytical data for each sample for all CoC in the table below. If free product is

present, indicate the measured thickness to the nearest 0.01 feet.

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

# ANALYTICAL RESULTS

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

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

# Test/America

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

ANALYTICAL TESTING CORPORATION	:							_		-			Con	pliance	Monito	ring				
Client Name E	<u>`</u>				<u>.</u>	Cli	ent#:	<u> 2</u>	41	<u> </u>	_		,							
Address:	·		<del></del>									Project Na	me:	-AUR	EL.	BAY	. •			
City/State/Zip Code:													t#:{							_
Project Manager:	NM	PIHO	NEY		· ·	•					– s	ite/Location						State		-
Telephone Number:					Fax		•				_		 То:		1				·	
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Fax Results: Y N	Time Sampled	) ≈ 0 (dan 0 ≈ 0	St Studge DW GW - Groundwate WW - Westewate	HNO <sub>3</sub>	NeOH	H <sub>2</sub> SO <sub>4</sub>	None	Other (Specify)	/d	THE WAY AND TO	THE SOLD							/	Level 4 Other:	
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Testamerica
ANALYTICAL TESTING CORPORATION

06HO044 page zof3

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

THE COUNTY OF	KIOKAHON	$\sim$										_					Con	<b>apliance</b>	Monito	oring	,			
Client Nam	e <u> </u>	<u> </u>							С	lient :	#: _/	24	1)							-	*******			
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City/State/Zip Code	);						•							-	ا	Project#		D 7:	<u> </u>	1167.	<del> </del>			
Project Manager	:_JO}	Mun	tOHF	NF.	7											cation ID							<u> </u>	
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Test/America To assist us in using the proper analytical-methods is this work being conducted for regulatory purposes? Compliance Monitoring Client Name \_\_\_\_\_\_Client#: 241) Project Name: LAUREL BAY Address: City/State/Zip Code: WHICH MAHONEY Project Manager: Site/Location ID: State: Telephone Number: Fax: Report To: MRIS ECHEVARRIA Sampler Name: (Print Name) Invoice To: Sampler Signature: Quote #: Matrix Preservation & # of Containers Analyze For: Standard Rush (surcharges may apply) Date Needed:

CC Deliverables None Level 2 (Batch QC) Level 3 Level 4 Fax Results: Y N Other: SAMPLE ID REMARKS 61215 SINE 02 7-23071020 LABORATORY COMMENTS: Init Lab Temp: Rec Lab Temp:

Date:

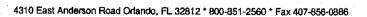
Time:

Received By

Relinquished By: Received But

Custody Seals: Y N Bottles Supplied by Test America;

8623 2591 Method of Shipment:





· THE LEADER IN ENVIRONMENTAL TESTING

Client: EPG, INC.

PO BOX 1096

MT PLEASANT, SC 29465

Attn: JOHN MAHONEY

Work Order:

OQH0044

Project:

LAUREL BAY

Project Number: EP2362

Sampled: 07/23/07-07/27/07

Received: 08/02/07

### LABORATORY REPORT

## Sample ID: 1146 IRIS BOTTOM 01 - Lab Number: OQH0044-11 - Matrix: Solid/Soil

CAS#	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
	Chemistry Parameters							<del>_</del>			
NA	% Solids	84.6		%.	0.100	0.100	1	08/02/07 17:45	RRP	EPA 160.3	7H02039
	Organic Compounds by EPA										
71-43-2	Benzene	0.0830	U	ug/kg dry	0.0830	0.227	1	08/03/07 23:34	JWT	EPA 8260B	7H03050
100-41-4	Ethylbenzene	0.0959	υ	ug/kg dry	0.0959	0.227	1	08/03/07 23:34	JWT	EPA 8260B	7H03050
91-20-3	Naphthalene	0.125	U	ug/kg dry	0.125	0.227	1	08/03/07 23:34	JWT	EPA 8260B	7H03050
108-88-3	Toluene	0.196	U	ug/kg dry	0.196	0.227	1	08/03/07 23:34	JWT	EPA 8260B	7H03050
1330-20-7	Xylenes, total	0.118	U	ug/kg dry	0.118	0.227	I	08/03/07 23:34	JWT	EPA 8260B	7H03050
	,2-Dichloroethane-d4 (73-137%)	116 %									
Surrogate: 4	l-Bromofluorobenzene (59-118%)	105 %									
Surrogate: L	Dibromofluoromethane (55-145%)	109 %									
Surrogate: T	Coluene-d8 (80-117%)	103 %									
	ear Aromatic Hydrocarbons b	y EPA Meth	<u> 204 827</u>	ō.							
83-32-9	Acenaphthene	87.5	U	ug/kg dry	87.5	197	1	08/10/07 10:23	REM	EPA 8270C	7H06004
208-96-8	Acenaphthylene	115	U	ug/kg dry	115	197	1	08/10/07 10:23	REM	EPA 8270C	7H06004
120-12-7	Anthracene	63.0	U	ug/kg dry	63.0	197	i	08/10/07 10:23	REM	EPA 8270C	7H06004
56-55-3	Benzo (a) anthracene	21.4	U	ug/kg dry	21.4	197	1	08/10/07 10:23	REM	EPA 8270C	7H06004
205-99-2	Benzo (b) fluoranthene	20.8	U	ug/kg dry	20.8	197	1	08/10/07 10:23	REM	EPA 8270C	7H06004
207-08-9	Benzo (k) fluoranthene	20.8	U	ug/kg dry	20.8	197	1	08/10/07 10:23	REM	EPA 8270C	7H06004
191-24-2	Benzo (g,h,i) perylene	20.5	U	ug/kg dry	20.5	197	1	08/10/07 10:23	REM	EPA 8270C	7H06004
30-32-8	Benzo (a) pyrene	24.3	U	ug/kg dry	24.3	197	1	08/10/07 10:23	REM		7H06004
0-12-0	1-Methylnaphthalene	99.1	U	ug/kg dry	99.1	197	1	08/10/07 10:23	REM	EPA 8270C	7H06004
218-01 <b>-9</b>	Chrysene	23.6	U	ug/kg dry	23.6	197	1	08/10/07 10:23	REM	EPA 8270C	7H06004
<b>i3-70-</b> 3	Dibenz (a,h) anthracene	25.9	U	ug/kg dry	25.9	197	1	08/10/07 10:23	REM	EPA 8270C	7H06004
:06-44-0	Fluoranthene	28.4	U	ug/kg dry	28.4	197	1	08/10/07 10:23	REM	EPA 8270C	7H06004
:6-73-7	Fluorene	77.3	U	ug/kg dry	77.3	197	-	08/10/07 10:23	REM	EPA 8270C	7H06004
93-39-5	Indeno (1,2,3-cd) pyrene	25.6	บ	ug/kg dry	25.6	197		08/10/07 10:23	REM	EPA 8270C	7H06004
1-57-6 ا	2-Methylnaphthalene	84.2	บ	ug/kg dry	84.2	197		08/10/07 10:23	REM	EPA 8270C	7H06004 7H06004
·1-20-3	Naphthalene	79,3	บ	ug/kg dry	79.3	197		08/10/07 10:23	REM	EPA 8270C	7H06004 7H06004
5-01-8	Phenanthrene	46,6	U	ug/kg dry	46.6	197		08/10/07 10:23	REM	EPA 8270C	7H06004
29-00-0	Pyrene	40.1	U	ug/kg dry	40.1	197		08/10/07 10:23	REM	EPA 8270C	
	Fluorobiphenyl (24-121%)	41 %	<b>.</b>	~B vP m1	70.1	171	1	00/10/07 10:23	KEM	EFA 82/UC	7H06004
	trobenzene-d5 (19-111%)	41%				2012/2011/2011		Alaman in a lunalaran			

#### LABORATORY REPORT

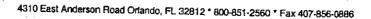
88 %

# Sample ID: 1146 IRIS SIDE 02 - Lab Number: OQH0044-12 - Matrix: Solid/Soil

CAS#	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
General	Chemistry Parameters			<del>-</del> -							
A	% Solids	82.1		<b>%</b> .	0.100	0.100	1	08/02/07 17:45	RRP	EPA 160.3	7H02039
'olatile	Organic Compounds by El	PA Method 8260	В								
1-43-2	Benzene	0.112	บ	ug/kg dry	0.112	0.305	1	08/03/07 23:51	JWT	EPA 8260B	7H03050
<b>30-41-4</b>	Ethylbenzene	0.129	U	ug/kg dry	0.129	0.305	1	08/03/07 23:51	JWT	EPA 8260B	7H03050

Project Manager

urrogate: Terphenyl-d14 (44-171%)





Client: EPG, INC.

PO BOX 1096

MT PLEASANT, SC 29465

Attn: JOHN MAHONEY

Work Order:

OQH0044

Project:

LAUREL BAY

Project Number:

EP2362

Sampled: 07/23/07-07/27/07

Received: 08/02/07

# LABORATORY REPORT

Sample ID: 1146 IRIS SIDE 02 - Lab Number: OQH0044-12 - Matrix: Solid/Soil

CAS#	Analyte	Result	Q	Units	MDL	PQL	Dil Facto	Analyzed Date/Time	Ву	Method	Batch
Volatile	Organic Compounds by EPA	Method 826	0B - Co	———— ont.							
91-20-3	Naphthalene	0.409		ug/kg dry	0.169	0.305	1	08/03/07 23:51	JWT	EPA 8260B	7H03050
.00 00-5	Toluene	0.264	υ .	ug/kg dry	0.264	0.305	1	08/03/07 23:51		EPA 8260B	7H03050
1330-20-7	Xylenes, total	0.159	U	ug/kg dry	0.159	0.305	1	08/03/07 23:51		EPA 8260B	7H03050
	1,2-Dichloroethane-d4 (73-137%)	121 %							7 11 1	L1 A 0200D	7000000
	4-Bromofluorobenzene (59-118%)	103 %									
	Dibromofluoromethane (55-145%)	109 %									
	Toluene-d8 (80-117%)	103 %									
Polynucl 83-32-9	ear Aromatic Hydrocarbons	by EPA Meti	10d 827	0							
03-32-9	Acenaphthene	90.1	U	ug/kg dry	90.1	203	1	08/10/07 10:45	REM	EPA 8270C	7H06004
208-96-8	Acenaphthylene	119	U	ug/kg dry	119	203	1	08/10/07 10:45	REM		7H06004
120-12-7	Anthracene	64.9	U	⊔g/kg dry	64.9	203	1	08/10/07 10:45	REM	_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	7H06004 7H06004
56-55-3	Benzo (a) anthracene	696		ug/kg dry	22.0	203	1	08/10/07 10:45	REM		7H06004 7H06004
205-99-2	Benzo (b) fluoranthene	663		ug/kg dry	21.4	203	1	08/10/07 10:45	REM	EPA 8270C	
207-08-9	Benzo (k) fluoranthene	254		ug/kg dry	21.4	203	1	08/10/07 10:45	REM		7H06004
191-24-2	Benzo (g,h,i) perylene	134	I	ug/kg dry	21.1	203	1	08/10/07 10:45		EPA 8270C	7H06004
50-32 <b>-</b> 8	Benzo (a) pyrene	<b>38</b> 0		ug/kg dry	25.0	203	1	08/10/07 10:45	REM	EPA 8270C	7H06004
90-12-0	1-Methylnaphthalene	102	U	ug/kg dry	102	203			REM	EPA 8270C	7H06004
218-01-9	Chrysene	938		ug/kg dry	24,3	203	1	08/10/07 10:45	REM	EPA 8270C	7H06004
53-70-3	Dibenz (a,h) authracene	2 <b>6</b> .7	U	ug/kg dry	26.7	203	1	08/10/07 10:45	REM	EPA 8270C	7H06004
206-44-0	Fluoranthene	488	J	ug/kg dry	29.3	203	1	08/10/07 10:45	REM	EPA 8270C	7H06004
36-73 <b>-</b> 7	Fluorene	79.6	บ	ug/kg dry	79.6			08/10/07 10:45	REM	EPA 8270C	7H06004
93-39-5	Indeno (1,2,3-cd) pyrene	139	ī	⊔g/kg dry	26.3	203		08/10/07 10:45	REM	EPA 8270C	7H06004
1-57-6	2-Methylnaphthalene	86.7	ŭ	ug/kg dry	26.3 86.7	203		08/10/07 10:45	REM	EPA 8270C	7H06004
11-20-3	Naphthalene	81.7	U		•	203		08/10/07 10:45	REM	EPA 8270C	7H06004
5-01-8	Phenanthrene	48.0	U	ug/kg dry	81.7	203		08/10/07 10:45	REM	EPA 8270C	7H06004
29-00-0	Pyrene	716	U	ug/kg dry	48.0	203				EPA 8270C	7H06004
urrogate: 2-	Fluorobiphenyl (24-121%)	52 %		ug/kg dry	41.3	203	1	08/10/07 10:45	REM	EPA 8270C	7H06004
	trobenzene-dS (19-111%)	52 % 52 %									
	rphenyl-d14 (44-171%)	83 %									

