SUMMARY REPORT
385 WEST CARDINAL LANE (FORMERLY 1356 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



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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 385 West Cardinal Lane (Formerly 1356 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 heating oil 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, February 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, February 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, April 2013) and were revised again in Revision 3.0 (SCDHEC, May 2015). The screening levels used for evaluation at each site were those levels that were in effect at the time of reporting and review by SCDHEC.

The results of the soil sampling at each former UST location were used to determine if a potential for groundwater contamination exists (i.e., soil results greater than RBSLs) and subsequently to select properties for follow-up initial groundwater assessment (IGWA) sampling. The IGWA sampling process utilizes temporary groundwater sampling points that are typically installed and sampled within the same day. The intent of the sampling point is to determine the presence or absence of the aforementioned COPCs in groundwater and identify whether former UST locations may require additional delineation of COPCs in groundwater. These sampling points are not subjected to the same installation standards as permanent monitoring wells and, as such; the data obtained from the IGWA wells can sometimes be biased high and is considered preliminary data. In order to confirm the presence of any impact to groundwater, a permanent well is installed where IGWA sampling has indicated the presence of COPCs is in excess of the SCDHEC RBSLs for groundwater. If COPCs are found to be present in the permanent well, additional permanent wells are installed to delineate the extent of impact to groundwater and a sampling program is established. Groundwater analytical results from permanent wells 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 385 West Cardinal Lane (Formerly 1356 West Cardinal Lane). The sampling activities at 385 West Cardinal Lane (Formerly 1356 West Cardinal Lane) comprised a soil investigation, IGWA sampling and installation and sampling of a permanent well. Details regarding the soil investigation at this site are provided in the SCDHEC UST Assessment Report – 1356 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 – May and June 2015 (Resolution Consultants, 2015). The laboratory report that includes the pertinent IGWA analytical results for this site is presented in Appendix



C. Details regarding the permanent well installation and sampling activities at this site are provided in the *Groundwater Assessment Report – November and December 2017* (Resolution Consultants, 2018). The laboratory report that includes the pertinent groundwater analytical results for this site is presented in Appendix D.

2.1 UST Removal and Soil Sampling

On July 7, 2009, a single 280 gallon heating oil UST was removed from the rear grassed area at 385 West Cardinal Lane (Formerly 1356 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 and properly disposed of (i.e., shipped offsite for recycling or transported to a landfill). There was no visual evidence (i.e., staining or sheen) of petroleum impact at the time of the UST removal. According to the UST Assessment Report (Appendix B), the depth to the base of the UST was 5'9" 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 385 West Cardinal Lane (Formerly 1356 West Cardinal Lane) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated May 15, 2014, SCDHEC requested an IGWA for 385 West Cardinal Lane (Formerly 1356 West Cardinal Lane) to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letter is provided in Appendix E.



2.3 Initial Groundwater Sampling

On June 24, 2015, a temporary monitoring well was installed at 385 West Cardinal Lane (Formerly 1356 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 – May and June 2015* (Resolution Consultants, 2015).

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

2.4 Initial 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 385 West Cardinal Lane (Formerly 1356 West Cardinal Lane) were greater than the SCDHEC RBSLs and the site specific groundwater VISLs (Table 2), which indicated further investigation was required. In a letter dated February 22, 2016, SCDHEC requested a permanent well be installed for 385 West Cardinal Lane (Formerly 1356 West Cardinal Lane) to confirm the impact to groundwater detected in the temporary well sample. SCDHEC's request letter is provided in Appendix E.

2.5 Permanent Well Groundwater Sampling

On November 30, 2017, a permanent monitoring well was installed at 385 West Cardinal Lane (Formerly 1356 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 and the IGWA sample location. The former UST location is indicated on Figures 2 and 3 of the UST Assessment Report (Appendix B). Further details are provided in the *Groundwater Assessment Report – November and December 2017* (Resolution Consultants, 2018).

The sampling strategy for this phase of the investigation required a one-time sampling event of the permanent 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. Field forms are provided in the *Groundwater Assessment Report – November and December 2017* (Resolution Consultants, 2018).

2.6 Permanent Well Groundwater Analytical Results

A summary of the laboratory analytical results and SCDHEC RBSLs is presented in Table 3. A copy of the laboratory analytical data report is included in Appendix D.

The groundwater results collected from 385 West Cardinal Lane (Formerly 1356 West Cardinal Lane) were less than the SCDHEC RBSLs and the site specific groundwater VISLs (Table 3), 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 collected from the permanent monitoring well, SCDHEC made the determination that NFA was required for 385 West Cardinal Lane (Formerly 1356 West Cardinal Lane). This NFA determination was obtained in a letter dated June 18, 2018. SCDHEC's NFA letter is provided in Appendix E.

4.0 REFERENCES

Marine Corps Air Station Beaufort, 2009. South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 1356 Cardinal Lane, Laurel Bay Military Housing Area, October 2009.

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



- Resolution Consultants, 2018. *Groundwater Assessment Report November and December 2017 for Laurel Bay Military Housing Area, Multiple Properties, Marine Corps Air Station Beaufort, Beaufort, South Carolina*, March 2018.
- 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 385 West Cardinal Lane (Formerly 1356 West Cardinal Lane)

Laurel Bay Military Housing Area Marine Corps Air Station Beaufort Beaufort, South Carolina

Constituent	SCDHEC RBSLs (1)	Results Sample Collected 07/07/09
Volatile Organic Compounds Analyze		
Benzene	0.003	0.0154
Ethylbenzene	1.15	0.302
Naphthalene	0.036	1.90
Toluene	0.627	0.00420
Xylenes, Total	13.01	ND
Semivolatile Organic Compounds Ana	alyzed by EPA Method 8270D (mg/kg)	
Benzo(a)anthracene	0.066	1.62
Benzo(b)fluoranthene	0.066	0.821
Benzo(k)fluoranthene	0.066	0.809
Chrysene	0.066	1.81
Dibenz(a,h)anthracene	0.066	0.118

Notes:

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

mg/kg - milligrams per kilogram

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

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

⁽¹⁾ South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 1.0 (SCDHEC, May 2001).

Table 2

Laboratory Analytical Results - Initial Groundwater 385 West Cardinal Lane (Formerly 1356 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 06/24/15
Volatile Organic Compounds Analyze	d by EPA Method 8260B	(μg/L)	
Benzene	5	16.24	0.32
Ethylbenzene	700	45.95	18
Naphthalene	25	29.33	69
Toluene	1000	105,445	ND
Xylenes, Total	10,000	2,133	0.26
Semivolatile Organic Compounds An	alyzed by EPA Method 8	270D (μg/L)	
Benzo(a)anthracene	10	NA	ND
Benzo(b)fluoranthene	10	NA	ND
Benzo(k)fluoranthene	10	NA	ND
Chrysene	10	NA	ND
Dibenz(a,h)anthracene	10	NA	ND

Notes:

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

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

 $^{^{(2)}}$ Site-specific groundwater VISLs were calculated using the EPA JE Model Spreadsheets (Version 3.1, February 2004) and conservative modeling inputs representative of a small single-story house with an 8 foot ceiling. Site-specific groundwater VISLs were developed based on a target risk level of 1×10^{-6} , a target hazard quotient of 1 (per target organ), and a default residential exposure scenario, assuming exposure for 24 hours/day, 350 days/year, for 26 years. Modeling was performed for a range of depths to groundwater for application as appropriate in different areas of the Laurel Bay Military Housing Area. The most conservative levels are presented for comparison. Refer to Appendix H of the Uniform Federal Policy Sampling Analysis and Sampling Plan for Vapor Media, Revision 4 (Resolution Consultants, April 2017) for additional information.

Table 3

Laboratory Analytical Results - Permanent Well Groundwater 385 West Cardinal Lane (Formerly 1356 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 12/08/17
Volatile Organic Compounds Analyze	d by EPA Method 8260B	(μg/L)	
Benzene	5	16.24	ND
Ethylbenzene	700	45.95	3.9
Naphthalene	25	29.33	18
Toluene	1000	105,445	ND
Xylenes, Total	10,000	2,133	2.9
Semivolatile Organic Compounds And	alyzed by EPA Method 8	270D (μg/L)	
Benzo(a)anthracene	10	NA	ND
Benzo(b)fluoranthene	10	NA	ND
Benzo(k)fluoranthene	10	NA	ND
Chrysene	10	NA	ND
Dibenz(a,h)anthracene	10	NA	ND

Notes:

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

 $^{(2)}$ Site-specific groundwater VISLs were calculated using the EPA JE Model Spreadsheets (Version 3.1, February 2004) and conservative modeling inputs representative of a small single-story house with an 8 foot ceiling. Site-specific groundwater VISLs were developed based on a target risk level of 1×10^{-6} , a target hazard quotient of 1 (per target organ), and a default residential exposure scenario, assuming exposure for 24 hours/day, 350 days/year, for 26 years. Modeling was performed for a range of depths to groundwater for application as appropriate in different areas of the Laurel Bay Military Housing Area. The most conservative levels are presented for comparison. Refer to Appendix H of the Uniform Federal Policy Sampling Analysis and Sampling Plan for Vapor Media, Revision 4 (Resolution Consultants, April 2017) for additional information.

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

JE - Johnson & Ettinger

NA - not applicable

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

RBSL - Risk-Based Screening Level

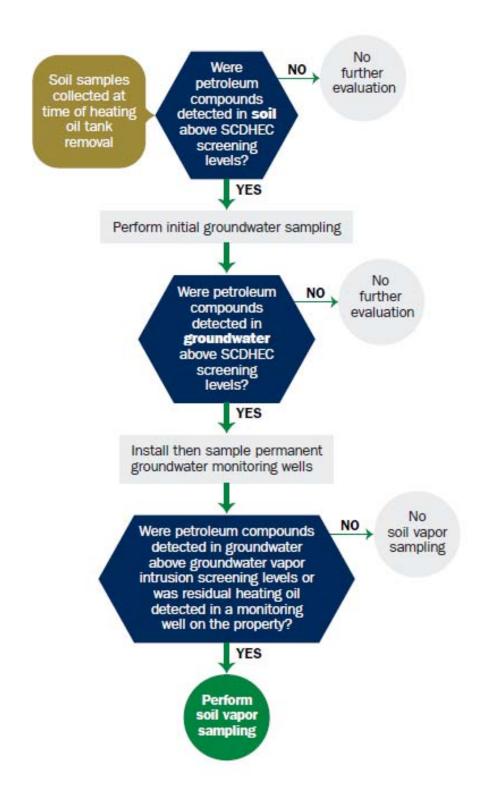
SCDHEC - South Carolina Department Of Health and Environmental Control

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



RECEIVED

OCT 0 8 2009

SC DHEC - Bureau of Land & Waste Management Submit Completed Form To: UST Program SCDHEC 2600 Bull Street Columbia, South Carolina 29201 Telephone (803) 896-7957

I. OWNERSHIP OF UST (S)

	ommanding Officer Attn: Ni n, Individual, Public Agency, Other)	READ (Clary Ende)
P.O. Box 55001 Mailing Address		
Beaufort,	South Carolina	29904-5001
	State	Zip Code
City	State	Elp code
City 843 Area Code	228-7317 Telephone Number	Craig Ehde

II. SITE IDENTIFICATION AND LOCATION

Permit I.D.	.#									
Laurel	Bay Mil:	itary	Housing	Area,	Marine	Corps	Air	Station,	Beaufort,	SC
Facility Na	me or Comp	pany Site	e Identifier							
	Cardinal				ilitary	Housir	ng Ar	rea		
Street Add	ress or State	Road (a	is applicable	e)						
Beaufo	rt,		Ве	aufort						
City				County						

Attachment 2

III. INSURANCE INFORMATION

Insurance Statement
The petroleum release reported to DHEC on at Permit ID Number may qualify to receive state monies to pay for appropriate site rehabilitation activities. Before participation is allowed in the State Clean-up fund, written confirmation of the existence or non-existence of an environmental insurance policy is required. This section must be completed.
Is there now, or has there ever been an insurance policy or other financial mechanism that covers this UST release? YES NO (check one)
If you answered YES to the above question, please complete the following information:
My policy provider is: The policy deductible is: The policy limit is:
If you have this type of insurance, please include a copy of the policy with this report.
IV. REQUEST FOR SUPERB FUNDING
I DO / DO NOT wish to participate in the SUPERB Program. (Circle one.)
V. CERTIFICATION (To be signed by the UST owner)
I certify that I have personally examined and am familiar with the information submitted in this and all attached documents; and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.
Name (Type or print.)
Signature
To be completed by Notary Public:
Sworn before me this day of, 20
(Name)
Notary Public for the state of Please affix State seal if you are commissioned outside South Carolina

	VI. UST INFORMATION	1356Cardinal
A.	Product(ex. Gas, Kerosene)	Heating oil
B.	Capacity(ex. 1k, 2k)	280 gal
C.	Age	Late 1950s
D.	Construction Material(ex. Steel, FRP)	Steel
E.	Month/Year of Last Use	Mid 1980s
- F.	Depth (ft.) To Base of Tank	519"
G.	Spill Prevention Equipment Y/N	No
Н∙	Overfill Prevention Equipment Y/N	No
I.	Method of Closure Removed/Filled	Removed
J _.	Date Tanks Removed/Filled	7/7/09
K.	Visible Corrosion or Pitting Y/N	Yes
L.	Visible Holes Y/N	Yes
M.	Method of disposal for any USTs removed from the UST 1356Cardinal was removed from	•
	Subtitle "D" landfill. See Attachm	ent "A."
N.	Method of disposal for any liquid petroleum, sludge disposal manifests) UST 1356Cardinal had been previou	
O.	If any corrosion, pitting, or holes were observed, de Corrosion, pitting and holes were	

VII. PIPING INFORMATION

	1356Cardinal	
	Steel	†
Construction Material(ex. Steel, FRP)	& Copper	1
Distance from UST to Dispenser	N/A	1
Number of Dispensers	N/A	
Type of System Pressure or Suction	Suction	\downarrow
Was Piping Removed from the Ground? Y/N	Yes	1
Visible Corrosion or Pitting Y/N	Yes	1
Visible Holes Y/N	No	
Age	Late 1950s	
If any corrosion, pitting, or holes were observed,	describe the location and extent for each pipin	g
		_
corrosion and pitting were four pipe. Copper supply and return	nd on the surface of the steel was very sound	<i>т</i> е
pipe. Copper supply and return	Times were sound.	
VIII RRIFF SITE DESCI	PIPTION AND HISTORY	
VIII. BRIEF SITE DESCI		
VIII. BRIEF SITE DESCI	constructed of single wall steel	•
The USTs at the residences are o	constructed of single wall steel for heating. These USTs were	
The USTs at the residences are of and formerly contained fuel oil	constructed of single wall steel for heating. These USTs were	
The USTs at the residences are of and formerly contained fuel oil	constructed of single wall steel for heating. These USTs were	
The USTs at the residences are of and formerly contained fuel oil	constructed of single wall steel for heating. These USTs were	-
The USTs at the residences are of and formerly contained fuel oil	constructed of single wall steel for heating. These USTs were	

IX. SITE CONDITIONS

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

X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 96012001

B.

