SUMMARY REPORT

405 WEST CARDINAL LANE (FORMERLY 1358 WEST CARDINAL LANE)

LAUREL BAY MILITARY HOUSING AREA

MARINE CORPS AIR STATION BEAUFORT

BEAUFORT, SC

Revision: 0 Prepared for:

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

and



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

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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

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 405 West Cardinal Lane (Formerly 1358 West Cardinal Lane). This NFA determination indicates that there are no unacceptable risks to human health or the environment for the petroleum constituents associated with the home heating oil USTs. The following information is included in this report:

- Background information;
- Sampling activities and results; and
- A determination of the property status.

1.1 Background Information

The LBMH area is located approximately 3.5 miles west of MCAS Beaufort. The area is approximately 970 acres in size and serves as an enlisted and officer family housing area. The area is configured with single family and duplex residential structures, and includes recreation, open space, and community facilities. The community includes approximately 1,300 housing units, including legacy Capehart style homes and newer duplex style homes. The housing area



is bordered on the west by salt marshes and the Broad River, and to the north, east and south by uplands. Forested areas lie along the northern and northeastern borders.

Capehart style homes within the LBMH area were formerly heated using heating oil stored in USTs at each residence. There were 1,100 Capehart style housing units in the LBMH area. The newer duplex homes within the LBMH area never utilized heating oil tanks. Heating oil has not been used at Laurel Bay since the mid-1980s. As was the accepted practice at the time, USTs were drained, filled with dirt, capped, and left in place when they were removed from service. Residential USTs are not regulated in the State of South Carolina (i.e., there are no federal or state laws governing installation, management, or removal).

In 2007, MCAS Beaufort began a voluntary program to remove the unregulated, residential USTs and conduct sampling activities to determine if, and to what extent, petroleum constituents may have impacted the surrounding environment. MCAS Beaufort coordinated with SCDHEC to develop removal procedures that were consistent with procedural requirements for regulated USTs. All tank removal activities and follow-on actions are conducted in coordination with SCDHEC. To date, all known USTs have been removed from all residential properties within the LBMH area.

1.2 UST Removal and Assessment Process

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

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

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



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

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

2.0 SAMPLING ACTIVITIES AND RESULTS

The following section presents the sampling activities and associated results for 405 West Cardinal Lane (Formerly 1358 West Cardinal Lane). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 1358 West Cardinal Lane* (MCAS Beaufort, 2011). The UST Assessment Report is provided in Appendix B.

2.1 UST Removal and Soil Sampling

On April 13, 2011, a single 280 gallon heating oil UST was removed from the front yard adjacent to the driveway area at 405 West Cardinal Lane (Formerly 1358 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 6'4" bgs and a single soil sample was



collected from that depth. The sample was collected from the fill port side of the former UST to represent a worst case scenario.

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

2.2 Soil Analytical Results

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

The soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form (Appendix B). The results of the soil sampling at the former UST location were used by MCAS Beaufort, in consultation with SCDHEC, to determine a path forward (i.e., additional sampling or NFA) for the property. The soil results collected from 405 West Cardinal Lane (Formerly 1358 West Cardinal Lane) were less than the SCDHEC RBSLs, which indicated the subsurface was not impacted by COPCs associated with the former UST at concentrations that presented a potential risk to human health and the environment.

3.0 PROPERTY STATUS

Based on the analytical results for soil, SCDHEC made the determination that NFA was required for 405 West Cardinal Lane (Formerly 1358 West Cardinal Lane). This NFA determination was obtained in a letter dated April 9, 2014. SCDHEC's NFA letter is provided in Appendix C.

4.0 REFERENCES

Marine Corps Air Station Beaufort, 2011. South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 1358 West Cardinal Lane, Laurel Bay Military Housing Area, September 2011.

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.

Table



Table 1

Laboratory Analytical Results - Soil 405 West Cardinal Lane (Formerly 1358 West Cardinal Lane)

Laurel Bay Military Housing Area Marine Corps Air Station Beaufort

Beaufort, South Carolina

Constituent	SCDHEC RBSLs (1)	Results Sample Collected 04/13/11	
Volatile Organic Compounds Analyz	ed by EPA Method 8260B (mg/kg)		
Benzene	0.003	ND	
Ethylbenzene	1.15	ND	
Naphthalene	0.036	0.00951	
Toluene	0.627	0.000930	
Xylenes, Total	13.01	ND	
Semivolatile Organic Compounds A	nalyzed by EPA Method 8270D (mg/kg		
Benzo(a)anthracene	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Chrysene	0.66	ND	
Dibenz(a,h)anthracene	0.66	ND	

Notes:

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 - milligram per kilogram

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

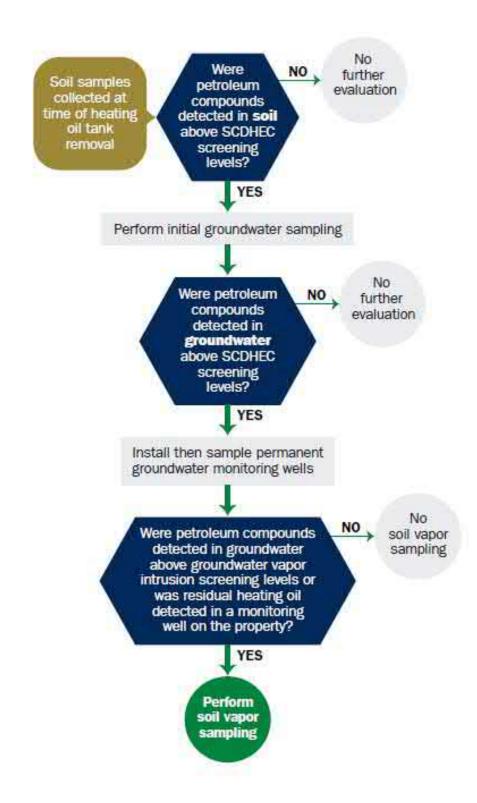
RBSL - Risk-Based Screening Level

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 2.0 (SCDHEC, April 2013).

Appendix A Multi-Media Selection Process for LBMH





Appendix A - Multi-Media Selection Process for LBMH

Appendix B UST Assessment Report



Attachment 1

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

Date Received		
	State Use Only	

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

I. OWNERSHIP OF UST (S)

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

II. SITE IDENTIFICATION AND LOCATION

Permit I.D. #
Laurel Bay Military Housing Area, Marine Corps Air Station, Beaufort, SC
Facility Name or Company Site Identifier
1358 Cardinal Lane, Laurel Bay Military Housing Area
Street Address or State Road (as applicable)
Beaufort, Beaufort
City County
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	1358
	Cardinal
Product(ex. Gas, Kerosene)	Heating oil
Capacity(ex. 1k, 2k)	280 gal
Age	Late 1950s
Construction Material(ex. Steel, FRP)	Steel
Month/Year of Last Use	Mid 80s
Depth (ft.) To Base of Tank	6'4"
Spill Prevention Equipment Y/N	No
Overfill Prevention Equipment Y/N	No
Method of Closure Removed/Filled	Removed
Date Tanks Removed/Filled	4/13/11
Visible Corrosion or Pitting Y/N	Yes
Visible Holes Y/N	Yes
Method of disposal for any USTs removed from UST 1358Cardinal was removed	
of at a Subtitle "D" landfill	. See Attachment "A".
disposal manifests)	udges, or wastewaters removed from the USTs (att

VII. PIPING INFORMATION

	Cardinal
	Steel
Construction Material(ex. Steel, FRP)	& Copper
Distance from UST to Dispenser	N/A
Number of Dispensers	N/A
Type of System Pressure or Suction	Suction
Was Piping Removed from the Ground? Y/N	Yes
Visible Corrosion or Pitting Y/N	Yes
Visible Holes Y/N	No
Age	Late 1950s
	I, describe the location and extent for each piping run.
Steel vent piping was corroded	and pitted. Copper supply and return
piping was sound.	
	CRIPTION AND HISTORY constructed of single wall steel
and formerly contained fuel oil	
installed in the late 1950s and	_
	

IX. SITE CONDITIONS

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

X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 84009

B.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA#
1358 Card	Excav at fill end	Soil	Sandy	6'4"	4/13/11 1215 hrs	P. Shaw	
	1111 0110	5011	2		+======================================	Z C SIGN	
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 th
testing laboratory. The grab method was utilized to fill the sample
containers leaving as little head space as possible and immediately
capped. Soil samples were extracted from area below tank. The
samples were marked, logged, and immediately placed in a sample cooler
packed with ice to maintain an approximate temperature of 4 degrees
Centigrade. Tools were thoroughly cleaned and decontaminated with
the seven step decon process after each use. The samples remained in
custody of SBG-EEG, Inc. until they were transferred to Test America
Incorporated for analysis as documented in the Chain of Custody Record.