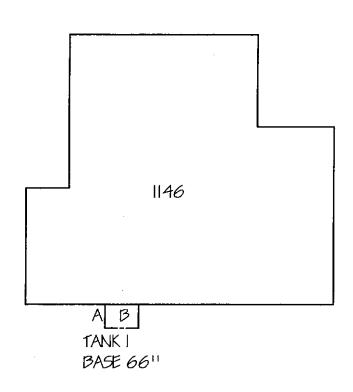
# LABORATORY REPORT

Sample ID: 1150 IRIS BOTTOM 01 - Lab Number: OQH0044-13 - Matrix: Solid/Soil

									JII		
CAS#	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
	Chemistry Parameters				_						
A	% Solids	73.9		%.	0.100	0.100	1	08/02/07 17:45	RRP	ED4 140 0	
/olatile (	Organic Compounds by EPA	Method 8260B		*		******	•	000207 17:43	KKP	EPA 160.3	7H02039
1-43-∠	Benzene	0.123	U .	ug/kg dry	0.123	0.336	1	08/04/07 00:08	JWT	EDA GOZOD	
00-41-4	Ethylbenzene	0.142	ш	ug/kg dry	0.142	-0.336	•			EPA 8260B	7H03050
1-20-3	Naphthalene	0.185	U			<del>-</del>	- 1-	<del>· 08/04/07   00:08-</del>	JWT	EPA-8260B-	<del>71103050 -</del>
)8-88-3	Toluene	0.356	U	ug/kg dry	0.185	0.336	1	08/04/07 00:08	JWT	EPA 8260B	7H03050
130-20-7				ug/kg dry	0.290	0.336	1	08/04/07 00:08	JWT	EPA 8260B	7H03050
	Xylenes, total	0.174	U	ug/kg dry '	0.174	0.336	1	08/04/07 00:08	JWT	EPA 8260B	
urrogate: 1	,2-Dichloroethane-d4 (73-137%)	132 %					-	00.08	3 77 1	EFA 8200B	7H03050

TestAmerica - Orlando, FL

Enid Ortiz For Shali Brown Project Manager 1146 7215



IRIS LANE

# TANK I EXCAVATION

A-SOIL TEST SIDE SAMPLE @ 42" B-SOIL TEST BOTTOM SAMPLE @ 66"



	<u> </u>	·
CUSTOMER:	SCALE:	FPC INC
BEAUFORT MILITARY COMPLEX FAMILY HOUSING	1/16"=1'-0"	LI G INC.
DEAGLORI MILATARI COMI DEA TRIMILI MOUDINO	SUPPLIER:	P.O. BOX 1096
SITE ADDRESS:	EPG INC.	MOUNT PLEASANT, SC 29465-1096
1146 IRIS LANE	DATE:	MODINI FLEXSANI, 3C 29403-1090

1146 1RIS LN 7-26-07 155" 248" BASE DEPTH 65" . . .

### Attachment 1

## South Carolina Department of Health and Environmental Control (SCDHEC)

## **Underground Storage Tank (UST) Assessment Report**



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

I. OWNERSHIP OF UST (S)

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

## 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
1146 Iris 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.
ì
Name (Type or print.)
Name (Type or print.)  Signature
Signature
Signature  To be completed by Notary Public:

,	VI. UST INFORMATION					
		1146Iris				
P	roduct(ex. Gas, Kerosene)	Heating oil				
C	Capacity(ex. 1k, 2k)	280 gal				
A	ge	Late 1950s				
C	onstruction Material(ex. Steel, FRP)	Steel				
M	Ionth/Year of Last Use	Mid 1980s				
D	Pepth (ft.) To Base of Tank	5'1"				
Sj	pill Prevention Equipment Y/N	No				
0	Overfill Prevention Equipment Y/N	No		<u> </u>		
M	Method of Closure Removed/Filled	Removed				
D	Pate Tanks Removed/Filled	3/15/2011				
V	isible Corrosion or Pitting Y/N	Yes				
V	isible Holes Y/N	Yes				
M	Method of disposal for any USTs removed from the UST 1146Iris was removed from the	· ·	-			
	Subtitle "D" landfill. See Attach	nment "A."				
	Method of disposal for any liquid petroleum, sludge isposal manifests)  UST 1146Iris was previously fille				e USTs (a	atta 

## VII. PIPING INFORMATION

	1146Iris
	Steel
Construction Material(ex. Steel, FRP)	& Copper
Distance from UST to Dispenser	N/A
Number of Dispensers	N/A
Type of System Pressure or Suction	Suction
Was Piping Removed from the Ground? Y/N	No
Visible Corrosion or Pitting Y/N	Yes
Visible Holes Y/N	No
Age	Late 1950s
If any corrosion, pitting, or holes were observed, de	scribe the location and extent for each piping run.
	on the surface of the steel vent
pipe. The copper supply and retu	
VIII. BRIEF SITE DESCRI	
The USTs at the residences are co	
and formerly contained fuel oil	
installed in the late 1950s and	last used in the mid 1980s.

## IX. SITE CONDITIONS

	Yes	No	Unk
A. Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells?  If yes, indicate depth and location on the site map.		Х	
11 yes, 111110111 esperante	<del> </del>		
B. Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells?		Х	
If yes, indicate location on site map and describe the odor (strong, mild, etc.)			
C. Was water present in the UST excavation, soil borings, or trenches?		х	
If yes, how far below land surface (indicate location and depth)?			
D. Did contaminated soils remain stockpiled on site after closure?		Х	
If yes, indicate the stockpile location on the site map.			
Name of DHEC representative authorizing soil removal:			
E. Was a petroleum sheen or free product detected on any excavation or boring waters?		х	
If yes, indicate location and thickness.			

## X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 84009

В.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA#
1146Iris	Excav at fill end	Soil	Sandy	5'1"	3/15/11 1100 hrs	P. Shaw	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

<sup>\* =</sup> Depth Below the Surrounding Land Surface

## XI. SAMPLING METHODOLOGY

Provide a detailed description of the methods used to collect <u>and</u> 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.

## XII. RECEPTORS

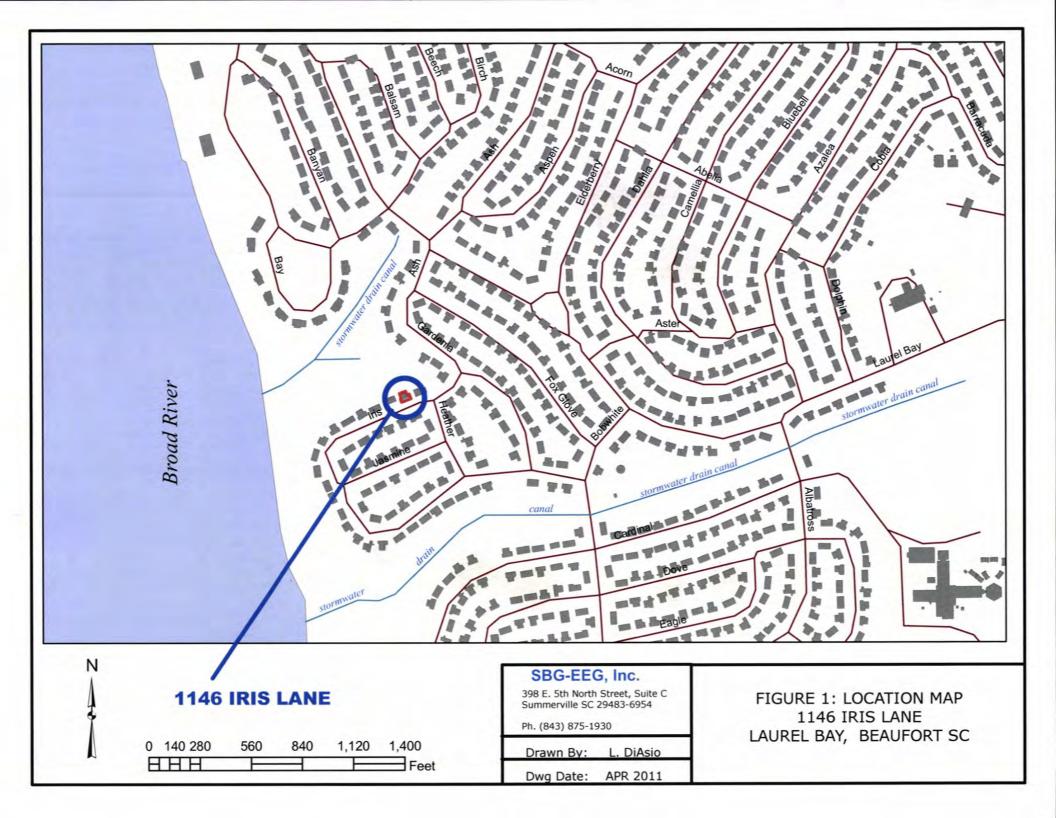
Yes No

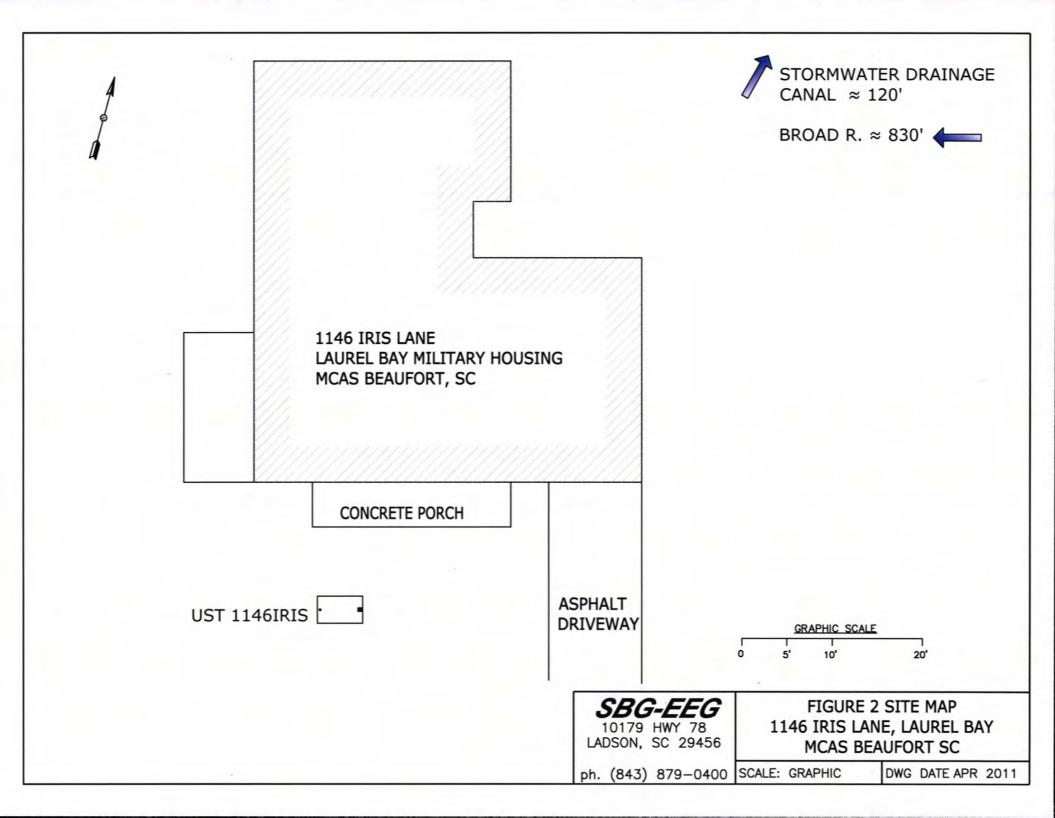
A.	Are there any lakes, ponds, streams, or wetlands located within	*X	
	1000 feet of the UST system? *Approx 120' to stormwate:	r cana	al
ĺ	& 830' to Broad River.		
	If yes, indicate type of receptor, distance, and direction on site map.		
B.	Are there any public, private, or irrigation water supply wells within		Х
	1000 feet of the UST system?		
	If yes, indicate type of well, distance, and direction on site map.		
C.	Are there any underground structures (e.g., basements)		Х
	Located within 100 feet of the UST system?		
	If you indicate type of etweetype dictance and direction on site		
	If yes, indicate type of structure, distance, and direction on site map.		
	map.		
D.	Are there any underground utilities (e.g., telephone, electricity, gas,	*X	
	water, sewer, storm drain) located within 100 feet of the UST	:	
	system that could potentially come in contact with the		
	contamination? *Sewer, water, ele	ctric	ity,
ĺ	cable & fiber opti	С	
	If yes, indicate the type of utility, distance, and direction on the site		
	map.		
E.	Has contaminated soil been identified at a depth less than 3 feet		Х
Ľ.	below land surface in an area that is not capped by asphalt or		^
	concrete?		
	If yes, indicate the area of contaminated soil on the site map.		
	Try to, mertane the area of commitments out on the old map.		