Sample #		Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA#
1356	Excav at fill end	Soil	Sandy	5'9"	7/7/09 1230 hrs	P. Shaw	
Cardinal	1111 6116	2011			1230 1115	1. Blaw	
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.

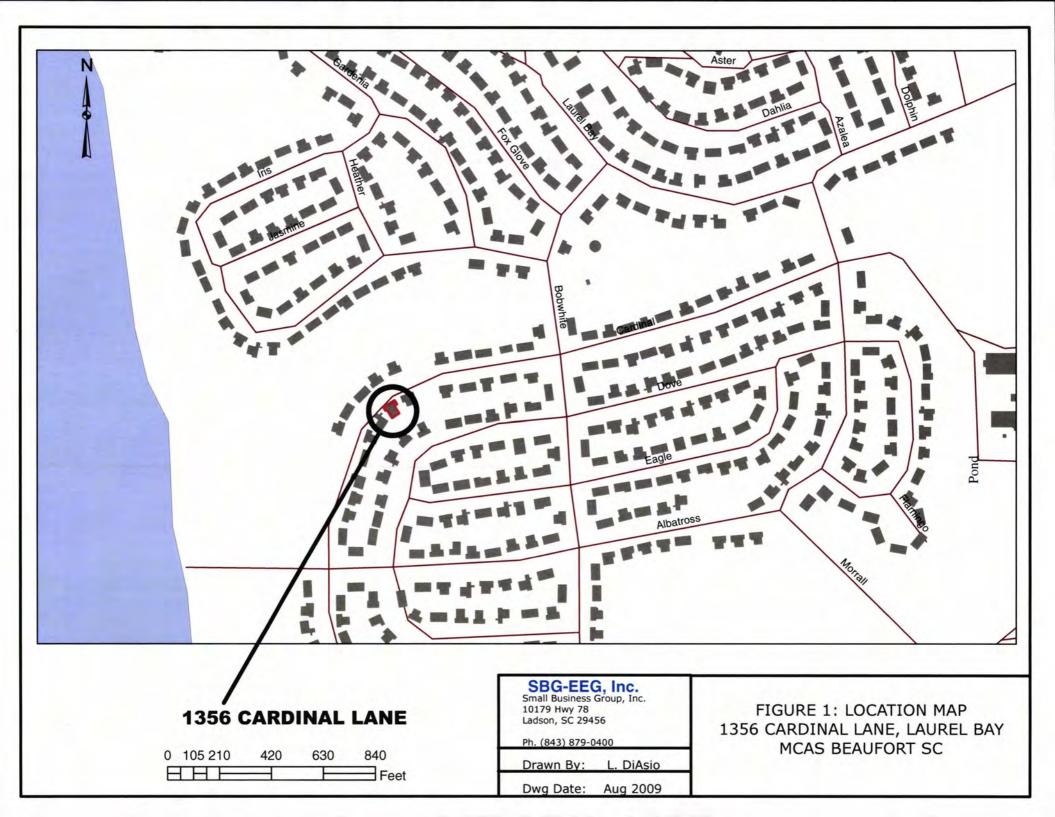
XII. RECEPTORS

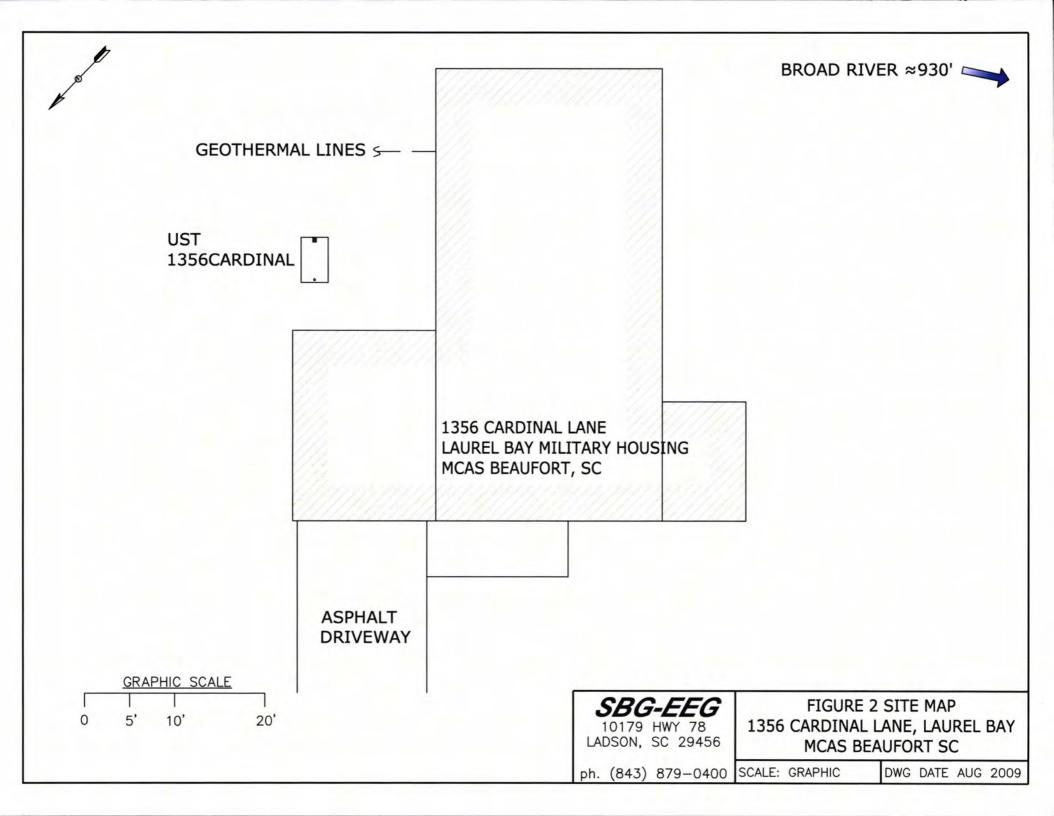
		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system? *Broad R. ~930ft.	*X	
	If yes, indicate type of receptor, distance, and direction on site map.		
B.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?		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, water & geothermal	*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.		

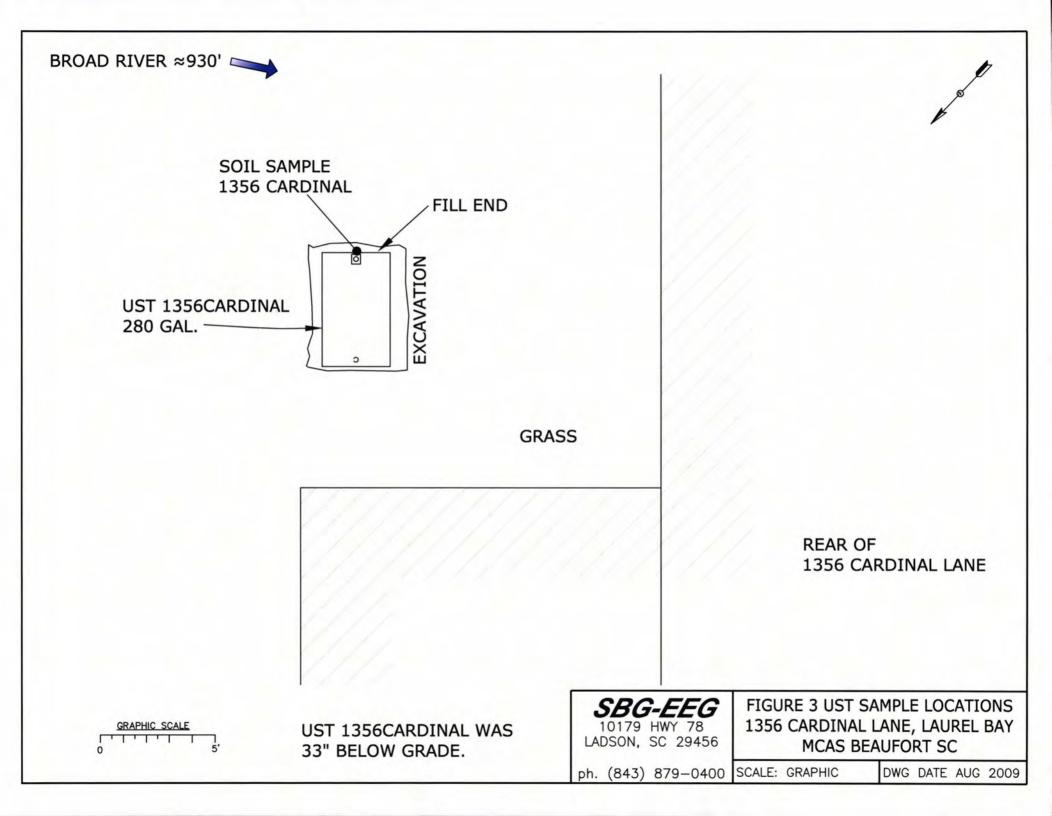
XIII. SITE MAP

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)









Picture 1: Location of UST 1356Cardinal after completion of work.

XIV. SUMMARY OF ANALYSIS RESULTS

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

CoC UST	1356Cardinal
Benzene	0.0154 mg/kg
Toluene	0.00420 mg/kg
Ethylbenzene	0.302 mg/kg
Xylenes	ND ND
Naphthalene	1.90 mg/kg
Benzo (a) anthracene	1.62 mg/kg
Benzo (b) fluoranthene	0.821 mg/kg
Benzo (k) fluoranthene	0.809 mg/kg
Chrysene	1.81 mg/kg
Dibenz (a, h) anthracene	0.118 mg/kg
TPH (EPA 3550)	
СоС	
Benzene	
Toluene	
Ethylbenzene	
Xylenes	
Naphthalene	
Benzo (a) anthracene	
Benzo (b) fluoranthene	
Benzo (k) fluoranthene	
Chrysene	
Dibenz (a, h) anthracene	
TPH (EPA 3550)	

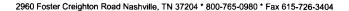
SUMMARY OF ANALYSIS RESULTS (cont'd)
Enter the ground water analytical data for each sample for all CoC in the table below. If free product is present, indicate the measured thickness to the nearest 0.01 feet.

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

XV. ANALYTICAL RESULTS

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

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





July 24, 2009

5:10:54PM

Client:

Attn:

EEG - Small Business Group, Inc. (2449)

10179 Highway 78

Ladson, SC 29456 Tom McElwee Work Order: NSG0736

Project Name: Laurel Bay Housing Project

Project Nbr: [none]
P/O Nbr: 0829
Date Received: 07/10/09

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
1350 Cardinal	NSG0736-01	07/06/09 15:30
1347 Cardinal	NSG0736-02	07/06/09 09:45
1348 Cardinal	NSG0736-03	07/07/09 10:00
1356 Cardinal	NSG0736-04	07/07/09 12:30
1357 Cardinal	NSG0736-05	07/07/09 14:30
1360 Cardinal	NSG0736-06	07/08/09 11:00
1370 Cardinal	NSG0736-07	07/08/09 11:15
1371 Dove	NSG0736-08	07/09/09 09:20
1373 Dove	NSG0736-09	07/09/09 09:30

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.

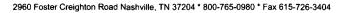
This report has been electronically signed.

