SUMMARY REPORT 215 WEST CARDINAL LANE (FORMERLY 1224 WEST CARDINAL LANE) LAUREL BAY MILITARY HOUSING AREA MARINE CORPS AIR STATION BEAUFORT BEAUFORT, SC

Revision: 0 Prepared for:

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

and



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

JUNE 2021

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Prepared by:



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

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



Summary Report 215 West Cardinal Lane (Formerly 1224 West Cardinal Lane) Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort June 2021

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List of Acronyms

bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
СТО	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 215 West Cardinal Lane (Formerly 1224 West Cardinal 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 215 West Cardinal Lane (Formerly 1224 West Cardinal Lane). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 1224 West Cardinal Lane* (MCAS Beaufort, 2009). The UST Assessment Report is provided in Appendix B. Details regarding the IGWA sampling activities at this site are provided in the *Initial Groundwater Investigation Report – February and March 2017* (Resolution Consultants, 2017). The laboratory report that includes the pertinent IGWA analytical results for this site is presented in Appendix C.

2.1 UST Removal and Soil Sampling

On August 25, 2009, a single 280 gallon heating oil UST was removed from the landscaped area adjacent to the house at 215 West Cardinal Lane (Formerly 1224 West Cardinal Lane). The former UST location is indicated on Figures 2 and 3 of the UST Assessment Report (Appendix B). The UST was removed, cleaned, and shipped offsite for recycling. There was no visual



evidence (i.e., staining or sheen) of petroleum impact at the time of the UST removal. According to the UST Assessment Report (Appendix B), the depth to the base of the UST was 6'3" bgs and a single soil sample was collected from that depth. The sample was collected from the fill port side of the former UST to represent a worst case scenario.

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

2.2 Soil Analytical Results

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

The soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form (Appendix B). The results of the soil sampling at the former UST location were used by MCAS Beaufort, in consultation with SCDHEC, to determine a path forward (i.e., additional sampling or NFA) for the property. The soil results collected from 215 West Cardinal Lane (Formerly 1224 West Cardinal Lane) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated August 24, 2016, SCDHEC requested an IGWA for 215 West Cardinal Lane (Formerly 1224 West Cardinal Lane (Formerly 1224 West Cardinal Lane) to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letter is provided in Appendix D.

2.3 Groundwater Sampling

On March 8, 2017, a temporary monitoring well was installed at 215 West Cardinal Lane (Formerly 1224 West Cardinal Lane), in accordance with the South Carolina Well Standards and Regulations (R.61-71.H-I, updated June 24, 2016). In order to provide data that can be used to determine whether COPCs are migrating to underlying groundwater, the monitoring well was placed in the same general location as the former heating oil UST. The former UST location is indicated on Figures 2 and 3 of the UST Assessment Report (Appendix B). Further details are provided in the *Initial Groundwater Investigation Report – February and March 2017* (Resolution Consultants, 2017).



The sampling strategy for this phase of the investigation required a one-time sampling event of the temporarily installed monitoring well. Following well installation and development, groundwater samples were collected using low-flow methods and shipped to an offsite laboratory for analysis of the petroleum COPCs. Upon completion of groundwater sampling, the temporary well was abandoned in accordance with the South Carolina Well Standards and Regulations R.61-71 (SCDHEC, 2016). Field forms are provided in the *Initial Groundwater Investigation Report – February and March 2017* (Resolution Consultants, 2017).

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 215 West Cardinal Lane (Formerly 1224 West Cardinal Lane) were less than the SCDHEC RBSLs and the site specific groundwater VISLs (Table 2), which indicated that the groundwater was not impacted by COPCs associated with the former UST at concentrations that present a potential risk to human health and the environment.

3.0 **PROPERTY STATUS**

Based on the analytical results for groundwater, SCDHEC made the determination that NFA was required for 215 West Cardinal Lane (Formerly 1224 West Cardinal Lane). This NFA determination was obtained in a letter dated July 27, 2017. SCDHEC's NFA letter is provided in Appendix D.

4.0 **REFERENCES**

- Marine Corps Air Station Beaufort, 2009. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report 1224 West Cardinal Lane, Laurel Bay Military Housing Area*, November 2009.
- Resolution Consultants, 2017. Initial Groundwater Investigation Report February and March 2017 for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina, June 2017.



- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2013. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 2.0*, April 2013.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2015. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.0*, May 2015.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2016. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.1*, February 2016.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2017. *R.61-92, Part 280, Underground Storage Tank Control Regulations,* March 2017.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2018. *Underground Storage Tank Assessment Instructions for Permanent Closure and Change-In-Service*, March 2018.
- South Carolina Department of Health and Environmental Control Bureau of Water, 2016. *R.61-71, Well Standards*, June 2016.

Tables



Table 1Laboratory Analytical Results - Soil215 West Cardinal Lane (Formerly 1224 West Cardinal Lane)Laurel Bay Military Housing AreaMarine Corps Air Station BeaufortBeaufort, South Carolina

Constituent SCDHEC RBSLs (1) Results Sample Collected 0		Results Sample Collected 08/25/09		
Volatile Organic Compounds Analyzed by EPA Method 8260B (mg/kg)				
Benzene	0.003	ND		
Ethylbenzene	1.15	ND		
Naphthalene	0.036	0.00743		
Toluene	0.627	0.207		
Xylenes, Total	13.01	ND		
Semivolatile Organic Compounds Analyzed by EPA Method 8270D (mg/kg)				
Benzo(a)anthracene	0.66	ND		
Benzo(b)fluoranthene	0.66	ND		
Benzo(k)fluoranthene	0.66	ND		
Chrysene	0.66	ND		
Dibenz(a,h)anthracene	0.66	ND		

Notes:

⁽¹⁾ South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 3.0 and 3.1 (SCDHEC, May 2015 and SCDHEC, February 2016) and the Underground Storage Tank Assessment Guidelines (SCDHEC, February 2006).

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

mg/kg - milligrams per kilogram

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

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

Table 2 Laboratory Analytical Results - Groundwater 215 West Cardinal Lane (Formerly 1224 West Cardinal Lane) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort Beaufort, South Carolina

Constituent	SCDHEC RBSLs ⁽¹⁾	Site-Specific Groundwater VISLs (µg/L) ⁽²⁾	Results Sample Collected 03/08/17
Volatile Organic Compounds Analyzed	l by EPA Method 8260B (µg	/L)	
Benzene	5	16.24	ND
Ethylbenzene	700	45.95	ND
Naphthalene	25	29.33	ND
Toluene	1000	105,445	ND
Xylenes, Total	10,000	2,133	ND
Semivolatile Organic Compounds Analyzed by EPA Method 8270D (µg/L)			
Benzo(a)anthracene	10	NA	ND
Benzo(b)fluoranthene	10	NA	ND
Benzo(k)fluoranthene	10	NA	ND
Chrysene	10	NA	ND
Dibenz(a,h)anthracene	10	NA	ND

Notes:

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

⁽²⁾ Site-specific groundwater VISLs were calculated using the EPA JE Model Spreadsheets (Version 3.1, February 2004) and conservative modeling inputs representative of a small single-story house with an 8 foot ceiling. Site-specific groundwater VISLs were developed based on a target risk level of 1x10⁻⁶, a target hazard quotient of 1 (per target organ), and a default residential exposure scenario, assuming exposure for 24 hours/day, 350 days/year, for 26 years. Modeling was performed for a range of depths to groundwater for application as appropriate in different areas of the Laurel Bay Military Housing Area. The most conservative levels are presented for comparison. Refer to Appendix H of the Uniform Federal Policy Sampling Analysis and Sampling Plan for Vapor Media, Revision 4 (Resolution Consultants, April 2017) for additional information.

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

JE - Johnson & Ettinger

NA - Not Applicable

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

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

µg/L - micrograms per liter

VISL - Vapor Intrusion Screening Level

Appendix A Multi-Media Selection Process for LBMH





Appendix A - Multi-Media Selection Process for LBMH

Appendix B UST Assessment Report



Attachment 1

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

Date Rec	eived	
	State Use Only	
	PECLIVED	

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

٦

NOV 1 3 2009

SC DHEC - Bureau of Land & Waste Management

I. OWNERSHIP OF UST (S)

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

II. SITE IDENTIFICATION AND LOCATION

Permit I.D. # Laurel Bay Milit Facility Name or Compar	<u> </u>	<u>, sc</u>
1224 Cardinal Lo Street Address or State Ro	ne, Laurel Bay Military Housing Area nd (as applicable)	
Beaufort,	Beaufort	
City	County	

Attachment 2

Insurance Statement

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

Is there now, or has there ever been an insurance policy or other financial mechanism that covers this UST release? **YES____ NO____** (check one)

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

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

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

IV. REQUEST FOR SUPERB FUNDING

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

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

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

Name (Type or print.)

Signature

To be completed by Notary Public:

Sworn before me this _____ day of _____, 20____

(Name)

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

VI. **UST INFORMATION**

	VI. UST INFORMATION	1224
		Cardinal
A.	Product(ex. Gas, Kerosene)	Heating oil
п.	110ddet(ex. 0ds, Refosenc)	
B.	Capacity(ex. 1k, 2k)	280 gal
C.	Age	Late 1950s
D.	Construction Material(ex. Steel, FRP)	Steel
Е·	Month/Year of Last Use	Mid 1980s
F.	Depth (ft.) To Base of Tank	6'3"
G.	Spill Prevention Equipment Y/N	No
H·	Overfill Prevention Equipment Y/N	No
I.	Method of Closure Removed/Filled	Removed
J _.	Date Tanks Removed/Filled	8/25/09
K.	Visible Corrosion or Pitting Y/N	Yes
L.	Visible Holes Y/N	Yes

M. Method of disposal for any USTs removed from the ground (attach disposal manifests) UST 1224Cardinal was removed from the ground and disposed of at a Subtitle "D" landfill. See Attachment "A".

N. Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests) UST 1224Cardinal had been previously filled with sand by others.

О. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST Corrosion, pitting and holes were found throughout the tank.