## XIII. SITE MAP

You must supply a <u>scaled</u> 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)







Picture 1: Location of UST 1146Iris.



Picture 2: UST 1146Iris tank pit.

## 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.

		<del>-</del>	 		Townig page.
CoC UST	1146Iris				
Benzene	ND		:		
Toluene	ND				
Ethylbenzene	0.00555 mg/	kg			
Xylenes	0.0184 mg/k	g			
Naphthalene	0.0407 mg/k	g		 	
Benzo (a) anthracene	ND				
Benzo (b) fluoranthene	ND				
Benzo (k) fluoranthene	ND				
Chrysene	ND				
Dibenz (a, h) anthracene	ND				
TPH (EPA 3550)					
СоС					
Benzene					· · · · · · · · · · · · · · · · · · ·
Toluene					
Ethylbenzene					
Xylenes					
Naphthalene					
Benzo (a) anthracene					
Benzo (b) fluoranthene					
Benzo (k) fluoranthene					
Chrysene					
Dibenz (a, h) anthracene					
TPH (EPA 3550)					

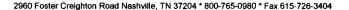
SUMMARY OF ANALYSIS RESULTS (cont'd)
Enter the ground water analytical data for each sample for all CoC in the table below. If free product is present, indicate the measured thickness to the nearest 0.01 feet.

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

### 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)





March 31, 2011

9:52:21AM

Client:

EEG - Small Business Group, Inc. (2449)

10179 Highway 78

Ladson, SC 29456

Attn:

Tom McElwee

Work Order:

NUC3441

Project Name:

Laurel Bay Housing Project

Project Nbr: P/O Nbr:

[none]

1027

Date Received:

ved: 03/19/11

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
1034 Foxglove	NUC3441-01	03/14/11 11:45
1081 Heather	NUC3441-02	03/14/11 16:30
1146 Iris	NUC3441-03	03/15/11 11:00
1142 Iris	NUC3441-04	03/15/11 16:00
1124 Iris	NUC3441-05	03/16/11 16:00

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

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

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.

Hoxarre L. Connor

This report has been electronically signed.

Report Approved By:

Roxanne Connor

Program Manager - Conventional Accounts



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NUC3441

Project Name:

Laurel Bay Housing Project

Project Number: [none]

Received:

03/19/11 08:15

### ANALYTICAL REPORT

						Dilution	Analysis			
Analyte	Result	Flag	Units	MDL	MRL	Factor	Date/Time	Method	Analyst	Batch
Sample ID: NUC3441-01 (1034 F	oxglove - Soil	) Sample	ed: 03/14/1	1 11:45						
General Chemistry Parameters										
% Dry Solids	80.7		%	0.500	0.500	1	03/30/11 14:37	SW-846	AMS	11C7014
Volatile Organic Compounds by EPA	Method 8260F	3								
Benzene	0.00169	J	mg/kg dry	0.00125	0.00227	1	03/28/11 13:42	SW846 8260B	МЈН	11C5212
Ethylbenzene	2.42		mg/kg dry	0.0711	0.145	50	03/28/11 17:20	SW846 8260B	МЈН	11C5212
Naphthalene	19.6	В1	mg/kg dry	2.47	7.26	1000	03/28/11 20:57	SW846 8260B	МЈН	11C5212
Toluene	0.0148		mg/kg dry	0.00101	0.00227	1	03/28/11 13:42	SW846 8260B	МЈН	11C5212
Xylenes, total	7.92		mg/kg dry	0.138	0.363	50	03/28/11 17:20	SW846 8260B	МЈН	11C5212
Surr: 1,2-Dichloroethane-d4 (67-138%)	96 %					1	03/28/11 13:42	SW846 8260B	МЈН	11C5212
Surr: 1,2-Dichloroethane-d4 (67-138%)	81 %					50	03/28/11 17:20	SW846 8260B	МЈН	11C5212
Surr: 1,2-Dichloroethane-d4 (67-138%)	93 %					1000	03/28/11 20:57	SW846 8260B	МЈН	11C5212
Surr: Dibromofluoromethane (75-125%)	100 %					1	03/28/11 13:42	SW846 8260B	МЈН	11C5212
Surr: Dibromofluoromethane (75-125%)	81 %					50	03/28/11 17:20	SW846 8260B	MJH	11C5212
Surr: Dibromofluoromethane (75-125%)	93 %					1000	03/28/11 20:57	SW846 8260B	МЈН	11C5212
Surr: Toluene-d8 (76-129%)	403 %	Z	X			1	03/28/11 13:42	SW846 8260B	МЈН	11C5212
Surr: Toluene-d8 (76-129%)	107 %					50	03/28/11 17:20	SW846 8260B	MJH	11C5212
Surr: Toluene-d8 (76-129%)	104 %					1000	03/28/11 20:57	SW846 8260B	MJH	11C5212
Surr: 4-Bromofluorobenzene (67-147%)	371 %	Z	X			1	03/28/11 13:42	SW846 8260B	MJH	11C5212
Surr: 4-Bromofluorobenzene (67-147%)	134 %					50	03/28/11 17:20	SW846 8260B	MJH	11C5212
Surr: 4-Bromofluorobenzene (67-147%)	99 %					1000	03/28/11 20:57	SW846 8260B	MJH	11C5212
Polyaromatic Hydrocarbons by EPA	8270D									
Acenaphthene	1.76		mg/kg dry	0.0173	0.0827	1	03/24/11 22:18	SW846 8270D	KJP	11C5269
Acenaphthylene	ND		mg/kg dry	0.0247	0.0827	1	03/24/11 22:18	SW846 8270D	KJP	11C5269
Anthracene	ND		mg/kg dry	0.0111	0.0827	1	03/24/11 22:18	SW846 8270D	KJP	11C5269
Benzo (a) anthracene	0.0839		mg/kg dry	0.0136	0.0827	1	03/24/11 22:18	SW846 8270D	KJP	11C5269
Benzo (a) pyrene	ND		mg/kg dry	0.00987	0.0827	1	03/24/11 22:18	SW846 8270D	KJP	11C5269
Benzo (b) fluoranthene	ND		mg/kg dry	0.0469	0.0827	1	03/24/11 22:18	SW846 8270D	KJP	11C5269
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0111	0.0827	1	03/24/11 22:18	SW846 8270D	KJP	11C5269
Benzo (k) fluoranthene	ND		mg/kg dry	0.0456	0.0827	1	03/24/11 22:18	SW846 8270D	KJP	11C5269
Chrysene	0.134		mg/kg dry	0.0382	0.0827	1	03/24/11 22:18	SW846 8270D	KJP	11C5269
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0185	0.0827	1	03/24/11 22:18	SW846 8270D	KJP	11C5269
Fluoranthene	ND		mg/kg dry	0.0136	0.0827	1	03/24/11 22:18	SW846 8270D	KJP	11C5269
Fluorene	ND		mg/kg dry	0.0247	0.0827	1	03/24/11 22:18	SW846 8270D	KJP	11C5269
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0382	0.0827	1	03/24/11 22:18	SW846 8270D	KJP	11C5269
Naphthalene	14.3		mg/kg dry	0.173	0.827	10	03/25/11 23:53	SW846 8270D	KJP	11C5269
Phenanthrene	9.16		mg/kg dry	0.123	0.827	10	03/25/11 23:53	SW846 8270D	KJP	11C5269
Pyrene	1.04		mg/kg dry	0.0284	0.0827	1	03/24/11 22:18	SW846 8270D	KJP	11C5269
l-Methylnaphthalene	30.1		mg/kg dry	0.148	0.827	10	03/25/11 23:53	SW846 8270D	KJP	11C5269
2-Methylnaphthalene	43.3		mg/kg dry	1.30	4.13	50	03/26/11 00:15	SW846 8270D	KJP	11C5269
Surr: Terphenyl-d14 (18-120%)	81 %			1.20		1	03/24/11 22:18	SW846 8270D	KJP	11C5269



10179 Highway 78 Ladson, SC 29456

Ladson, SC 29456 Tom McElwee

Attn

Work Order:

Received:

NUC3441

Project Name:

Laurel Bay Housing Project

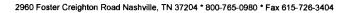
Project Number: [ne

[none]

