SUMMARY REPORT
167 WEST CARDINAL LANE (FORMERLY 1218 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 SUMMARY REPORT
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Prepared by:



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

Contract Number: N62470-14-D-9016

CTO WE52

JUNE 2021



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List of Acronyms

bgs below ground surface

BTEX benzene, toluene, ethylbenzene, and xylenes

CTO Contract Task Order

COPC constituents of potential concern

ft feet

IDIQ Indefinite Delivery, Indefinite Quantity

IGWA Initial Groundwater Assessment

JV Joint Venture

LBMH Laurel Bay Military Housing MCAS Marine Corps Air Station

NAVFAC Mid-Lant Naval Facilities Engineering Command Mid-Atlantic

NFA No Further Action

PAH polynuclear aromatic hydrocarbon QAPP Quality Assurance Program Plan

RBSL risk-based screening level

SCDHEC South Carolina Department of Health and Environmental Control

Site LBMH area at MCAS Beaufort, South Carolina

UST underground storage tank
VISL vapor intrusion screening level



1.0 INTRODUCTION

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

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

This report summarizes the results the environmental investigation activities associated with the storage of home heating oil and the potential release of petroleum constituents at the referenced property. Based on the results of the investigation, a No Further Action (NFA) determination has been made by the South Carolina Department of Health and Environmental Control (SCDHEC) for 167 West Cardinal Lane (Formerly 1218 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 167 West Cardinal Lane (Formerly 1218 West Cardinal Lane). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 1218 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 – 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

On August 24, 2009, a single 280 gallon heating oil UST was removed from the landscaped area adjacent to the house at 167 West Cardinal Lane (Formerly 1218 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 5'7" 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 167 West Cardinal Lane (Formerly 1218 West Cardinal Lane) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated July 1, 2015, SCDHEC requested an IGWA for 167 West Cardinal Lane (Formerly 1218 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 December 3, 2015, a temporary monitoring well was installed at 167 West Cardinal Lane (Formerly 1218 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 – 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 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 – 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 167 West Cardinal Lane (Formerly 1218 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 167 West Cardinal Lane (Formerly 1218 West Cardinal Lane). This NFA determination was obtained in a letter dated June 8, 2016. 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 – 1218 West Cardinal Lane, Laurel Bay Military Housing Area, November 2009.

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 167 West Cardinal Lane (Formerly 1218 West Cardinal Lane) Laurel Bay Military Housing Area

Marine Corps Air Station Beaufort Beaufort, South Carolina

Constituent	SCDHEC RBSLs (1)	Results Sample Collected 08/24/09					
Volatile Organic Compounds Analyzed by EPA Method 8260B (mg/kg)							
Benzene	0.003	ND					
Ethylbenzene	1.15	ND					
Naphthalene	0.036	0.0111					
Toluene	0.627	ND					
Xylenes, Total	13.01	ND					
Semivolatile Organic Compounds Ar	nalyzed by EPA Method 8270D (mg/kg)						
Benzo(a)anthracene	0.66	5.47					
Benzo(b)fluoranthene	0.66	3.46					
Benzo(k)fluoranthene	0.66	2.54					
Chrysene	0.66	5.13					
Dibenz(a,h)anthracene	0.66	0.751					

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 167 West Cardinal Lane (Formerly 1218 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 12/03/15
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 Ana	lyzed by EPA Method 82701	 Ο (μg/L)	
Benzo(a)anthracene	10	NA	ND
Benzo(b)fluoranthene	10	NA NA	ND
Benzo(k)fluoranthene	10	NA NA	ND
Chrysene	10	NA 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

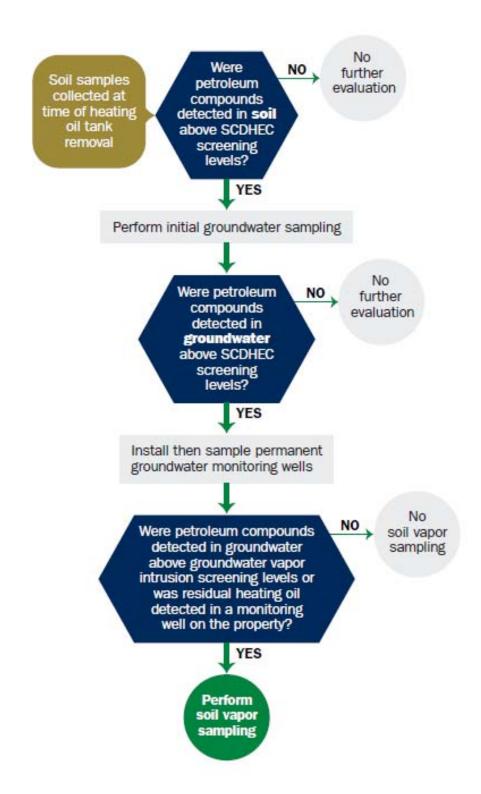
SCDHEC - South Carolina Department Of Health and Environmental Control

μg/L - micrograms per liter

VISL - Vapor Intrusion Screening Level

Appendix A Multi-Media Selection Process for LBMH



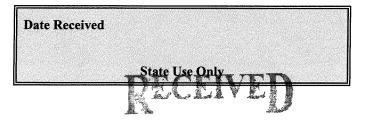


Appendix A - Multi-Media Selection Process for LBMH

Appendix B UST Assessment Report



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

NOV 1 3 2009

SC DHEC - Bureau of Land & Waste Management

I. OWNERSHIP OF UST (S)

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

II. SITE IDENTIFICATION AND LOCATION

Permit I.D. #	
<u>Laurel Bay Military</u>	Housing Area, Marine Corps Air Station, Beaufort, SC
Facility Name or Company Site	Identifier
	Laurel Bay Military Housing Area
Street Address or State Road (a	s applicable)
Beaufort,	Beaufort
City	County

Attachment 2

III. INSURANCE INFORMATION

Insurance S	tatement
The petroleum release reported to DHEC on qualify to receive state monies to pay for appropriate site allowed in the State Clean-up fund, written confirmation of insurance policy is required. This section must be complete.	rehabilitation activities. Before participation is of the existence or non-existence of an environmental
Is there now, or has there ever been an insurance p UST release? YES NO (check one)	olicy or other financial mechanism that covers this
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 FO	R SUPERB FUNDING
I DO / DO NOT wish to participate in the SUPE	ERB Program. (Circle one.)
V. CERTIFICATION (T	o be signed by the UST owner)
I certify that I have personally examined and am fami attached documents; and that based on my inquiry of information, I believe that the submitted information is	of those individuals responsible for obtaining this
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	th Carolina

VI. US	T INFORMATION	1218 Cardinal		
Product(e:	x. Gas, Kerosene)	Heating oil		
Capacity(ex. 1k, 2k)	280 gal		
Age		Late 1950s		
Construction	n Material(ex. Steel, FRP)	Steel		
Month/Year	of Last Use	Mid 1980s		
Depth (ft.) T	To Base of Tank	5 ' 7 "		
Spill Preven	tion Equipment Y/N	No		
Overfill Pre	vention Equipment Y/N	No		
Method of C	Closure Removed/Filled	Removed		
Date Tanks	Removed/Filled	8/24/09		
Visible Corr	osion or Pitting Y/N	Yes		
Visible Hole	es Y/N	Yes		
	isposal for any USTs removed from 8Cardinal was removed fr	•	,	at a
	e "D" landfill. See Atta			
UST 121 Subtitl	8Cardinal was removed free "D" landfill. See Atta	com the ground and a	disposed of	
_UST 121	8Cardinal had been previ	ously filled with s	sand by othe	ers
•	ion, pitting, or holes were observed			
Corros	ion, pitting and holes w	<u>rere found throughou</u>	<u>ut the tank</u>	•

VII. PIPING INFORMATION

	Cardinal
	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	Yes
Visible Corrosion or Pitting Y/N	Yes
Visible Holes Y/N	No
Age	Late 1950s
If any corrosion, pitting, or holes were observed, d	
COTTOSTON and pitting were round	l on the surface of the steel ve
pipe. Copper supply and return 1	on the surface of the steel verines were sound.