VII. PIPING INFORMATION

		1224
		Cardinal
		Steel
A.	Construction Material(ex. Steel, FRP)	& Copper
B.	Distance from UST to Dispenser	N/A
C.	Number of Dispensers	N/A
D.	Type of System Pressure or Suction	Suction
E.	Was Piping Removed from the Ground? Y/N	Yes
F.	Visible Corrosion or Pitting Y/N	Yes
G.	Visible Holes Y/N	NO
H.	Age	Late 1950s
I.	If any corrosion, pitting, or holes were observed, dea	scribe the location and extent for each piping run.

Corrosion and pitting were found on the surface of the steel vent pipe. Copper supply and return lines were sound.

VIII. BRIEF SITE DESCRIPTION AND HISTORY

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

IX. SITE CONDITIONS

	Yes	No	Unk
 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	
 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.) 		Х	
C. Was water present in the UST excavation, soil borings, or trenches? If yes, how far below land surface (indicate location and depth)?		Х	
 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: 		x	
 E. Was a petroleum sheen or free product detected on any excavation or boring waters? If yes, indicate location and thickness. 		x	

X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 84009001

Β.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
1224 Cardinal	Excav at fill end	Soil	Sandy	6'3"	8/25/09 0920 hrs	P. Shaw	
			_				
8							
9			_				
10					_		
11			_				
12			_	_			
13							
14							
15					_		
16					_		_
17							
18							
19							
20							

* = Depth Below the Surrounding Land Surface

XI. SAMPLING METHODOLOGY

Provide a detailed description of the methods used to collect <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.

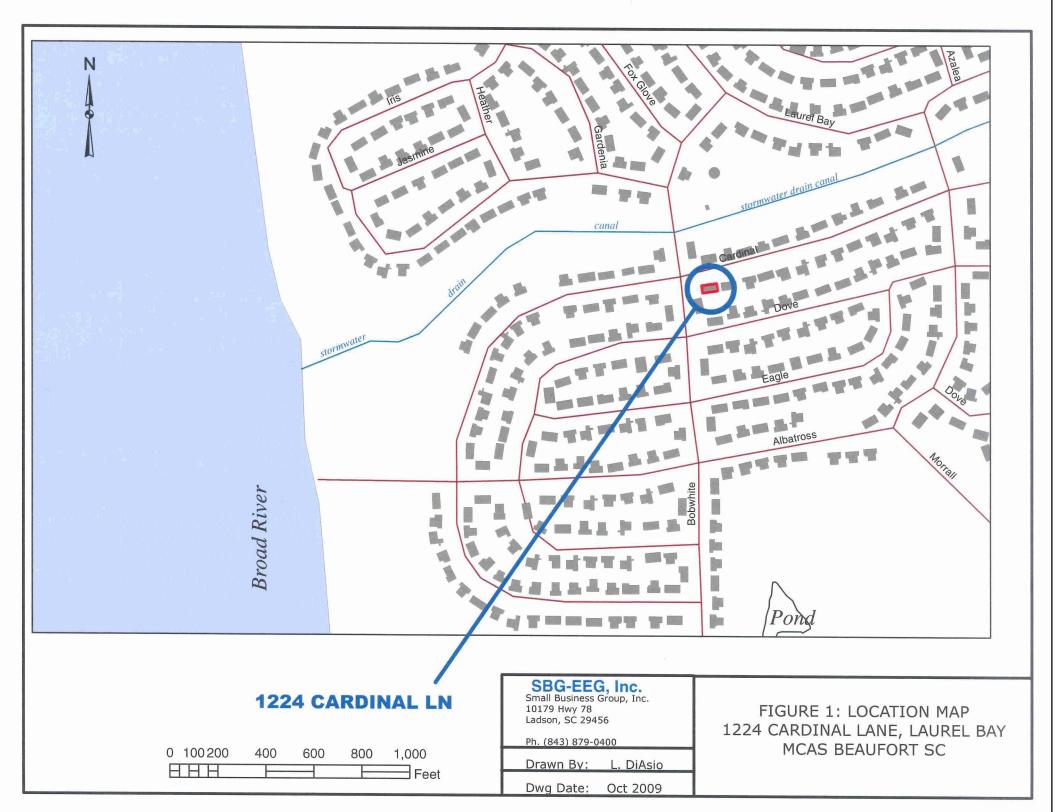
XII. RECEPTORS

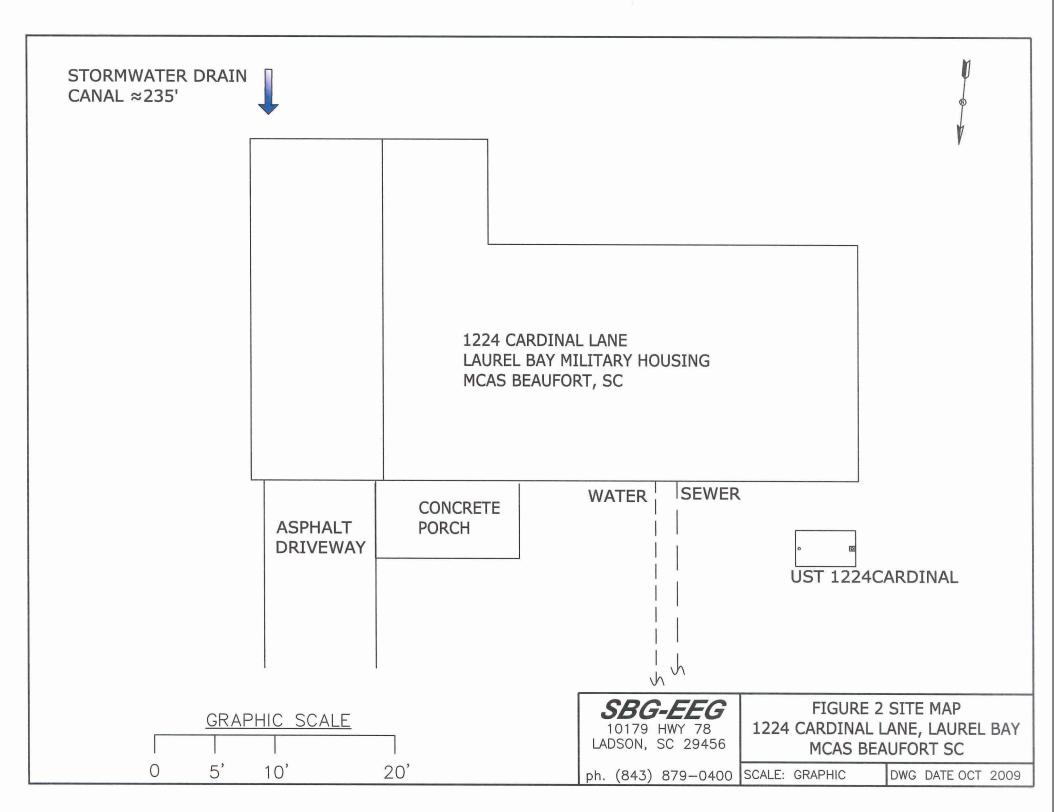
		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?	*X	
	*Stormwater drainage canal ~ If yes, indicate type of receptor, distance, and direction on site map.	235'	
В.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?		Х
	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?		х
	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? *Sewer and water	*X	
	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 below land surface in an area that is not capped by asphalt or concrete?		X
	If yes, indicate the area of contaminated soil on the site map.		

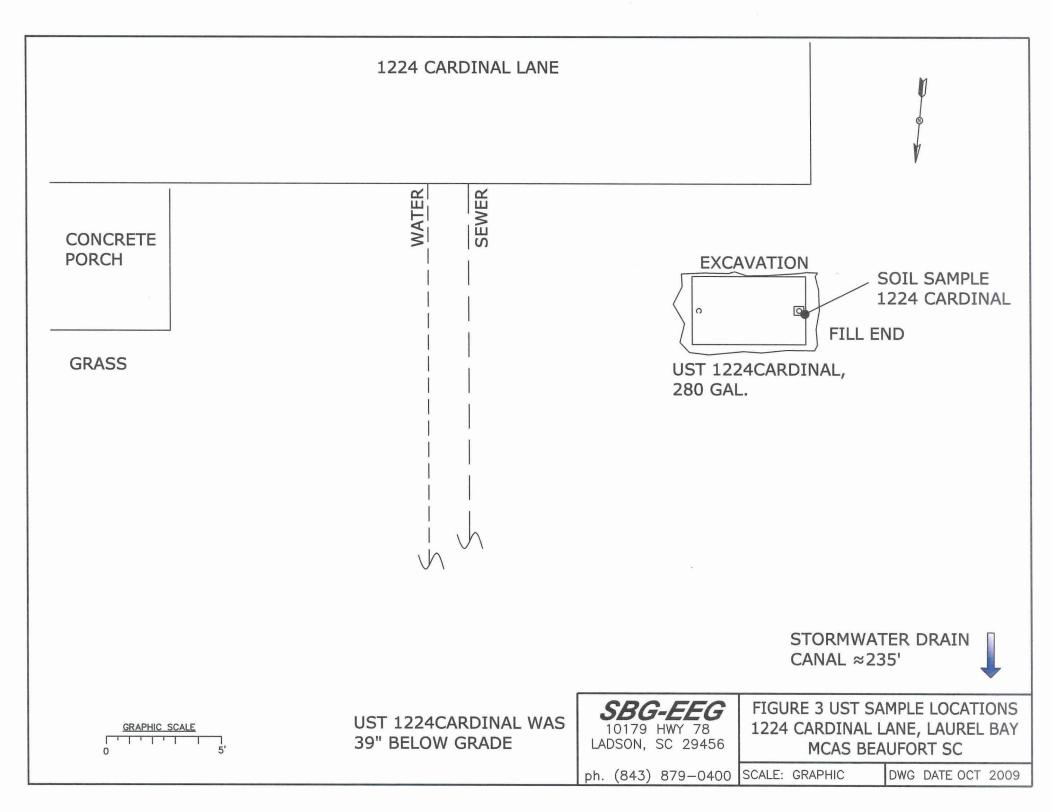
XIII. SITE MAP

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 1224Cardinal.



Picture 2: UST 1224Cardinal.

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.