Lemos A Hage

Report Approved By:

Ken A. Hayes

Senior Project Manager





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

10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

Project Number:

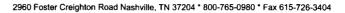
[none]

07/10/09 08:00

Received:

ANAI	YTICAL	REPORT

Analyte	Result	———— Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
		-						D
Sample ID: NSG0736-01 (1350 Car	rdinal - Soil) S	ampled:	07/06/09 15:30					
General Chemistry Parameters								
% Dry Solids	90.1		%	0.500	1	07/18/09 07:27	SW-846	9072278
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	ND		mg/kg dry	0.00233	1	07/15/09 17:31	SW846 8260B	9071390
Ethylbenzene	ND		mg/kg dry	0.00233	1	07/15/09 17:31	SW846 8260B	9071390
Naphthalene	ND		mg/kg dry	0.00582	1	07/15/09 17:31	SW846 8260B	9071390
Toluene	ND		mg/kg dry	0.00233	1	07/15/09 17:31	SW846 8260B	9071390
Xylenes, total	ND		mg/kg dry	0.00582	1	07/15/09 17:31	SW846 8260B	9071390
Surr: 1,2-Dichloroethane-d4 (67-138%)	100 %					07/15/09 17:31	SW846 8260B	9071390
Surr: Dibromofluoromethane (75-125%)	99 %					07/15/09 17:31	SW846 8260B	9071390
Surr: Toluene-d8 (76-129%)	97 %					07/15/09 17:31	SW846 8260B	9071390
Surr: 4-Bromofluorobenzene (67-147%)	98 %					07/15/09 17:31	SW846 8260B	9071390
Polyaromatic Hydrocarbons by EPA 82	270D							
Acenaphthene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Acenaphthylene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Anthracene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Benzo (a) anthracene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Benzo (a) pyrene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Benzo (b) fluoranthene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Benzo (k) fluoranthene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Chrysene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Fluoranthene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Fluorene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Naphthalene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Phenanthrene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Pyrene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
1-Methylnaphthalene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
2-Methylnaphthalene	ND		mg/kg dry	0.0739	1	07/14/09 20:57	SW846 8270D	9071532
Surr: Terphenyl-d14 (18-120%)	78 %		J J ,			07/14/09 20:57	SW846 8270D	9071532
Surr: 2-Fluorobiphenyl (14-120%)	65 %					07/14/09 20:57	SW846 8270D	9071532
Surr: Nitrobenzene-d5 (17-120%)	81 %					07/14/09 20:57	SW846 8270D	9071532





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG0736

Project Name:

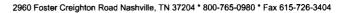
Laurel Bay Housing Project

Project Number:

[none]

Received: 07/10/09 08:00

				MDI	Dilution	Analysis	36.41.4	.
Analyte	Result	Flag	Units	MRL	Factor	Date/Time	Method	Batch
Sample ID: NSG0736-02 (1347 Ca	rdinal - Soil) S	ampled:	07/06/09 09:45					
General Chemistry Parameters								
% Dry Solids	95.9		%	0.500	1	07/18/09 07:27	SW-846	9072278
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	ND		mg/kg dry	0.00227	1	07/15/09 18:02	SW846 8260B	9071390
Ethylbenzene	ND		mg/kg dry	0.00227	1	07/15/09 18:02	SW846 8260B	9071390
Naphthalene	ND		mg/kg dry	0.00568	1	07/15/09 18:02	SW846 8260B	9071390
Toluene	ND		mg/kg dry	0.00227	1	07/15/09 18:02	SW846 8260B	9071390
Xylenes, total	ND		mg/kg dry	0.00568	1	07/15/09 18:02	SW846 8260B	9071390
Surr: 1,2-Dichloroethane-d4 (67-138%)	102 %					07/15/09 18:02	SW846 8260B	9071390
Surr: Dibromofluoromethane (75-125%)	103 %					07/15/09 18:02	SW846 8260B	9071390
Surr: Toluene-d8 (76-129%)	98 %					07/15/09 18:02	SW846 8260B	9071390
Surr: 4-Bromofluorobenzene (67-147%)	101 %					07/15/09 18:02	SW846 8260B	9071390
Polyaromatic Hydrocarbons by EPA 82	270D							
Acenaphthene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Acenaphthylene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Anthracene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Benzo (a) anthracene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Benzo (a) pyrene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Benzo (b) fluoranthene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Benzo (k) fluoranthene	0.0754		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Chrysene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Fluoranthene	0.172		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Fluorene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Naphthalene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Phenanthrene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Pyrene	0.241		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
1-Methylnaphthalene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
2-Methylnaphthalene	ND		mg/kg dry	0.0699	1	07/14/09 21:20	SW846 8270D	9071532
Surr: Terphenyl-d14 (18-120%)	55 %		·			07/14/09 21:20	SW846 8270D	9071532
Surr: 2-Fluorobiphenyl (14-120%)	84 %					07/14/09 21:20	SW846 8270D	9071532
Surr: Nitrobenzene-d5 (17-120%)	73 %					07/14/09 21:20	SW846 8270D	9071532





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

07/10/09 08:00 Received:

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NSG0736-03 (1348 Car	rdinal - Soil) S	ampled:	07/07/09 10:00					
General Chemistry Parameters								
% Dry Solids	82.9		%	0.500	1	07/18/09 07:27	SW-846	9072278
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	ND		mg/kg dry	0.00263	1	07/15/09 18:33	SW846 8260B	9071390
Ethylbenzene	ND		mg/kg dry	0.00263	1	07/15/09 18:33	SW846 8260B	9071390
Naphthalene	ND		mg/kg dry	0.00657	1	07/15/09 18:33	SW846 8260B	9071390
Toluene	ND		mg/kg dry	0.00263	1	07/15/09 18:33	SW846 8260B	9071390
Xylenes, total	ND		mg/kg dry	0.00657	I	07/15/09 18:33	SW846 8260B	9071390
Surr: 1,2-Dichloroethane-d4 (67-138%)	101 %					07/15/09 18:33	SW846 8260B	9071390
Surr: Dibromofluoromethane (75-125%)	103 %					07/15/09 18:33	SW846 8260B	9071390
Surr: Toluene-d8 (76-129%)	98 %					07/15/09 18:33	SW846 8260B	9071390
Surr: 4-Bromofluorobenzene (67-147%)	103 %					07/15/09 18:33	SW846 8260B	9071390
Polyaromatic Hydrocarbons by EPA 82	.70D							
Acenaphthene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
Acenaphthylene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
Anthracene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
Benzo (a) anthracene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
Benzo (a) pyrene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
Benzo (b) fluoranthene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0800	l	07/14/09 21:43	SW846 8270D	9071532
Benzo (k) fluoranthene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
Chrysene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
Fluoranthene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
Fluorene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
Naphthalene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
Phenanthrene	ND		mg/kg dry	0.0800	i	07/14/09 21:43	SW846 8270D	9071532
Pyrene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
1-Methylnaphthalene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
2-Methylnaphthalene	ND		mg/kg dry	0.0800	1	07/14/09 21:43	SW846 8270D	9071532
Surr: Terphenyl-d14 (18-120%)	55 %					07/14/09 21:43	SW846 8270D	9071532
Surr: 2-Fluorobiphenyl (14-120%)	50 %					07/14/09 21:43	SW846 8270D	9071532
Surr: Nitrobenzene-d5 (17-120%)	57 %					07/14/09 21:43	SW846 8270D	9071532





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

10179 Highway 78

Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSG0736

Project Name:

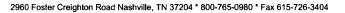
Laurel Bay Housing Project

Project Number:

[none]

07/10/09 08:00 Received:

					Dilution	Analysis		
Analyte	Result	Flag	Units	MRL	Factor	Date/Time	Method	Batch
Sample ID: NSG0736-04 (1356 Ca	rdinal - Soil) S	ampled:	07/07/09 12:30					
General Chemistry Parameters								
% Dry Solids	82.0		%	0.500	1	07/18/09 07:27	SW-846	9072278
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	0.0154		mg/kg dry	0.00198	1	07/15/09 19:03	SW846 8260B	9071390
Ethylbenzene	0.302		mg/kg dry	0.100	50	07/16/09 15:37	SW846 8260B	9072035
Naphthalene	1.90		mg/kg dry	0.250	50	07/16/09 15:37	SW846 8260B	9072035
Toluene	0.00420		mg/kg dry	0.00198	1	07/15/09 19:03	SW846 8260B	9071390
Xylenes, total	ND		mg/kg dry	0.250	50	07/16/09 15:37	SW846 8260B	9072035
Surr: 1,2-Dichloroethane-d4 (67-138%)	100 %					07/15/09 19:03	SW846 8260B	9071390
Surr: 1,2-Dichloroethane-d4 (67-138%)	101 %					07/16/09 15:37	SW846 8260B	9072035
Surr: Dibromofluoromethane (75-125%)	111 %					07/15/09 19:03	SW846 8260B	9071390
Surr: Dibromofluoromethane (75-125%)	102 %					07/16/09 15:37	SW846 8260B	9072035
Surr: Toluene-d8 (76-129%)	194 %	ZX				07/15/09 19:03	SW846 8260B	9071390
Surr: Toluene-d8 (76-129%)	97 %					07/16/09 15:37	SW846 8260B	9072035
Surr: 4-Bromofluorobenzene (67-147%)	197 %	ZX				07/15/09 19:03	SW846 8260B	9071390
Surr: 4-Bromofluorobenzene (67-147%)	104 %					07/16/09 15:37	SW846 8260B	9072035
Polyaromatic Hydrocarbons by EPA 82	270D							
Accnaphthene	0.912		mg/kg dry	0.0810	1	07/14/09 22:05	SW846 8270D	9071532
Acenaphthylene	ND		mg/kg dry	0.0810	1	07/14/09 22:05	SW846 8270D	9071532
Anthracene	1.00		mg/kg dry	0.0810	1	07/14/09 22:05	SW846 8270D	9071532
Benzo (a) anthracene	1.62		mg/kg dry	0.0810	1	07/14/09 22:05	SW846 8270D	9071532
Benzo (a) pyrene	0.765		mg/kg dry	0.0810	1	07/14/09 22:05	SW846 8270D	9071532
Benzo (b) fluoranthene	0.821		mg/kg dry	0.0810	1	07/14/09 22:05	SW846 8270D	9071532
Benzo (g,h,i) perylene	0.262		mg/kg dry	0.0810	1	07/14/09 22:05	SW846 8270D	9071532
Benzo (k) fluoranthene	0.809		mg/kg dry	0.0810	1	07/14/09 22:05	SW846 8270D	9071532
Chrysene	1.81		mg/kg dry	0.0810	1	07/14/09 22:05	SW846 8270D	9071532
Dibenz (a,h) anthracene	0.118		mg/kg dry	0.0810	1	07/14/09 22:05	SW846 8270D	9071532
Fluoranthene	4.41		mg/kg dry	0.405	5	07/15/09 18:29	SW846 8270D	9071532
Fluorenc	2.14		mg/kg dry	0.0810	1	07/14/09 22:05	SW846 8270D	9071532
Indeno (1,2,3-cd) pyrene	0.278		mg/kg dry	0.0810	1	07/14/09 22:05	SW846 8270D	9071532
Naphthalene	2.81		mg/kg dry	0.0810	1	07/14/09 22:05	SW846 8270D	9071532
Phenanthrene	6.17		mg/kg dry	0.405	5	07/15/09 18:29	SW846 8270D	9071532
Pyrene	3.11		mg/kg dry	0.0810	1	07/14/09 22:05	SW846 8270D	9071532
1-Methylnaphthalene	10.1		mg/kg dry	0.405	5	07/15/09 18:29	SW846 8270D	9071532
• •	15.1			0.405	5	07/15/09 18:29	SW846 8270D	9071532
2-Methylnaphthalene			mg/kg dry	0.405	J		SW846 8270D	9071532
Surr: Terphenyl-d14 (18-120%) Surr: 2-Fluorobiphenyl (14-120%)	67 % 92 %					07/14/09 22:05 07/14/09 22:05	SW846 8270D SW846 8270D	9071532
Surr: 2-r tuorootphenyi (14-120%) Surr: Nitrobenzene-d5 (17-120%)	92 % 106 %					07/14/09 22:05	SW846 8270D	9071532
Surr. Murovenzene-as (17-12076)	100 70					07/14/09 22:03	30 040 04/0D	90/1332





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

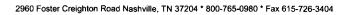
Project Number:

[none]