	IPTION AND HISTORY
pipe. Copper supply and return l VIII. BRIEF SITE DESCRI	IPTION AND HISTORY nstructed of single wall steel
viii. BRIEF SITE DESCRITHE USTs at the residences are co	IPTION AND HISTORY nstructed of single wall steel or heating. These USTs were
VIII. BRIEF SITE DESCRITHE USTs at the residences are contained fuel oil f	IPTION AND HISTORY nstructed of single wall steel or heating. These USTs were
VIII. BRIEF SITE DESCRITHE USTs at the residences are contained fuel oil f	IPTION AND HISTORY nstructed of single wall steel or heating. These USTs were
VIII. BRIEF SITE DESCRITHE USTs at the residences are contained fuel oil f	IPTION AND HISTORY nstructed of single wall steel or heating. These USTs were

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.		X	
11 yes, indicate depth and location on the site map.			
B. Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells?	77.00	X	
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?		X	
If yes, how far below land surface (indicate location and depth)?			
D. Did contaminated soils remain stockpiled on site after closure?		X	100
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 84009001

B.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA#
1218 Cardinal	Excav at fill end	Soil	Sandy	5'7"	8/24/09 1155 hrs	P. Shaw	
A							
			,				
		,					
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.

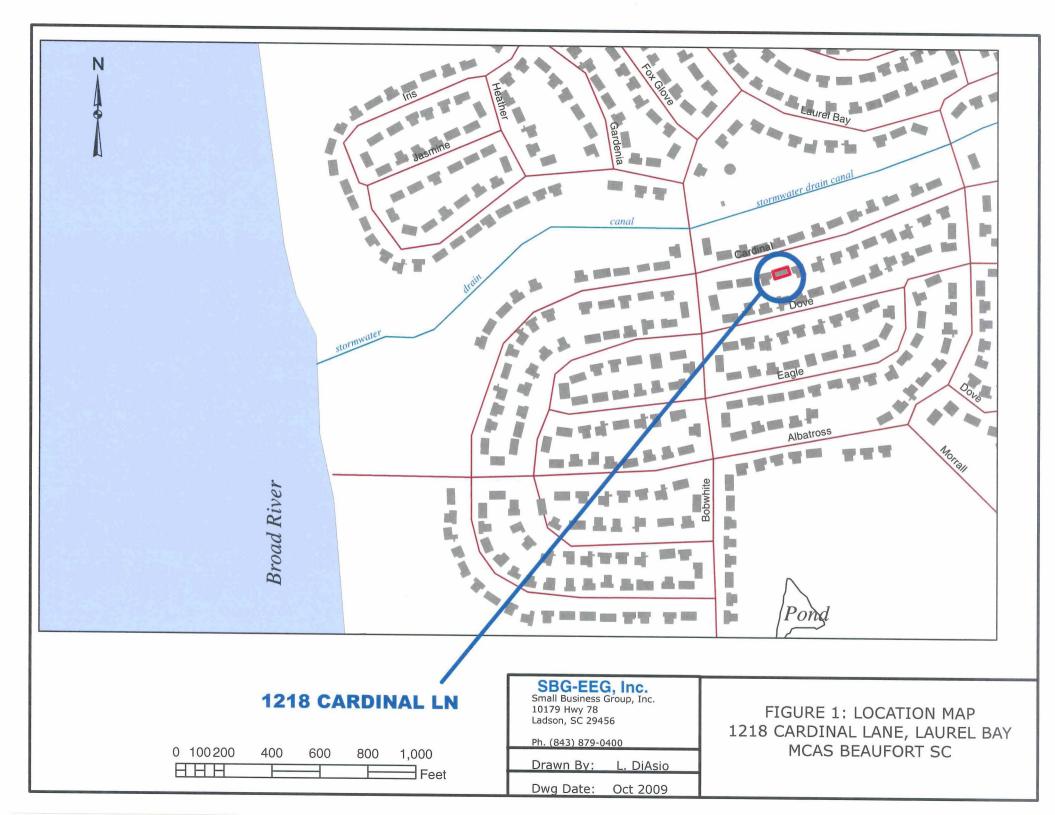
XII. RECEPTORS

		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.	260'	
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?		Х
	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.

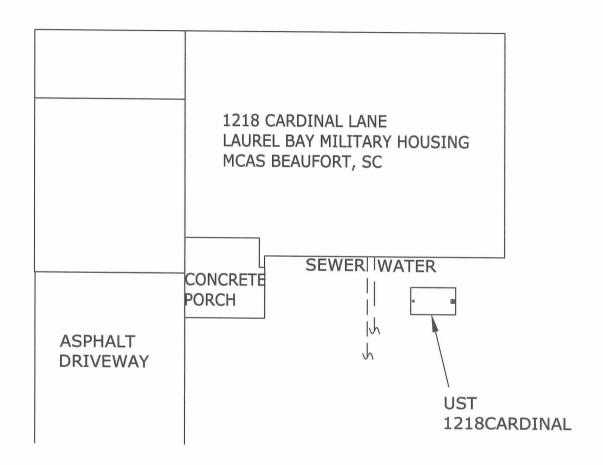
(Attach Site Map Here)

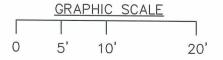


STORMWATER DRAINAGE CANAL ≈ 260'







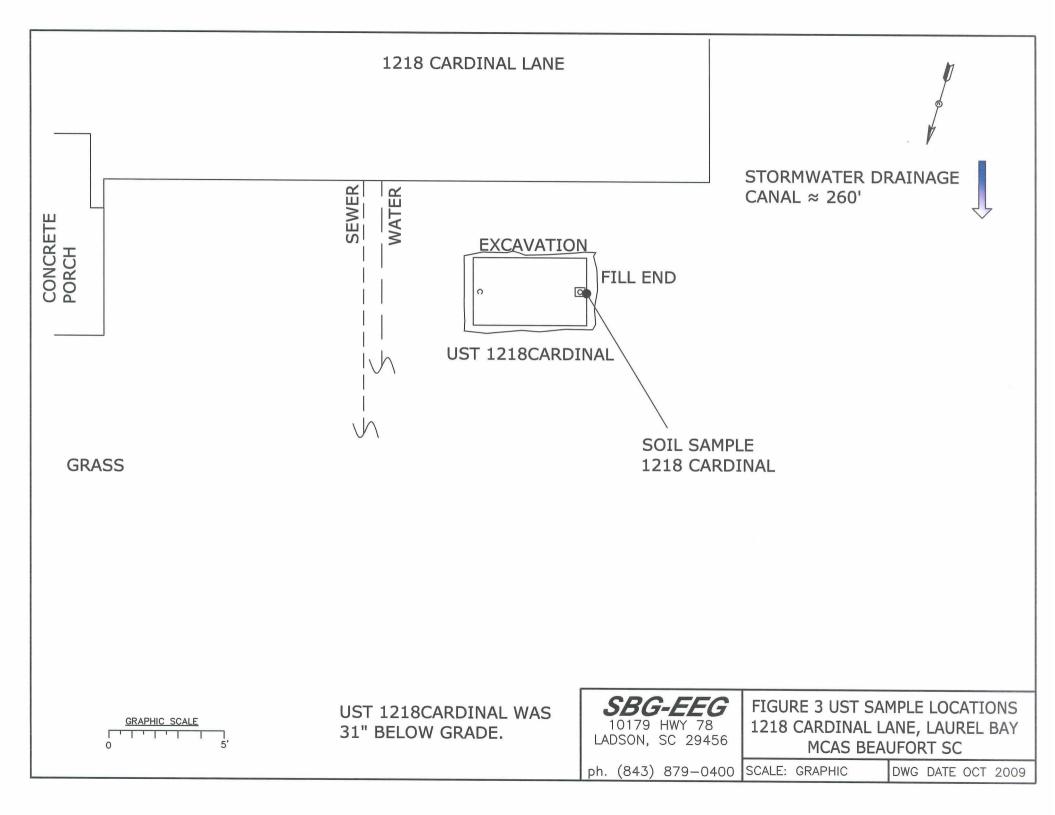


SBG-EEG 10179 HWY 78 LADSON, SC 29456

FIGURE 2 SITE MAP 1218 CARDINAL LANE, LAUREL BAY MCAS BEAUFORT SC

ph. (843) 879-0400 SCALE: GRAPHIC

DWG DATE OCT 2009





Picture 1: UST 1218Cardinal during excavation.