CoC UST	1224Cardinal				
Benzene	ND				
Toluene	0.207 mg/kg				
Ethylbenzene	ND				
Xylenes	ND				
Naphthalene	0.00743 mg/k	g			
Benzo (a) anthracene	ND				
Benzo (b) fluoranthene	ND				
Benzo (k) fluoranthene	ND				
Chrysene	ND				
Dibenz (a, h) anthracene	ND				
ТРН (ЕРА 3550)				 	

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

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

CoC	RBSL (µg/l)	W-1	W-2	W -3	W -4
Free Product Thickness	None				
Benzene	5				
Toluene	1,000				
Ethylbenzene	700				
Xylenes	10,000				
Total BTEX	N/A				
МТВЕ	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)

•



September 14, 2009 2:05:14PM

Client: EEG - Small Business Group, Inc. (2449) 10179 Highway 78 Ladson, SC 29456 Attn: Tom McElwee Work Order:NSH2536Project Name:Laurel BayProject Nbr:[none]P/O Nbr:0829Date Received:08/28/09

NSH2536 Laurel Bay Housing Project [none] 0829 08/28/09

LAB NUMBER	COLLECTION DATE AND TIME
NSH2536-01	08/25/09 15:00
NSH2536-02	08/25/09 15:30
NSH2536-03	08/25/09 10:30
NSH2536-04	08/25/09 09:20
NSH2536-05	08/24/09 13:45
NSH2536-06	08/24/09 11:55
NSH2536-07	08/24/09 10:30
NSH2536-08	08/24/09 10:15
	NSH2536-01 NSH2536-02 NSH2536-03 NSH2536-04 NSH2536-05 NSH2536-06 NSH2536-07

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.

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South Carolina Certification Number: 84009001

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

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All solids results are reported in wet weight unless specifically stated. Estimated uncertainty is available upon request.

This report has been electronically signed. Report Approved By:

Em & Hay

Ken A. Hayes Senior Project Manager



Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	08/28/09 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
Sample ID: NSH2536-01 (1227 D	ove - Soil) Sam	pled: 08/2	5/09 15:00						
General Chemistry Parameters									
% Dry Solids	94.9		%	0.500	1	09/10/09 11:04	SW-846	AJK	9091140
Selected Volatile Organic Compound	s by EPA Method	8260B							
Benzene	ND		mg/kg dry	0.00215	I	09/07/09 18:46	SW846 8260B	KxC	9084866
Ethylbenzene	ND		mg/kg dry	0.00215	1	09/07/09 18:46	SW846 8260B	KxC	9084866
Naphthalene	ND		mg/kg dry	0.00538	1	09/07/09 18:46	SW846 8260B	KxC	9084866
Toluene	ND		mg/kg dry	0.00215	1	09/07/09 18:46	SW846 8260B	KxC	9084866
Xylenes, total	ND		mg/kg dry	0.00538	1	09/07/09 18:46	SW846 8260B	KxC	9084866
Surr: 1,2-Dichloroethane-d4 (67-138%)	87 %					09/07/09 18:46	SW846 8260B	KxC	9084860
Surr: Dibromofluoromethane (75-125%)	93 %					09/07/09 18:46	SW846 8260B	KxC	9084860
Surr: Toluene-d8 (76-129%)	92 %					09/07/09 18:46	SW846 8260B	KxC	9084860
Surr: 4-Bromofluorobenzene (67-147%)	100 %					09/07/09 18:46	SW846 8260B	KxC	9084860
Polyaromatic Hydrocarbons by EPA 8	3270D								
Acenaphthene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Acenaphthylene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	ilf	9090545
Anthracene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Benzo (a) anthracene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Benzo (a) pyrene	ND		mg/kg dry	0.0701	I	09/10/09 05:59	SW846 8270D	jlf	9090545
Benzo (b) fluoranthene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Benzo (k) fluoranthene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Chrysene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Fluoranthene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Fluorene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Naphthalene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Phenanthrene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Pyrene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
1-Methylnaphthalene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
2-Methylnaphthalene	ND		mg/kg dry	0.0701	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Surr: Terphenyl-d14 (18-120%)	61 %					09/10/09 05:59	SW846 8270D	jlf	9090545
Surr: 2-Fluorobiphenyl (14-120%)	53 %					09/10/09 05:59	SW846 8270D	jlf	9090545
Surr: Nitrobenzene-d5 (17-120%)	46 %					09/10/09 05:59	SW846 8270D	ilf	9090545



Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	08/28/09 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
Sample ID: NSH2536-02 (1225 De	ove - Soil) Samj	pled: 08/2	5/09 15:30						
General Chemistry Parameters									
% Dry Solids	93.2		%	0.500	1	09/10/09 11:04	SW-846	AJK	9091140
Selected Volatile Organic Compounds	s by EPA Method	8260B							
Benzene	ND		mg/kg dry	0.00231	1	09/07/09 19:17	SW846 8260B	KxC	9084866
Ethylbenzene	ND		mg/kg dry	0.00231	1	09/07/09 19:17	SW846 8260B	KxC	9084866
Naphthalene	ND		mg/kg dry	0.00578	1	09/07/09 19:17	SW846 8260B	KxC	9084866
Toluene	ND		mg/kg dry	0.00231	1	09/07/09 19:17	SW846 8260B	KxC	9084866
Xylenes, total	ND		mg/kg dry	0.00578	I	09/07/09 19:17	SW846 8260B	KxC	9084866
Surr: 1,2-Dichloroethane-d4 (67-138%)	90 %					09/07/09 19:17	SW846 8260B	KxC	9084866
Surr: Dibromofluoromethane (75-125%)	94 %					09/07/09 19:17	SW846 8260B	KxC	9084866
Surr: Toluene-d8 (76-129%)	93 %					09/07/09 19:17	SW846 8260B	KxC	9084866
Surr: 4-Bromofluorobenzene (67-147%)	103 %					09/07/09 19:17	SW846 8260B	KxC	9084866
Polyaromatic Hydrocarbons by EPA 8	3270D								
Acenaphthene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	ilf	9090545
Acenaphthylene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	ilf	9090545
Anthracene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	jlf	9090545
Benzo (a) anthracene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	ilf	9090545
Benzo (a) pyrene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	jlf	9090545
Benzo (b) fluoranthene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	jlf	9090545
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	jlf	9090545
Benzo (k) fluoranthene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	jlf	9090545
Chrysene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	jlf	9090545
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	jlf	9090545
Fluoranthene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	jlf	9090545
Fluorene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	jlf	9090545
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	jlf	9090545
Naphthalene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	jlf	9090545
Phenanthrene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	jlf	9090545
Pyrene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	ilf	9090545
1-Methylnaphthalene	ND		mg/kg dry	0.0702	I	09/10/09 17:56	SW846 8270D	jlf	9090545
2-Methylnaphthalene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	jlf	9090545
Surr: Terphenyl-d14 (18-120%)	57 %					09/10/09 17:56	SW846 8270D	jlf	9090545
Surr: 2-Fluorobiphenyl (14-120%)	56 %					09/10/09 17:56	SW846 8270D	jlf	9090545
Surr: Nitrobenzene-d5 (17-120%)	54 %					09/10/09 17:56	SW846 8270D).)][9090545



Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	08/28/09 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
Sample ID: NSH2536-03 (1223 C	ardinal - Soil) S	ampled:	08/25/09 10:30)					
General Chemistry Parameters									
% Dry Solids	80.3		%	0.500	1	09/10/09 11:04	SW-846	AJK	9091140
Selected Volatile Organic Compound	s by EPA Method	8260B							
Benzene	ND		mg/kg dry	0.00231	1	09/07/09 19:47	SW846 8260B	KxC	908486
Ethylbenzene	ND		mg/kg dry	0.00231	1	09/07/09 19:47	SW846 8260B	КхС	908486
Naphthalene	ND		mg/kg dry	0.00578	I	09/07/09 19:47	SW846 8260B	КхС	908486
Toluene	ND		mg/kg dry	0.00231	1	09/07/09 19:47	SW846 8260B	KxC	9084866
Xylenes, total	ND		mg/kg dry	0.00578	1	09/07/09 19:47	SW846 8260B	KxC	9084866
Surr: 1,2-Dichloroethane-d4 (67-138%)	90 %					09/07/09 19:47	SW846 8260B	KxC	908486
Surr: Dibromofluoromethane (75-125%)	94 %					09/07/09 19:47	SW846 8260B	KxC	908486
Surr: Toluene-d8 (76-129%)	99 %					09/07/09 19:47	SW846 8260B	KxC	908486
Surr: 4-Bromofluorobenzene (67-147%)	127 %					09/07/09 19:47	SW846 8260B	KxC	908486
Polyaromatic Hydrocarbons by EPA 8	3270D								
Acenaphthene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf	9090545
Acenaphthylene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf	9090545
Anthracene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	ilf	9090545
Benzo (a) anthracene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf	9090545
Benzo (a) pyrene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	ilf	9090545
Benzo (b) fluoranthene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf	9090545
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	ilf	9090545
Benzo (k) fluoranthene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	ilf	9090545
Chrysene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf	9090545
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf	9090545
Fluoranthene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf	9090545
Fluorene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf	9090545
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf	9090545
Naphthalene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf	9090545
Phenanthrene	ND		mg/kg dry	0.0824	I	09/10/09 21:32	SW846 8270D	jlf	9090545
Pyrene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf	9090545
1-Methylnaphthalene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf	9090545
2-Methylnaphthalene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf	9090545
Surr: Terphenyl-d14 (18-120%)	53 %					09/10/09 21:32	SW846 8270D	jlf	909054
Surr: 2-Fluorobiphenyl (14-120%)	50 %					09/10/09 21:32	SW846 8270D	jlf	9090543
Surr: Nitrobenzene-d5 (17-120%)	46 %					09/10/09 21:32	SW846 8270D	ilf	909054