Received: 07/10/09 08:00

ANA	LV	TIC	AT.	REP	ORT
		110	<u> </u>	KEI	VILL

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NSG0736-05 (1357 Ca	rdinal - Soil) S	ampled:	07/07/09 14:30					
General Chemistry Parameters								
% Dry Solids	85.1		%	0.500	1	07/18/09 07:27	SW-846	9072278
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	0.00260		mg/kg dry	0.00193	1	07/15/09 19:34	SW846 8260B	9071390
Ethylbenzene	0.322		mg/kg dry	0.103	50	07/16/09 16:07	SW846 8260B	9072035
Naphthalene	3.41		mg/kg dry	0.259	50	07/16/09 16:07	SW846 8260B	9072035
Toluene	0.128		mg/kg dry	0.00193	1	07/15/09 19:34	SW846 8260B	9071390
Xylenes, total	1.67		mg/kg dry	0.259	50	07/16/09 16:07	SW846 8260B	9072035
Surr: 1,2-Dichloroethane-d4 (67-138%)	115 %		0 0 1			07/15/09 19:34	SW846 8260B	9071390
Surr: 1,2-Dichloroethane-d4 (67-138%)	96 %					07/16/09 16:07	SW846 8260B	9072035
Surr: Dibromofluoromethane (75-125%)	113 %					07/15/09 19:34	SW846 8260B	9071390
Surr: Dibromofluoromethane (75-125%)	98 %					07/16/09 16:07	SW846 8260B	9072035
Surr: Toluene-d8 (76-129%)	193 %	ZX				07/15/09 19:34	SW846 8260B	9071390
Surr: Toluene-d8 (76-129%)	98 %					07/16/09 16:07	SW846 8260B	9072035
Surr: 4-Bromofluorobenzene (67-147%)	253 %	ZX				07/15/09 19:34	SW846 8260B	9071390
Surr: 4-Bromofluorobenzene (67-147%)	107 %					07/16/09 16:07	SW846 8260B	9072035
Polyaromatic Hydrocarbons by EPA 8	270D							
Acenaphthene	0.622		mg/kg dry	0.0766	1	07/14/09 22:28	SW846 8270D	9071532
Acenaphthylene	ND		mg/kg dry	0.0766	1	07/14/09 22:28	SW846 8270D	9071532
Anthracene	0.388		mg/kg dry	0.0766	1	07/14/09 22:28	SW846 8270D	9071532
Benzo (a) anthracene	ND		mg/kg dry	0.0766	}	07/14/09 22:28	SW846 8270D	9071532
Benzo (a) pyrene	ND		mg/kg dry	0.0766	1	07/14/09 22:28	SW846 8270D	9071532
Benzo (b) fluoranthene	ND		mg/kg dry	0.0766	1	07/14/09 22:28	SW846 8270D	9071532
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0766	1	07/14/09 22:28	SW846 8270D	9071532
Benzo (k) fluoranthene	ND		mg/kg dry	0.0766	i	07/14/09 22:28	SW846 8270D	9071532
Chrysene	0.114		mg/kg dry	0.0766	1	07/14/09 22:28	SW846 8270D	9071532
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0766	1	07/14/09 22:28	SW846 8270D	9071532
Fluoranthene	0.247		mg/kg dry	0.0766	1	07/14/09 22:28	SW846 8270D	9071532
Fluorene	1.54		mg/kg dry	0.0766	ì	07/14/09 22:28	SW846 8270D	9071532
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0766	j	07/14/09 22:28	SW846 8270D	9071532
Naphthalene	1.23		mg/kg dry	0.0766	1	07/14/09 22:28	SW846 8270D	9071532
Phenanthrene	2.90		mg/kg dry	0.0766	1	07/14/09 22:28	SW846 8270D	9071532
Pyrene	0.184		mg/kg dry	0.0766	1	07/14/09 22:28	SW846 8270D	9071532
I-Methylnaphthalene	7.21		mg/kg dry	0.383	5	07/15/09 18:52	SW846 8270D	9071532
2-Methylnaphthalene	9.46		mg/kg dry	0.383	5	07/15/09 18:52	SW846 8270D	9071532
Surr: Terphenyl-d14 (18-120%)	62 %		mg/kg diy	0.505	,	07/14/09 22:28	SW846 8270D	9071532
Surr: 2-Fluorobiphenyl (14-120%)	86 %					07/14/09 22:28	SW846 8270D	9071532
Surr: Nitrobenzene-d5 (17-120%)	132 %	ZX				07/14/09 22:28	SW846 8270D	9071532





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

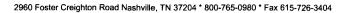
NSG0736

Project Name:

Laurel Bay Housing Project

Project Number: Received: [none] 07/10/09 08:00

			ANALYTICAL REP	ORT				
					Dilution	Analysis		
Analyte	Result	Flag	Units	MRL	Factor	Date/Time	Method	Batch
Sample ID: NSG0736-06 (1360 Ca	rdinal - Soil) Sa	ampled:	07/08/09 11:00					
General Chemistry Parameters								
% Dry Solids	79.3		%	0.500	1	07/18/09 07:27	SW-846	9072278
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	0.0709		mg/kg dry	0.00200	1	07/15/09 20:05	SW846 8260B	9071390
Ethylbenzene	1.96		mg/kg dry	0.0973	50	07/16/09 16:38	SW846 8260B	9072035
Naphthalene	8.52		mg/kg dry	0.243	50	07/16/09 16:38	SW846 8260B	9072035
Toluene	0.0150		mg/kg dry	0.00200	1	07/15/09 20:05	SW846 8260B	9071390
Xylenes, total	8.54		mg/kg dry	0.243	50	07/16/09 16:38	SW846 8260B	9072035
Surr: 1,2-Dichloroethane-d4 (67-138%)	108 %					07/15/09 20:05	SW846 8260B	9071390
Surr: 1,2-Dichloroethane-d4 (67-138%)	91 %					07/16/09 16:38	SW846 8260B	9072035
Surr: Dibromofluoromethane (75-125%)	111 %					07/15/09 20:05	SW846 8260B	9071390
Surr: Dibromofluoromethane (75-125%)	96 %					07/16/09 16:38	SW846 8260B	9072035
Surr: Toluene-d8 (76-129%)	188 %	ZX				07/15/09 20:05	SW846 8260B	9071390
Surr: Toluene-d8 (76-129%)	102 %					07/16/09 16:38	SW846 8260B	9072035
Surr: 4-Bromofluorobenzene (67-147%)	166 %	ZX				07/15/09 20:05	SW846 8260B	9071390
Surr: 4-Bromofluorobenzene (67-147%)	104 %					07/16/09 16:38	SW846 8260B	9072035
Polyaromatic Hydrocarbons by EPA 83	270D							
Acenaphthene	1.11		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
Acenaphthylene	0.545		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
Anthracene	0.599		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
Benzo (a) anthracene	0.394		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
Benzo (a) pyrene	0.171		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
Benzo (b) fluoranthene	0.195		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
Benzo (k) fluoranthene	0.162		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
Chrysene	0.482		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
Fluoranthene	1.25		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
Fluorene	2.68		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
Naphthalene	6.88		mg/kg dry	0.420	5	07/15/09 19:14	SW846 8270D	9071532
Phenanthrene	4.72		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
Pyrene	0.581		mg/kg dry	0.0841	1	07/14/09 22:51	SW846 8270D	9071532
1-Methylnaphthalene	16.2		mg/kg dry	0.420	5	07/15/09 19:14	SW846 8270D	9071532
2-Methylnaphthalene	32.5		mg/kg dry	0.841	10	07/16/09 16:31	SW846 8270D	9071532
Surr: Terphenyl-d14 (18-120%)	56 %		ing ng ui y	0.041	10	07/14/09 22:51	SW846 8270D	9071532
Surr: 2-Fluorobiphenyl (14-120%)	81 %					07/14/09 22:51	SW846 8270D	9071532
Surr: Nitrobenzene-d5 (17-120%)	124 %	ZX				07/14/09 22:51	SW846 8270D	9071532





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG0736

Project Name:

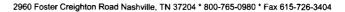
Laurel Bay Housing Project

Project Number:

[none]

Received: 07/10/09 08:00

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NSG0736-07 (1370 Ca	rdinal - Soil) S		07/08/09 11:15					
General Chemistry Parameters	2011,		0,,00,05 11,12					
% Dry Solids	79.0		%	0.500	1	07/18/09 07:27	SW-846	9072278
Selected Volatile Organic Compounds	by EPA Method	l 8260B						
Benzenc	0.0108		mg/kg dry	0.00220	1	07/15/09 20:36	SW846 8260B	9071390
Ethylbenzene	1.82		mg/kg dry	0.120	50	07/16/09 17:09	SW846 8260B	9072035
Naphthalene	10.6		mg/kg dry	0.300	50	07/16/09 17:09	SW846 8260B	9072035
Toluene	ND	RLI	mg/kg dry	0.120	50	07/16/09 17:09	SW846 8260B	9072035
Xylenes, total	1.90		mg/kg dry	0.300	50	07/16/09 17:09	SW846 8260B	9072035
Surr: 1,2-Dichloroethane-d4 (67-138%)	116 %		2 2 3			07/15/09 20:36	SW846 8260B	9071390
Surr: 1,2-Dichloroethane-d4 (67-138%)	94 %					07/16/09 17:09	SW846 8260B	9072035
Surr: Dibromofluoromethane (75-125%)	125 %					07/15/09 20:36	SW846 8260B	9071390
Surr: Dibromofluoromethane (75-125%)	98 %					07/16/09 17:09	SW846 8260B	9072035
Surr: Toluene-d8 (76-129%)	530 %	ZX				07/15/09 20:36	SW846 8260B	9071390
Surr: Toluene-d8 (76-129%)	101 %					07/16/09 17:09	SW846 8260B	9072035
Surr: 4-Bromofluorobenzene (67-147%)	418 %	ZX				07/15/09 20:36	SW846 8260B	9071390
Surr: 4-Bromofluorobenzene (67-147%)	106 %					07/16/09 17:09	SW846 8260B	9072035
Polyaromatic Hydrocarbons by EPA 82	270D							
Acenaphthene	1.35		mg/kg dry	0.0843	1	07/14/09 23:14	SW846 8270D	9071532
Acenaphthylene	ND		mg/kg dry	0.0843	1	07/14/09 23:14	SW846 8270D	9071532
Anthracene	0.994		mg/kg dry	0.0843	1	07/14/09 23:14	SW846 8270D	9071532
Benzo (a) anthracene	0.267		mg/kg dry	0.0843	1	07/14/09 23:14	SW846 8270D	9071532
Benzo (a) pyrene	0.117		mg/kg dry	0.0843	j	07/14/09 23:14	SW846 8270D	9071532
Benzo (b) fluoranthene	0.138		mg/kg dry	0.0843	1	07/14/09 23:14	SW846 8270D	9071532
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0843	1	07/14/09 23:14	SW846 8270D	9071532
Benzo (k) fluoranthene	0.123		mg/kg dry	0.0843	1	07/14/09 23:14	SW846 8270D	9071532
Chrysene	0.364		mg/kg dry	0.0843	1	07/14/09 23:14	SW846 8270D	9071532
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0843	1	07/14/09 23:14	SW846 8270D	9071532
Fluoranthene	0.891		mg/kg dry	0.0843	1	07/14/09 23:14	SW846 8270D	9071532
Fluorene	2.81		mg/kg dry	0.0843	1	07/14/09 23:14	SW846 8270D	9071532
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0843	1	07/14/09 23:14	SW846 8270D	9071532
Naphthalene	5.08		mg/kg dry	0.422	5	07/15/09 19:37	SW846 8270D	9071532
Phenanthrene	8.24		mg/kg dry	0.422	5	07/15/09 19:37	SW846 8270D	9071532
Pyrene	0.607		mg/kg dry	0.0843	1	07/14/09 23:14	SW846 8270D	9071532
1-Methylnaphthalene	16.9		mg/kg dry	0.422	5	07/15/09 19:37	SW846 8270D	9071532
2-Methylnaphthalene	36.2		mg/kg dry	0.843	10	07/16/09 16:53	SW846 8270D	9071532
Surr: Terphenyl-d14 (18-120%)	30.2 39 %		ing/kg ury	0.043	10	07/14/09 23:14	SW846 8270D	9071532
Surr: 2-Fluorobiphenyl (14-120%)	59 % 64 %					07/14/09 23:14	SW846 8270D	9071532
Surr: Nitrobenzene-d5 (17-120%)	99 %					07/14/09 23:14	SW846 8270D	9071532





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

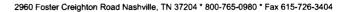
Project Number:

[none]

Received:

07/10/09 08:00

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NSG0736-08 (1371 Do	ve - Soil) Samp	oled: 07/0	9/09 09:20					
General Chemistry Parameters								
% Dry Solids	93.3		%	0.500	1	07/18/09 07:27	SW-846	9072278
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	ND		mg/kg dry	0.00226	1	07/15/09 21:06	SW846 8260B	9071390
Ethylbenzene	ND		mg/kg dry	0.00226	1	07/15/09 21:06	SW846 8260B	9071390
Naphthalene	ND		mg/kg dry	0.00531	1	07/16/09 15:06	SW846 8260B	9072035
Toluene	ND		mg/kg dry	0.00226	1	07/15/09 21:06	SW846 8260B	9071390
Xylenes, total	ND		mg/kg dry	0.00565	1	07/15/09 21:06	SW846 8260B	9071390
Surr: 1,2-Dichloroethane-d4 (67-138%)	102 %		00,			07/15/09 21:06	SW846 8260B	9071390
Surr: 1,2-Dichloroethane-d4 (67-138%)	110 %					07/16/09 15:06	SW846 8260B	9072035
Surr: Dibromofluoromethane (75-125%)	100 %					07/15/09 21:06	SW846 8260B	9071390
Surr: Dibromofluoromethane (75-125%)	106 %					07/16/09 15:06	SW846 8260B	9072035
Surr: Toluene-d8 (76-129%)	98 %					07/15/09 21:06	SW846 8260B	9071390
Surr: Toluene-d8 (76-129%)	97 %					07/16/09 15:06	SW846 8260B	9072035
Surr: 4-Bromofluorobenzene (67-147%)	102 %					07/15/09 21:06	SW846 8260B	9071390
Surr: 4-Bromofluorobenzene (67-147%)	103 %					07/16/09 15:06	SW846 8260B	9072035
Polyaromatic Hydrocarbons by EPA 82	270D							
Acenaphthene	ND		mg/kg d r y	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Acenaphthylene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Anthracene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Benzo (a) anthracene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Benzo (a) pyrene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Benzo (b) fluoranthene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Benzo (g,h,i) perylenc	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Benzo (k) fluoranthene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Chrysene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Fluoranthene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Fluorene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Naphthalene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Phenanthrene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Pyrene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
1-Methylnaphthalene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
2-Methylnaphthalene	ND		mg/kg dry	0.0705	1	07/14/09 23:36	SW846 8270D	9071532
Surr: Terphenyl-d14 (18-120%)	66 %		2 2 . ,			07/14/09 23:36	SW846 8270D	9071532
Surr: 2-Fluorobiphenyl (14-120%)	59 %					07/14/09 23:36	SW846 8270D	9071532
Surr: Nitrobenzene-d5 (17-120%)	67 %					07/14/09 23:36	SW846 8270D	9071532