Picture 2: UST 1218Cardinal site after restoration.

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.

	1		1	 		
CoC UST	1218Cardin	al				
Benzene	1	1D				
Toluene	1	ID				
Ethylbenzene	1	1D				
Xylenes	1	1D				
Naphthalene	0.0111 mg/}	rg				
Benzo (a) anthracene	5.47 mg/kg					
Benzo (b) fluoranthene	3.46 mg/kg					
Benzo (k) fluoranthene	2.54 mg/kg					
Chrysene	5.13 mg/kg					
Dibenz (a, h) anthracene	0.751 mg/kg					
TPH (EPA 3550)						
			1			
СоС						
Benzene						
Toluene			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
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.

is present, indicate the measured thickness to the nearest 0.01 feet.							
CoC	RBSL	W-1	W-2	W -3	W -4		
	(µg/l)						
Free Product							
Thickness	None						
THICKHESS							
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)	10						
anthracene	10						
EDB	.05						
1,2-DCA	5			,			
Lead	Site specific				-		
	opcomo						

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

Attn:

2:05:14PM

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

10179 Highway 78 Ladson, SC 29456

Tom McElwee

Work Order: NSH2536

Project Name: Laurel Bay Housing Project

Project Nbr: [none]
P/O Nbr: 0829
Date Received: 08/28/09

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
1227 Dove	NSH2536-01	08/25/09 15:00
1225 Dove	NSH2536-02	08/25/09 15:30
1223 Cardinal	NSH2536-03	08/25/09 10:30
1224 Cardinal	NSH2536-04	08/25/09 09:20
1219 Cardinal	NSH2536-05	08/24/09 13:45
1218 Cardinal	NSH2536-06	08/24/09 11:55
1215 Cardinal	NSH2536-07	08/24/09 10:30
1214 Cardinal	NSH2536-08	08/24/09 10:15

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: 84009001

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

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

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

Estimated uncertainty is available upon request.

This report has been electronically signed.

Lend A Hage

Report Approved By:

Ken A. Hayes

Senior Project Manager



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

10179 Highway 78

Ladson, SC 29456 Attn Tom McElwee Work Order: NSH2536

Project Name: Laurel Bay Housing Project

Project Number: [none]

Received: 08/28/09 08:00

ANALYTICAL REPORT

Analysta	ъ .	***	¥7 .*-	MRL	Dilution Factor	Analysis Date/Time	Moth - J	Ameless	Dotal
Analyte	Result	Flag	Units	WIKL	ractor	Date/11me	Method	Analyst	Batch
Sample ID: NSH2536-01 (1227 D	ove - Soil) Samı	oled: 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 Compounds	s by EPA Method	8260B							
Benzene	ND		mg/kg dry	0.00215	1	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	9084866
Surr: Dibromofluoromethane (75-125%)	93 %					09/07/09 18:46	SW846 8260B	KxC	9084866
Surr: Toluene-d8 (76-129%)	92 %					09/07/09 18:46	SW846 8260B	KxC	9084866
Surr: 4-Bromofluorobenzene (67-147%)	100 %					09/07/09 18:46	SW846 8260B	KxC	9084866
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	jlf	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	1	09/10/09 05:59	SW846 8270D	jlf	9090545
Benzo (b) fluoranthene	ND		mg/kg dry	0.0701	I	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	jlf	9090545



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

10179 Highway 78 Ladson, SC 29456

Attn Tom McElwee

Work Order:

NSH2536

Project Name: Laurel Bay Housing Project

Project Number:

[none]

Received: 08/28/09 08:00

ANALYTICAL REPORT

				-	Dilution	Analysis			
Analyte	Result	Flag	Units	MRL	Factor	Date/Time	Method	Analyst	Batch
Sample ID: NSH2536-02 (1225 Dov	e - Soil) Sam	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 by	y 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	1	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 82	70D								
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	jlf	9090545
Anthracene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	ilf	9090545
Benzo (a) anthracene	ND		mg/kg dry	0.0702	ı	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	ilf	9090545
Benzo (g,h,i) perylene	ND		mg/kg đry	0.0702	1	09/10/09 17:56	SW846 8270D	ilf	9090545
Benzo (k) fluoranthene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	ilf	9090545
Chrysene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	ilf	9090545
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	ilf	9090545
Fluoranthene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	ilf	9090545
Fluorene	ND		mg/kg dry	0.0702	1	09/10/09 17:56	SW846 8270D	ilf	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	jlf	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	I	09/10/09 17:56	SW846 8270D	ilf	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	jlf	9090545



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

10179 Highway 78

Ladson, SC 29456

Attn Tom McElwee

Work Order:

NSH2536

Project Name: Laurel Bay Housing Project

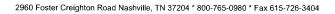
Project Number:

[none]

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	Sampled:	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	9084866
Ethylbenzene	ND		mg/kg dry	0.00231	1	09/07/09 19:47	SW846 8260B	KxC	9084866
Naphthalene	ND		mg/kg dry	0.00578	1	09/07/09 19:47	SW846 8260B	KxC	9084866
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	9084866
Surr: Dibromofluoromethane (75-125%)	94 %					09/07/09 19:47	SW846 8260B	KxC	9084866
Surr: Toluene-d8 (76-129%)	99 %					09/07/09 19:47	SW846 8260B	KrC	9084866
Surr: 4-Bromofluorobenzene (67-147%)	127 %					09/07/09 19:47	SW846 8260B	KxC	9084866
Polyaromatic Hydrocarbons by EPA 8							311070 02002	A.C	2007000
Acenaphthene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	:10	9090545
Acenaphthylene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf jlf	9090545
Anthracene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	jlf	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	jli jlf	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	jii jlf	9090545
Benzo (k) fluoranthene	ND		mg/kg dry	0.0824	i	09/10/09 21:32	SW846 8270D	jlf	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	jil jlf	9090545
Fluoranthene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	ilf	9090545
Fluorene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	ilf	9090545
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	ilf	9090545
Naphthalene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	ilf	9090545
Phenanthrene	ND		mg/kg dry	0.0824	1	09/10/09 21:32	SW846 8270D	ilf	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	ì	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	9090545
Surr: 2-Fluorobiphenyl (14-120%)	50 %					09/10/09 21:32	SW846 8270D	jlf	9090545
Surr: Nitrobenzene-d5 (17-120%)	46 %					09/10/09 21:32	SW846 8270D	jlf	9090545





10179 Highway 78 Ladson, SC 29456

Attn Tom McElwee

Work Order:

NSH2536

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received: 08/28/09 08:00

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
Sample ID: NSH2536-04 (1224 C	ardinal - Soil) S	Sampled:	08/25/09 09:20)					
General Chemistry Parameters		·							
% Dry Solids	79.4		%	0.500	1	09/10/09 11:04	SW-846	AJK	9091140
Selected Volatile Organic Compound	s by EPA Method	l 8260B							
Benzene	ND	RL1	mg/kg dry	0.117	50	09/07/09 18:15	SW846 8260B	KxC	9084866
Ethylbenzene	ND	RL1	mg/kg dry	0.117	50	09/07/09 18:15	SW846 8260B	KxC	9084866
Naphthalene	0.00743		mg/kg dry	0.00586	1	09/07/09 17:45	SW846 8260B	KxC	9084866
Toluene	0.207		mg/kg dry	0.117	50	09/07/09 18:15	SW846 8260B	KxC	9084866
Xylenes, total	ND	RL1	mg/kg dry	0.294	50	09/07/09 18:15	SW846 8260B	KxC	9084866
Surr: 1,2-Dichloroethane-d4 (67-138%)	122 %					09/07/09 17:45	SW846 8260B	KxC	9084866
Surr: 1,2-Dichloroethane-d4 (67-138%)	81 %					09/07/09 18:15	SW846 8260B	KxC	9084866
Surr: Dibromofluoromethane (75-125%)	117 %					09/07/09 17:45	SW846 8260B	KxC	9084866
Surr: Dibromofluoromethane (75-125%)	88 %					09/07/09 18:15	SW846 8260B	KxC	9084866
Surr: Toluene-d8 (76-129%)	167 %	ZX				09/07/09 17:45	SW846 8260B	KxC	9084866
Surr: Toluene-d8 (76-129%)	92 %					09/07/09 18:15	SW846 8260B	KxC	9084866
Surr: 4-Bromofluorobenzene (67-147%)	155 %	ZX				09/07/09 17:45	SW846 8260B	KxC	9084866
Surr: 4-Bromofluorobenzene (67-147%)	109 %					09/07/09 18:15	SW846 8260B	KxC	9084866
Polyaromatic Hydrocarbons by EPA 8	3270D								
Acenaphthene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	ilf	9090545
Acenaphthylene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Anthracene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Benzo (a) anthracene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Benzo (a) pyrene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Benzo (b) fluoranthene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Benzo (g,h,i) perylene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Benzo (k) fluoranthene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Chrysene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Dibenz (a,h) anthracene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Fluoranthene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Fluorene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Naphthalene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Phenanthrene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Pyrene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
1-Methylnaphthalene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
2-Methylnaphthalene	ND		mg/kg dry	4.17	50	09/11/09 21:54	SW846 8270D	jlf	9090545
Surr: Terphenyl-d14 (18-120%)	3 %	ZX				09/11/09 21:54	SW846 8270D	jlf	9090545
Surr: 2-Fluorobiphenyl (14-120%)	21 %					09/11/09 21:54	SW846 8270D	jlf	9090545
Surr: Nitrobenzene-d5 (17-120%)	59 %					09/11/09 21:54	SW846 8270D	jlf	9090545



10179 Highway 78 Ladson, SC 29456

Attn Tom McElwee

Work Order:

NSH2536

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received: 08/28/09 08:00

$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0.500 0.00217 0.110 0.00542 0.110 0.276	1 1 50 1 50	09/10/09 11:04 09/07/09 15:41 09/07/09 16:43	SW-846 SW846 8260B	AJK	9091140
% Dry Solids 83.0 % Selected Volatile Organic Compounds by EPA Method 8260B Benzene ND mg/kg dry Ethylbenzene 0.127 mg/kg dry Naphthalene 0.0160 mg/kg dry Toluene 1.67 mg/kg dry Xylenes, total 0.568 mg/kg dry Sur: 1,2-Dichloroethane-d4 (67-138%) 82 % Surr: Dibromofluoromethane (75-125%) 121 % Surr: Dibromofluoromethane (75-125%) 89 % Surr: Toluene-d8 (76-129%) 99 % Surr: Toluene-d8 (76-129%) 99 % Surr: 4-Bromofluorobenzene (67-147%) 259 % ZX Surr: 4-Bromofluorobenzene (67-147%) 106 % Polyaromatic Hydrocarbons by EPA 8270D Acenaphthene ND mg/kg dry Acenaphthene ND mg/kg dry Acenaphthylene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (b) fluoranthene 0.525	0.00217 0.110 0.00542 0.110	1 50 1	09/07/09 15:41 09/07/09 16:43		AJK	9091140
Selected Volatile Organic Compounds by EPA Method 8260B Benzene ND mg/kg dry Ethylbenzene 0.127 mg/kg dry Naphthalene 0.0160 mg/kg dry Naphthalene 1.67 mg/kg dry Toluene 1.67 mg/kg dry Surr: 1.2-Dichloroethane-d4 (67-138%) 82 % Surr: 1.2-Dichloroethane-d4 (67-138%) 82 % Surr: Dibromofluoromethane (75-125%) 121 % Surr: Dibromofluoromethane (75-125%) 89 % Surr: Toluene-d8 (76-129%) 99 % Surr: 4-Bromofluorobenzene (67-147%) 259 % ZX Surr: 4-Bromofluorobenzene (67-147%) 106 % Toluene-d8 (76-129%) Polyaromatic Hydrocarbons by EPA 8270D ND mg/kg dry Acenaphthene ND mg/kg dry Acenaphthylene ND mg/kg dry Benzo (a) anthracene ND mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (k) fluoranthene 0.525 mg/kg dry	0.00217 0.110 0.00542 0.110	1 50 1	09/07/09 15:41 09/07/09 16:43		AJK	9091140
Benzene	0.110 0.00542 0.110	50 1	09/07/09 16:43	SW846 8260B		
Benzene	0.110 0.00542 0.110	50 1	09/07/09 16:43	SW846 8260B		
Ethylbenzene	0.110 0.00542 0.110	50 1	09/07/09 16:43		KxC	9084866
Naphthalene 0.0160 mg/kg dry Toluene 1.67 mg/kg dry Xylenes, total 0.568 mg/kg dry Surr: 1,2-Dichloroethane-d4 (67-138%) 82 % surr: Dibromofluoromethane (75-125%) Surr: Dibromofluoromethane (75-125%) 89 % surr: Dibromofluoromethane (75-125%) Surr: Toluene-d8 (76-129%) 215 % ZX Surr: Toluene-d8 (76-129%) 99 % ZX Surr: 4-Bromofluorobenzene (67-147%) 259 % ZX Surr: 4-Bromofluorobenzene (67-147%) 106 % VA Polyaromatic Hydrocarbons by EPA 8270D Acenaphthene ND mg/kg dry Acenaphthylene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene </td <td>0.00542 0.110</td> <td>1</td> <td></td> <td>SW846 8260B</td> <td>KxC</td> <td>9084866</td>	0.00542 0.110	1		SW846 8260B	KxC	9084866
Toluene 1.67 mg/kg dry Xylenes, total 0.568 mg/kg dry Surr: 1,2-Dichloroethane-d4 (67-138%) 82 % Surr: Dibromofluoromethane (75-125%) 121 % Surr: Dibromofluoromethane (75-125%) 89 % Surr: Toluene-d8 (76-129%) 99 % Surr: Toluene-d8 (76-129%) 99 % Surr: 4-Bromofluorobenzene (67-147%) 259 % ZX Surr: 4-Bromofluorobenzene (67-147%) 106 % MD mg/kg dry Polyaromatic Hydrocarbons by EPA 8270D ND mg/kg dry Acenaphthene ND mg/kg dry Acenaphthylene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluorene ND mg/kg dry		50	09/07/09 15:41	SW846 8260B	KxC	9084866
Surr: 1,2-Dichloroethane-d4 (67-138%) 134 % Surr: 1,2-Dichloroethane-d4 (67-138%) 82 % Surr: Dibromofluoromethane (75-125%) 121 % Surr: Dibromofluoromethane (75-125%) 89 % Surr: Toluene-d8 (76-129%) 215 % ZX Surr: 4-Bromofluorobenzene (67-147%) 259 % ZX Surr: 4-Bromofluorobenzene (67-147%) 106 % 259 % ZX Surr: 4-Bromofluorobenzene (67-147%) 106 % 106 % 106 % Polyaromatic Hydrocarbons by EPA 8270D ND mg/kg dry Acenaphthene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (k) fluoranthene 0.642 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluorene ND mg/kg dry	0.276	50	09/07/09 16:43	SW846 8260B	KxC	9084866
Surr: 1,2-Dichloroethane-d4 (67-138%) 82 % Surr: Dibromofluoromethane (75-125%) 121 % Surr: Toluene-d8 (76-129%) 89 % Surr: Toluene-d8 (76-129%) 99 % Surr: 4-Bromofluorobenzene (67-147%) 259 % ZX Surr: 4-Bromofluorobenzene (67-147%) 106 % Polyaromatic Hydrocarbons by EPA 8270D ND mg/kg dry Acenaphthene ND mg/kg dry Acenaphthylene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry ND </td <td></td> <td>50</td> <td>09/07/09 16:43</td> <td>SW846 8260B</td> <td>KxC</td> <td>9084866</td>		50	09/07/09 16:43	SW846 8260B	KxC	9084866
Surr: Dibromofluoromethane (75-125%) 121 % Surr: Dibromofluoromethane (75-125%) 89 % Surr: Toluene-d8 (76-129%) 215 % ZX Surr: 4-Bromofluorobenzene (67-147%) 99 % ZX Surr: 4-Bromofluorobenzene (67-147%) 106 % ZX Polyaromatic Hydrocarbons by EPA 8270D ND mg/kg dry Acenaphthene ND mg/kg dry Acenaphthylene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry ND mg/kg dry <			09/07/09 15:41	SW846 8260B	KxC	9084866
Surr: Dibromofluoromethane (75-125%) 121 % Surr: Dibromofluoromethane (75-125%) 89 % Surr: Toluene-d8 (76-129%) 215 % ZX Surr: 4-Bromofluorobenzene (67-147%) 99 % ZX Surr: 4-Bromofluorobenzene (67-147%) 106 % ZX Polyaromatic Hydrocarbons by EPA 8270D ND mg/kg dry Acenaphthene ND mg/kg dry Acenaphthylene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry ND mg/kg dry <			09/07/09 16:43	SW846 8260B	KxC	9084866
Surr: Dibromofluoromethane (75-125%) 89 % Surr: Toluene-d8 (76-129%) 215 % ZX Surr: Toluene-d8 (76-129%) 99 % ZX Surr: 4-Bromofluorobenzene (67-147%) 259 % ZX Surr: 4-Bromofluorobenzene (67-147%) 106 % Polyaromatic Hydrocarbons by EPA 8270D ND mg/kg dry Acenaphthene ND mg/kg dry Acenaphthylene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry ND mg/kg dry			09/07/09 15:41	SW846 8260B	KxC	9084866
Surr: Toluene-d8 (76-129%) 215 % ZX Surr: Toluene-d8 (76-129%) 99 % ZX Surr: 4-Bromofluorobenzene (67-147%) 259 % ZX Polyaromatic Hydrocarbons by EPA 8270D ND mg/kg dry Acenaphthene ND mg/kg dry Acenaphthylene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry			09/07/09 16:43	SW846 8260B	KxC	9084860
Surr: Toluene-d8 (76-129%) 99 % Surr: 4-Bromofluorobenzene (67-147%) 259 % ZX Polyaromatic Hydrocarbons by EPA 8270D ND mg/kg dry Acenaphthene ND mg/kg dry Acenaphthylene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry			09/07/09 15:41			
Surr: 4-Bromofluorobenzene (67-147%) 259 % ZX Surr: 4-Bromofluorobenzene (67-147%) 106 % Polyaromatic Hydrocarbons by EPA 8270D ND mg/kg dry Acenaphthene ND mg/kg dry Acenaphthylene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry				SW846 8260B	KxC	9084860
Surr: 4-Bromofluorobenzene (67-147%) 106 % Polyaromatic Hydrocarbons by EPA 8270D Acenaphthene ND mg/kg dry Acenaphthylene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry			09/07/09 16:43	SW846 8260B	KxC	9084866
Polyaromatic Hydrocarbons by EPA 8270D Acenaphthene ND mg/kg dry Acenaphthylene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry			09/07/09 15:41	SW846 8260B	KxC	908486
Acenaphthene ND mg/kg dry Acenaphthylene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry			09/07/09 16:43	SW846 8260B	KxC	9084860
Acenaphthylene ND mg/kg dry Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry						
Anthracene ND mg/kg dry Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
Benzo (a) anthracene 0.394 mg/kg dry Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
Benzo (a) pyrene 0.383 mg/kg dry Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
Benzo (b) fluoranthene 0.525 mg/kg dry Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
Benzo (g,h,i) perylene ND mg/kg dry Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
Benzo (k) fluoranthene 0.358 mg/kg dry Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
Chrysene 0.642 mg/kg dry Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
Dibenz (a,h) anthracene ND mg/kg dry Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
Fluoranthene 0.778 mg/kg dry Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
Fluorene ND mg/kg dry Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
Indeno (1,2,3-cd) pyrene ND mg/kg dry Naphthalene ND mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D SW846 8270D	jlf	9090545
Naphthalene ND 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
	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
Phenanthrene ND mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf ::e	9090545
Phenanthrene ND mg/kg dry Pyrene 0.956 mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf ilf	9090545
1-Methylnaphthalene ND mg/kg dry	0.320	2	09/10/09 22:20	SW846 8270D	jlf	9090545
2-Methylnaphthalene ND mg/kg dry		2	09/10/09 22:20	SW846 8270D	jii jlf	9090545
Surr: Terphenyl-d14 (18-120%) 19 %		-	09/10/09 22:20	SW846 8270D		9090545
Surr: 2-Fluorobiphenyl (14-120%) 26 %	0.320		09/10/09 22:20		jlf	
Surr: Nitrobenzene-d5 (17-120%) 47 %			09/10/09 22:20	SW846 8270D SW846 8270D	jlf jlf	9090545 9090545



10179 Highway 78 Ladson, SC 29456

Attn Tom McElwee

Work Order: NSH2536

Project Name: Laurel Bay Housing Project

Project Number: [none]

Received: 08/28/09 08:00

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
Sample ID: NSH2536-06 (1218 C	ardinal - Soil) S	Sampled:	08/24/09 11:55	;					
General Chemistry Parameters									
% Dry Solids	87.6		%	0.500	i	09/10/09 11:04	SW-846	AJK	9091140
Selected Volatile Organic Compound	s by EPA Method	l 8260B							
Benzene	ND		mg/kg dry	0.00209	1	09/07/09 13:44	SW846 8260B	CMM	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	CMM	9091127
Toluene	ND		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
Surr: 1,2-Dichloroethane-d4 (67-138%)	85 %					09/07/09 13:44	SW846 8260B	СММ	9091127
Surr: Dibromofluoromethane (75-125%)	95 %					09/07/09 13:44	SW846 8260B	СММ	9091127
Surr: Toluene-d8 (76-129%)	101 %					09/07/09 13:44	SW846 8260B	СММ	9091127
Surr: 4-Bromofluorobenzene (67-147%)	135 %					09/07/09 13:44	SW846 8260B	СММ	9091127
Polyaromatic Hydrocarbons by EPA 8	3270D								
Acenaphthene	ND		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	ilf	9090545
Acenaphthylene	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) anthracene	5.47		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Benzo (a) pyrene	2.38		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Benzo (b) fluoranthene	3.46		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Benzo (g,h,i) perylene	3.21		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Benzo (k) fluoranthene	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) anthracene	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-cd) pyrene	2.53		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Naphthalene	ND		mg/kg dry	0.375	J	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-Methylnaphthalene	ND		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
2-Methylnaphthalene	ND		mg/kg dry	0.375	1	09/10/09 22:44	SW846 8270D	jlf	9090545
Surr: Terphenyl-d14 (18-120%)	332 %	ZX				09/10/09 22:44	SW846 8270D	jlf	9090545
Surr: 2-Fluorobiphenyl (14-120%)	320 %	ZX				09/10/09 22:44	SW846 8270D	jlf	9090545
Surr: Nitrobenzene-d5 (17-120%)	294 %	ZX				09/10/09 22:44	SW846 8270D	jlf	9090545