10179 Highway 78 Project Name: Laurel Bay Housing Project Ladson, SC 29456 Project Number: [none] Attn Tom McElwee Bereived: 08/28/09 08:00	Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
		10179 Highway 78	Project Name:	Laurel Bay Housing Project
Attn Tom McElwee Received: 08/28/09 08:00		Ladson, SC 29456	Project Number:	[none]
	Attn	Tom McElwee	Received:	08/28/09 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batc
Sample ID: NSH2536-04 (1224 C	ardinal - Soil) S	Sampled: (08/25/09 09:20	1					
General Chemistry Parameters		•							
% Dry Solids	79.4		%	0.500	1	09/10/09 11:04	SW-846	AJK	909114
Selected Volatile Organic Compound	s by EPA Method	1 8260B							
Benzene	ND	RL1	mg/kg dry	0.117	50	09/07/09 18:15	SW846 8260B	KxC	908480
Ethylbenzene	ND	RL1	mg/kg dry	0.117	50	09/07/09 18:15	SW846 8260B	KxC	90848
Naphthalene	0.00743		mg/kg dry	0.00586	1	09/07/09 17:45	SW846 8260B	KxC	908480
Toluene	0.207		mg/kg dry	0.117	50	09/07/09 18:15	SW846 8260B	KxC	908486
Xylenes, total	ND	RL1	mg/kg dry	0.294	50	09/07/09 18:15	SW846 8260B	KxC	908486
Surr: 1,2-Dichloroethane-d4 (67-138%)	122 %					09/07/09 17:45	SW846 8260B	KxC	90848
Surr: 1,2-Dichloroethane-d4 (67-138%)	81 %					09/07/09 18:15	SW846 8260B	KxC	90848
Surr: Dibromofluoromethane (75-125%)	117 %					09/07/09 17:45	SW846 8260B	KxC	90848
Surr: Dibromofluoromethane (75-125%)	88 %					09/07/09 18:15	SW846 8260B	KxC	90848
Surr: Toluene-d8 (76-129%)	167 %	ZX				09/07/09 17:45	SW846 8260B	KxC	90848
Surr: Toluene-d8 (76-129%)	92 %	2011				09/07/09 18:15	SW846 8260B	KxC	90848
Surr: 4-Bromofluorobenzene (67-147%)	155 %	ZX				09/07/09 17:45	SW846 8260B		
Surr: 4-Bromofluorobenzene (67-147%)	109 %	LA				09/07/09 18:15	SW846 8260B SW846 8260B	KxC KxC	90848 90848
Polyaromatic Hydrocarbons by EPA 8						09/07/09 10:10	3// 040 02000	ліс	90040
Acenaphthene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	ilf	909054
Acenaphthylene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
Anthracene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
Benzo (a) anthracene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	յ jlf	909054
Benzo (a) pyrene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
Benzo (b) fluoranthene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
Benzo (g,h,i) perylene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
Benzo (k) fluoranthene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
Chrysene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
Dibenz (a,h) anthracene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
Fluoranthene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
Fluorene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
ndeno (1,2,3-cd) pyrene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
Naphthalene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
Phenanthrene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
Pyrene Mathematical de la	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
-Methylnaphthalene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
-Methylnaphthalene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	909054
urr: Terphenyl-d14 (18-120%)	3 %	ZX				09/11/09 21:54	SW846 8270D	jlf	90905
urr: 2-Fluorobiphenyl (14-120%)	21 %					09/11/09 21:54	SW846 8270D	jlf	909054
urr: Nitrobenzene-d5 (17-120%)	59 %					09/11/09 21:54	SW846 8270D	jlf	909054

THE LEADER IN ENVIRONMENTAL TESTING

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

Client	EEG - Small Business Group, h 10179 Highway 78 Ladson, SC 29456 Tom McElwee	nc. (2449)			Work Order: Project Name: Project Number: Received:		Bay Housing Projec	t 		
				ANALYTICAL	REPORT					
Analyte		Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
Sample	ID: NSH2536-05 (1219 Ca	ardinal - Soil) S	ampled:	08/24/09 13:4	5					
General	Chemistry Parameters									
% Dry Sol	lids	83.0		%	0.500	I	09/10/09 11:04	SW-846	AJK	909114
Selected	Volatile Organic Compounds	by FPA Method	8260B							
	volatile Organie Compounds	ND	02000	ma/ka day	0.00217	,	00/07/00 15.41	SW846 8260B	K O	000407
Benzene Ethylbenz	ene	0.127		mg/kg dry mg/kg dry	0.00217	1 50	09/07/09 15:41 09/07/09 16:43	SW846 8260B SW846 8260B	KxC	9084860 9084860
Naphthale:		0.0160		mg/kg dry	0.00542	30	09/07/09 15:41	SW846 8260B	KxC KxC	908486
Toluene	ine inc	1.67		mg/kg dry	0.110	50	09/07/09 16:43	SW846 8260B	КХС	9084866
Xylenes, to	otal	0.568		mg/kg dry	0.276	50	09/07/09 16:43	SW846 8260B	КАС	9084866
•	ichloroethane-d4 (67-138%)	134 %		000			09/07/09 15:41	SW846 8260B	KxC	908486
	chloroethane-d4 (67-138%)	82 %					09/07/09 16:43	SW846 8260B	KxC	908486
	mofluoromethane (75-125%)	121 %					09/07/09 15:41			
	nofluoromethane (75-125%)							SW846 8260B	KxC	908486
	9 () () () () () () () () () (89 %					09/07/09 16:43	SW846 8260B	KxC	908486
	ne-d8 (76-129%)	215 %	ZX				09/07/09 15:41	SW846 8260B	KxC	908486
	ne-d8 (76-129%)	99 %					09/07/09 16:43	SW846 8260B	KxC	908486
urr: 4-Bron	nofluorobenzene (67-147%)	259 %	ZX				09/07/09 15:41	SW846 8260B	KxC	908486
urr: 4-Bron	nofluorobenzene (67-147%)	106 %					09/07/09 16:43	SW846 8260B	KxC	908486
Polyarom	atic Hydrocarbons by EPA 8	270D								
cenaphth	ene	ND		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
cenaphth		ND		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
nthracene	2	ND		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
Benzo (a) a	anthracene	0.394		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
lenzo (a) p	byrene	0.383		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
enzo (b) f	luoranthene	0.525		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
	,i) perylene	ND		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
• • •	luoranthene	0.358		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
hrysene		0.642		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
	anthracene	ND		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
luoranthei luorene	ne	0.778 ND		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D SW846 8270D	jlf	9090545
	,3-cd) pyrene	ND		mg/kg dry mg/kg dry	0.320 0.320	2 2	09/10/09 22:20 09/10/09 22:20	SW846 8270D SW846 8270D	jlf	9090545 9090545
aphthalen		ND		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
henanthre		ND		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf jlf	9090545
yrene		0.956		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
-	phthalene	ND		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
	phthalene	ND		mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
	nyl-d14 (18-120%)	19 %					09/10/09 22:20	SW846 8270D	jil	9090543
-	obiphenyl (14-120%)	26 %					09/10/09 22:20	SW846 8270D		909054
	nzene-d5 (17-120%)	47 %					09/10/09 22:20	SW846 8270D SW846 8270D	jlf jlf	909054. 909054

THE LEADER IN ENVIRONMENTAL TESTING

101 Lad	G - Small Business Group, In 79 Highway 78 Ison, SC 29456 n McElwee	c. (2449)			Work Order: Project Name: Project Number: Received:		Bay Housing Projec	:t		
				ANALYTICA	L REPORT					
Analyte		Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
Sample ID:	NSH2536-06 (1218 Ca	rdinal - Soil) S	ampled:	08/24/09 11:5	55					
General Cher	mistry Parameters									
% Dry Solids		87.6		%	0.500	1	09/10/09 11:04	SW-846	AJK	9091140
-	atile Organic Compounds	by FPA Method	8260B							
Benzene	ame Organic Compounds	ND	8200B	mg/kg dry	0.00209	1	09/07/09 13:44	SW846 8260B	СММ	9091127
Ethylbenzene		ND		mg/kg dry	0.00209	1	09/07/09 13:44	SW846 8260B	CMM	9091127
Naphthalene		0.0111	В	mg/kg dry	0.00523	1	09/07/09 13:44	SW846 8260B	СММ	9091127
Toluene		ND	D	mg/kg dry	0.00209	1	09/07/09 13:44	SW846 8260B	CMM	9091127
Xylenes, total		ND		mg/kg dry	0.00523	1	09/07/09 13:44	SW846 8260B	CMM	9091127
•	voethane-d4 (67-138%)	85 %		ing ng or y	0100020	•	09/07/09 13:44	SW846 8260B	CMM	909112
		95 %					09/07/09 13:44			
5	ioromethane (75-125%)							SW846 8260B	СММ	909112
Surr: Toluene-d8		101 %					09/07/09 13:44	SW846 8260B	СММ	909112
Surr: 4-Bromoflu	orobenzene (67-147%)	135 %					09/07/09 13:44	SW846 8260B	СММ	909112
Polyaromatic	Hydrocarbons by EPA 82	270D								
Acenaphthene		ND		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Acenaphthylen	e	ND		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Anthracene		0.685		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Benzo (a) anthr	racene	5.47		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Benzo (a) pyrei	ne	2.38		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Benzo (b) fluor	anthene	3.46		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Benzo (g,h,i) po	erylene	3.21		mg/kg dry	0.375	i	09/10/09 22:44	SW846 8270D	jlf	9090545
Benzo (k) fluor	anthene	2.54		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Chrysene		5.13		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Dibenz (a,h) an	thracene	0.751		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Fluoranthene		9.33		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Fluorene		ND		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Indeno (1,2,3-c	d) pyrene	2.53		mg/kg dry	0.375	I	09/10/09 22:44	SW846 8270D	jlf	9090545
Naphthalene		ND		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Phenanthrene		2.32		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Pyrene		6.65		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
1-Methylnaphth		ND		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
2-Methylnaphth		ND		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Surr: Terphenyl-d	114 (18-120%)	332 %	ZX				09/10/09 22:44	SW846 8270D	jlf	9090543
Surr: 2-Fluorobip	henyl (14-120%)	320 %	ZX				09/10/09 22:44	SW846 8270D	jlf	9090543
Surr: Nitrobenzen	e-d5 (17-120%)	294 %	ZX				09/10/09 22:44	SW846 8270D	jlf	909054:

THE LEADER IN ENVIRONMENTAL TESTING

Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	08/28/09 08:00

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
Sample ID: NSH2536-07 (1215 C	ardinal - Soil) S	ampled:	08/24/09 10:30)					
General Chemistry Parameters									
% Dry Solids	88.6		%	0.500	1	09/10/09 11:04	SW-846	AJK	9091140
Selected Volatile Organic Compound	s by EPA Method	8260B							
Benzene	ND		mg/kg dry	0.00247	1	09/07/09 16:12	SW846 8260B	KxC	9084866
Ethylbenzene	ND		mg/kg dry	0.00247	1	09/07/09 16:12	SW846 8260B	KxC	9084866
Naphthalene	0.0521		mg/kg dry	0.00617	j	09/07/09 16:12	SW846 8260B	КхС	9084866
Toluene	ND		mg/kg dry	0.00247	1	09/07/09 16:12	SW846 8260B	KxC	9084866
Xylenes, total	ND		mg/kg dry	0.00617	1	09/07/09 16:12	SW846 8260B	KxC	9084866
Surr: 1,2-Dichloroethane-d4 (67-138%)	94 %					09/07/09 16:12	SW846 8260B	KxC	908486
Surr: Dibromofluoromethane (75-125%)	96 %					09/07/09 16:12	SW846 8260B	KxC	908486
Surr: Toluene-d8 (76-129%)	114 %					09/07/09 16:12	SW846 8260B	KxC	908486
Surr: 4-Bromofluorobenzene (67-147%)	149 %	ZX				09/07/09 16:12	SW846 8260B	KxC	908486
Polyaromatic Hydrocarbons by EPA 8	3270D								
Acenaphthene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
Acenaphthylene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
Anthracene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	ilf	9090545
Benzo (a) anthracene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
Benzo (a) pyrene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
Benzo (b) fluoranthene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
Benzo (g,h,i) perylene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
Benzo (k) fluoranthene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	ilf	9090545
Chrysene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
Dibenz (a,h) anthracene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
Fluoranthene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
Fluorene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
ndeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	ilf	9090545
Naphthalene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
Phenanthrene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
yrene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	ilf	9090545
-Methylnaphthalene	4.82		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
2-Methylnaphthalene	7.04		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
urr: Terphenyl-d14 (18-120%)	119 %					09/11/09 22:17	SW846 8270D	, jlf	9090545
urr: 2-Fluorobiphenyl (14-120%)	115 %					09/11/09 22:17	SW846 8270D	jlf	9090545
urr: Nitrobenzene-d5 (17-120%)	112 %					09/11/09 22:17	SW846 8270D	jtf	9090545

THE LEADER IN ENVIRONMENTAL TESTING

Attn	Ladson, SC 29456 Tom McElwee	 		Project Number: Received:	[none] 08/28/09	08:00	- and the	
		A 7	NAT VTICA	L DEBODT				
		 AN	NALYTICA	L REPORT	 Dilution	Analysis		

Sample ID: NSH2536-08 (1214 Cardinal - Soil) Sampled: 08/24/09 10:15

% Dry Solids	88.7	%	0.500	1	09/10/09 11:04	SW-846	A 11/	9091140
			0.500	,	09/10/09 11:04	511-540	AJK	9091140
Selected Volatile Organic Compound	is by EPA Method 8260)B						
Benzene	ND	mg/kg dry	0.00241	1	09/07/09 14:47	SW846 8260B	CMM	9091127
Ethylbenzene	ND	mg/kg dry	0.00241	1	09/07/09 14:47	SW846 8260B	CMM	9091127
Naphthalene	ND	mg/kg dry	0.00602	I	09/07/09 14:47	SW846 8260B	CMM	9091127
Toluene	ND	mg/kg dry	0.00241	1	09/07/09 14:47	SW846 8260B	СММ	9091127
Xylenes, total	ND	mg/kg dry	0.00602	I	09/07/09 14:47	SW846 8260B	CMM	9091127
Surr: 1,2-Dichloroethane-d4 (67-138%)	89 %				09/07/09 14:47	SW846 8260B	СММ	9091127
Surr: Dibromofluoromethane (75-125%)	95 %				09/07/09 14:47	SW846 8260B	СММ	9091127
Surr: Toluene-d8 (76-129%)	103 %				09/07/09 14:47	SW846 8260B	СММ	9091127
Surr: 4-Bromofluorobenzene (67-147%)	135 %				09/07/09 14:47	SW846 8260B	СММ	9091127
Polyaromatic Hydrocarbons by EPA	8270D							
Acenaphthene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	ilf	9090545
Acenaphthylene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Anthracene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Benzo (a) anthracene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Benzo (a) pyrene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Benzo (b) fluoranthene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Benzo (g,h,i) perylene	0.212	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Benzo (k) fluoranthene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Chrysene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Dibenz (a,h) anthracene	ND	mg/kg dry	0.0747	I	09/10/09 23:32	SW846 8270D	jlf	9090545
Fluoranthene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Fluorene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Indeno (1,2,3-cd) pyrene	0.192	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Naphthalene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Phenanthrene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Pyrene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
1-Methylnaphthalene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
2-Methylnaphthalene	ND	mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Surr: Terphenyl-d14 (18-120%)	72 %				09/10/09 23:32	SW846 8270D	jlf	9090545
Surr: 2-Fluorobiphenyl (14-120%)	70 %				09/10/09 23:32	SW846 8270D	jlf	9090545
Surr: Nitrobenzene-d5 (17-120%)	75 %				09/10/09 23:32	SW846 8270D	jlf	9090545

THE LEADER IN ENVIRONMENTAL TESTING

Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	08/28/09 08:00

SAMPLE EXTRACTION DATA

			Wt/Vol				Extraction
Parameter	Batch	Lab Number	Extracted	Extracted Vol	Date	Analyst	Method
Polyaromatic Hydrocarbons by E	EPA 8270D						
SW846 8270D	9090545	NSH2536-01	30.22	1.00	09/05/09 09:00	AJF	EPA 3550C
SW846 8270D	9090545	NSH2536-02	30.73	1.00	09/05/09 09:00	AJF	EPA 3550C
SW846 8270D	9090545	NSH2536-03	30.39	1.00	09/05/09 09:00	AJF	EPA 3550C
SW846 8270D	9090545	NSH2536-04	30.36	1.00	09/05/09 09:00	AJF	EPA 3550C
SW846 8270D	9090545	NSH2536-04RE1	30.36	1.00	09/05/09 09:00	AJF	EPA 3550C
SW846 8270D	9090545	NSH2536-05	30.31	2.00	09/05/09 09:00	AJF	EPA 3550C
SW846 8270D	9090545	NSH2536-06	30.57	5.00	09/05/09 09:00	AJF	EPA 3550C
SW846 8270D	9090545	NSH2536-07	30.40	1.00	09/05/09 09:00	AJF	EPA 3550C
SW846 8270D	9090545	NSH2536-07RE1	30.40	1.00	09/05/09 09:00	AJF	EPA 3550C
SW846 8270D	9090545	NSH2536-08	30.33	1.00	09/05/09 09:00	AJF	EPA 3550C
Selected Volatile Organic Compo	ounds by EPA Method 8	3260B					
SW846 8260B	9084866	NSH2536-01	4.90	5.00	08/25/09 15:00	СНН	EPA 5035
SW846 8260B	9084866	NSH2536-02	4.64	5.00	08/25/09 15:30	СНН	EPA 5035
SW846 8260B	9084866	NSH2536-03	5.39	5.00	08/25/09 10:30	СНН	EPA 5035
SW846 8260B	9084866	NSH2536-04	3.55	5.00	08/25/09 09:20	СНН	EPA 5035
SW846 8260B	9084866	NSH2536-04RE1	5.37	5.00	08/25/09 09:20	СНН	EPA 5035
SW846 8260B	9084866	NSH2536-04RE2	5.36	5.00	08/25/09 09:20	СНН	EPA 5035
SW846 8260B	9091127	NSH2536-05	5.78	5.00	08/24/09 13:45	CHH	EPA 5035
SW846 8260B	9084866	NSH2536-05RE1	5.56	5.00	08/24/09 13:45	СНН	EPA 5035
SW846 8260B	. 9084866	NSH2536-05RE2	5.46	5.00	08/24/09 13:45	CHH	EPA 5035
SW846 8260B	9091127	NSH2536-06	5.46	5.00	08/24/09 11:55	CHH	EPA 5035
SW846 8260B	9091127	NSH2536-07	4.73	5.00	08/24/09 10:30	СНН	EPA 5035
SW846 8260B	9084866	NSH2536-07RE1	4.57	5.00	08/24/09 10:30	СНН	EPA 5035
SW846 8260B	9091127	NSH2536-08	4.68	5.00	08/24/09 10:15	СНН	EPA 5035

THE LEADER IN ENVIRONMENTAL TESTING

Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	08/28/09 08:00

PROJECT QUALITY CONTROL DATA

Blank

lyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
ected Volatile Organic Comp	ounds by EPA Metho	1 8260B				
4866-BLK1						
izene	< 0.000670		mg/kg wet	9084866	9084866-BLK1	09/07/09 15:10
ylbenzene	< 0.000670		mg/kg wet	9084866	9084866-BLK1	09/07/09 15:10
hthalene	< 0.00170		mg/kg wet	9084866	9084866-BLK1	09/07/09 15:10
ucne	< 0.000400		mg/kg wet	9084866	9084866-BLK1	09/07/09 15:10
enes, total	< 0.00130		mg/kg wet	9084866	9084866-BLK1	09/07/09 15:10
ogate: 1,2-Dichloroethane-d4	104%			9084866	9084866-BLK1	09/07/09 15:10
ogate: Dibromofluoromethane	94%			9084866	9084866-BLK1	09/07/09 15:10
ogate: Toluene-d8	102%			9084866	9084866-BLK1	09/07/09 15:10
gate: 4-Bromofluorobenzene	107%			9084866	9084866-BLK1	09/07/09 15:10
127-BLK1						
zene	<0.000670		mg/kg wet	9091127	9091127-BLK1	09/07/09 12:40
lbenzene	< 0.000670		mg/kg wet	9091127	9091127-BLK1	09/07/09 12:40
nthalene	0.00337	В	mg/kg wet	9091127	9091127-BLK1	09/07/09 12:40
iene	<0.000400		mg/kg wet	9091127	9091127-BLK1	09/07/09 12:40
nes, total	< 0.00130		mg/kg wet	9091127	9091127-BLK1	09/07/09 12:40
gate: 1,2-Dichloroethane-d4	97%			9091127	9091127-BLK1	09/07/09 12:40
ate: Dibromofluoromethane	100%			9091127	9091127-BLK1	09/07/09 12:40
ate: Toluene-d8	103%			9091127	9091127-BLK1	09/07/09 12:40
e: 4-Bromofluorobenzene	124%			9091127	9091127-BLK1	09/07/09 12:40
romatic Hydrocarbons by E	EPA 8270D					
545-BLK1						
phthene	< 0.0320		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
bhthylene	< 0.0310		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
cene	< 0.0330		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
(a) anthracene	< 0.0380		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
(a) pyrene	< 0.0300		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
(b) fluoranthene	< 0.0300		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
) (g,h,i) perylene	< 0.0300		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
o (k) fluoranthene	< 0.0300		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
ene	< 0.0400		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
ız (a,h) anthracene	< 0.0310		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
anthene	< 0.0340		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
ene	< 0.0360		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
o (1,2,3-cd) pyrene	< 0.0310		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
thalene	< 0.0410		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
nthrene	< 0.0340		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
2	< 0.0410		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
Inaphthalene	<0.0410 <0.0320		mg/kg wet mg/kg wet	9090545 9090545	9090545-BLK1 9090545-BLK1	09/10/09 04:26 09/10/09 04:26



Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	08/28/09 08:00

PROJECT QUALITY CONTROL DATA

Blank - Cont.