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG0736

Project Name:

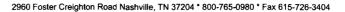
Laurel Bay Housing Project

Project Number:

[none]

Received: 07/10/09 08:00

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NSG0736-09 (1373 Do		.5						
- · · · · · · · · · · · · · · · · · · ·	ive - Sulli Salli	pieu: 07/0	9/09 09:30					
General Chemistry Parameters				0.500	•	05/10/00 05 05	G117 0.47	007777
% Dry Solids	93.6		%	0.500	1	07/18/09 07:27	SW-846	9072278
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	ND		mg/kg dry	0.00226	1	07/15/09 21:37	SW846 8260B	9071390
Ethylbenzene	ND		mg/kg dry	0.00226	1	07/15/09 21:37	SW846 8260B	9071390
Naphthalene	ND		mg/kg dry	0.00566	1	07/15/09 21:37	SW846 8260B	9071390
Toluene	ND		mg/kg dry	0.00226	1	07/15/09 21:37	SW846 8260B	9071390
Xylenes, total	ND		mg/kg dry	0.00566	1	07/15/09 21:37	SW846 8260B	9071390
Surr: 1,2-Dichloroethane-d4 (67-138%)	105 %					07/15/09 21:37	SW846 8260B	9071390
Surr: Dibromofluoromethane (75-125%)	102 %					07/15/09 21:37	SW846 8260B	9071390
Surr: Toluene-d8 (76-129%)	99 %					07/15/09 21:37	SW846 8260B	9071390
Surr: 4-Bromofluorobenzene (67-147%)	100 %					07/15/09 21:37	SW846 8260B	9071390
Polyaromatic Hydrocarbons by EPA 82	270D							
Acenaphthene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Acenaphthylene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Anthracene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Benzo (a) anthracene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Benzo (a) pyrene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Benzo (b) fluoranthene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Benzo (k) fluoranthene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Chrysene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Fluoranthene	0.0751		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Fluorene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Naphthalene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Phenanthrene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Pyrene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
1-Methylnaphthalene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
2-Methylnaphthalene	ND		mg/kg dry	0.0716	1	07/14/09 23:59	SW846 8270D	9071532
Surr: Terphenyl-d14 (18-120%)	63 %					07/14/09 23:59	SW846 8270D	9071532
Surr: 2-Fluorobiphenyl (14-120%)	58 %					07/14/09 23:59	SW846 8270D	9071532
Surr: Nitrobenzene-d5 (17-120%)	62 %					07/14/09 23:59	SW846 8270D	9071532





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

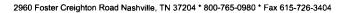
Project Number:

[none]

Received: 07/10/09 08:00

SAMPLE EXTRACTION DATA

	5.4		Wt/Vol	Extracted Vol	Date		Extraction
Parameter	Batch	Lab Number	Extracted	Extracted Voi	Date	Analyst	Method
Polyaromatic Hydrocarbons by EPA 8270							
SW846 8270D	9071532	NSG0736-01	30.17	1.00	07/13/09 13:10	TEM	EPA 3550B
SW846 8270D	9071532	NSG0736-02	30.00	1.00	07/13/09 13:10	TEM	EPA 3550B
SW846 8270D	9071532	NSG0736-03	30.31	1.00	07/13/09 13:10	TEM	EPA 3550B
SW846 8270D	9071532	NSG0736-04	30.26	1.00	07/13/09 13:10	TEM	EPA 3550B
SW846 8270D	9071532	NSG0736-04RE1	30.26	1.00	07/13/09 13:10	TEM	EPA 3550B
SW846 8270D	9071532	NSG0736-05	30.83	1.00	07/13/09 13:10	TEM	EPA 3550B
SW846 8270D	9071532	NSG0736-05RE1	30.83	1.00	07/13/09 13:10	TEM	EPA 3550B
SW846 8270D	9071532	NSG0736-06	30.15	1.00	07/13/09 13:10	TEM	EPA 3550B
SW846 8270D	9071532	NSG0736-06RE1	30.15	1.00	07/13/09 13:10	TEM	EPA 3550B
SW846 8270D	9071532	NSG0736-06RE2	30.15	1.00	07/13/09 13:10	TEM	EPA 3550B
SW846 8270D	9071532	NSG0736-07	30.18	1.00	07/13/09 13:10	TEM	EPA 3550B
SW846 8270D	9071532	NSG0736-07RE1	30.18	1.00	07/13/09 13:10	TEM	EPA 3550B
SW846 8270D	9071532	NSG0736-07RE2	30.18	1.00	07/13/09 13:10	TEM	EPA 3550B
SW846 8270D	9071532	NSG0736-08	30.55	1.00	07/13/09 13:10	TEM	EPA 3550B
SW846 8270D	9071532	NSG0736-09	30.00	1.00	07/13/09 13:10	TEM	EPA 3550B
Selected Volatile Organic Compounds by	EPA Method 826	50B					
SW846 8260B	9071390	NSG0736-01	4.77	5.00	07/06/09 15:30	JRL	EPA 5035
SW846 8260B	9071390	NSG0736-02	4.59	5.00	07/06/09 09:45	JRL	EPA 5035
SW846 8260B	9071390	NSG0736-03	4.59	5.00	07/07/09 10:00	JRL	EPA 5035
SW846 8260B	9071390	NSG0736-04	6.16	5.00	07/07/09 12:30	JRL	EPA 5035
SW846 8260B	9072035	NSG0736-04RE1	6.10	5.00	07/07/09 12:30	JRL	EPA 5035
SW846 8260B	9071390	NSG0736-05	6.09	5.00	07/07/09 14:30	JRL	EPA 5035
SW846 8260B	9072035	NSG0736-05RE1	5.68	5.00	07/07/09 14:30	JRL	EPA 5035
SW846 8260B	9071390	NSG0736-06	6.31	5.00	07/08/09 11:00	JRL	EPA 5035
SW846 8260B	9072035	NSG0736-06RE1	6.48	5.00	07/08/09 11:00	JRL	EPA 5035
SW846 8260B	9071390	NSG0736-07	5.75	5.00	07/08/09 11:15	JRL	EPA 5035
SW846 8260B	9072035	NSG0736-07RE1	5.28	5.00	07/08/09 11:15	JRL	EPA 5035
SW846 8260B	9071390	NSG0736-08	4.74	5.00	07/09/09 09:20	JRL	EPA 5035
SW846 8260B	9072035	NSG0736-08RE1	5.05	5.00	07/09/09 09:20	JRL	EPA 5035
SW846 8260B	9071390	NSG0736-09	4.72	5.00	07/09/09 09:30	JRL	EPA 5035





10179 Highway 78 Ladson, SC 29456

Tom McElwee

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Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

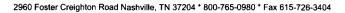
Project Number:

[none]

Received: 07/10/09 08:00

PROJECT QUALITY CONTROL DATA Blank

			**	0.6.5.1		Applying Date/Time	-
Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time	
Selected Volatile Organic Compo	ounds by EPA Method	8260B					
9071390-BLK1							
Benzene	< 0.000670		mg/kg wet	9071390	9071390-BLK1	07/15/09 14:27	
Ethylbenzene	< 0.000670		mg/kg wet	9071390	9071390-BLK1	07/15/09 14:27	
Naphthalene	< 0.00170		mg/kg wet	9071390	9071390-BLK1	07/15/09 14:27	
Toluene	< 0.000400		mg/kg wet	9071390	9071390-BLK1	07/15/09 14:27	
Xylenes, total	< 0.00130		mg/kg wet	9071390	9071390-BLK1	07/15/09 14:27	
Surrogate: 1,2-Dichloroethane-d4	119%			9071390	9071390-BLK1	07/15/09 14:27	
Surrogate: Dibromofluoromethane	110%			9071390	9071390-BLK1	07/15/09 14:27	
Surrogate: Toluene-d8	98%			9071390	9071390-BLK1	07/15/09 14:27	
Surrogate: 4-Bromofluorobenzene	104%			9071390	9071390-BLK1	07/15/09 14:27	
9072035-BLK1							
Benzene	< 0.000670		mg/kg wet	9072035	9072035-BLK1	07/16/09 14:34	
Ethylbenzene	< 0.000670		mg/kg wet	9072035	9072035-BLK1	07/16/09 14:34	
Naphthalene	< 0.00170		mg/kg wet	9072035	9072035-BLK1	07/16/09 14:34	
Toluene	< 0.000400		mg/kg wet	9072035	9072035-BLK1	07/16/09 14:34	
Xylenes, total	< 0.00130		mg/kg wet	9072035	9072035-BLK1	07/16/09 14:34	
Surrogate: 1,2-Dichloroethane-d4	106%			9072035	9072035-BLK1	07/16/09 14:34	
Surrogate: Dibromofluoromethane	104%			9072035	9072035-BLK1	07/16/09 14:34	
Surrogate: Toluene-d8	94%			9072035	9072035-BLK1	07/16/09 14:34	
Surrogate: 4-Bromofluorobenzene	101%			9072035	9072035-BLK1	07/16/09 14:34	
Polyaromatic Hydrocarbons by I	EPA 8270D						
9071532-BLK1							
Acenaphthene	< 0.0320		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Acenaphthylene	< 0.0310		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Anthracene	< 0.0330		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Benzo (a) anthracene	< 0.0380		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Benzo (a) pyrene	< 0.0300		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Benzo (b) fluoranthene	< 0.0300		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Benzo (g,h,i) perylene	< 0.0300		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Benzo (k) fluoranthene	< 0.0300		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Chrysene	< 0.0400		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Dibenz (a,h) anthracene	< 0.0310		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Fluoranthene	<0.0340		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Fluorene	< 0.0360		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Indeno (1,2,3-cd) pyrene	< 0.0310		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Naphthalene	< 0.0410		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Phenanthrene	< 0.0340		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
Pyrene	<0.0410		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
1-Methylnaphthalene	<0.0320		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
2-Methylnaphthalene	<0.0320		mg/kg wet	9071532	9071532-BLK1	07/14/09 19:26	
z-wietnymaphmaiche	~0.0330		mg/kg wet	70/1332	7011334-DLN1	01/17/02 17.20	





10179 Highway 78 Ladson, SC 29456

Tom McElwee

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Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

Project Number:

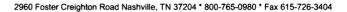
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Received:

07/10/09 08:00

PROJECT QUALITY CONTROL DATA Blank - Cont.

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
Polyaromatic Hydrocarbons by EPA 8	270D					
9071532-BLK1						
Surrogate: Terphenyl-d14	76%			9071532	9071532-BLK1	07/14/09 19:26
Surrogate: 2-Fluorobiphenyl	69%			9071532	9071532-BLK1	07/14/09 19:26
Surrogate: Nitrobenzene-d5	85%			9071532	9071532-BLK1	07/14/09 19:26





10179 Highway 78

Ladson, SC 29456

Tom McElwee

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Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

Project Number:

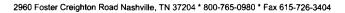
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Received: 07/10/09 08:00

PROJECT QUALITY CONTROL DATA

Duplicate

Analyte	Orig. Val.	Duplicate	Q	Units	RPD	Limit	Batch	Sample Duplicated	% Rec.	Analyzed Date/Time
General Chemistry Parameters 9072278-DUP1										
% Dry Solids	92.8	91.7		%	1	20	9072278	NSG0710-13		07/18/09 07:27





10179 Highway 78 Ladson, SC 29456

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Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received: 07/10/09 08:00