03/19/11 08:15

AR	TAT	VT	ICAL	DI	E DA	DТ
AI	I A I	. Y I	II. AI	. K	r.Ptj	кі

						Dilution	Analysis			
Analyte	Result	Flag	Units	MDL	MRL	Factor	Date/Time	Method	Analyst	Batch
Sample ID: NUC3441-01 (1034 F	Foxglove - Soi	l) - cont.	Sampled:	03/14/11 11:	45					
Polyaromatic Hydrocarbons by EPA	8270D - cont.									
Surr: 2-Fluorobiphenyl (14-120%)	79 %					1	03:24:11 22:18	SW846 8270D	KJP	11C5269
Surr: Nitrobenzene-d5 (17-120%)	63 %					1	03/24/11 22:18	SW846 8270D	KJP	11C5269
Sample ID: NUC3441-02 (1081 F	Heather - Soil	) Sample	d: 03/14/1	1 16:30						
General Chemistry Parameters										
% Dry Solids	80.8		%	0.500	0.500	1	03/30/11 14:37	SW-846	AMS	11C7014
Volatile Organic Compounds by EPA	A Method 8260	В								
Benzene	ND		mg/kg dry	0.00119	0.00216	1	03/28/11 14:13	SW846 8260B	МЈН	11C5212
Ethylbenzene	0.216		mg/kg dry	0.00106	0.00216	1	03/28/11 14:13	SW846 8260B	МЈН	11C5212
Naphthalene	0.568	B1, E	mg/kg dry	0.00184	0.00541	1	03/28/11 14:13	SW846 8260B	МЈН	11C5212
Toluene	0.0333		mg/kg dry	0.000963	0.00216	1	03/28/11 14:13	SW846 8260B	МЈН	11C5212
Xylenes, total	0.705	E	mg/kg dry	0.00206	0.00541	1	03/28/11 14:13	SW846 8260B	МЈН	11C5212
Surr: 1,2-Dichloroethane-d4 (67-138%)	90 %					1	03 28 11 14:13	SW846 8260B	MJH	11C5212
Surr: Dibromofluoromethane (75-125%)	90 %					1	03 28:11 14:13	SW846 8260B	MJH	11C5212
Surr: Toluene-d8 (76-129%)	116 %					1	03/28/11 14:13	SW846 8260B	MJH	11C5212
Surr: 4-Bromofluorobenzene (67-147%)	87 %					1	03/28/11 14:13	SW846 8260B	MJH	11C5212
Polyaromatic Hydrocarbons by EPA	8270D									
Acenaphthene	1.39		mg/kg dry	0.0172	0.0826	1	03/24/11 22:40	SW846 8270D	KJP	11C5269
Acenaphthylene	ND		mg/kg dry	0.0246	0.0826	1	03/24/11 22:40	SW846 8270D	KJP	11C5269
Anthracene	7.03		mg/kg dry	0.111	0.826	10	03/26/11 00:38	SW846 8270D	KJP	11C5269
Benzo (a) anthracene	15.8		mg/kg dry	0.136	0.826	10	03/26/11 00:38	SW846 8270D	KJP	11C5269
Benzo (a) pyrene	5.92		mg/kg dry	0.0986	0.826	10	03/26/11 00:38	SW846 8270D	KJP	11C5269
Benzo (b) fluoranthene	8.21		mg/kg dry	0.468	0.826	10	03/26/11 00:38	SW846 8270D	KJP	11C5269
Benzo (g,h,i) perylene	1.47		mg/kg dry	0.0111	0.0826	1	03/24/11 22:40	SW846 8270D	KJP	11C5269
Benzo (k) fluoranthene	5.79		mg/kg dry	0.456	0.826	10	03/26/11 00:38	SW846 8270D	KJP	11C5269
Chrysene	14.6		mg/kg dry	0.382	0.826	10	03/26/11 00:38	SW846 8270D	KJP	11C5269
Dibenz (a,h) anthracene	0.158		mg/kg dry	0.0185	0.0826	1	03/24/11 22:40	SW846 8270D	KJP	11C5269
Fluoranthene	43.7		mg/kg dry	0.678	4.13	50	03/26/11 00:59	SW846 8270D	КЈР	11C5269
Fluorene	3.81		mg/kg dry	0.0246	0.0826	1	03/24/11 22:40	SW846 8270D	KJP	11C5269
Indeno (I,2,3-cd) pyrene	1.53		mg/kg dry	0.0382	0.0826	1	03/24/11 22:40	SW846 8270D	KJP	11C5269
Naphthalene	5.58		mg/kg dry	0.172	0.826	10	03/26/11 00:38	SW846 8270D	KJP	11C5269
Phenanthrene	31.7		mg/kg dry	0.123	0.826	10	03/26/11 00:38	SW846 8270D	KJP	11C5269
Pyrene	33.8		mg/kg dry	0.283	0.826	10	03/26/11 00:38	SW846 8270D	KJP	11C5269
1-Methylnaphthalene	25.4		mg/kg dry	0.148	0.826	10	03/26/11 00:38	SW846 8270D	KJP	11C5269
2-Methylnaphthalene	41.0		mg/kg dry	0.259	0.826	10	03/26/11 00:38	SW846 8270D	KJP	11C5269
Surr: Terphenyl-d14 (18-120%)	74 %					1	03/24/11 22:40	SW846 8270D	KJP	11C5269
Surr: 2-Fluorobiphenyl (14-120%)	54 %					1	03 24 11 22:40	SW846 8270D	KJP	11C5269
Surr: Nitrobenzene-d5 (17-120%)	77 %					1	03 24 11 22:40	SW846 8270D	KJP	11C5269





10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NUC3441

Project Name:

Laurel Bay Housing Project

Project Number:

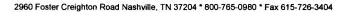
[none]

Received:

03/19/11 08:15

### ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
Sample ID: NUC3441-03 (1146 I	Iris - Soil) Sam	pled: 03	3/15/11 11:	00						
General Chemistry Parameters										
% Dry Solids	81.8		%	0.500	0.500	1	03/30/11 14:37	SW-846	AMS	11C7014
Volatile Organic Compounds by EPA	A Method 8260I	3								
Benzene	ND		mg/kg dry	0.00194	0.00352	1	03/28/11 16:49	SW846 8260B	МЈН	11C5212
Ethylbenzene	0,00555		mg/kg dry	0.00173	0.00352	1	03/28/11 16:49	SW846 8260B	МЈН	11C5212
Naphthalene	0.0407	В1	mg/kg dry	0.00300	0.00881	1	03/28/11 16:49	SW846 8260B	MJH	11C5212
Toluene	ND		mg/kg dry	0.00157	0.00352	1	03/28/11 16:49	SW846 8260B	MJH	11C5212
Xylenes, total	0.0184		mg/kg dry	0.00335	0.00881	1	03/28/11 16:49	SW846 8260B	МЈН	11C5212
Surr: 1,2-Dichloroethane-d4 (67-138%)	90 %					1	03/28/11 16:49	SW846 8260B	МЈН	11C5212
Surr: Dibromofluoromethane (75-125%)	90 %					1	03/28/11 16:49	SW846 8260B	MJH	11C5212
Surr: Toluene-d8 (76-129%)	112 %					I	03/28/11 16:49	SW846 8260B	MJH	11C5212
Surr: 4-Bromofluorobenzene (67-147%)	110 %					1	03/28/11 16:49	SW846 8260B	МЈН	11C5212
Polyaromatic Hydrocarbons by EPA	8270D									
Acenaphthene	ND		mg/kg dry	0.0168	0.0802	1	03/24/11 23:02	SW846 8270D	КЈР	11C5269
Acenaphthylene	ND		mg/kg dry	0.0239	0.0802	1	03/24/11 23:02	SW846 8270D	КЈР	11C5269
Anthracene	ND		mg/kg dry	0.0108	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
Benzo (a) anthracene	ND		mg/kg dry	0.0132	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
Benzo (a) pyrene	ND		mg/kg dry	0.00958	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
Benzo (b) fluoranthene	ND		mg/kg dry	0.0455	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0108	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
Benzo (k) fluoranthene	ND		mg/kg dry	0.0443	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
Chrysene	ND		mg/kg dry	0.0371	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0180	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
Fluoranthene	0.0487	J	mg/kg dry	0.0132	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
Fluorene	ND		mg/kg dry	0.0239	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0371	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
Naphthalene	ND		mg/kg dry	0.0168	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
Phenanthrene	0.0714	J	mg/kg dry	0.0120	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
Pyrene	0,0423	J	mg/kg dry	0.0275	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
1-Methylnaphthalene	0.0862		mg/kg dry	0.0144	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
2-Methylnaphthalene	0.146		mg/kg dry	0.0251	0.0802	1	03/24/11 23:02	SW846 8270D	KJP	11C5269
Surr: Terphenyl-d14 (18-120%)	72 %					1	03 24 11 23:02	SW846 8270D	KJP	11C5269
Surr: 2-Fluorobiphenyl (14-120%)	57 %					1	03:24 11 23:02	SW846 8270D	KJP	11C5269
Surr: Nitrobenzene-d5 (17-120%)	64 %					1	03/24/11 23:02	SW846 8270D	KJP	11C5269





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NUC3441

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received:

03/19/11 08:15

### ANALYTICAL REPORT

						Dilution	Analysis			
Analyte	Result	Flag	Units	MDL	MRL	Factor	Date/Time	Method	Analyst	Batch
Sample ID: NUC3441-04 (1142 I	ris - Soil) Sam	pled: 03	3/15/11 16:	00						
General Chemistry Parameters										
% Dry Solids	79.9		%	0.500	0,500	1	03/30/11 14:37	SW-846	AMS	11C7014
Volatile Organic Compounds by EPA	A Method 8260I	3								
Benzene	ND		mg/kg dry	0.00160	0.00291	1	03/28/11 15:16	SW846 8260B	МЈН	11C5212
Ethylbenzene	0.202		mg/kg dry	0.00143	0.00291	1	03/28/11 15:16	SW846 8260B	МЈН	11C5212
Naphthalene	0.216	В1	mg/kg dry	0.00247	0.00728	1	03/28/11 15:16	SW846 8260B	МЈН	11C5212
Toluene	0.00163	J	mg/kg dry	0.00130	0.00291	1	03/28/11 15:16	SW846 8260B	MJH	11C5212
Xylenes, total	0.0757		mg/kg dry	0.00277	0.00728	1	03/28/11 15:16	SW846 8260B	MJH	11C5212
Surr: 1,2-Dichloroethane-d4 (67-138%)	90 %					1	03/28/11 15:16	SW846 8260B	MJH	11C521.
Surr: Dibromofluoromethane (75-125%)	90 %				•	1	03/28/11 15:16	SW846 8260B	MJH	11C521.
Surr: Toluene-d8 (76-129%)	121 %					I	03/28/11 15:16	SW846 8260B	MJH	11C521.
Surr: 4-Bromofluorobenzene (67-147%)	421 %	Z	Y			1	03 28/11 15:16	SW846 8260B	<i>MJH</i>	11C521.
Polyaromatic Hydrocarbons by EPA	8270D									
Acenaphthene	0.906		mg/kg dry	0.0173	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
Acenaphthylene	ND		mg/kg dry	0.0247	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
Anthracene	0.488		mg/kg dry	0.0111	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
Benzo (a) anthracene	ND		mg/kg dry	0.0136	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
Benzo (a) pyrene	ND		mg/kg dry	0.00987	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
Benzo (b) fluoranthene	ND		mg/kg dry	0.0469	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0111	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
Benzo (k) fluoranthene	ND		mg/kg dry	0.0457	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
Chrysene	0.0601	J	mg/kg dry	0.0383	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0185	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
Fluoranthene	0.159		mg/kg dry	0.0136	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
Fluorene	2.06		mg/kg dry	0.0247	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0383	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
Naphthalene	1.38		mg/kg dry	0.0173	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
Phenanthrene	6.35		mg/kg dry	0.123	0.827	10	03/26/11 01:22	SW846 8270D	KJP	11C5269
Pyrene	0.449		mg/kg dry	0.0284	0.0827	1	03/24/11 23:24	SW846 8270D	KJP	11C5269
1-Methylnaphthalene	12.0		mg/kg dry	0.148	0.827	10	03/26/11 01:22	SW846 8270D	КЈР	11C5269
2-Methylnaphthalene	19.2		mg/kg dry	0.259	0.827	10	03/26/11 01:22	SW846 8270D	КЈР	11C5269
	92 %					1	03.24 11 23:24	SW846 8270D	KJP	11C5269
Surr: 2-Fluorobiphenyl (14-120%)	7 <b>0</b> %					1	03 24 11 23:24	SW846 8270D	KJP	11C5269
Surr: Nitrobenzene-d5 (17-120%)	74%					1	03 24:11 23:24	SW846 8270D	KJP	11C5269



10179 Highway 78 Ladson, SC 29456

Tom McElwee

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Work Order:

NUC3441

Project Name:

Laurel Bay Housing Project

Project Number: [none]