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
Polyaromatic Hydrocarbons by EP.	A 8270D					
9090545-BLK1						
Surrogate: Terphenyl-d14	71%			9090545	9090545-BLK1	09/10/09 04:26
Surrogate: 2-Fluorobiphenyl	60%			9090545	9090545-BLK1	09/10/09 04:26
Surrogate: Nitrobenzene-d5	49%			9090545	9090545-BLK1	09/10/09 04:26



Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	08/28/09 08:00

	OJECT (-	JALITY CONTROL DATA Duplicate							
Analyte	Orig. Val.	Duplicate	Q	Units	RPD	Limit	Batch	Sample Duplicated	% Rcc.	Analyzed Date/Time
General Chemistry Parameters 9091140-DUP1 % Dry Solids	92.8	92.4		%	0.4	20	9091140	NSH2507-03		09/10/09 11:04

<u>TestAmerica</u>

Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	08/28/09 08:00

PROJECT QUALITY CONTROL DATA LCS									
Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time	
Selected Volatile Organic Compou	nds by EPA Method 82	60B							
9084866-BS1									
Benzenc	50.0	44.5		ug/kg	89%	78 - 126	9084866	09/07/09 13:4	
Ethylbenzene	50.0	46.4		ug/kg	93%	79 - 130	9084866	09/07/09 13:4	
Naphthalene	50.0	47.2		ug/kg	94%	72 - 150	9084866	09/07/09 13:4	
Toluene	50.0	45.3		ug/kg	91%	76 - 126	9084866	09/07/09 13:4	
Xylenes, total	150	138		ug/kg	92%	80 - 130	9084866	09/07/09 13:4	
Surrogate: 1,2-Dichloroethane-d4	50.0	52.1			104%	67 - 138	9084866	09/07/09 13:4	
Surrogate: Dibromofluoromethane	50.0	47.8			96%	75 - 125	9084866	09/07/09 13:4	
Surrogate: Toluene-d8	50.0	50.5			101%	76 - 129	9084866	09/07/09 13:4	
Surrogate: 4-Bromofluorobenzene	50.0	54.0			108%	67 - 147	9084866	09/07/09 13:4	
0091127-BS1									
Benzene	50.0	52.8		ug/kg	106%	78 - 126	9091127	09/07/09 11:3	
Ethylbenzene	50.0	59.7		ug/kg	119%	79 - 130	9091127	09/07/09 11:	
Naphthalenc	50.0	52.3		ug/kg	105%	72 - 150	9091127	09/07/09 11:	
Foluene	50.0	57.5		ug/kg	115%	76 - 126	9091127	09/07/09 11:3	
Xylenes, total	150	180		ug/kg	120%	80 - 130	9091127	09/07/09 11:3	
Surrogate: 1,2-Dichloroethane-d4	50.0	47.3			95%	67 - 138	9091127	09/07/09 11:3	
Surrogate: Dibromofluoromethane	50.0	49.6			99%	75 - 125	9091127	09/07/09 11:3	
Surrogate: Toluene-d8	50.0	52.4			105%	76 - 129	9091127	09/07/09 11:3	
Surrogate: 4-Bromofluorobenzene	50.0	45.6			91%	67 - 147	9091127	09/07/09 11:3	
olyaromatic Hydrocarbons by EP.	A 8270D								
090545-BS1									
Acenaphthene	1.67	1.28		mg/kg wet	77%	49 - 120	9090545	09/10/09 04:4	
Acenaphthylene	1.67	1.29		mg/kg wet	77%	52 - 120	9090545	09/10/09 04:4	
Anthracene	1.67	1.45		mg/kg wet	87%	58 - 120	9090545	09/10/09 04:4	
Benzo (a) anthracene	1.67	1.33		mg/kg wet	80%	57 - 120	9090545	09/10/09 04:4	
Benzo (a) pyrene	1.67	1.38		mg/kg wet	83%	55 - 120	9090545	09/10/09 04:4	
Benzo (b) fluoranthene	1.67	1.46		mg/kg wet	88%	51 - 123	9090545	09/10/09 04:4	
Benzo (g,h,i) perylene	1.67	1.31		mg/kg wet	79%	49 - 121	9090545	09/10/09 04:4	
Benzo (k) fluoranthene	1.67	1.07		mg/kg wet	64%	42 - 129	9090545	09/10/09 04:4	
hrysene	1.67	1.32		mg/kg wet	79%	55 - 120	9090545	09/10/09 04:4	
Dibenz (a,h) anthracene	1.67	1.34		mg/kg wet	80%	50 - 123	9090545	09/10/09 04:4	
luoranthene	1.67	1.23		mg/kg wet	74%	58 - 120	9090545	09/10/09 04:4	
luorene	1.67	1.29		mg/kg wet	77%	54 - 120	9090545	09/10/09 04:4	
ideno (1,2,3-cd) pyrene	1.67	1.33		mg/kg wet	80%	50 - 122	9090545	09/10/09 04:4	
aphthalene	1.67	1.14		mg/kg wet	68%	28 - 120	9090545	09/10/09 04:4	
henanthrene	1.67	1.30		mg/kg wet	78%	56 - 120	9090545	09/10/09 04:4	
yrene	1.67	1.33		mg/kg wet	80%	56 - 120	9090545	09/10/09 04:4	
-Methylnaphthalene	1.67	1.07		mg/kg wet	64%	36 - 120	9090545	09/10/09 04:4	
-Methylnaphthalene	1.67	1.09		mg/kg wet	66%	36 - 120	9090545	09/10/09 04:4	



Client El	EG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
10	0179 Highway 78	Project Name:	Laurel Bay Housing Project
La	adson, SC 29456	Project Number:	[none]
Attn To	om McElwee	Received:	08/28/09 08:00

PROJECT QUALITY CONTROL DATA

LCS - Cont.

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
Polyaromatic Hydrocarbons by I	EPA 8270D							
9090545-BS1								
Surrogate: Terphenyl-d14	1.67	1.19			71%	18 - 120	9090545	09/10/09 04:49
Surrogate: 2-Fluorobiphenyl	1.67	1.06			63%	14 - 120	9090545	09/10/09 04:49
Surrogate: Nitrobenzene-d5	1.67	0.947			57%	17 - 120	9090545	09/10/09 04:49



Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	08/28/09 08:00

PROJECT QUALITY CONTROL DATA LCS Dup												
Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
Selected Volatile Organic Comp	ounds by EPA	Method 82601	в									
9084866-BSD1												
Benzene		45.8		ug/kg	50.0	92%	78 - 126	3	50	9084866		09/07/09 13:07
Ethylbenzene		46.9		ug/kg	50.0	94%	79 - 130	1	50	9084866		09/07/09 13:07
Naphthalene		49.8		ug/kg	50.0	100%	72 - 150	5	50	9084866		09/07/09 13:07
Toluene		45.4		ug/kg	50.0	91%	76 - 126	0.3	50	9084866		09/07/09 13:07
Xylenes, total		139		ug/kg	150	93%	80 - 130	0.7	50	9084866		09/07/09 13:07
Surrogate: 1,2-Dichloroethane-d4		53.4		ug/kg	50.0	107%	67 - 138			9084866		09/07/09 13:07
Surrogate: Dibromofluoromethane		48.0		ug/kg	50.0	96%	75 - 125			9084866		09/07/09 13:07
Surrogate: Toluene-d8		49.5		ug/kg	50.0	99%	76 - 129			9084866		09/07/09 13:07
Surrogate: 4-Bromofluorobenzene		52.6		ug/kg	50.0	105%	67 - 147			9084866		09/07/09 13:07
9091127-BSD1												
Benzene		54.9		ug/kg	50.0	110%	78 - 126	4	50	9091127		09/07/09 11:03
Ethylbenzene		61.7		ug/kg	50.0	123%	79 - 130	3	50	9091127		09/07/09 11:03
Naphthalene		54.9		ug/kg	50.0	110%	72 - 150	5	50	9091127		09/07/09 11:03
Toluene		58.1		ug/kg	50.0	116%	76 - 126	1	50	9091127		09/07/09 11:03
Xylenes, total		186		ug/kg	150	124%	80 - 130	3	50	9091127		09/07/09 11:03
Surrogate: 1,2-Dichloroethane-d4		48.6		ug/kg	50.0	97%	67 - 138			9091127		09/07/09 11:03
Surrogate: Dibromofluoromethane		49.4		ug/kg	50.0	99%	75 - 125			9091127		09/07/09 11:03
Surrogate: Toluene-d8		52.1		ug/kg	50.0	104%	76 - 129			9091127		09/07/09 11:03
Surrogate: 4-Bromofluorobenzene		44.9		ug/kg	50,0	90%	67 - 147			9091127		09/07/09 11:03

Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	08/28/09 08:00

PROJECT QUALITY CONTROL DATA Matrix Spike										
Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
Selected Volatile Organic Compo	unds by EPA Me	thod 8260B								
9084866-MS1										
Benzene	ND	2.21		mg/kg dry	2.76	80%	42 - 141	9084866	NSH2536-05RE 2	09/07/09 20:18
Ethylbenzene	0.127	2.42		mg/kg dry	2.76	83%	21 - 165	9084866	NSH2536-05RE 2	09/07/09 20:18
Naphthalene	0.678	2.72		mg/kg dry	2.76	74%	10 - 160	9084866	NSH2536-05RE 2	09/07/09 20:18
Toluene	1.67	2.39	M2	mg/kg dry	2.76	26%	45 - 145	9084866	NSH2536-05RE 2	09/07/09 20:18
Xylenes, total	0.568	7.05		mg/kg dry	8.27	78%	31 - 159	9084866	NSH2536-05RE 2	09/07/09 20:18
Surrogate: 1,2-Dichloroethane-d4		40.4		ug/kg	50.0	81%	67 - 138	9084866	NSH2536-05RE 2	09/07/09 20:18
Surrogate: Dibromofluoromethane		45.4		ug/kg	50.0	91%	75 - 125	9084866	NSH2536-05RE 2	09/07/09 20:18
Surrogate: Toluene-d8		47.9		ug/kg	50.0	96%	76 - 129	9084866	NSH2536-05RE 2	09/07/09 20:18
Surrogate: 4-Bromofluorobenzene		55.6		ug/kg	50.0	111%	67 - 147	9084866	NSH2536-05RE 2	09/07/09 20:18
9091127-MS1										
Benzene	ND	47.5		ug/kg	50.0	95%	42 - 141	9091127	NSH2536-08	09/07/09 17:49
Ethylbenzene	ND	53.9		ug/kg	50.0	108%	21 - 165	9091127	NSH2536-08	09/07/09 17:49
Naphthalene	5.06	26.0		ug/kg	50.0	42%	10 - 160	9091127	NSH2536-08	09/07/09 17:49
Toluene	0.437	54.7		ug/kg	50.0	109%	45 - 145	9091127	NSH2536-08	09/07/09 17:49
Xylenes, total	0.484	153		ug/kg	150	102%	31 - 159	9091127	NSH2536-08	09/07/09 17:49
Surrogate: 1,2-Dichloroethane-d4		43.9		ug/kg	50.0	88%	67 - 138	9091127	NSH2536-08	09/07/09 17:49
Surrogate: Dibromofluoromethane		49.4		ug/kg	50.0	99%	75 - 125	9091127	NSH2536-08	09/07/09 17:49
Surrogate: Toluene-d8		54.1		ug/kg	50.0	108%	76 - 129	9091127	NSH2536-08	09/07/09 17:49
Surrogate: 4-Bromofluorobenzene		50.4		ug/kg	50.0	101%	67 - 147	9091127	NSH2536-08	09/07/09 17:49

<u>TestAmerica</u>

Attn	Tom McElwee	Received:	08/28/09 08:00
	Ladson, SC 29456	Project Number:	[none]
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536

		PF	ROJEC	T QUALITY Matrix Sp			DATA					
Analyte	Orig. Val.	Duplicate	Q	Units	Spike	P % Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
Selected Volatile Organic Comp	ounds by EPA	Method 82	60B									
9084866-MSD1 Benzene	ND	2.23		mg/kg dry	2.76	81%	42 - 141	0.9	50	9084866	NSH2536-05R E2	09/07/09 20:49
Ethylbenzene	0.127	2.38		mg/kg dry	2.76	82%	21 - 165	2	50	9084866	E2 NSH2536-05R E2	09/07/09 20:49
Naphthalene	0.678	2.75		mg/kg dry	2.76	75%	10 - 160	1	50	9084866	E2 NSH2536-05R E2	09/07/09 20:49
Toluene	1.67	2.24	M2	mg/kg dry	2.76	21%	45 - 145	6	50	9084866	NSH2536-05R E2	09/07/09 20:49
Xylenes, total	0.568	6.84		mg/kg dry	8.27	76%	31 - 159	3	50	9084866	NSH2536-05R E2	09/07/09 20:49
Surrogate: 1,2-Dichloroethane-d4		40.8		ug/kg	50.0	82%	67 - 138			9084866	NSH2536-05R E2	09/07/09 20:49
urrogate: Dibromofluoromethane		45.0		ug/kg	50.0	90%	75 - 125			9084866	NSH2536-05R E2	09/07/09 20:49
Surrogate: Toluene-d8		47.0		ug/kg	50.0	94%	76 - 129			9084866	NSH2536-05R E2	09/07/09 20:49
Surrogate: 4-Bromofluorobenzene		54.9		ug/kg	50.0	110%	67 - 147			9084866	NSH2536-05R E2	09/07/09 20:49
0091127-MSD1												
Benzene	ND	45.4		ug/kg	50.0	91%	42 - 141	5	50	9091127	NSH2536-08	09/07/09 18:20
Ethylbenzene	ND	46.5		ug/kg	50.0	93%	21 - 165	15	50	9091127	NSH2536-08	09/07/09 18:20
Naphthalene	4.65	25.3		ug/kg	50.0	41%	10 - 160	3	50	9091127	NSH2536-08	09/07/09 18:20
Toluene	0.402	48.6		ug/kg	50.0	96%	45 - 145	12	50	9091127	NSH2536-08	09/07/09 18:20
Xylenes, total	0.446	130		ug/kg	150	87%	31 - 159	16	50	9091127	NSH2536-08	09/07/09 18:20
urrogate: 1,2-Dichloroethane-d4		44.4		ug/kg	50.0	89%	67 - 138			9091127	NSH2536-08	09/07/09 18:20
urrogate: Dibromofluoromethane		50.0		ug/kg	50.0	100%	75 - 125			9091127	NSH2536-08	09/07/09 18:20
Surrogate: Toluene-d8		52.8		ug/kg	50.0	106%	76 - 129			9091127	NSH2536-08	09/07/09 18:20
Surrogate: 4-Bromofluorobenzene		57.7		ug/kg	50.0	115%	67 - 147			9091127	NSH2536-08	09/07/09 18:20



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

Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	08/28/09 08:00

CERTIFICATION SUMMARY

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



Client	EEG - Small Business Group, Inc. (2449)	Work Order:	NSH2536
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	08/28/09 08:00

DATA QUALIFIERS AND DEFINITIONS

- **B** Analyte was detected in the associated Method Blank.
- M2 The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- **RL1** Reporting limit raised due to sample matrix effects.
- **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

NSH2536 09/14/09 23 59

	t Piss Pregra	Nashville Di 2960 Foster Nashville, T	Creightor	ı		Toll Fre	e: 800	-726-017 -765-098 -726-340	30				n	nethods, i	s this wor purposes	k being co ?	er analytical onducted for			
Client Name/Account #: 1		79													(e Monitoring?	, .	Yes	No
- City/State/Zip: I	10179 Highway									·····						Enforcen	nent Action?		Yes	No
					·								State: _							······
Project Manager:		mail: mceiwee	e@eeginc.n		Fax No.;	821	2	079	-0	Umi				\mathcal{O}	5-20	Z		·····		
Telephone Number:		# 0	27		Fax No.:	2-1	<u>.</u>	5/1		101		TA Qu	-							
Sampler Name: (Print)	Pr m	1	hac		$\neg \neg$			~					_	aurel Bay	Housing	Project				
Sampler Signature:		LL,	/	·····	ŧ			<u> </u>			-	Proj	ect #: _							
1 1		-4			- 23	Preser	vative			Matrix					A	nalyze For	· · · · · · · · · · · · · · · · · · ·			
Sample ID / Description /227 Dour /225 Dour /223 CARdinit /224 CARDINIT /219 CARDINIT /218 CARDINIT /218 CARDINIT /215 CARDINIT /214 CARDINIT	2015 2 18 2015 2 8 2015	(03C) 0920 1345 1155 1030	5 55555555 No of Containers Shipped 文文文文文文文 Grab	Composite	Los Contraction Set	HCI (Blue Label) NaOH (Orange Label)		いていていている。 いていていていていていていてい。 いていていていていていていい。 していていていていていていい。 していていていていていていていい。 していていていていていていていていていていい。 していていていていていていていていていていていていていていていていていていてい	Groundwater Wastewater		X X X Soit A X X X Soit	W w w w w w W BTEX + Napth - 8260								RUSH TAT (Pre-Schedule)
Special Instructions:	8/2	Jec	Time 19 6 ³ 0		$\frac{1}{2}$	/ * r	oment:			Date	FEDE	Time		Tei		ents: 9 Upon Re 9 Headsp:				Y
Relinquished by:	Dati	E	Time	Receive	t by Testar	Torica.				Date Q / 2	9	Time るくひ								

ATTACHMENT A



NON-HAZARDOUS MANIFEST

ease print or type. (Form designed for use on elite (12-pitch) typewriter.) 1. Generator's US E	DA ID No.	Vanilest		
NON-HAZARDOUS MANIFEST		cument No.	2. Page 1 of	
Generator's Name and Mailing Address MCAS, Beaufort Laurel Bay Housing Beaufort SC 29904 Generator's Phone 843 228-8480			A Manifact Number	10885420
	6. US EPA ID Number		C. State Transporter's ID	
EEG, Inc.			D. Transporter's Phone	3 879-0411
7. Transporter 2 Company Name	8. US EPA ID Number		E. State Transporter's ID	
			F. Transporter's Phone	
	10. US EPA ID Number		G. State Facility's ID	
HICKORY HILL LANDFILL ROUTE 1, BOX 121 RIDGELAND SC 29936			H. Facility's Phone	3 987-4643
11. Description of Waste Materials		12. Conta	Total	14. I. Unit Mice Comment
a Heating Of Tank Mied with Sand			Type Quantity	Wt./Vol. Misc. Comment
)2055SC	001		
WM Profile #				
WM Profile #		11		
d. As				
WM Profile #				
J. Additional Descriptions for Materials Listed Above	and the second		K. Disposal Location	
Landfill Solidification			Cell	Level
Bio Remediation	<u></u>		Grid	HING
15. Special Handling Instructions and Additional Information Gran USTS free madi wall Purchase Order # 21218/Смалді wall	3) 1224rCAR 4) 1223rCAR EMERGENCY CONTACT:			Carebrando M
16. GENERATOR'S CERTIFICATION:		and the second second		
I hereby certify that the above-described mater applicable state law, have been fully and accur for transportation according to applicable regul	ately described, classifie			
Printed/Typed Name	Signature "On behalf of"	Second Second	The second se	Month Day Ye
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name	Cignoture			Manthe David V
Jomes Baldwin	Signature	Rald	lun	Month Day Yea
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name	Signature			Month Day Yea
19. Certificate of Final Treatment/Disposal				
I certify, on behalf of the above listed treatment was managed in compliance with all applicable	t facility, that to the best of laws, regulations, permi	of my kn its and lie	owledge, the above censes on the date	e-described waste s listed above.
20. Facitility Owner or Operator: Certification of receipt of non-hazardou	s materials covered by this manifes	st.	<u></u>	
Printed/Typed Name	Signature	602		Month Day Yea