10179 Highway 78

Ladson, SC 29456

Attn Tom McElwee

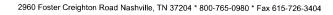
Work Order: NSH2536

Project Name: Laurel Bay Housing Project

Project Number: [none]

Received: 08/28/09 08:00

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
Sample ID: NSH2536-07 (1215 Ca	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 Compounds	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	1	09/07/09 16:12	SW846 8260B	KxC	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	9084866
Surr: 4-Bromofluorobenzene (67-147%)	149 %	ZX				09/07/09 16:12	SW846 8260B	KxC	9084866
Polyaromatic Hydrocarbons by EPA 83	270D								
Acenaphthene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	ilf	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	jlf	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	jlf	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
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	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
Pyrene	ND		mg/kg dry	0.746	10	09/11/09 22:17	SW846 8270D	jlf	9090545
1-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
Surr: Terphenyl-d14 (18-120%)	119 %					09/11/09 22:17	SW846 8270D	jlf	9090545
Surr: 2-Fluorobiphenyl (14-120%)	115 %					09/11/09 22:17	SW846 8270D	jlf	9090545
	112 %					09/11/09 22:17			





10179 Highway 78

Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSH2536

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received: 08/28/09 08:00

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
Sample ID: NSH2536-08 (1214 Ca	ardinal - Soil) S	ampled:	08/24/09 10:15	5					
General Chemistry Parameters									
% Dry Solids	88.7		%	0.500	1	09/10/09 11:04	SW-846	AJK	9091140
Selected Volatile Organic Compounds	by EPA Method	8260B							
Benzene	ND		mg/kg dry	0.00241	1	09/07/09 14:47	SW846 8260B	СММ	9091127
Ethylbenzene	ND		mg/kg dry	0.00241	i	09/07/09 14:47	SW846 8260B	CMM	9091127
Naphthalene	ND		mg/kg dry	0.00602	1	09/07/09 14:47	SW846 8260B	CMM	9091127
Toluene	ND		mg/kg dry	0.00241	1	09/07/09 14:47	SW846 8260B	CMM	9091127
Xylenes, total	ND		mg/kg dry	0.00602	1	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	909112
Surr: Dibromofluoromethane (75-125%)	95 %					09/07/09 14:47	SW846 8260B	CMM	909112
Surr: Toluene-d8 (76-129%)	103 %					09/07/09 14:47	SW846 8260B	СММ	909112
Surr: 4-Bromofluorobenzene (67-147%)	135 %					09/07/09 14:47	SW846 8260B	СММ	909112
Polyaromatic Hydrocarbons by EPA 8.	270D								
Acenaphthene	ND		mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	jlf	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	ilf	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	ì	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	ilf	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	1	09/10/09 23:32	SW846 8270D	jlf	9090545
Fluoranthene	ND		mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	ilf	9090545
Fluorene	ND		mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	ilf	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	ilf	9090545
Phenanthrene	ND		mg/kg dry	0.0747	1	09/10/09 23:32	SW846 8270D	ilf	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	ilf	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
								39	2020070



10179 Highway 78

Ladson, SC 29456

Attn Tom McElwee

Work Order: NSH2536

Project Name: Laurel Bay Housing Project

Project Number: [none]

Received: 08/28/09 08:00

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
Polyaromatic Hydrocarbons by EP	A 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 Compou	ands 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	CHH	EPA 5035
SW846 8260B	9091127	NSH2536-05	5.78	5.00	08/24/09 13:45	СНН	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	СНН	EPA 5035
SW846 8260B	9091127	NSH2536-06	5.46	5.00	08/24/09 11:55	СНН	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



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSH2536

Project Name:

Laurel Bay Housing Project

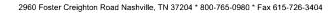
Project Number:

[none]

Received: 08/28/09 08:00

PROJECT QUALITY CONTROL DATA Blank

Selectical Volatile Organic Compounds by EPA Method 8260B 19084866-BLK 1908709 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10 15:10	Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
Betance	Selected Volatile Organic Compo	ounds by EPA Method	l 8260B				
Ethylhenzoe	9084866-BLK1						
Naphthalene	Benzene	< 0.000670		mg/kg wet	9084866	9084866-BLK1	09/07/09 15:10
Tolure	Ethylbenzene	< 0.000670		mg/kg wet	9084866	9084866-BLK1	09/07/09 15:10
Sylenogue: 1.2 Dichinarchime 40,0010 10 10 10 10 10 10 1	Naphthalene	< 0.00170		mg/kg wet	9084866	9084866-BLK1	09/07/09 15:10
Surveyate: 1,2-Dichforocthame-44 104% 9084866 9084866-BLK1 090709 15:10	Toluene	< 0.000400		mg/kg wet	9084866	9084866-BLK1	09/07/09 15:10
Survegate: Dibromofilance 0.44% 9084866 9084866-BLK1 090709 15-10	Xylenes, total	< 0.00130		mg/kg wet	9084866	9084866-BLK1	09/07/09 15:10
Surrogate: Folium-ed8	Surrogate: 1,2-Dichloroethane-d4	104%			9084866	9084866-BLK1	09/07/09 15:10
Possible Possible	Surrogate: Dibromofluoromethane	94%			9084866	9084866-BLK1	09/07/09 15:10
Section Sect	Surrogate: Toluene-d8	102%			9084866	9084866-BLK1	09/07/09 15:10
Benzene	Surrogate: 4-Bromofluorobenzene	107%			9084866	9084866-BLK1	09/07/09 15:10
Ethylhenzene	9091127-BLK1						
Naphthalene 0.00337 B mg/kg wet 9091127 9091127-BLK1 09/07/09 12-40 Toluene <0.0004000	Benzene	< 0.000670		mg/kg wet	9091127	9091127-BLK1	09/07/09 12:40
Toluene <0,000400 mg/kg wet 9091127 9091127-BLK1 09/07/09 12-40 Xylens, total <0,0010	Ethylbenzene	< 0.000670		mg/kg wet	9091127	9091127-BLK1	09/07/09 12:40
Nylenes, total	Naphthalene	0.00337	В	mg/kg wet	9091127	9091127-BLK1	09/07/09 12:40
Surrogate: 1,2-Dichloroethane-d4 97% 9091127 9091127-BLK1 09/07/09 12:40 Surrogate: Dibromofluoroethane 100% 9091127 9091127-BLK1 09/07/09 12:40 Surrogate: Toluene-d8 103% 9091127 9091127-BLK1 09/07/09 12:40 Polyaromatic Hydrocarbons by EPA 8270D Polyaromati	Toluene	< 0.000400		mg/kg wet	9091127	9091127-BLK1	09/07/09 12:40
Surrogate: Dibromofluoromethame 100% 9091127 9091127-BLK1 09070709 12:40	Xylenes, total	< 0.00130		mg/kg wet	9091127	9091127-BLK1	09/07/09 12:40
Surrogate: Toluene-d8 103% 9091127 9091127-BLK1 09/07/09 12:40	Surrogate: 1,2-Dichloroethane-d4	97%			9091127	9091127-BLK1	09/07/09 12:40
Polyaromatic Hydrocarbons by EPA 8270U Polyaromatic Hydrocarbons by	Surrogate: Dibromofluoromethane	100%			9091127	9091127-BLK1	09/07/09 12:40
Polyaromatic Hydrocarbons by EPA 8270D Polyaromatic Hydrocarbons by	Surrogate: Toluene-d8	103%			9091127	9091127-BLK1	09/07/09 12:40
9090545-BLK1 Acenaphthene <0.0320	Surrogate: 4-Bromofluorobenzene	124%			9091127	9091127-BLK1	09/07/09 12:40
Acenaphthene <0.0320 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 Acenaphthylene <0.0310	Polyaromatic Hydrocarbons by E	PA 8270D					
Acenaphthene <0.0320 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 Acenaphthylene <0.0310	9090545-BLK1						
Anthracene <0.0330 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 Benzo (a) anthracene <0.0380		< 0.0320		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
Benzo (a) anthracene <0.0380 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 Benzo (a) pyrene <0.0300	Acenaphthylene	< 0.0310		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
Benzo (a) pyrene <0.0300 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 Benzo (b) fluoranthene <0.0300	Anthracene	< 0.0330		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
Benzo (b) fluoranthene <0.0300 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 Benzo (g,h,i) perylene <0.0300	Benzo (a) anthracene	< 0.0380		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
Benzo (g,h,i) perylene <0.0300 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 Benzo (k) fluoranthene <0.0300	Benzo (a) pyrene	< 0.0300		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
Benzo (k) fluoranthene <0.0300 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 Chrysene <0.0400	Benzo (b) fluoranthene	< 0.0300		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
Chrysene <0.0400 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 Dibenz (a,h) anthracene <0.0310	Benzo (g,h,i) perylene	< 0.0300		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
Dibenz (a,h) anthracene <0.0310 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 Fluoranthene <0.0340	Benzo (k) fluoranthene	< 0.0300		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
Fluoranthene <0.0340 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 Fluorene <0.0360	Chrysene	< 0.0400		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
Fluorene <0.0360 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 Indeno (1,2,3-cd) pyrene <0.0310	Dibenz (a,h) anthracene	< 0.0310		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
Indeno (1,2,3-cd) pyrene <0.0310	Fluoranthene	< 0.0340		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
Naphthalene <0.0410 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 Phenanthrene <0.0340	Fluorene	< 0.0360		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
Phenanthrene <0.0340 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 Pyrene <0.0410	Indeno (1,2,3-cd) pyrene	< 0.0310		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
Pyrene <0.0410 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26 1-Methylnaphthalene <0.0320	Naphthalene	< 0.0410		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
1-Methylnaphthalene <0.0320 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26	Phenanthrene	< 0.0340		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
· · ·	Pyrene	< 0.0410		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
2-Methylnaphthalene <0.0330 mg/kg wet 9090545 9090545-BLK1 09/10/09 04:26	l-Methylnaphthalene	< 0.0320		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26
	2-Methylnaphthalene	< 0.0330		mg/kg wet	9090545	9090545-BLK1	09/10/09 04:26