Received: 03/19/11 08:15

A	NA	T	VI	TC	ΔI	D	FP(	ORT	

						Dilution	Analysis			
Analyte	Result	Flag	Units	MDL	MRL	Factor	Date/Time	Method	Analyst	Batc
Sample ID: NUC3441-05 (1124 I	ris - Soil) Sam	pled: 03	3/16/11 16:	00						
General Chemistry Parameters										
% Dry Solids	82.8		%	0.500	0.500	1	03/30/11 14:37	SW-846	AMS	11C701
Volatile Organic Compounds by EPA	A Method 8260F	3								
Benzene	0.0396		mg/kg dry	0.00107	0.00194	1	03/28/11 15:47	SW846 8260B	МЈН	11C5212
Ethylbenzene	5.44		mg/kg dry	0.0497	0.101	50	03/28/11 18:53	SW846 8260B	МЈН	11C521
Naphthalene	33.8	В1	mg/kg dry	1.73	5.07	1000	03/28/11 19:24	SW846 8260B	МЈН	11C521
Toluene	ND		mg/kg dry	0.0452	0.101	50	03/28/11 18:53	SW846 8260B	МЈН	11C5212
Xylenes, total	6.04		mg/kg dry	0.0964	0.254	50	03/28/11 18:53	SW846 8260B	МЈН	11C5212
Surr: 1,2-Dichloroethane-d4 (67-138%)	97 %					1	03/28/11 15:47	SW846 8260B	MJH	11C521
Surr: 1,2-Dichloroethane-d4 (67-138%)	82 %					50	03/28/11 18:53	SW846 8260B	МЈН	11C521
Surr: 1,2-Dichloroethane-d4 (67-138%)	93 %					1000	03/28/11 19:24	SW846 8260B	МЈН	11C521
Surr: Dibromofluoromethane (75-125%)	97 %					1	03/28/11 15:47	SW846 8260B	МЈН	11C521
Surr: Dibromofluoromethane (75-125%)	80 %					50	03/28/11 18:53	SW846 8260B	МЈН	11C521
Surr: Dibromofluoromethane (75-125%)	92 %					1000	03/28/11 19:24	SW846 8260B	MJH	11C521
Surr: Toluene-d8 (76-129%)	552 %	Z	r			1	03/28/11 15:47	SW846 8260B	MJH	11C521
Surr: Toluene-d8 (76-129%)	113 %					50	03/28/11 18:53	SW846 8260B	MJH	11C521
Surr: Toluene-d8 (76-129%)	104 %					1000	03/28/11 19:24	SW846 8260B	MJH	11C521
Surr: 4-Bromofluorobenzene (67-147%)	267 %	Z	Y.			1	03/28/11 15:47	SW846 8260B	MJH	11C52
Surr: 4-Bromofluorobenzene (67-147%)	133 %					50	03/28/11 18:53	SW846 8260B	MJH	11C521
Surr: 4-Bromofluorobenzene (67-147%)	89 %					1000	03/28/11 19:24	SW846 8260B	MJH	11C521
Polyaromatic Hydrocarbons by EPA	8270D									
Acenaphthene	1.50		mg/kg dry	0.0166	0.0796	1	03/24/11 23:46	SW846 8270D	KJP	11C5269
Acenaphthylene	ND		mg/kg dry	0.0238	0.0796	1	03/24/11 23:46	SW846 8270D	KJP	11C5269
Anthracene	0.771		mg/kg dry	0.0107	0.0796	1	03/24/11 23:46	SW846 8270D	KJP	11C5269
Benzo (a) anthracene	ND		mg/kg dry	0.0131	0.0796	1	03/24/11 23:46	SW846 8270D	KJP	11C5269
Benzo (a) pyrene	ND		mg/kg dry	0.00951	0.0796	1	03/24/11 23:46	SW846 8270D	KJP	11C5269
Benzo (b) fluoranthene	ND		mg/kg dry	0.0452	0.0796	1	03/24/11 23:46	SW846 8270D	KJP	11C5269
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0107	0.0796	1	03/24/11 23:46	SW846 8270D	KJP	11C5269
Benzo (k) fluoranthene	ND		mg/kg dry	0.0440	0.0796	1	03/24/11 23:46	SW846 8270D	KJP	11C5269
Chrysene	0.0860		mg/kg dry	0.0368	0.0796	1	03/24/11 23:46	SW846 8270D	KJP	11C5269
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0178	0.0796	1	03/24/11 23:46	SW846 8270D	KJP	11C5269
Fluoranthene	0.219		mg/kg dry	0.0131	0.0796	1	03/24/11 23:46	SW846 8270D	KJP	11C5269
luorene	3.21		mg/kg dry	0.0238	0.0796	i	03/24/11 23:46	SW846 8270D	KJP	11C5269
ndeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0368	0.0796	1	03/24/11 23:46	SW846 8270D	KJP	11C5269
Naphthalene	12.1		mg/kg dry	0.166	0.796	10	03/26/11 01:44	SW846 8270D	KJP	11C5269
Phenanthrene	10.8		mg/kg dry	0.119	0.796	10	03/26/11 01:44	SW846 8270D	КЈР	11C526
Pyrene	0.618		mg/kg dry	0.0273	0.0796	1	03/24/11 23:46	SW846 8270D	KJP	11C526
l-Methylnaphthalene	30.5		mg/kg dry	0.143	0.796	10	03/26/11 01:44	SW846 8270D	KJP	11C5269
2-Methylnaphthalene	44.4		mg/kg dry	0.499	1.59	20	03/26/11 02:07	SW846 8270D	KJP	11C5269
Surr: Terphenyl-d14 (18-120%)	93 %					1	03/24/11 23:46	SW846 8270D	<i>KJP</i>	11C526





10179 Highway 78 Ladson, SC 29456

Ladson, SC 29456
Tom McElwee

Attn

Work Order:

NUC3441

Project Name:

Laurel Bay Housing Project

Project Number:

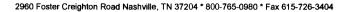
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Received:

03/19/11 08:15

ANA	LVTI	CAT.	REPO	RT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
Sample ID: NUC3441-05 (1124	I Iris - Soil) - con	t. Sampl	ed: 03/16/	11 16:00						
Polyaromatic Hydrocarbons by EP	A 8270D - cont.									
Surr: 2-Fluorobiphenyl (14-120%)	76 %					1	03/24/11 23:46	SW846 8270D	KJP	11C5269
Surr: Nitrobenzene-d5 (17-120%)	79 %					,	03/24/11/23:46	SW846 8270D	K IP	110'5269





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NUC3441

Project Name:

Laurel Bay Housing Project

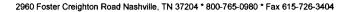
Project Number: [none]

Received:

03/19/11 08:15

### SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extract Vol	Date	Analyst	Extraction Method
Polyaromatic Hydrocarbons by EPA 8270	DD						
SW846 8270D	11C5269	NUC3441-01	30.14	1.00	03/24/11 09:30	SAS	EPA 3550C
SW846 8270D	11C5269	NUC3441-01RE1	30.14	1.00	03/24/11 09:30	SAS	EPA 3550C
SW846 8270D	11C5269	NUC3441-01RE2	30.14	1.00	03/24/11 09:30	SAS	EPA 3550C
SW846 8270D	11C5269	NUC3441-02	30.13	1.00	03/24/11 09:30	SAS	EPA 3550C
SW846 8270D	11C5269	NUC3441-02RE1	30.13	1.00	03/24/11 09:30	SAS	EPA 3550C
SW846 8270D	11C5269	NUC3441-02RE2	30.13	1.00	03/24/11 09:30	SAS	EPA 3550C
SW846 8270D	11C5269	NUC3441-03	30.64	1.00	03/24/11 09:30	SAS	EPA 3550C
SW846 8270D	11C5269	NUC3441-04	30.43	1.00	03/24/11 09:30	SAS	EPA 3550C
SW846 8270D	11C5269	NUC3441-04RE1	30.43	1.00	03/24/11 09:30	SAS	EPA 3550C
SW846 8270D	11C5269	NUC3441-05	30.48	1.00	03/24/11 09:30	SAS	EPA 3550C
SW846 8270D	11C5269	NUC3441-05RE1	30.48	1.00	03/24/11 09:30	SAS	EPA 3550C
SW846 8270D	11C5269	NUC3441-05RE2	30.48	1.00	03/24/11 09:30	SAS	EPA 3550C
Volatile Organic Compounds by EPA Me	thod 8260B						
SW846 8260B	11C5212	NUC3441-01	5.45	5.00	03/14/11 11:45	TSP	EPA 5035
SW846 8260B	11C5212	NUC3441-01RE1	4.27	5.00	03/14/11 11:45	TSP	EPA 5035
SW846 8260B	11C5212	NUC3441-01RE2	4.27	5.00	03/14/11 11:45	TSP	EPA 5035
SW846 8260B	11C5212	NUC3441-02	5.72	5.00	03/14/11 16:30	TSP	EPA 5035
SW846 8260B	11C5212	NUC3441-02RE1	5.18	5.00	03/14/11 16:30	TSP	EPA 5035
SW846 8260B	11C5212	NUC3441-02RE2	5,73	5.00	03/14/11 16:30	TSP	EPA 5035
SW846 8260B	11C5212	NUC3441-02RE3	5.18	5.00	03/14/11 16:30	TSP	EPA 5035
SW846 8260B	11C5212	NUC3441-03	5.95	5.00	03/15/11 11:00	TSP	EPA 5035
SW846 8260B	11C5212	NUC3441-03RE1	3.47	5.00	03/15/11 11:00	TSP	EPA 5035
SW846 8260B	11C5212	NUC3441-04	4.30	5.00	03/15/11 16:00	TSP	EPA 5035
SW846 8260B	11C5212	NUC3441-05	6.22	5.00	03/16/11 16:00	TSP	EPA 5035
SW846 8260B	11C5212	NUC3441-05RE1	5.95	5.00	03/16/11 16:00	TSP	EPA 5035
SW846 8260B	11C5212	NUC3441-05RE2	5,95	5.00	03/16/11 16:00	TSP	EPA 5035





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order: NUC3441

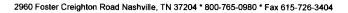
Project Name: Laurel Bay Housing Project

Project Number: [none]

Received: 03/19/11 08:15

### PROJECT QUALITY CONTROL DATA Blank

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
Volatile Organic Compounds by I	EPA Method 8260B					
11C5212-BLK1						
Benzene	< 0.00110		mg/kg wet	11C5212	11C5212-BLK1	03/28/11 12:41
Ethylbenzene	<0.000980		mg/kg wet	11C5212	11C5212-BLK1	03/28/11 12:41
Naphthalene	0.00217	J	mg/kg wet	11C5212	11C5212-BLK1	03/28/11 12:41
Toluene	<0.000890		mg/kg wet	11C5212	11C5212-BLK1	03/28/11 12:41
Xylenes, total	< 0.00190		mg/kg wet	11C5212	11C5212-BLK1	03/28/11 12:41
Surrogate: 1,2-Dichloroethane-d4	106%			11C5212	11C5212-BLK1	03/28/11 12:41
Surrogate: Dibromofluoromethane	106%			11C5212	11C5212-BLK1	03/28/11 12:41
Surrogate: Toluene-d8	101%			11C5212	11C5212-BLK1	03/28/11 12:41
Surrogate: 4-Bromofluorobenzene	118%			11C5212	11C5212-BLK1	03/28/11 12:41
11C5212-BLK2						
Benzene	< 0.0550		mg/kg wet	11C5212	11C5212-BLK2	03/28/11 13:12
Ethylbenzene	< 0.0490		mg/kg wet	11C5212	11C5212-BLK2	03/28/11 13:12
Naphthalene	0.110	J	mg/kg wet	11C5212	11C5212-BLK2	03/28/11 13:12
Toluene	< 0.0445		mg/kg wet	11C5212	11C5212-BLK2	03/28/11 13:12
Xylenes, total	< 0.0950		mg/kg wet	11C5212	11C5212-BLK2	03/28/11 13:12
Surrogate: 1,2-Dichloroethane-d4	98%			11C5212	11C5212-BLK2	03/28/11 13:12
Surrogate: Dibromofluoromethane	94%			11C5212	11C5212-BLK2	03/28/11 13:12
Surrogate: Toluene-d8	103%			11C5212	11C5212-BLK2	03/28/11 13:12
Surrogate: 4-Bromofluorobenzene	119%			11C5212	11C5212-BLK2	03/28/11 13:12
Polyaromatic Hydrocarbons by E	PA 8270D					
11C5269-BLK1						·
Acenaphthene	< 0.0140		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Acenaphthylene	< 0.0200		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Anthracene	<0.00900		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Benzo (a) anthracene	< 0.0110		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Benzo (a) pyrene	< 0.00800		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Benzo (b) fluoranthene	< 0.0380		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Benzo (g,h,i) perylene	< 0.00900		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Benzo (k) fluoranthene	< 0.0370		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Chrysene	< 0.0310		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Dibenz (a,h) anthracene	< 0.0150		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Fluoranthene	< 0.0110		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Fluorene	< 0.0200		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Indeno (1,2,3-cd) pyrene	< 0.0310		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Naphthalene	< 0.0140		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Phenanthrene	< 0.0100		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
Pyrene	< 0.0230		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
1-Methylnaphthalene	<0.0120		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53
2-Methylnaphthalene	< 0.0210		mg/kg wet	11C5269	11C5269-BLK1	03/24/11 17:53