Appendix C Laboratory Analytical Report - Groundwater



Volatile Organic Compounds by GC/MS

Client: AECOM - Resolution Consultants

Description: BEALB1224TW01WG20170308

Laboratory ID: SC09025-003 Matrix: Aqueous

Date Sampled:03/08/2017 1130

Date Received: 03/09/2017											
RunPrep Method25030B	Analytical Method 8260B			i s Date Analyst 017 1425 ALL	Prep	Date	Batch 36933				
Parameter			CAS mber	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzene		71-	-43-2	8260B	0.80	U	1.0	0.80	0.40	ug/L	2
Ethylbenzene		100-	41-4	8260B	0.80	U	1.0	0.80	0.40	ug/L	2
Naphthalene		91-	20-3	8260B	0.80	U	1.0	0.80	0.40	ug/L	2
Toluene		108-	88-3	8260B	0.80	U	1.0	0.80	0.40	ug/L	2
Xylenes (total)		1330-	-20-7	8260B	0.80	U	1.0	0.80	0.40	ug/L	2
Surrogate	Q %	Run 2 Recovery	Acceptar Limit								
Bromofluorobenzene		87	85-114	1							
Dibromofluoromethane		102	80-119	9							
1,2-Dichloroethane-d4		88	81-118	3							
Toluene-d8		94	89-112	2							

PQL = Practical quantitation limitB = Detected in the method blankE = Quantitation of compound exceeded the calibration rangeH = Out of holding timeQ = Surrogate failureND = Not detected at or above the MDLJ = Estimated result < PQL and \geq MDLP = The RPD between two GC columns exceeds 40%N = Recovery is out of criteriaL = LCS/LCSD failureWhere applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"S = MS/MSD failureS = MS/MSD failure

Client: AECOM - Resolution Consultants

Description: BEALB1224TW01WG20170308

Date Sampled:03/08/2017 1130

Laboratory ID: SC09025-003 Matrix: Aqueous

Batch

Date Received: 03/09/2017 **Run Prep Method** Analytical Method Dilution Analysis Date Analyst **Prep Date** 1 3520C 8270D 1 03/17/2017 1804 RBH 03/15/2017 1020 37108 2 3520C 8270D 1 03/22/2017 1620 RBH 03/21/2017 1114 37636

Parameter			CAS /	Analyti Meth		Result	Q	LOQ	LOD	DL	Units	Run
Benzo(a)anthracene		56-	55-3	827	70D	0.10	UQ	0.20	0.10	0.040	ug/L	1
Benzo(b)fluoranthene		205-	99-2	827	70D	0.10	UQ	0.20	0.10	0.040	ug/L	1
Benzo(k)fluoranthene		207-	08-9	827	70D	0.10	UQ	0.20	0.10	0.040	ug/L	1
Chrysene		218-	01-9	827	70D	0.10	UQ	0.20	0.10	0.040	ug/L	1
Dibenzo(a,h)anthracene		53-	70-3	827	70D	0.10	UQ	0.20	0.10	0.040	ug/L	1
Surrogate	Q	Run 1 % Recovery	Acceptanc Limits		Run % Reco		ceptance Limits	•				
Nitrobenzene-d5	N	42	44-120	Н	5	4	44-120					
2-Fluorobiphenyl	N	39	44-119	Н	5	5	44-119					
Terphenyl-d14		75	50-134	н	7	5	50-134					

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

Shealy Environmental Services, Inc. 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com Page: 9 of 35

Client: AECOM - Resolution Consultants

Description: BEALB1224TW01WG20170308

Date Sampled:03/08/2017 1130

Laboratory ID: SC09025-003 Matrix: Aqueous

Batch

Date Received: 03/09/2017 Run Prep Method Analytical Method Dilution Analysis Date Analyst **Prep Date** 1 3520C 8270D 1 03/17/2017 1804 RBH 03/15/2017 1020 37108 2 3520C 8270D 1 03/22/2017 1620 RBH 03/21/2017 1114 37636

Parameter		(Num		Analyti Metho		Result	Q	LOQ	LOD	DL	Units	Run
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Benzo(k)fluoranthene		207-0)8-9	827	'0D	0.10	UH	0.20	0.10	0.040	ug/L	2
Chrysene		218-0)1-9	827	'0D	0.10	UH	0.20	0.10	0.040	ug/L	2
Dibenzo(a,h)anthracene		53-7	70-3	827	'0D	0.10	UH	0.20	0.10	0.040	ug/L	2
Surrogate	Q	Run 1 % Recovery	Acceptane Limits		Run % Reco		ceptance Limits	1				
Nitrobenzene-d5	N	42	44-120	Н	54	1	44-120					
2-Fluorobiphenyl	Ν	39	44-119	н	55	5	44-119					
Terphenyl-d14		75	50-134	н	75	5	50-134					

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Appendix D Regulatory Correspondence





August 24, 2016

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 Tank Assessment Reports

Dear Mr. Drawdy:

The South Carolina Department of Health and Environmental Control (the Department) received the Underground Storage Tanks (USTs) Assessment Reports for the addresses listed in the attachment. 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 <u>et seq</u>., as amended).

The Department has reviewed the referenced 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 these sites.

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

If you have any questions, please contact me at petruslb@dhec.sc.gov or 803-898-0294.

Sincerely,

LIPT

Laurel Petrus, Environmental Engineer Associate RCRA Federal Facilities Section

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, August 24, 2016 Subject: IGWA, Laurel Bay Underground Tank Assessment Reports

Draft Final Initial Groundwater Investigation Report for (41 addresses)

122 Banyan	905 Barracuda	
159 Cypress Tank 2	921 Barracuda	
221 Cypress	935 Albacore	
283 Birch Tank 2	946 Albacore	
328 Ash Tank 2	1037 Iris	
346 Ash	1039 Iris	
359 Aspen	1110 Iris	
370 Aspen	1134 Iris	
377 Aspen	1143 Iris	
409 Elderberry	1202 Cardinal	
486 Laurel Bay	1212 Cardinal	
515 Laurel Bay	1222 Cardinal	10
542 Laurel Bay	1224 Cardinal	
593 Aster	1226 Dove	
630 Dahlia	1236 Dove	
693 Camellia	1245 Dove	
723 Blue Bell	1247 Dove	
774 Althea	1274 Albatross	1995.
860 Dolphin	1319 Albatross	
873 Cobia	1337 Albatross	
883 Cobia		



July 27, 2017

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

RE: Draft Final Initial Groundwater Investigation Report, February and March 2017

Dear Mr. Drawdy:

The South Carolina Department of Health and Environmental Control (DHEC) received groundwater data from temporary monitoring well installations in the Draft Final Groundwater Investigation Report, Laurel Bay Military Housing Area for the fifty two (52) addresses shown in the attachment. 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 DHEC's request, groundwater samples were collected from the attached referenced addresses. DHEC 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 groundwater monitoring wells should be installed at the three (3) stated addresses. For the remaining forty nine (49) addresses, there is no indication of contamination on the property and therefore no further investigation is required at this time.

Please note that DHEC'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, DHEC retains the right to request further investigation if deemed necessary.

If you have any questions, please contact me at petruslb@dhec.sc.gov or 803-898-0294.

Sincerely,

Lalpt

Laurel Petrus, Environmental Engineer Associate Bureau of Land and Waste Management

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

Draft Final Initial Groundwater Investigation Report for (52 addresses)

Permanent Well Installation recommedation (3 Addresses):

- 254 Beech Street (110 ug/L)
- o 268 Beech Street (28 ug/L)
- o 774 Althea Street (35 ug/L)

No Further Action recommendation (49 addresses):

113 Birch Drive 0 121 Banyan Drive 0 122 Banyan Drive 0 **159 Cypress Street** 0 221 Cypress Street 0 274 Birch Drive 0 279 Birch Drive 0 283 Birch Drive 0 328 Ash Street 0 346 Ash Street 0 359 Aspen Street 0 370 Aspen Street 0 377 Aspen Street 0 409 Elderberry Drive 0 465 Dogwood Drive 0 480 Laurel Bay Boulevard 0 486 Laurel Bay Boulevard 0 515 Laurel Bay Boulevard Q 542 Laurel Bay Boulevard 0 593 Aster Street 0 630 Dahlia Drive 0 641 Dahlia Drive 0 693 Camelia Drive 0 723 Bluebell Lane 0 860 Dolphin Street 0 873 Cobia Drive 0 883 Cobia Drive 0 905 Barracuda Drive 0 921 Barracuda Drive 0 935 Albacore Street 0 946 Albacore Street 0 1037 Iris Lane 0 1039 Iris Lane 0 1110 Iris Lane 0 1134 Iris Lane 0 1143 Iris Lane 0 1177 Bobwhite Drive 0 1202 Cardinal Lane 0 0 1212 Cardinal Lane 0 1222 Cardinal Lane 1224 Cardinal Lane 0 1226 Dove Lane 0 1236 Dove Lane 0 1245 Dove Lane 0 1247 Dove Lane 0 0 1274 Albatross Drive 1319 Albatross Drive 0 1337 Albatross Drive 0 1346 Cardinal Lane 0