10179 Highway 78

Ladson, SC 29456 Tom McElwee

Attn

Work Order: NSH2536

Project Name:

Laurel Bay Housing Project

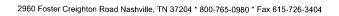
Project Number:

[none]

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 EI	PA 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





10179 Highway 78

Ladson, SC 29456

Attn Tom McElwee

Work Order:

NSH2536

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received: 08/28/09 08:00

PROJECT QUALITY CONTROL DATA

Duplicate

Analyte	Orig. Val.	Duplicate	Q	Units	RPD	Limit	Batch	Sample Duplicated	% Rec.	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



10179 Highway 78

Ladson, SC 29456

Tom McElwee

Attn

Work Order: NSH2536

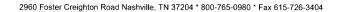
Laurel Bay Housing Project Project Name: [none]

Project Number:

08/28/09 08:00 Received:

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								
Benzene	50.0	44.5		ug/kg	89%	78 - 126	9084866	09/07/09 13:40
Ethylbenzene	50.0	46.4		ug/kg	93%	79 - 130	9084866	09/07/09 13:40
Naphthalene	50.0	47.2		ug/kg	94%	72 - 150	9084866	09/07/09 13:40
Toluene	50.0	45.3		ug/kg	91%	76 - 126	9084866	09/07/09 13:40
Xylenes, total	150	138		ug/kg	92%	80 - 130	9084866	09/07/09 13:40
Surrogate: 1,2-Dichloroethane-d4	50.0	52.1			104%	67 - 138	9084866	09/07/09 13:40
Surrogate: Dibromofluoromethane	50.0	47.8			96%	75 - 125	9084866	09/07/09 13:40
Surrogate: Toluene-d8	50.0	50.5			101%	76 - 129	9084866	09/07/09 13:40
Surrogate: 4-Bromofluorobenzene	50.0	54.0			108%	67 - 147	9084866	09/07/09 13:40
9091127-BS1								
Benzene	50.0	52.8		ug/kg	106%	78 - 126	9091127	09/07/09 11:34
Ethylbenzene	50.0	59.7		ug/kg	119%	79 - 130	9091127	09/07/09 11:34
Naphthalene	50.0	52.3		ug/kg	105%	72 - 150	9091127	09/07/09 11:34
Toluene	50.0	57.5		ug/kg	115%	76 - 126	9091127	09/07/09 11:34
Xylenes, total	150	180		ug/kg	120%	80 - 130	9091127	09/07/09 11:34
Surrogate: 1,2-Dichloroethane-d4	50.0	47.3			95%	67 - 138	9091127	09/07/09 11:34
Surrogate: Dibromofluoromethane	50.0	49.6			99%	75 - 125	9091127	09/07/09 11:34
Surrogate: Toluene-d8	50.0	52.4			105%	76 - 129	9091127	09/07/09 11:34
Surrogate: 4-Bromofluorobenzene	50.0	45.6			91%	67 - 147	9091127	09/07/09 11:34
Polyaromatic Hydrocarbons by EP	A 8270D							
9090545-BS1								
Acenaphthene	1.67	1.28		mg/kg wet	77%	49 - 120	9090545	09/10/09 04:49
Acenaphthylene	1.67	1.29		mg/kg wet	77%	52 - 120	9090545	09/10/09 04:49
Anthracene	1.67	1.45		mg/kg wet	87%	58 - 120	9090545	09/10/09 04:49
Benzo (a) anthracene	1.67	1.33		mg/kg wet	80%	57 - 120	9090545	09/10/09 04:49
Benzo (a) pyrene	1.67	1.38		mg/kg wet	83%	55 - 120	9090545	09/10/09 04:49
Benzo (b) fluoranthene	1.67	1.46		mg/kg wet	88%	51 - 123	9090545	09/10/09 04:49
Benzo (g,h,i) perylene	1.67	1.31		mg/kg wet	79%	49 - 121	9090545	09/10/09 04:49
Benzo (k) fluoranthene	1.67	1.07		mg/kg wet	64%	42 - 129	9090545	09/10/09 04:49
Chrysene	1.67	1.32		mg/kg wet	79%	55 - 120	9090545	09/10/09 04:49
Dibenz (a,h) anthracene	1.67	1.34		mg/kg wet	80%	50 - 123	9090545	09/10/09 04:49
Fluoranthene	1.67	1.23		mg/kg wet	74%	58 - 120	9090545	09/10/09 04:49
Fluorene	1.67	1.29		mg/kg wet	77%	54 - 120	9090545	09/10/09 04:49
Indeno (1,2,3-cd) pyrene	1.67	1.33		mg/kg wet	80%	50 - 122	9090545	09/10/09 04:49
Naphthalene	1.67	1.14		mg/kg wet	68%	28 - 120	9090545	09/10/09 04:49
Phenanthrene	1.67	1.30		mg/kg wet	78%	56 - 120	9090545	09/10/09 04:49
Pyrene	1.67	1.33		mg/kg wet	80%	56 - 120	9090545	09/10/09 04:49
1-Methylnaphthalene	1.67	1.07		mg/kg wet	64%	36 - 120	9090545	09/10/09 04:49
2-Methylnaphthalene	1.67	1.09		mg/kg wet	66%	36 - 120	9090545	09/10/09 04:49





10179 Highway 78

Ladson, SC 29456

Attn Tom McElwee

Work Order:

NSH2536

Project Name:

Laurel Bay Housing Project

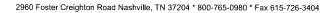
Project Number:

[none]

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 EPA 8270)D							
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





10179 Highway 78 Ladson, SC 29456

Attn Tom McElwee

Work Order:

NSH2536

Project Name:

Laurel Bay Housing Project

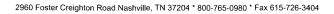
Project Number:

[none]

Received: 08/28/09 08:00

PROJECT QUALITY CONTROL DATA LCS Dup

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range		Limit	Batch	Sample Duplicated	Analyzed Date/Time
Selected Volatile Organic Compo	ounds by EPA	Method 826	60B									
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]	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





10179 Highway 78 Ladson, SC 29456

Attn Tom McElwee

Work Order:

NSH2536

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

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



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSH2536

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received: 08/28/09 08:00

PROJECT QUALITY CONTROL DATA Matrix Spike Dup

Analyte	Orig, Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
Calcated Valatila Ourania Comm											•	
Selected Volatile Organic Comp	ounds by EPA	vietnoa 82	00B									
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	NSH2536-05R E2	09/07/09 20:49
Naphthalene	0.678	2.75		mg/kg dry	2.76	75%	10 - 160	1	50	9084866	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
Surrogate: 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
9091127-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
Surrogate: 1,2-Dichloroethane-d4		44.4		ug/kg	50.0	89%	67 - 138			9091127	NSH2536-08	09/07/09 18:20
Surrogate: 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)

10179 Highway 78

Ladson, SC 29456

Attn Tom McElwee

Work Order:

NSH2536

Project Name:

Laurel Bay Housing Project

Project Number:

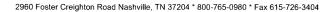
[none]

Received: 08/28/09 08:00

CERTIFICATION SUMMARY

TestAmerica Nashville

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





Client EEG - Small Business Group, Inc. (2449) Work Order: NSH2536

10179 Highway 78 Project Name: Laurel Bay Housing Project Ladson, SC 29456 Project Number: [none]

 Ladson, SC 29456
 Project Number:
 [none]

 Atm
 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

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	Ladson, SC 294						····								-			Site :	State:	sc									
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ATTACHMENT A



NON-HAZARDOUS MANIFEST

CVARAS

Ple	ase print or type. (Form designed for use on elite (12-pitch) typewriter.)					
-	NON-HAZARDOUS MANIFEST 1. Generator's US EPA ID No. Doi	Manifest ocument No.	2. Pag	je 1		
	Generator's Name and Mailing Address		W	MNA e Generator's ID	108	85420
	4. Generator's Phone		b. State	e Generator's ID		
	5. Transporter 1 Company Name 6. US EPA ID Number	****	C. State	e Transporter's ID		
	EEG, Inc.	LLL	D. Tran	sporter's Phone	143 879	0411
	7. Transporter 2 Company Name 8. US EPA ID Number		E. State	Transporter's ID		
				sporter's Phone		
	9. Designated Facility Name and Site Address 10. US EPA ID Number		G. State	e Facility's ID		
	HICKORY HILL LANDFILL		H. Facil	lity's Phone		
	ROUTE 1, BOX 121 RIDGELAND SC 29936	1 1 1			43 987	4843
	11. Description of Waste Materials	12. Cont	ainers	13. Total	14. Unit	I.
	Martine CO Tools Mad with Cond	No.	Туре	Quantity	Wt./Vol.	Misc. Comments
	a Heating Oil Tank filled with Sand WM Profile # 102855SC	0,0,1		7.12	TN	
G	WM Profile #	0 0 1				
NED	b.					
GENERATOR	WM Profile #	1 .	١, ١	1 1 1 1		
OR	c.	+			+	-
	WM Profile #	111		LII		,
	d. As					
	NAME Profile (1	
	WM Profile #		K Dis	posal Location		
	J. Additional Descriptions for Materials Listed Above		IV. EDIO	posar Location		
	Landfill Solidification		Cell		Leve	el
	Bio Remediation		Grid	lrag _j		und,
	15. Special Handling Instructions and Additional Information 3) 1224/CAR	diNA	(5)1225	CAR	interpretation low
	GRA USTS from DIZZ3VCAR	edini	4-6	6/122) CA	EGLOA
	Purchase Order # 2 1219 CARdina EMERGENCY CONTACT:			/	HAD	2000
	16. GENERATOR'S CERTIFICATION:					
	I hereby certify that the above-described materials are not hazardous v					
	applicable state law, have been fully and accurately described, classific	ed and p	ackag	jed, and are	in prop	er condition
	for transportation according to applicable regulations.					
	Printed/Typed Name Signature "On behalf of"	francis				Month Day Year
	12.2. Doko? g.	31	-	Personal law.		Parape
R A N	Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Signature	Λ.	1			Month Day Year
9	James Raldwin Dames	Rold	140	No.	. 1	DIGINISIOS
	18. Transporter 2 Acknowledgement of Receipt of Materials			9 9 9		01100101
	Printed/Typed Name Signature				i	Month Day Year
1	19. Certificate of Final Treatment/Disposal				-	
1	I certify, on behalf of the above listed treatment facility, that to the best was managed in compliance with all applicable laws, regulations, perm					
	20. Facitilty Owner or Operator: Certification of receipt of non-hazardous materials covered by this manife	ast.				
	Printed/Typed Name Signature Signature	Ind)		- 1	Month Day Year
and a		The second second second		The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	the same of the same of the same of

Appendix C Laboratory Analytical Report - Groundwater



Volatile Organic Compounds by GC/MS

Client: AECOM - Resolution Consultants

Description: BEALB1218TW01WG20151203

Laboratory ID: QL04022-010

Matrix: Aqueous

Date Sampled: 12/03/2015 1420 Date Received: 12/04/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date Analyst	Prep Date	Batch
1	5030B	8260B	1	12/09/2015 1638 ALL		91718

	CAS	Analytical						
Parameter	Number	Method	Result	Q	LOQ	LOD	DL	Units Run
Benzene	71-43-2	8260B	0.45	U	5.0	0.45	0.21	ug/L 1
Ethylbenzene	100-41-4	8260B	0.51	U	5.0	0.51	0.21	ug/L 1
Naphthalene	91-20-3	8260B	0.96	U	5.0	0.96	0.14	ug/L 1
Toluene	108-88-3	8260B	0.48	U	5.0	0.48	0.24	ug/L 1
Xylenes (total)	1330-20-7	8260B	0.57	U	5.0	0.57	0.32	ug/L 1

Surrogate	Run 1 A Q % Recovery	cceptance Limits	
Bromofluorobenzene	95	75-120	
1,2-Dichloroethane-d4	100	70-120	
Toluene-d8	104	85-120	
Dibromofluoromethane	95	85-115	

PQL = Practical quantitation limit ND = Not detected at or above the MDL B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range P = The RPD between two GC columns exceeds 40%

H = Out of holding time

Q = Surrogate failure N = Recovery is out of criteria L = LCS/LCSD failure

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

J = Estimated result < PQL and ≥ MDL

S = MS/MSD failure

Semivolatile Organic Compounds by GC/MS (SIM)

Client: AECOM - Resolution Consultants

Laboratory ID: QL04022-010

Description: BEALB1218TW01WG20151203

Matrix: Aqueous

Date Sampled: 12/03/2015 1420 Date Received: 12/04/2015

Run Prep Method Analytical Method Dilution Analysis Date Analyst Batch **Prep Date** 1 3520C 8270D (SIM) 12/11/2015 2119 DRB1 12/10/2015 0918 91795

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

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Methylnaphthalene-d10		71	15-139
Fluoranthene-d10		102	23-154

PQL = Practical quantitation limit ND = Not detected at or above the MDL B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range P = The RPD between two GC columns exceeds 40%

H = Out of holding time

Q = Surrogate failure L = LCS/LCSD failure

 $J = Estimated result < PQL and <math>\geq MDL$ Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" N = Recovery is out of criteria

S = MS/MSD failure

Appendix D Regulatory Correspondence





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



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 <u>petruslb@dhec.sc.gov</u> or 803-898-0294.

Sincerely,

Laurel Petrus

NETS

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	-50
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