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NUC3441

Project Name:

Laurel Bay Housing Project

Project Number: [r

[none]

Received: 03/19/11 08:15

## PROJECT QUALITY CONTROL DATA Blank - Cont.

Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
EPA 8270D					
80%			11C5269	11C5269-BLK1	03/24/11 17:53
79%			11C5269	11C5269-BLK1	03/24/11 17:53
75%			11C5269	11C5269-BLK1	03/24/11 17:53
	<b>EPA 8270D</b> 80% 79%	EPA 8270D 80% 79%	EPA 8270D 80% 79%	80% 11C5269 79% 11C5269	EPA 8270D  80% 11C5269 11C5269-BLK1 79% 11C5269-BLK1



THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

Client EEG - Small Business Group, Inc. (2449)

10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order: Project Name: NUC3441

roject Name: Laurel Bay Housing Project

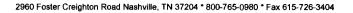
Project Number: [none]

Received: 03/19/11 08:15

### PROJECT QUALITY CONTROL DATA

### Duplicate

Analyte	Orig. Val.	Duplicate	Q	Units	RPD	Limit	Batch	Sample Duplicated	% Rec.	Analyzed Date/Time
General Chemistry Parameters 11C7014-DUP1										
% Dry Solids	97.8	97.7		%	0.1	20	11C7014	NUC3440-08		03/30/11 14:37





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NUC3441

Project Name:

Laurel Bay Housing Project

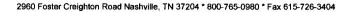
Project Number: [none]

Received:

03/19/11 08:15

## PROJECT QUALITY CONTROL DATA LCS

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
Volatile Organic Compounds by El	PA Method 8260B							
11C5212-BS1								
Benzene	50.0	50.8		ug/kg	102%	78 - 126	11C5212	03/28/11 11:39
Ethylbenzene	50.0	60.2		ug/kg	120%	79 - 130	11C5212	03/28/11 11:39
Naphthalene	50.0	62.2		ug/kg	124%	72 - 150	11C5212	03/28/11 11:39
Toluene	50.0	57.5		ug/kg	115%	76 - 126	11C5212	03/28/11 11:39
Xylenes, total	150	177		ug/kg	118%	80 - 130	11C5212	03/28/11 11:39
Surrogate: 1,2-Dichloroethane-d4	50.0	46.9			94%	67 - 138	11C5212	03/28/11 11:39
Surrogate: Dibromofluoromethane	50.0	46.2			92%	75 - 125	11C5212	03/28/11 11:39
Surrogate: Toluene-d8	50.0	51.4			103%	76 - 129	11C5212	03/28/11 11:39
Surrogate: 4-Bromofluorobenzene	50.0	57.3			115%	67 - 147	11C5212	03/28/11 11:39
Polyaromatic Hydrocarbons by EP	'A 8270D							
1C5269-BS1								
Acenaphthene	1.67	1.39	MNR	mg/kg wet	83%	49 - 120	11C5269	03/24/11 18:1
Acenaphthylene	1.67	1.41	MNR	mg/kg wet	84%	52 - 120	11C5269	03/24/11 18:1
Anthracene	1.67	1.60	MNR	mg/kg wet	96%	58 - 120	11C5269	03/24/11 18:1
Benzo (a) anthracene	1.67	1.54	MNR	mg/kg wet	92%	57 - 120	11C5269	03/24/11 18:1
Benzo (a) pyrene	1.67	1.53	MNR	mg/kg wet	92%	55 - 120	11C5269	03/24/11 18:1
Benzo (b) fluoranthene	1.67	1.44	MNR	mg/kg wet	86%	51 - 123	11C5269	03/24/11 18:1:
Benzo (g,h,i) perylene	1.67	1.53	MNR	mg/kg wet	92%	49 - 121	11C5269	03/24/11 18:1:
Benzo (k) fluoranthene	1.67	1.63	MNR	mg/kg wet	98%	42 - 129	11C5269	03/24/11 18:1
Chrysene	1.67	1.50	MNR	mg/kg wet	90%	55 - 120	11C5269	03/24/11 18:1:
Dibenz (a,h) anthracene	1.67	1.54	MNR	mg/kg wet	92%	50 - 123	11C5269	03/24/11 18:1
Fluoranthene	1.67	1.55	MNR	mg/kg wet	93%	58 - 120	11C5269	03/24/11 18:1
Fluorene	1.67	1.49	MNR	mg/kg wet	90%	54 - 120	11C5269	03/24/11 18:1:
Indeno (1,2,3-cd) pyrene	1.67	1.54	MNR	mg/kg wet	92%	50 - 122	11C5269	03/24/11 18:1
Naphthalene	1.67	1.25	MNR	mg/kg wet	75%	28 - 120	11C5269	03/24/11 18:1
Phenanthrene	1.67	1.57	MNR	mg/kg wet	94%	56 - 120	11C5269	03/24/11 18:1
Pyrene	1.67	1.56	MNR	mg/kg wet	93%	56 - 120	11C5269	03/24/11 18:1:
1-Methylnaphthalene	1.67	1.14	MNR	mg/kg wet	69%	36 - 120	11C5269	03/24/11 18:1:
2-Methylnaphthalene	1.67	1.26	MNR	mg/kg wet	75%	36 - 120	11C5269	03/24/11 18:1:
Surrogate: Terphenyl-d14	1.67	1.34			81%	18 - 120	11C5269	03/24/11 18:1
Surrogate: 2-Fluorobiphenyl	1.67	1.26			76%	14 - 120	11C5269	03/24/11 18:1:
Surrogate: Nitrobenzene-d5	1.67	1.08			65%	17 - 120	11C5269	03/24/11 18:1





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NUC3441

Project Name:

Laurel Bay Housing Project

Project Number: [none]

Received:

03/19/11 08:15

## PROJECT QUALITY CONTROL DATA Matrix Spike

Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
Volatile Organic Compounds by I	EPA Method 826	0B			-				·	
11C5212-MS1										
Benzene	ND	54.5		ug/kg	50.0	109%	42 - 141	11C5212	NUC3441-02R E1	03/28/11 21:28
Ethylbenzene	31.5	61.1		ug/kg	50.0	59%	21 - 165	11C5212	NUC3441-02R E1	03/28/11 21:28
Naphthalene	360	63.8	M8	ug/kg	50.0	-591%	10 - 160	11C5212	NUC3441-02R E1	03/28/11 21:28
Toluene	13.5	56.7		ug/kg	50.0	86%	45 - 145	11C5212	NUC3441-02R E1	03/28/11 21:28
Xylenes, total	104	178		ug/kg	150	49%	31 - 159	11C5212	NUC3441-02R E1	03/28/11 21:28
Surrogate: 1,2-Dichloroethane-d4		48.7		ug/kg	50.0	97%	67 - 138	11C5212	NUC3441-02R E1	03/28/11 21:28
Surrogate: Dibromofluoromethane		48.8		ug/kg	50.0	98%	75 - 125	11C5212	NUC3441-02R E1	03/28/11 21:28
Surrogate: Toluene-d8		51.6		ug/kg	50.0	103%	76 - 129	11C5212	NUC3441-02R E1	03/28/11 21:28
Surrogate: 4-Bromofluorobenzene		58.0		ug/kg	50.0	116%	67 - 147	11C5212	NUC3441-02R E1	03/28/11 21:28



10179 Highway 78 Ladson, SC 29456

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Attn

Work Order:

NUC3441

Project Name:

Laurel Bay Housing Project

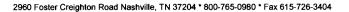
Project Number: [none]

Received:

03/19/11 08:15

## 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
Volatile Organic Compounds by	EPA Method 8	3260B										
11C5212-MSD1												
Benzene	ND	46.1		ug/kg	50.0	92%	42 - 141	17	50	11C5212	NUC3441-02R	03/28/11 21:59
Ethylbenzene	31.5	62,8		ug/kg	50.0	63%	21 - 165	3	50	11C5212	E1 NUC3441-02R	03/28/11 21:59
Emylocizene	31.3	02.0		ug/kg	30.0	0370	21 - 103	,	50	1103212	F1	03/26/11 21.39
Naphthalene	360	64.6	M8	ug/kg	50.0	-590%	10 - 160	1	50	11C5212	NUC3441-02R	03/28/11 21:59
Toluene	13.5	58.7		ug/kg	50.0	90%	45 - 145	3	50	11C5212	E1	03/28/11 21:59
Torner	15.5	36.7		ug/kg	30.0	<b>7</b> 0 / 0	43 - 143	3	30	1103212	NUC3441-02R E1	03/28/11 21.39
Xylenes, total	104	184		ug/kg	150	53%	31 - 159	3	50	11C5212	NUC3441-02R	03/28/11 21:59
Comments 12 Dieblementers 14		20.6			500	700/	(5. 100				E1	
Surrogate: 1,2-Dichloroethane-d4		39.6		ug/kg	50.0	79%	67 - 138			11C5212	NUC3441-02R E1	03/28/11 21:59
Surrogate: Dibromofluoromethane		40.6		ug/kg	50.0	81%	75 - 125			11C5212	NUC3441-02R	03/28/11 21:59
											E1	
Surrogate: Toluene-d8		51.8		ug/kg	50.0	104%	76 - 129			11C5212	NUC3441-02R	03/28/11 21:59
Surrogate: 4-Bromofluorobenzene		58.1		na/ka	50.0	116%	67 - 147			11C5212	E1	03/28/11 21:59
Burroguie. 4-Dromojiuorobenzene		30.1		ug/kg	50,0	11076	0/-14/			1103212	NUC3441-02R E1	03/28/11 21:39





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Work Order:

NUC3441

Project Name:

Laurel Bay Housing Project

Project Number: [none]

Received:

03/19/11 08:15

### **CERTIFICATION SUMMARY**

### TestAmerica Nashville

Attn

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





10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order: N

NUC3441

Project Name:

Laurel Bay Housing Project

Project Number:

Received:

[none] 03/19/11 08:15

TA OUALIEIEDG AND DEED

DATA QUALIFIERS AND DEFINITION

Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration

found in the method blank.

E Concentration exceeds the calibration range and therefore result is semi-quantitative.

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.

M8 The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS).

MNR No results were reported for the MS/MSD. The sample used for the MS/MSD required dilution due to the sample matrix.

Because of this, the spike compounds were diluted below the detection limit.