PROJECT QUALITY CONTROL DATA LCS

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
Selected Volatile Organic Compou	nds by EPA Method 82	60B						
9071390-BS1	·							
Benzene	50.0	41.8		ug/kg	84%	78 - 126	9071390	07/15/09 12:49
Ethylbenzene	50.0	48.8		ug/kg	98%	79 - 130	9071390	07/15/09 12:49
Naphthalene	50.0	53.1		ug/kg	106%	72 - 150	9071390	07/15/09 12:49
Toluene	50.0	44.6		ug/kg	89%	76 - 126	9071390	07/15/09 12:49
Xylenes, total	150	152		ug/kg	102%	80 - 130	9071390	07/15/09 12:49
Surrogate: 1,2-Dichloroethane-d4	50.0	61.7			123%	67 - 138	9071390	07/15/09 12:49
Surrogate: Dibromofluoromethane	50.0	54.4			109%	75 - 125	9071390	07/15/09 12:49
Surrogate: Toluene-d8	50.0	47.7			95%	76 - 129	9071390	07/15/09 12:49
Surrogate: 4-Bromofluorobenzene	50.0	49.8			100%	67 - 147	9071390	07/15/09 12:49
9072035-BS1								
Benzene	50.0	46.4		ug/kg	93%	78 - 126	9072035	07/16/09 13:02
Ethylbenzene	50.0	49.6		ug/kg	99%	79 - 130	9072035	07/16/09 13:02
Naphthalene	50.0	53.4		ug/kg	107%	72 - 150	9072035	07/16/09 13:02
Toluene	50.0	47.7		ug/kg	95%	76 - 126	9072035	07/16/09 13:02
Xylenes, total	150	151		ug/kg	101%	80 - 130	9072035	07/16/09 13:02
Surrogate: 1,2-Dichloroethane-d4	50.0	56.8			114%	67 - 138	9072035	07/16/09 13:02
Surrogate: Dibromofluoromethane	50.0	52.1			104%	75 - 125	9072035	07/16/09 13:02
Surrogate: Toluene-d8	50.0	48.8			98%	76 - 129	9072035	07/16/09 13:02
Surrogate: 4-Bromofluorobenzene	50.0	50.3			101%	67 - 147	9072035	07/16/09 13:02
Polyaromatic Hydrocarbons by EP	A 8270D							
9071532-BS1								
Acenaphthene	1.67	1.24		mg/kg wet	74%	49 - 120	9071532	07/14/09 19:49
Acenaphthylene	1.67	1.31		mg/kg wet	78%	52 - 120	9071532	07/14/09 19:49
Anthracene	1.67	1.44		mg/kg wet	86%	58 - 120	9071532	07/14/09 19:49
Benzo (a) anthracene	1.67	1.34		mg/kg wet	81%	57 - 120	9071532	07/14/09 19:49
Benzo (a) pyrene	1.67	1.45		mg/kg wet	87%	55 - 120	9071532	07/14/09 19:49
Benzo (b) fluoranthene	1.67	1.36		mg/kg wet	81%	51 - 123	9071532	07/14/09 19:49
Benzo (g,h,i) perylene	1.67	1.42		mg/kg wet	85%	49 - 121	9071532	07/14/09 19:49
Benzo (k) fluoranthene	1.67	1.31		mg/kg wet	79%	42 - 129	9071532	07/14/09 19:49
Chrysene	1.67	1.30		mg/kg wet	78%	55 - 120	9071532	07/14/09 19:49
Dibenz (a,h) anthracene	1.67	1.38		mg/kg wet	83%	50 - 123	9071532	07/14/09 19:49
Fluoranthene	1.67	1.34		mg/kg wet	80%	58 - 120	9071532	07/14/09 19:49
Fluorene	1.67	1.29		mg/kg wet	77%	54 - 120	9071532	07/14/09 19:49
Indeno (1,2,3-cd) pyrene	1.67	1.43		mg/kg wet	86%	50 - 122	9071532	07/14/09 19:49
Naphthalene	1.67	1.06		mg/kg wet	63%	28 - 107	9071532	07/14/09 19:49
Phenanthrene	1.67	1.30		mg/kg wet	78%	56 - 120	9071532	07/14/09 19:49
Pyrene	1.67	1.36		mg/kg wet	82%	56 - 120	9071532	07/14/09 19:49
1-Methylnaphthalene	1.67	1.06		mg/kg wet	64%	36 - 120	9071532	07/14/09 19:49
2-Methylnaphthalene	1.67	1.13		mg/kg wet	68%	36 - 120	9071532	07/14/09 19:49





10179 Highway 78

Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

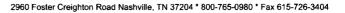
Project Number:

[none]

Received: 07/10/09 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							
9071532-BS1								
Surrogate: Terphenyl-d14	1.67	1.26			75%	18 - 120	9071532	07/14/09 19:49
Surrogate: 2-Fluorobiphenyl	1.67	1.09			66%	14 - 120	9071532	07/14/09 19:49
Surrogate: Nitrobenzene-d5	1.67	1.16			70%	17 - 120	9071532	07/14/09 19:49





10179 Highway 78

Ladson, SC 29456

Tom McElwee

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Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

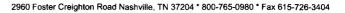
Project Number:

[none]

Received: 07/10/09 08:00

PROJECT QUALITY CONTROL DATA LCS Dup

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
Selected Volatile Organic Compound	ls by EPA	Method 826	60B									
9071390-BSD1	•											
Benzene		39.1		ug/kg	50.0	78%	78 - 126	7	50	9071390		07/15/09 13:20
Ethylbenzene		43.7		ug/kg	50.0	87%	79 - 130	11	50	9071390		07/15/09 13:20
Naphthalene		44.8		ug/kg	50.0	90%	72 - 150	17	50	9071390		07/15/09 13:20
Toluene		40.7		ug/kg	50.0	81%	76 - 126	9	50	9071390		07/15/09 13:20
Xylenes, total		135		ug/kg	150	90%	80 - 130	12	50	9071390		07/15/09 13:20
Surrogate: 1,2-Dichloroethane-d4		60.8		ug/kg	50.0	122%	67 - 138			9071390		07/15/09 13:20
Surrogate: Dibromofluoromethane		54.1		ug/kg	50.0	108%	75 - 125			9071390		07/15/09 13:20
Surrogate: Toluene-d8		47.0		ug/kg	50.0	94%	76 - 129			9071390		07/15/09 13:20
Surrogate: 4-Bromofluorobenzene		50.1		ug/kg	50.0	100%	67 - 147			9071390		07/15/09 13:20
9072035-BSD1												
Benzene		43.4		ug/kg	50.0	87%	78 - 126	7	50	9072035		07/16/09 13:33
Ethylbenzene		47.7		ug/kg	50.0	95%	79 - 130	4	50	9072035		07/16/09 13:33
Naphthalene		51.2		ug/kg	50.0	102%	72 - 150	4	50	9072035		07/16/09 13:33
Toluene		45.7		ug/kg	50.0	91%	76 - 126	4	50	9072035		07/16/09 13:33
Xylenes, total		145		ug/kg	150	96%	80 - 130	4	50	9072035		07/16/09 13:33
Surrogate: 1,2-Dichloroethane-d4		56.4		ug/kg	50.0	113%	67 - 138			9072035		07/16/09 13:33
Surrogate: Dibromofluoromethane		51.7		ug/kg	50.0	103%	75 - 125			9072035		07/16/09 13:33
Surrogate: Toluene-d8		48.3		ug/kg	50.0	97%	76 - 129			9072035		07/16/09 13:33
Surrogate: 4-Bromofluorobenzene		49.8		ug/kg	50.0	100%	67 - 147			9072035		07/16/09 13:33





10179 Highway 78 Ladson, SC 29456

Tom McElwee

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Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

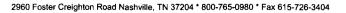
Project Number:

[none]

Received: 07/10/09 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	ounds by EPA Me	thod 8260B								
9071390-MS1	•									
Benzene	ND	38.9		ug/kg	50.0	78%	42 - 141	9071390	NSG0736-01	07/15/09 22:08
Ethylbenzene	ND	42.8		ug/kg	50.0	86%	21 - 165	9071390	NSG0736-01	07/15/09 22:08
Naphthalene	0.371	32.1		ug/kg	50.0	64%	10 - 160	9071390	NSG0736-01	07/15/09 22:08
Toluene	ND	41.0		ug/kg	50.0	82%	45 - 145	9071390	NSG0736-01	07/15/09 22:08
Xylenes, total	ND	132		ug/kg	150	88%	31 - 159	9071390	NSG0736-01	07/15/09 22:08
Surrogate: 1,2-Dichloroethane-d4		53.6		ug/kg	50.0	107%	67 - 138	9071390	NSG0736-01	07/15/09 22:08
Surrogate: Dibromofluoromethane		50.3		ug/kg	50.0	101%	75 - 125	9071390	NSG0736-01	07/15/09 22:08
Surrogate: Toluene-d8		49.0		ug/kg	50.0	98%	76 - 129	9071390	NSG0736-01	07/15/09 22:08
Surrogate: 4-Bromofluorobenzene		49.8		ug/kg	50.0	100%	67 - 147	9071390	NSG0736-01	07/15/09 22:08
9072035-MS1										
Benzene	0.444	48.1		ug/kg	50.0	95%	42 - 141	9072035	NSG1046-05	07/16/09 20:45
Ethylbenzene	1.24	53.7		ug/kg	50.0	105%	21 - 165	9072035	NSG1046-05	07/16/09 20:45
Naphthalene	1.38	52.3		ug/kg	50.0	102%	10 - 160	9072035	NSG1046-05	07/16/09 20:45
Toluene	2.19	53.9		ug/kg	50.0	103%	45 - 145	9072035	NSG1046-05	07/16/09 20:45
Xylenes, total	5.75	166		ug/kg	150	107%	31 - 159	9072035	NSG1046-05	07/16/09 20:45
Surrogate: 1,2-Dichloroethane-d4		54.3		ug/kg	50.0	109%	67 - 138	9072035	NSG1046-05	07/16/09 20:45
Surrogate: Dibromofluoromethane		49.9		ug/kg	50.0	100%	75 - 125	9072035	NSG1046-05	07/16/09 20:45
Surrogate: Toluene-d8		49.2		ug/kg	50.0	98%	76 - 129	9072035	NSG1046-05	07/16/09 20:45
Surrogate: 4-Bromofluorobenzene		51.0		ug/kg	50.0	102%	67 - 147	9072035	NSG1046-05	07/16/09 20:45
Polyaromatic Hydrocarbons by E	EPA 8270D									
9071532-MS1										
Acenaphthene	ND	1.30		mg/kg dry	1.77	73%	42 - 120	9071532	NSG0736-09	07/14/09 20:12
Acenaphthylene	ND	1.38		mg/kg dry	1.77	78%	32 - 120	9071532	NSG0736-09	07/14/09 20:12
Anthracene	ND	1.47		mg/kg dry	1.77	83%	10 - 200	9071532	NSG0736-09	07/14/09 20:12
Benzo (a) anthracene	ND	1.46		mg/kg dry	1.77	82%	41 - 120	9071532	NSG0736-09	07/14/09 20:12
Benzo (a) pyrene	ND	1.46		mg/kg dry	1.77	83%	33 - 121	9071532	NSG0736-09	07/14/09 20:12
Benzo (b) fluoranthene	ND	1.45		mg/kg dry	1.77	82%	26 - 137	9071532	NSG0736-09	07/14/09 20:12
Benzo (g,h,i) perylene	ND	1.44		mg/kg dry	1.77	81%	21 - 124	9071532	NSG0736-09	07/14/09 20:12
Benzo (k) fluoranthene	ND	1.30		mg/kg dry	1.77	73%	14 - 140	9071532	NSG0736-09	07/14/09 20:12
Chrysene	ND	1.40		mg/kg dry	1.77	79%	28 - 123	9071532	NSG0736-09	07/14/09 20:12
Dibenz (a,h) anthracene	ND	1.41		mg/kg dry	1.77	79%	25 - 127	9071532	NSG0736-09	07/14/09 20:12
Fluoranthene	0.0751	1.55		mg/kg dry	1.77	83%	38 - 120	9071532	NSG0736-09	07/14/09 20:12
Fluorene	ND	1.33		mg/kg dry	1.77	75%	41 - 120	9071532	NSG0736-09	07/14/09 20:12
Indeno (1,2,3-cd) pyrene	ND	1.45		mg/kg dry	1.77	82%	25 - 123	9071532	NSG0736-09	07/14/09 20:12
Naphthalene	ND	1.15		mg/kg dry	1.77	65%	25 - 120	9071532	NSG0736-09	07/14/09 20:12
Phenanthrene	ND	1.39		mg/kg dry	1.77	79%	37 - 120	9071532	NSG0736-09	07/14/09 20:12





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

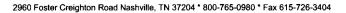
Project Number:

[none]

Received: 07/10/09 08:00

PROJECT QUALITY CONTROL DATA Matrix Spike - Cont.

Analyte	Orig. Val.	MS Val	Q Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
Polyaromatic Hydrocarbons by EP	A 8270D								
9071532-MS1 Pyrene	0.0662	1.53	mg/kg dry	1.77	82%	29 - 125	9071532	NSG0736-09	07/14/09 20:12
1-Methylnaphthalene	ND	1.11	mg/kg dry	1.77	62%	19 - 120	9071532	NSG0736-09	07/14/09 20:12
2-Methylnaphthalene	ND	1.21	mg/kg dry	1.77	68%	11 - 120	9071532	NSG0736-09	07/14/09 20:12
Surrogate: Terphenyl-d14		1.39	mg/kg dry	1.77	78%	18 - 120	9071532	NSG0736-09	07/14/09 20:12
Surrogate: 2-Fluorobiphenyl		1.31	mg/kg dry	1.77	74%	14 - 120	9071532	NSG0736-09	07/14/09 20:12
Surrogate: Nitrobenzene-d5		1.50	mg/kg dry	1.77	84%	17 - 120	9071532	NSG0736-09	07/14/09 20:12
9071532-MS1 Pyrene 1-Methylnaphthalene 2-Methylnaphthalene Surrogate: Terphenyl-d14 Surrogate: 2-Fluorobiphenyl	0.0662 ND	1.11 1.21 1.39 1.31	mg/kg dry mg/kg dry mg/kg dry mg/kg dry	1.77 1.77 1.77	62% 68% 78% 74%	19 - 120 11 - 120 18 - 120 14 - 120	9071532 9071532 9071532 9071532	NSG0736-09 NSG0736-09 NSG0736-09 NSG0736-09	07/14/09 20:1 07/14/09 20:1 07/14/09 20:1 07/14/09 20:1





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

10179 Highway 78

Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received:

07/10/09 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
Selected Volatile Organic Comp	ounds by EPA	Method 8260	В								
9071390-MSD1											
Benzene	ND	39.6	ug/kg	50.0	79%	42 - 141	2	50	9071390	NSG0736-01	07/15/09 22:38
Ethylbenzene	ND	39.4	ug/kg	50.0	79%	21 - 165	8	50	9071390	NSG0736-01	07/15/09 22:38
Naphthalene	0.396	28.3	ug/kg	50.0	56%	10 - 160	13	50	9071390	NSG0736-01	07/15/09 22:38
Toluene	ND	38.3	ug/kg	50.0	77%	45 - 145	7	50	9071390	NSG0736-01	07/15/09 22:38
Xylenes, total	ND	118	ug/kg	150	79%	31 - 159	11	50	9071390	NSG0736-01	07/15/09 22:38
Surrogate: 1,2-Dichloroethane-d4		57.4	ug/kg	50.0	115%	67 - 138			9071390	NSG0736-01	07/15/09 22:38
Surrogate: Dibromofluoromethane		57.7	ug/kg	50.0	115%	75 - 125			9071390	NSG0736-01	07/15/09 22:38
Surrogate: Toluene-d8		47.9	ug/kg	50.0	96%	76 - 129			9071390	NSG0736-01	07/15/09 22:38
Surrogate: 4-Bromofluorobenzene		49.7	ug/kg	50.0	99%	67 - 147			9071390	NSG0736-01	07/15/09 22:38
9072035-MSD1											
Benzene	0.436	39.3	ug/kg	50.0	78%	42 - 141	20	50	9072035	NSG1046-05	07/16/09 21:16
Ethylbenzene	1.21	44.3	ug/kg	50.0	86%	21 - 165	19	50	9072035	NSG1046-05	07/16/09 21:16
Naphthalene	1.36	42.0	ug/kg	50.0	81%	10 - 160	22	50	9072035	NSG1046-05	07/16/09 21:16
Toluene	2.15	43.0	ug/kg	50.0	82%	45 - 145	22	50	9072035	NSG1046-05	07/16/09 21:16
Xylenes, total	5.65	135	ug/kg	150	86%	31 - 159	21	50	9072035	NSG1046-05	07/16/09 21:16
Surrogate: 1,2-Dichloroethane-d4		50.0	ug/kg	50,0	100%	67 - 138			9072035	NSG1046-05	07/16/09 21:16
Surrogate: Dibromofluoromethane		50.0	ug/kg	50.0	100%	75 - 125			9072035	NSG1046-05	07/16/09 21:16
Surrogate: Toluene-d8		47.7	ug/kg	50.0	95%	76 - 129			9072035	NSG1046-05	07/16/09 21:16
Surrogate: 4-Bromofluorobenzene		49.1	ug/kg	50.0	98%	67 - 147			9072035	NSG1046-05	07/16/09 21:16
Polyaromatic Hydrocarbons by	EPA 8270D										
9071532-MSD1											
Acenaphthene	ND	1.26	mg/kg dry	1.77	71%	42 - 120	3	40	9071532	NSG0736-09	07/14/09 20:34
Acenaphthylene	ND	1.31	mg/kg dry	1.77	74%	32 - 120	5	30	9071532	NSG0736-09	07/14/09 20:34
Anthracene	ND	1.44	mg/kg dry	1.77	81%	10 - 200	2	50	9071532	NSG0736-09	07/14/09 20:34
Benzo (a) anthracene	ND	1.36	mg/kg dry	1.77	77%	41 - 120	7	30	9071532	NSG0736-09	07/14/09 20:34
Benzo (a) pyrene	ND	1.40	mg/kg dry	1.77	79%	33 - 121	5	33	9071532	NSG0736-09	07/14/09 20:34
Benzo (b) fluoranthene	ND	1.37	mg/kg dry	1.77	78%	26 - 137	6	42	9071532	NSG0736-09	07/14/09 20:34
Benzo (g,h,i) perylene	ND	1.37	mg/kg dr y	1.77	78%	21 - 124	5	32	9071532	NSG0736-09	07/14/09 20:34
Benzo (k) fluoranthene	ND	1.21	mg/kg dry	1.77	68%	14 - 140	7	39	9071532	NSG0736-09	07/14/09 20:34
Chrysene	ND	1.29	mg/kg dry	1.77	73%	28 - 123	8	34	9071532	NSG0736-09	07/14/09 20:34
Dibenz (a,h) anthracene	ND	1.33	mg/kg dry	1.77	75%	25 - 127	6	31	9071532	NSG0736-09	07/14/09 20:34
Fluoranthene	0.0751	1.42	mg/kg dry	1.77	76%	38 - 120	9	35	9071532	NSG0736-09	07/14/09 20:34
Fluorene	ND	1.27	mg/kg dry	1.77	72%	41 - 120	4	37	9071532	NSG0736-09	07/14/09 20:34
Indeno (1,2,3-cd) pyrene	ND	1.36	mg/kg dry	1.77	77%	25 - 123	6	32	9071532	NSG0736-09	07/14/09 20:34
Naphthalene	ND	1.15	mg/kg dry	1.77	65%	25 - 120	0.4	42	9071532	NSG0736-09	07/14/09 20:34
Phenanthrene	ND	1.30	mg/kg dry	1.77	74%	37 - 120	7	32	9071532	NSG0736-09	07/14/09 20:34
Pyrene	0.0662	1.45	mg/kg dry	1.77	78%	29 - 125	5	40	9071532	NSG0736-09	07/14/09 20:34
i-Methylnaphthalene	ND	1.08	mg/kg dry	1.77	61%	19 - 120	2	45	9071532	NSG0736-09	07/14/09 20:34
2-Methylnaphthalene	ND	1.20	mg/kg dry	1.77	68%	11 - 120	0.8	50	9071532	NSG0736-09	07/14/09 20:34



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

EEG - Small Business Group, Inc. (2449)

10179 Highway 78

Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

Project Number:

[none] 07/10/09 08:00

Received:

PROJECT QUALITY CONTROL DATA Matrix Spike Dup - Cont.

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD Li	imit	Batch	Sample Duplicated	Analyzed Date/Time
Polyaromatic Hydrocarbons by EPA	8270D											
9071532-MSD1												
Surrogate: Terphenyl-d14		1.22		mg/kg dry	1.77	69%	18 - 120			9071532	NSG0736-09	07/14/09 20:34
Surrogate: 2-Fluorobiphenyl		1.15		mg/kg dry	1.77	65%	14 - 120			9071532	NSG0736-09	07/14/09 20:34
Surrogate: Nitrobenzene-d5		1.33		mg/kg dry	1.77	75%	17 - 120			9071532	NSG0736-09	07/14/09 20:34



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

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

10179 Highway 78

Ladson, SC 29456

Tom McElwee

Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received:

07/10/09 08:00

CERTIFICATION SUMMARY

TestAmerica Nashville

Attn

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



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

Client

10179 Highway 78

Ladson, SC 29456 Tom McElwee

Attn

EEG - Small Business Group, Inc. (2449)

Work Order:

NSG0736

Project Name:

Laurel Bay Housing Project

Project Number: Received:

[none]

07/10/09 08:00

DATA QUALIFIERS AND DEFINITIONS

RL1 Reporting limit raised due to sample matrix effects.

 $\mathbf{Z}\mathbf{X}$ 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

NSG0736

07/24/09 23:59

	THE THE WENTER WAS		Nashville 2960 Fos Nashville	ter Cre	ighto	n				ll Fr	ee: 8	515-7 800-7 615-7	65-0	980							meth		this wo	rk being	roper an g condu	•			
	Client Name/Account #:	EEG # 2449																					(Complia	ance Mo	onitoring?	Yes_		No_
	Address:	10179 Highway	78														_							Enforc	cement.	Action?	Yes _		No
	City/State/Zip:	Ladson, SC 294	156																Site	State	: <u>SC</u>						 		
	Project Manager:	Tom McElwee e	mail: mcelv	vee@ee	ginc.r	et														PO#	:	0	32	C_{L}			 		
	Telephone Number:	843.412.2097					Fa	ax No	: فـــــ نا	54	3	- 8	37	7-	<u>- C</u>	40	21		TA Q	uote #	!:			· 			 		
	Sampler Name: (Print)	PR	AH	<u></u>	51	4 L	<u> `</u>												Proj	ect IE	: Laur	el Bay I	lousing	Projec	x		 		
	Sampler Signature:	FI	1)//																Pro	ject #	t:								
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07 06 06 07 08 09	1376 CARDINAL 1376 CARDINAL 1371 DOUR 1373 DOUR	7/6/09 7/6/09 7/7/09 7/7/09 7/7/09 7/8/09 7/9/09	1530 530 545 1230 1430 1100 1115 0930	5 5 5 5 5	XXXXX Grab	Composite	Field Filtered	a)	-	NaOH (Orange Label)	H ₂ SO, Plastic (Yellow Label)		277777	Groundwater	Wastewater	Drinking Water	abprilS	Other (specify)	W ~ ~ W W ~ ~ W BTEX + Napth - 8260E	Correspondent States of the St									RUSH TAT (Pre-Schedule)
	Special Instructions:																				Lab	oratory Tem			n Receip	ot:			
	Relinguished by			T		Deec'		Meth	od of	Shij	pmen	nt:			-	Dat	_	EDE			4	voc	s Free	of Hear	dspace	?			Y
	900	7/9/6	9	J S &	CO	Recei										Dai			Tim	IE									
	Relinquished by:	Date	!	Tin	ne	Recei	ved by	y Test	Ameri	9	M					Da:	te [0		8 s	i Ú C	,								

ATTACHMENT A



NON-HAZARDOUS MANIFEST

CARRIE

NON-HAZARDOUS MANIFEST 1. Generator's US EPA ID No.	Manifest Document No.	2. Pag of	e 1		
3. Generator's Name and Mailing Address Laurel City Louisity Beaution		W	MNA e Generator's ID	108	85464
4. Generator's Phone) Number	C. State	Transporter's ID		
EEG, Inc.		100	sporter's Phone	43 879	-0411
7. Transporter 2 Company Name 8. US EPA II.	Number	E. State	Transporter's ID		
		par adapt process	sporter's Phone		
Designated Facility Name and Site Address 10. US EPA II) Number	G. State	Facility's ID		
HICKORY HILL LANDFILL ROUTE 1, BOX 121 RIDGELAND SC 29936		H. Facili	ity's Phone	13 987-	4643
11. Description of Waste Materials	20.00	ntainers	13. Total	14. Unit	I. Misc. Comments
a Heating Oil Tank filled with Sand WM Profile # 1026558C	0 ₁ 0 ₁ 1	Туре	7,76	TN TN	Wiso. Comment
	00	April 1		-	C 40 20 20 20 20 20 20 20 20 20 20 20 20 20
b. WM Profile #	- 11	i			
c. WM Profile #	TE		1111		
1					
WM Profile #	11		1111		
		K. Dis	sposal Location	-	
J. Additional Descriptions for Materials Listed Above Landfill Solidification		Cell		Leve	el
Bio Remediation		Grid			
15. Special Handling Instructions and Additional Information 17.4 D 13.56 CARDINAL Purchase Order # 2 13.48 CARDINAL EMERGENCY	347 (A. 350 CA CONTACT: 5) 13	rd; , rd; 43(LAIV ?	118	77 Dour
16. GENERATOR'S CERTIFICATION: I hereby certify that the above-described materials are not had applicable state law, have been fully and accurately described for transportation according to applicable regulations.	ardous wastes	as defi	ned by 40 C	FR Par	
Printed/Typed Name Charles H. Herron Signature "O	behalf of H	Her	n		Month Day Ye
Printed/Typed Name Signature Signature					Month Day Yea
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name Signature 19. Certificate of Final Treatment/Disposal					Month Day Ye
I certify, on behalf of the above listed treatment facility, that to was managed in compliance with all applicable laws, regulation					
20. Facitity Owner or Operator: Certification of receipt of non-hazardous materials covered.	y this manifest.		7		18-0
Printed/Typed Name OIIIS	Callen	D			Month Day Ye

Appendix C Laboratory Analytical Report - Initial Groundwater



Volatile Organic Compounds by GC/MS

Client: AECOM - Resolution Consultants

Description: BEALB1356TW01WG20150624

Laboratory ID: QF26030-001

Matrix: Aqueous

Date Sampled: 06/24/2015 1430

Date Received: 06/26/2015

Run Prep Method **Analytical Method** Dilution **Analysis Date Analyst Prep Date** Batch 2 5030B 8260B 07/07/2015 2109 JJG 79028

	CAS	Analytical				
Parameter	Number	Method	Result Q	LOQ	LOD	DL Units Run
Benzene	71-43-2	8260B	0.32 J	5.0	0.45	0.21 ug/L 2
Ethylbenzene	100-41-4	8260B	18	5.0	0.51	0.21 ug/L 2
Naphthalene	91-20-3	8260B	69	5.0	0.96	0.14 ug/L 2
Toluene	108-88-3	8260B	0.48 U	5.0	0.48	0.24 ug/L 2
Xylenes (total)	1330-20-7	8260B	0.26 J	5.0	0.57	0.19 ug/L 2

Surrogate	Run 2 / Q % Recovery	Acceptance Limits	
Bromofluorobenzene	103	75-120	
1,2-Dichloroethane-d4	98	70-120	
Toluene-d8	97	85-120	
Dibromofluoromethane	95	85-115	

PQL = Practical quantitation limit ND = Not detected at or above the MDL

Shealy Environmental Services, Inc.

B = Detected in the method blank $J = Estimated result < PQL and <math>\geq MDL$ E = Quantitation of compound exceeded the calibration range P = The RPD between two GC columns exceeds 40%

H = Out of holding time N = Recovery is out of criteria

Q = Surrogate failure L = LCS/LCSD failure S = MS/MSD failure

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

Semivolatile Organic Compounds by GC/MS (SIM)

Client: AECOM - Resolution Consultants

Description: BEALB1356TW01WG20150624

Laboratory ID: QF26030-001

Matrix: Aqueous

Date Sampled: 06/24/2015 1430 Date Received: 06/26/2015

Run Prep Method **Analytical Method Dilution Analysis Date Analyst** Batch **Prep Date** 1 3520C 8270D (SIM) 07/10/2015 1256 DRB1 06/29/2015 1632 78383

	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		79	15-139
Fluoranthene-d10		81	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

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

 $J = Estimated result < PQL and <math>\geq MDL$

N = Recovery is out of criteria

S = MS/MSD failure

Appendix D Laboratory Analytical Report – Permanent Well Groundwater



Volatile Organic Compounds by GC/MS

Client: AECOM - Resolution Consultants

Description: BEALB1356MW01WG20171208

Laboratory ID: SL09005-019

Matrix: Aqueous

Date Sampled:12/08/2017 1040 Date Received: 12/09/2017

Analytical Method Dilution Analysis Date Analyst Prep Date Batch Run Prep Method 5030B 12/13/2017 1754 JJG 59492

CAS Analytical Parameter LOQ LOD DL Units Run Number Method Result Q Benzene 71-43-2 8260B 0.80 1.0 0.80 0.40 ug/L Ethylbenzene 0.80 0.40 ug/L 100-41-4 8260B 3.9 1.0 Naphthalene 91-20-3 8260B 18 1.0 0.80 0.40 ug/L 1 Toluene 108-88-3 8260B 0.80 U 1.0 0.80 0.40 ug/L 1 Xylenes (total) 1330-20-7 8260B 2.9 1.0 0.80 0.40 ug/L 1

Run 1 Acceptance Surrogate Q % Recovery Limits Bromofluorobenzene 97 85-114 Dibromofluoromethane 98 80-119 94 1,2-Dichloroethane-d4 81-118 Toluene-d8 103 89-112

LOQ = Limit of Quantitation U = Not detected at or above the LOQ H = Out of holding time

B = Detected in the method blank N = Recovery is out of criteria W = Reported on wet weight basis E = Quantitation of compound exceeded the calibration range P = The RPD between two GC columns exceeds 40% LOD = Limit of Detection

DL = Detection Limit J = Estimated result < LOQ and \geq DL Q = Surrogate failure L = LCS/LCSD failure S = MS/MSD failure

Shealy Environmental Services, Inc.

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

Semivolatile Organic Compounds by GC/MS

Client: AECOM - Resolution Consultants

Description: BEALB1356MW01WG20171208

Laboratory ID: SL09005-019

Matrix: Aqueous

Date Sampled:12/08/2017 1040 Date Received: 12/09/2017

Run Prep Method Analytical Method Dilution Analysis Date Analyst Prep Date Batch 3520C 12/29/2017 1049 CMP2 12/15/2017 1035 59757

Parameter	CAS Number	Analytical Method	Result Q	LOQ	LOD	DL	Units Run
Benzo(a)anthracene	56-55-3	8270D	0.10 U	0.20	0.10	0.040	ug/L 1
Benzo(b)fluoranthene	205-99-2	8270D	0.10 U	0.20	0.10	0.040	ug/L 1
Benzo(k)fluoranthene	207-08-9	8270D	0.10 U	0.20	0.10	0.040	ug/L 1
Chrysene	218-01-9	8270D	0.10 U	0.20	0.10	0.040	ug/L 1
Dibenzo(a,h)anthracene	53-70-3	8270D	0.10 U	0.20	0.10	0.040	ug/L 1

	Surrogate	Q	Run 1 % Recovery	Acceptance Limits
_	Nitrobenzene-d5		60	44-120
	2-Fluorobiphenyl		57	44-119
	Terphenyl-d14		64	50-134

Q = Surrogate failure LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit U = Not detected at or above the LOQ N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% $\label{eq:conditional} \textbf{J} = \textbf{Estimated result} < \textbf{LOQ and} \geq \textbf{DL}$ L = LCS/LCSD failure H = Out of holding time W = Reported on wet weight basis LOD = Limit of Detection S = MS/MSD failure

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Appendix E Regulatory Correspondence





May 15, 2014

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

RE: IGWA

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

Dear Mr. Drawdy,

The South Carolina Department of Health and Environmental Control (the Department) received the above referenced Underground Storage Tank Assessment Reports for the addresses listed above. The regulatory authority for the investigation and cleanup of releases from these tank systems is the South Carolina Pollution Control Act (S.C. Code Ann. §48-1-10 et seq., as amended).

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

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

If you have any questions, please contact me at kriegkm@dhec.sc.gov 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)

,



PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director

Attachment to:

Krieg to Drawdy Subject: IGWA

Dated 5/15/2014

Laurel Bay Underground Storage Tank Assessment Reports for: (121 addresses/139 tanks)

137 Laurel Bay Tank 2	387 Acorn
139 Laurel Bay	392 Acorn Tank 2
229 Cypress Tank 2	396 Acorn Tank 1
261 Beech Tank 1 *	396 Acorn Tank 2
261 Beech Tank 3	430 Elderberry
273 Birch Tank 1	433 Elderberry
273 Birch Tank 2	439 Elderberry
273 Birch Tank 3	440 Elderberry
276 Birch Tank 2	442 Elderberry
278 Birch Tank 2	443 Elderberry
291 Birch Tank 2	444 Elderberry Tank 1
300 Ash	445 Elderberry
304 Ash *	446 Elderberry
314 Ash Tank 1	448 Elderberry
314 Ash Tank 2	449 Elderberry
322 Ash Tank 2 *	451 Elderberry
323 Ash	453 Elderberry
324 Ash *	456 Elderberry Tank 1
325 Ash Tank 1 *	456 Elderberry Tank 2
325 Ash Tank 2	458 Elderberry Tank 1
326 Ash •	458 Elderberry Tank 3
336 Ash	464 Dogwood
339 Ash	466 Dogwood
343 Ash Tank 1	467 Dogwood
344 Ash Tank 1	468 Dogwood
348 Ash *	469 Dogwood
349 Ash Tank 1 *	471 Dogwood Tank 2
353 Ash Tank 1 *	471 Dogwood Tank 3
362 Aspen *	475 Dogwood Tank 1
376 Aspen	475 Dogwood Tank 2
380 Aspen	516 Laurel Bay Tank 1 (UST#03747)
383 Aspen Tank 2 *	518 Laurel Bay

Laurel Bay Underground Storage Tank Assessment Reports for: (121 addresses/139 tanks) cont.

531 Laurel Bay	1219 Cardinal	
532 Laurel Bay	1272 Albatross	
635 Dahlia Tank 2	1305 Eagle	
638 Dahlia	1353 Cardinal	
640 Dahlia Tank 1	1356 Cardinal	
640 Dahlia Tank 2	1357 Cardinal	
645 Dahlia	1359 Cardinal	
647 Dahlia	1360 Cardinal	
648 Dahlia Tank 2	1361 Cardinal	
650 Dahlia Tank 1	1368 Cardinal	
650 Dahlia Tank 2	1370 Cardinal Tank 1	
652 Dahlia Tank 1	1377 Dove	
652 Dahlia Tank 2	1381 Dove	
760 Althea	1382 Dove	
763 Althea	1384 Dove	
771 Althea	1385 Dove	
927 Albacore	1389 Dove	
1015 Foxglove	1391 Dove	
1046 Gardenia	1392 Dove	
1062 Gardenia Tank 2	1393 Dove Tank 1	
1070 Heather	1393 Dove Tank 2	
1072 Heather	1406 Eagle	
1102 Iris Tank 1	1407 Eagle Tank 1	
1107 Iris	1411 Eagle Tank 1	
1126 Iris	1411 Eagle Tank 2	
1129 Iris	1412 Eagle	
1132 Iris	1413 Albatross	
1133 Iris Tank 1	1414 Albatross	
1138 Iris	1422 Albatross	
1144 Iris Tank 1	1425 Albatross	
1144 Iris Tank 2	1426 Albatross	
1148 Iris Tank 1	1432 Dove	
1148 Iris Tank 2	1434 Dove	
1161 Jasmine	1436 Dove	
1167 Jasmine	1438 Dove Tank 1	
1170 Jasmine	1440 Dove	
1190 Bobwhite	1442 Dove Tank 1	
1192 Bobwhite		



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

Division of Waste Management Bureau of Land and Waste Management

February 22, 2016

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

RE: Approval and Concurrence with Draft Final Initial Groundwater Investigation Report-May and June 2015

Laurel Bay Military Housing Area Multiple Properties

Dated October 2015

Dear Mr. Drawdy,

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

Per the Department's request, groundwater samples were collected from the attached referenced addresses. The Department reviewed the groundwater data and previous investigations and it agrees with the conclusions and recommendations included in the document. To further assess the impact to groundwater, permanent wells should be installed at the 52 stated addresses. For the remaining 91 addresses, there is no indication of contamination on the property and therefore no further investigation is required at this time.

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

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

Sincerely,

Laurel Petrus

MRX

RCRA Federal Facilities Section

Attachment: Specific Property Recommendations

Cc: Russell Berry, EQC Region 8 (via email)

> Shawn Dolan, Resolution Consultants (via email) Bryan Beck, NAVFAC MIDATLANTIC (via email)

Craig Ehde (via email)

Attachment to: Petrus to Drawdy

Subject: Draft Final Initial Groundwater Investigation Report-May and June 2015

Specific Property Recommendations

Dated February 22, 2016

Draft Final Initial Groundwater Investigation Report for (143 addresses)

Permanent Monito	oring Well Investigation recommendation (52 addresses)
273 Birch Drive	1192 Bobwhite Drive
325 Ash Street	1194 Bobwhite Drive
326 Ash Street	1272 Albatross Drive
336 Ash Street	1352 Cardinal Lane
343 Ash Street	1356 Cardinal Lane
353 Ash Street	1359 Cardinal Lane
430 Elderberry Drive	1360 Cardinal Lane
440 Elderberry Drive	1362 Cardinal Lane
456 Elderberry Drive	1370 Cardinal Lane
458 Elderberry Drive	1382 Dove Lane
468 Dogwood Drive	1384 Dove lane
518 Laurel Bay Blvd	1385 Dove Lane
635 Dahlia Drive	1389 Dove Lane
638 Dahlia Drive	1392 Dove Lane
640 Dahlia Drive	1393 Dove Lane
647 Dahlia Drive	1407 Eagle Lane
648 Dahlia Drive	1411 Eagle Lane
650 Dahlia Drive	1418 Albatross Drive
652 Dahlia Drive	1420 Albatross Drive
760 Althea Street	1426 Albatross Drive
1102 Iris Lane	1429 Albatross Drive
1132 Iris Lane	1434 Dove Lane
1133 Iris Lane	1436 Dove Lane
1144 Iris Lane	1440 Dove Lane
1148 Iris Lane	1442 Dove Lane
1186 Bobwhite Drive	1444 Dove Lane
No Furt	her Action recommendation (91 addresses):
137 Laurel Bay Blvd	771 Althea Street
139 Laurel Bay Blvd	927 Albacore Street
229 Cypress Street	1015 Foxglove Street
261 Beech Street	1046 Gardenia Drive
276 Birch Drive	1062 Gardenia Drive
278 Birch Drive	1070 Heather Street
291 Birch Drive	1072 Heather Street

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

Attachment to: Petrus to Drawdy
Subject: Draft Final Initial Groundwater Investigation Report-May and June 2015
Specific Property Recommendations
Dated February 22, 2016, Page 2



June 18, 2018

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

RE: Approved

Draft Groundwater Assessment Report November and December 2017

Laurel Bay Military Housing Area

Dear Mr. Drawdy:

The South Carolina Department of Health and Environmental Control (DHEC) received the above referenced report on April 4, 2018. The regulatory authority for the investigation and cleanup of releases from these tank systems is the South Carolina Pollution Control Act (S.C. Code Ann. §48-1-10 et seq., as amended).

DHEC has reviewed the report and based on this review, DHEC has not generated any comments. DHEC agrees with the recommendations in the report including the NFA recommendations shown on the list on the attached page. Please note that DHEC's decision is based on information provided by the Marine Corps Air Station (MCAS) to date. Any information found to be contradictory to this decision may require additional action. Furthermore, DHEC retains the right to request further investigation if deemed necessary. If you have any questions, please contact me at petruslb@dhec.sc.gov or 803-898-0294.

Sincerely,

Laurel Petrus

Lal Part

Department of Defense Corrective Action Section

Cc:

EQC Region 8

Shawn Dolan, Resolution Consultants

Bryan Beck, NAVFAC MIDLANT

Attachment

Approval Draft Final Groundwater Assessment Report November and December 2017 Laurel Bay Military Housing Area June 18, 2018

The addresses approved for NFA are:

- 1186 Bobwhite Drive
- 1192 Bobwhite Drive
- 1194 Bobwhite Drive
- 1352 Cardinal Lane
- 1356 Cardinal Lane
- 1382 Dove Lane
- 1384 Dove Lane
- 1411 Eagle Lane
- 1418 Aibatross Drive
- 1426 Albatross Drive
- 1434 Dove Lane
- 1436 Dove Lane
- 1440 Dove Lane
- 1442 Dove Lane
- 1444 Dove Lane