**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

Client Name/Account		Nashvill 2960 Fo Nashvill	ster Cre	eiahto	n			Toll F	ree:	615-7 800-7 615-7	65-0	980						meth	ods, is	this wo urpose	ork beir us?	proper a	lucted 1	for					ž.
Addres	8: 10179 Highwa	y 78																			Compl	iance N	fonitori	ng?	Yes	 _ No			
City/State/Zi	: Ladson, SC 2	9456											_								Enfo	rcemen	t Action	1?	Yes	 _ No			
Project Manage	r: Tom McElwee	emeil: mcel	wee@ee	ginc.n	et									-		Site	State		<u> </u>	<del></del>						 			
Telephone Number	#: 843.412.2097					Fax	No ·	84	<del>3)</del>	87	9-1	04	7	_			PO#:		10	<del>2</del> 7						 	-		
Sampler Name: (Prin	W OZ W	ES B	ald	11.1.	4)			<u> </u>		<u> </u>	<u>`</u>	- /0		<del></del>			uote #:												
Sampler Signature	: Dam		Bald	1						_							ect iD:		Bay F	lousing	Proje	ct				 	_		
	0		<i></i>			_		Prese			$\stackrel{>}{=}$		_			Pro	ject #:									 			
			8	ГТ	T	十	T		rvativ	e	न्री		M:	atrix	_	-				A	nalyze	For:				 1			
Sample ID/Description  1034 Forglove  1081 Hatther  1146 Iris  1142 Iris  1124 Iris	3/14/11 3/14/11 3/15/11 3/16/11	145 1630 1600 1600	5	XXX Grab	Composite	ē	HNO, (Red Label)	NeOH (Ostrope Labe)	H <sub>2</sub> SO <sub>2</sub> Plestic (Yellow Label	A A B A None (Black Label)		Groundwater	Drinking Water	edipriis 7 7 4 4		メ イ イ メ A BTEX + Napth - 82606	XXXX FAH-8270D						A	3+	02 cs eq cs	RUSH TAT (Pre-Schedule)	Standard TAT	Fax Results	and OC with regart
Special Instructions:		i				Ц	丄	$\perp$	$\bot$	$oldsymbol{\perp}$	丄		$\perp$													 _	Ŧ	*	ヿ
Relinquished by: Relinquished by: Relinquished by:	Date 3-17-1 Date		Time / 400	S Rec	ceived b	y Test	Amer	Shipr	<u> </u>			3.14	Date		DEX	Time		•	empe	omme rature t Free of	Upon F	Receipt space?	0	î <sub>e</sub>		——L Y	N	<u></u> I	4

## ATTACHMENT A



# **NON-HAZARDOUS MANIFEST**

	1. Generator's US EPA ID No. M.							14.0			
NON-HAZARDOUS MANIFEST					1						
3. Generator's Mailing Address:	Gene	erator's Site Address (#	different than n	nailing):	A. Manife	st Number	A LEGITIE	MA TH			
MCAS, BEAUFORT	THE REAL PROPERTY.				W	MNA	00316	808			
LAUREL BAY HOUSING	Harting Control						ate Generator's ID				
BEAUFORT, SC 29907	THE WAY					D. State	Generators				
4. Generator's Phone 843-228-6461											
5. Transporter 1 Company Name	The state of the	6. US EPA I	D Number		100000			0.5925.0	THE LIE		
					C. State T	ransporter's	ID	Tel Sino	The It		
EEG, INC.					D. Transp	orter's Phone	e 843-8	379-041	1		
7. Transporter 2 Company Name	P. Carrier	8. US EPA I	D Number	EMP 39-81	100000	W. Co. Line			ALC:		
					E. State Ti	ransporter's	ID	Paral do	Morris		
					F. Transpo	orter's Phone		Service of			
9. Designated Facility Name and Site Address		10. US EPA	ID Number								
HICKORY HILL LANDFILL					G. State F	acility ID					
2621 LOW COUNTRY ROAD					H. State F	acility Phone	843-9	987-464	3		
RIDGELAND, SC 29936				AE HOUSE		EXECUTE OF			-216		
			No. of	The same		1253			9.33		
11. Description of Waste Materials			12. C	ontainers Type	13. Total Quantity	14. Unit Wt./Vol.	I. N	lisc. Commer	nts		
a. HEATING OIL TANKS FILLED WITH S	AND			1100	12.73	6210 300	NAME OF	TOTAL AL	3719		
			VINE	204	1	74.42	A Triple				
WM Profile # 10	2655SC		0.000	9	No.	8,876,754	STATE	1			
b. WM Profile # 10	,203330	TSU	Tool Section						1,1		
			10 1985	1.570	ELLETT.						
	1	The tree of the same of	1 2 3 3 4	arreit.		and the same of		100000	No.		
WM Profile #	ande le la							N. SILVE			
C.			* State	of Visited	The state of	SALES VER					
			A Treatment			A CONTRACTOR OF THE PARTY OF TH		Marine II	No.		
WM Profile #		Section 1	1000		100	Market Co.	RUHALA	Market Na			
d.			3	1000		WHE THE					
					1944		man's	the same			
WM Profile #	of the outputs	Service of the service of					Desire.				
J. Additional Descriptions for Materials Listed	d Above		K. Dispo	sal Location	National Control						
			0.11				Ltourt				
			Cell		And the same		Level	111111			
15 Special Handling Instructions and Addition	al Information			d Favo	lour	1 111	16 IR	101			
15. Special Handling Instructions and Addition	2) 394	TOURCE					2"	12.			
DZ24 CYPRESS		ACORNY 3	108	I HEA.	therv	2 37					
	1010	EMERGENCY CO	COMPANY FRANCE	SERVICE STATES				710			
Purchase Order #		EIVIERGEIVET CO	MIACI / Pr	TOTAL INO.:		P P C LAND CO		157 104	110		
16. GENERATOR'S CERTIFICATE:			and by one	Dovt 2C4		o etata lauri	anua harra f	llu sed			
I hereby certify that the above-described mate accurately described, classified and packaged a							nave been tu	illy and			
Printed Name //	ind dre in prop	Signature "On beh		ording to up	pircubic regu	idelions.	Month	Day	Year		
Charles Herran		Charle	5 3/1	Her	-	be Wellin	5	11	11		
17. Transporter 1 Acknowledgement of Receip	t of Materials			Y. HEID			4.10-1	Die Ist	5588		
Printed Name		Signature	~		· marian	VI TANK	Month	Day	Year		
The state of the s		o.B	The second second	0 0				17	11		
James Baldwi	N	Jame	1 100	Down	And the second		- 5				
18. Transporter 2 Acknowledgement of Receip	ot of Materials	Jame	, 150	Deu			-5	-17	Fire.		
	t of Materials	Jame	1 100	le.			Month	Day	Year		
18. Transporter 2 Acknowledgement of Receip	ot of Materials	Jame	1 150	. W.			Month	Day	Year		
18. Transporter 2 Acknowledgement of Receip Printed Name	A) at of Materials	Jame	, 100	. O Du			Month	Day	Year		
Transporter 2 Acknowledgement of Receip     Printed Name      One of the second s		Signature	lodge the	hous do-si	had waste	as managad					
18. Transporter 2 Acknowledgement of Receip Printed Name  19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment	nt facility, that	Signature to the best of my know	ledge, the a	bove-descri	bed waste w	as managed					
18. Transporter 2 Acknowledgement of Receip Printed Name  19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatmer applicable laws, regulations, permits and license.	nt facility, that ses on the date	Signature  to the best of my knowes listed above.				as managed					
18. Transporter 2 Acknowledgement of Receip Printed Name  19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatmer applicable laws, regulations, permits and licens 20. Facility Owner or Operator: Certification of	nt facility, that ses on the date	Signature  to the best of my knowes listed above. on-hazardous materials				as managed		ce with all			
Printed Name  19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment applicable laws, regulations, permits and license.	nt facility, that ses on the date	Signature  to the best of my knowes listed above.				as managed	in complian		1, 1		

Pink- FACILITY USE ONLY Gold- TRANSPORTER #1 COPY

## Appendix C Laboratory Analytical Report - Groundwater





Pace Analytical Services, Inc. 2225 Riverside Dr. Asheville, NC 28804 (828)254-7176

Pace Analytical Services, Inc. 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 (704)875-9092

### **ANALYTICAL RESULTS**

Project:

LAUREL BAY SAMPLING 7/28/08

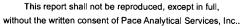
Pace Project No.: 9224472

Sample: 1137 IRIS D	Lab ID: 92	24472011	Collected: 07/28/0	08 18:30	Received: 0	7/30/08 17:00	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM SPE 3510	Analytical Me	ethod: EPA 8	270 by SIM Preparat	ion Meth	nod: EPA 3510			
Nitrobenzene-d5 (S)	74 9	%	50-150	1	07/31/08 00:00	08/12/08 10:1	1 4165-60-0	
2-Fluorobiphenyl (S)	73 9	<b>%</b>	50-150	1	07/31/08 00:00	08/12/08 10:1	1 321-60-8	
Terphenyl-d14 (S)	74 9	%	50-150	1		08/12/08 10:1		
8260 MSV Low Level	Analytical Me	ethod: EPA 8	260					
Benzene	ND t	ıg/L	1.0	1		08/01/08 21:4:	3 71-43-2	
Ethylbenzene	ND (	_	1.0	1		08/01/08 21:4:		
Naphthalene	ND t	-	1.0	1		08/01/08 21:4:		
Toluene	ND t	-	1.0	1		08/01/08 21:4:		
m&p-Xylene	ND I	•	2.0	1		08/01/08 21:4:		
o-Xylene	ND (	-	1.0	1		08/01/08 21:4:		
4-Bromofluorobenzene (S)	97 9	_		1				
Dibromofluoromethane (S)	98 9		87-109 85-115			08/01/08 21:43		
. ,			85-115	1		08/01/08 21:4:		
1,2-Dichloroethane-d4 (S)	101 9		79-120	1		08/01/08 21:4:		
Toluene-d8 (S)	99 9	<b>6</b>	70-120	1		08/01/08 21:4:	3 2037-26-5	
Sample: 1146 IRIS A	Lab ID: 92	24472012	Collected: 07/28/0	8 18:50	Received: 0	7/30/08 17:00	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM SPE 3510	Analytical Me	thod: EPA 8	270 by SIM Preparati	ion Meth	od: EPA 3510			
Acenaphthene	ND u	g/L	4.0	1	07/31/08 00:00	08/12/08 10:34	83-32-9	
Acenaphthylene	ND t	g/L	3.0	1	07/31/08 00:00	08/12/08 10:34	208-96-8	
Anthracene	ND t	-	0.10	1		08/12/08 10:34		
Benzo(a)anthracene	ND L	_	0.20	1		08/12/08 10:34		
Benzo(a)pyrene	ND L	-	0.40	1		08/12/08 10:34		
Benzo(b)fluoranthene	ND U	-	0.60	1		08/12/08 10:34		
Benzo(g,h,i)perylene	ND u	_		1				
		•	0.40			08/12/08 10:34		
Benzo(k)fluoranthene	ND u	•	0.40	1		08/12/08 10:34		
Chrysene	ND u	-	0.20	1		08/12/08 10:34		
Dibenz(a,h)anthracene	ND u	-	0.40	1		08/12/08 10:34		
-luoranthene	ND u	-	0.60	1		08/12/08 10:34		
luorene	1.1 u	-	0.62	1		08/12/08 10:34		
ndeno(1,2,3-cd)pyrene	ND u	g/L	0.40	1	07/31/08 00:00	08/12/08 10:34	193-39-5	
l-Methylnaphthalene	<b>6.6</b> u	g/L	4.0	1	07/31/08 00:00	08/12/08 10:34	90-12-0	
2-Methylnaphthalene	<b>8.3</b> u	g/L	4.0	1	07/31/08 00:00	08/12/08 10:34	91-57-6	
Naphthalene	ND u	g/L	3.0	1	07/31/08 00:00	08/12/08 10:34	91-20-3	
Phenanthrene	1.3 u	g/L	0.40	1		08/12/08 10:34		
Pyrene	ND u	-	0.20			08/12/08 10:34		
Nitrobenzene-d5 (S)	59 %	-	50-150			08/12/08 10:34		
2-Fluorobiphenyl (S)	56 %		50-150			08/12/08 10:34		
Ferphenyl-d14 (S)	60 %		50-150	1		08/12/08 10:34		
3260 MSV Low Level	Analytical Me							
Benzene	ND u	o/I	1.0	1		09/04/09 33:00	71 42 2	
JUILLIE	ואט ע	y/L	1.0	1		08/01/08 22:06	/ 1-43-2	

Date: 08/13/2008 05:36 PM

### **REPORT OF LABORATORY ANALYSIS**

Page 14 of 38







Pace Analytical Services, Inc. 2225 Riverside Dr. Asheville, NC 28804 (828)254-7176

Pace Analytical Services, inc. 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 (704)875-9092

#### **ANALYTICAL RESULTS**

Project:

LAUREL BAY SAMPLING 7/28/08

Pace Project No.: 9224472

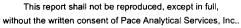
Sample: 1146 IRIS A Lab ID: 9224472012 Collected: 07/28/08 18:50 Received: 07/30/08 17:00 Matrix: Water Parameters Results Units Report Limit DF Prepared Analyzed CAS No. Qual 8260 MSV Low Level Analytical Method: EPA 8260 Ethylbenzene ND ug/L 08/01/08 22:06 100-41-4 1.0 **3.9** ug/L Naphthalene 08/01/08 22:06 91-20-3 1.0 1 Toluene ND ug/L 1.0 08/01/08 22:06 108-88-3 1 m&p-Xylene ND ug/L 08/01/08 22:06 1330-20-7 2.0 1 o-Xylene ND ug/L 08/01/08 22:06 95-47-6 1.0 1 4-Bromofluorobenzene (S) 97 % 87-109 08/01/08 22:06 460-00-4 Dibromofluoromethane (S) 96 % 85-115 08/01/08 22:06 1868-53-7 1,2-Dichloroethane-d4 (S) 99 % 79-120 08/01/08 22:06 17060-07-0 Toluene-d8 (S) 99 % 70-120 08/01/08 22:06 2037-26-5

Sample: 1131 IRIS A	Lab ID: 9224472013	Collected: 07/28/0	08 18:00	Received: 07	7/30/08 17:00	Matrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM SPE 3510	Analytical Method: EPA	8270 by SIM Preparat	ion Met	hod: EPA 3510			
Acenaphthene	ND ug/L	2.0	1	07/31/08 00:00	08/12/08 10:57	83-32-9	
Acenaphthylene	ND ug/L	1.5	1	07/31/08 00:00	08/12/08 10:57	208-96-8	
Anthracene	<b>0.074</b> ug/L	0.050	1	07/31/08 00:00	08/12/08 10:57	120-12-7	
Benzo(a)anthracene	ND ug/L	0.10	1	07/31/08 00:00	08/12/08 10:57	56-55-3	
Benzo(a)pyrene	ND ug/L	0.20	1	07/31/08 00:00	08/12/08 10:57	50-32-8	
Benzo(b)fluoranthene	ND ug/L	0.30	1	07/31/08 00:00	08/12/08 10:57	205-99-2	
Benzo(g,h,i)perylene	ND ug/L	0.20	1	07/31/08 00:00	08/12/08 10:57	191-24-2	
Benzo(k)fluoranthene	ND ug/L	0.20	1	07/31/08 00:00	08/12/08 10:57	207-08-9	
Chrysene	ND ug/L	0.10	1	07/31/08 00:00	08/12/08 10:57	218-01-9	
Dibenz(a,h)anthracene	ND ug/L	0.20	1	07/31/08 00:00	08/12/08 10:57	53-70-3	
Fluoranthene	ND ug/L	0.30	1	07/31/08 00:00	08/12/08 10:57	206-44-0	
Fluorene	ND ug/L	0.31	1	07/31/08 00:00	08/12/08 10:57	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L	0.20	1	07/31/08 00:00	08/12/08 10:57	193-39-5	
1-Methylnaphthalene	ND ug/L	2.0	1	07/31/08 00:00	08/12/08 10:57	90-12-0	
2-Methylnaphthalene	ND ug/L	2.0	1	07/31/08 00:00	08/12/08 10:57	91-57-6	
Naphthalene	ND ug/L	1.5	1	07/31/08 00:00	08/12/08 10:57	91-20-3	
Phenanthrene	ND ug/L	0.20	1	07/31/08 00:00	08/12/08 10:57	85-01-8	
Pyrene	ND ug/L	0.10	1	07/31/08 00:00	08/12/08 10:57	129-00-0	
Nitrobenzene-d5 (S)	56 %	50-150	1	07/31/08 00:00	08/12/08 10:57	4165-60-0	
2-Fluorobiphenyl (S)	63 %	50-150	1	07/31/08 00:00	08/12/08 10:57	321-60-8	
Terphenyl-d14 (S)	63 %	50-150	1	07/31/08 00:00	08/12/08 10:57	1718-51-0	
8260 MSV Low Level	Analytical Method: EPA	8260					
Benzene	ND ug/L	1.0	1		08/01/08 22:30	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		08/01/08 22:30	100-41-4	
Naphthalene	ND ug/L	1.0	1		08/01/08 22:30	91-20-3	
Toluene	ND ug/L	1.0	1		08/01/08 22:30	108-88-3	
m&p-Xylene	ND ug/L	2.0	1		08/01/08 22:30	1330-20-7	
o-Xylene	ND ug/L	1.0	1		08/01/08 22:30	95-47-6	
4-Bromofluorobenzene (S)	97 %	87-109	1		08/01/08 22:30	460-00-4	

Date: 08/13/2008 05:36 PM

**REPORT OF LABORATORY ANALYSIS** 

Page 15 of 38





## Appendix D Regulatory Correspondence



BOARD: Elizabeth M. Hagood Chairman Mark B. Kent Vice Chairman Howard L. Brilliant, MD

Secretary



C. Earl Hunter, Commissioner
Promoting and protecting the bealth of the public and the environment.

BOARD: Carl L. Brazell

Louisiana W. Wright

L. Michael Blackmon

Coleman F. Buckhouse, MD

16 July 2008

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

Re:

MCAS - Laurel Bay Housing - 1146 Iris Lane

Site ID # 03947

UST Closure Reports received 31 January 2008

Beaufort County

Dear Mr. Broadfoot:

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

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

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

Sincerely,

Michael Bishop Hydrogeologist Groundwater Quality Section

Bureau of Water

cc:

Region 8 District EQC (via pdf)

MCAS, Commanding Officer, Attention: S-4 NREAO (William Drawdy) (via pdf)

Technical File



## Catherine E. Heigel, Director Promoting and protecting the health of the public and the environment

July 1, 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 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 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) Bryan Beck (via email)



### Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

Krieg to Drawdy **Attachment to:** 

Subject: IGWA Dated 7/1/2015

## Laurel Bay Underground Storage Tank Assessment Reports for: (97 addresses/110 tanks)

118 Banyan	343 Ash Tank 2
126 Banyan	344 Ash Tank 2
127 Banyan	347 Ash Tank 2
130 Banyan Tank 1	378 Aspen Tank 2
141 Laurel Bay	379 Aspen
151 Laurel Bay	382 Aspen Tank 1
224 Cypress	382 Aspen Tank 2
227 Cypress	394 Acorn Tank 2
256 Beech Tank 2	400 Elderberry
257 Beech Tank 2	432 Elderberry
257 Beech Tank 1 257 Beech Tank 2	436 Elderberry
264 Beech	473 Dogwood Tank 2
265 Beech Tank 2	482 Laurel Bay
265 Beech Tank 2	517 Laurel Bay
275 Birch	586 Aster
277 Birch Tank 1	632 Dahlia
285 Birch	639 Dahlia Tank 2
292 Birch Tank 3	643 Dahlia Tank 1
297 Birch	644 Dahlia Tank 1
301 Ash	644 Dahlia Tank 2
306 Ash	646 Dahlia Tank 1
310 Ash Tank 1	646 Dahlia Tank 2
313 Ash	665 Camellia
315 Ash Tank 2	699 Abelia
316 Ash	744 Blue Bell
319 Ash	745 Blue Bell Tank 1
320 Ash	747 Blue Bell Tank 1
321 Ash	747 Blue Bell Tank 2
329 Ash	747 Blue Bell Tank 2
330 Ash Tank 2	749 Blue Bell Tank 1
331 Ash	749 Blue Bell Tank 2
332 Ash	751 Blue Bell
333 Ash	762 Althea
335 Ash Tank 1	765 Althea Tank 2
335 Ash Tank 2	766 Althea Tank 4
341 Ash	767 Althea Tank 1
342 Ash Tank 1	768 Althea Tank 2
342 Ash Tank 2	768 Althea Tank 3
	/ CO I Italieu I ullis 5

## Laurel Bay Underground Storage Tank Assessment Reports for: (98 addresses/110 tanks) cont.

768 Althea Tank 4	1067 Gardenia
769 Althea Tank 1	1077 Heather
769 Althea Tank 2	1081 Heather
775 Althea	1101 Iris Tank 2
819 Azalea	1104 Iris
840 Azalea	1105 Iris Tank 2
878 Cobia	1124 Iris Tank 2
891 Cobia	1142 Iris Tank 2
913 Barracuda	1146 Iris Tank 2
916 Barracuda	1218 Cardinal
923 Albacore	1240 Dove
1004 Bobwhite	1266 Dove
1022 Foxglove	1292 Eagle
1031 Foxglove	1299 Eagle Tank 1
1034 Foxglove Tank 2	1302 Eagle
1061 Gardenia Tank 3	1336 Albatross
1064 Gardenia	1351 Cardinal



#### C. Earl Hunter, Commissioner

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

### 19 December 2008

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

Re: MCAS - Laurel Bay Housing - 1146 Iris

Site ID # 03947

Groundwater Sampling Results received 6 November 2008

**Beaufort County** 

### Dear Mr. Ehde:

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

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

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

Jan T. Cooke, Hydrogeologist

B. Thomas Knight, Manager

cc: Region 8 District EQC

Tri-Command Communities; Attn: Mr. Robert Bible; 600 Laurel Bay Road Beaufort, SC

29906

**Technical File** 



#### 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

June 8, 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-November and December 2015

Laurel Bay Military Housing Area Multiple Properties

Dated April 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 attached addresses on May 2, 2016. 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 15 stated addresses. For the remaining 80 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 <a href="mailto:petruslb@dhec.sc.gov">petruslb@dhec.sc.gov</a> or 803-898-0294.

Sincerely,

Laurel Petrus

NOTS

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-November and December 2015

Specific Property Recommendations

Dated June 8, 2016

## Draft Final Initial Groundwater Investigation Report for (95 addresses)

Permanent Monitoring Well Investigation recommendation (15 addresses)		
130 Banyan Drive	473 Dogwood Drive	
256 Beech Street	747 Blue Bell Lane	
285 Birch Drive	749 Blue Bell Lane	
292 Birch Drive	775 Althea Street	
330 Ash Street	1034 Foxglove Street	
331 Ash Street	1104 Iris Lane	
335 Ash Street	1124 Iris Lane	
342 Ash Street		

118 Banyan Drive	644 Dahlia Drive	
126 Banyan Drive	646 Dahlia Drive	
127 Banyan Drive	665 Camellia Drive	
141 Laurel Bay Blvd	699 Abelia Street	
151 Laurel Bay Blvd	744 Blue Bell Lane	
224 Cypress Street	745 Blue Bell Lane	
227 Cypress Street	751 Blue Bell Lane	
257 Beech Street	762 Althea Street	
264 Beech Street	765 Althea Street	
265 Beech Street	766 Althea Street	
275 Birch Drive	767 Althea Street	
277 Birch Drive	768 Althea Street	
297 Birch Drive	769 Althea Street	
301 Ash Street	819 Azalea Drive	
306 Ash Street	840 Azalea Drive	
310 Ash Street	878 Cobia Drive	
313 Ash Street	891 Cobia Drive	
315 Ash Street	913 Barracuda Drive	
316 Ash Street	916 Barracuda Drive	
319 Ash Street	923 Wren Lane	
320 Ash Street	1004 Bobwhite Drive	
321 Ash Street	1022 Foxglove Street	
329 Ash Street	1031 Foxglove Street	
332 Ash Street	1061 Gardenia Drive	
333 Ash Street	1064 Gardenia Drive	
341 Ash Street	1067 Gardenia Drive	
347 Ash Street	1077 Heather Street	
378 Aspen Street	1081 Heather Street	
379 Aspen Street	1101 Iris Lane	
382 Aspen Street	1105 Iris Lane	
394 Acorn Street	1142 Iris Lane	
400 Elderberry Drive	1146 Iris Lane	
432 Elderberry Drive	1218 Cardinal Lane	
436 Elderberry Drive	1240 Dove Lane	
482 Laurel Bay Blvd	1266 Dove Lane	
517 Laurel Bay Blvd	1292 Eagle Lane	
586 Aster Street	1299 Eagle Lane	
632 Dahlia Drive	1302 Eagle Lane	
639 Dahlia Drive	1336 Albatross Drive	
643 Dahlia Drive	1351 Cardinal Lane	

Attachment to: Petrus to Drawdy
Subject: Draft Final Initial Groundwater Investigation Report-November and December 2015
Specific Property Recommendations
Dated June 8, 2016, Page 2