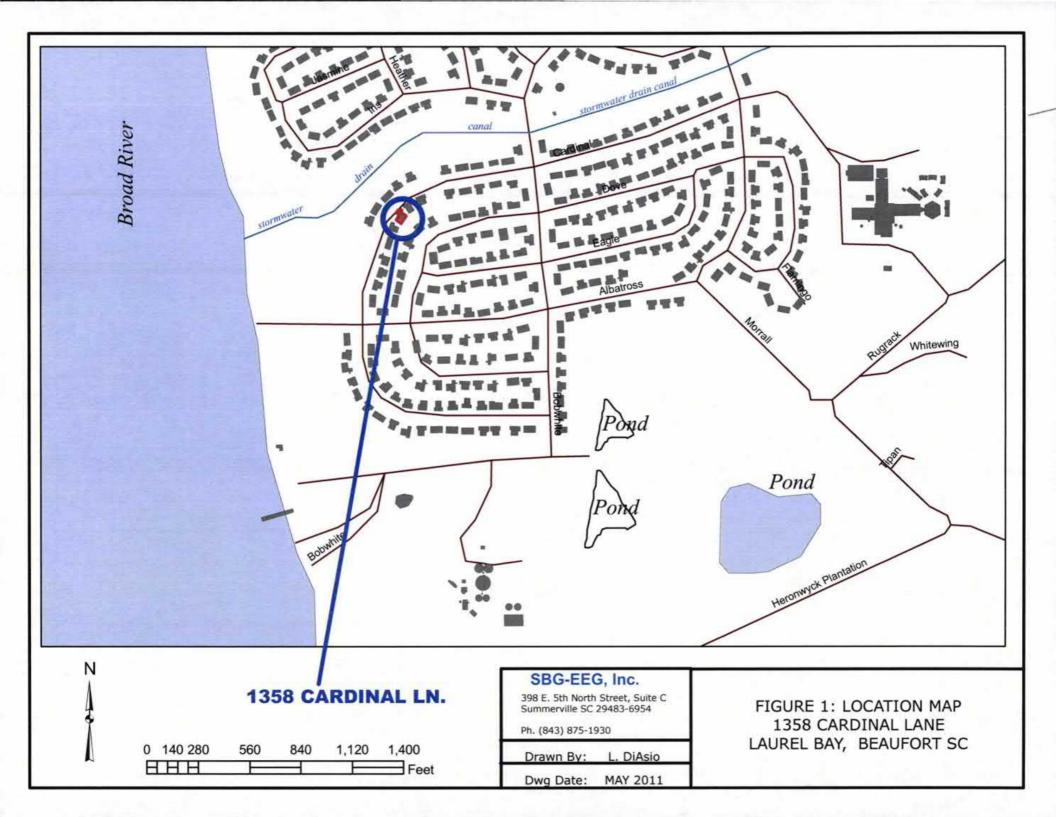
XII. RECEPTORS

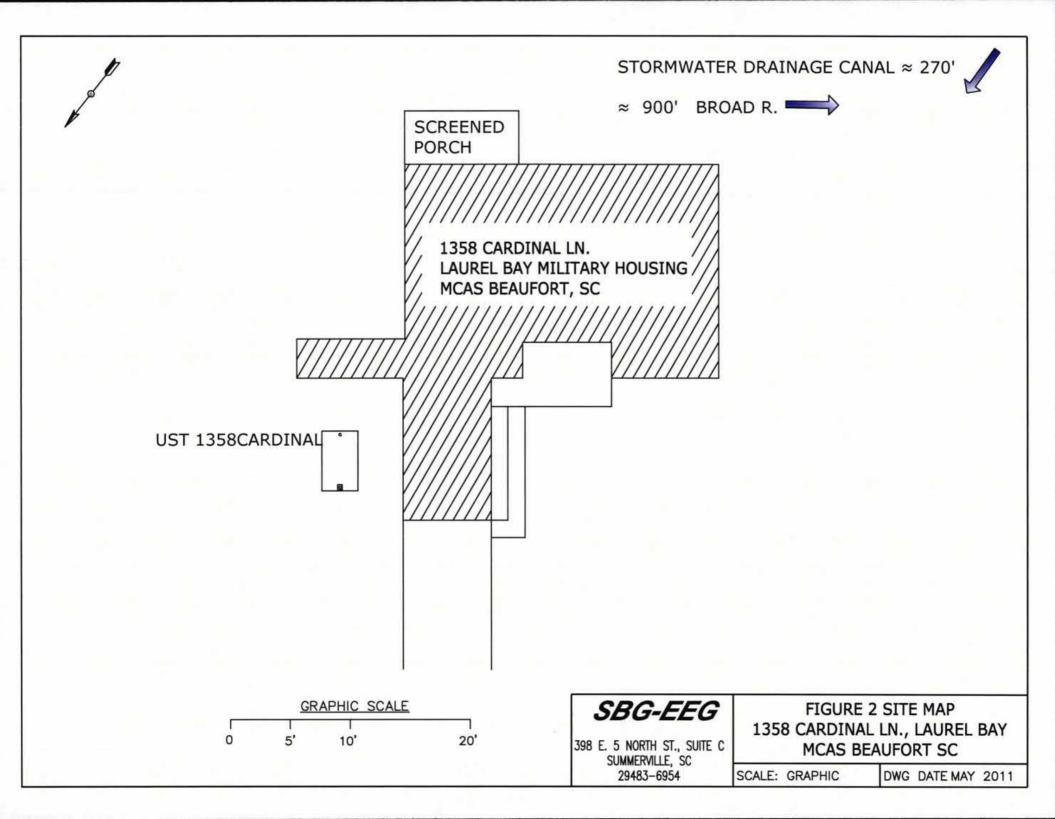
		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within	*X	
	1000 feet of the UST system? *~270' stormwater dr	ainag	е
	canal and ~900' Broal If yes, indicate type of receptor, distance, and direction on site map.	d R.	
B.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?		Х
1	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, elec	*X	tv
	cable & fiber optic If yes, indicate the type of utility, distance, and direction on the site map.		<i>- y</i>
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.		

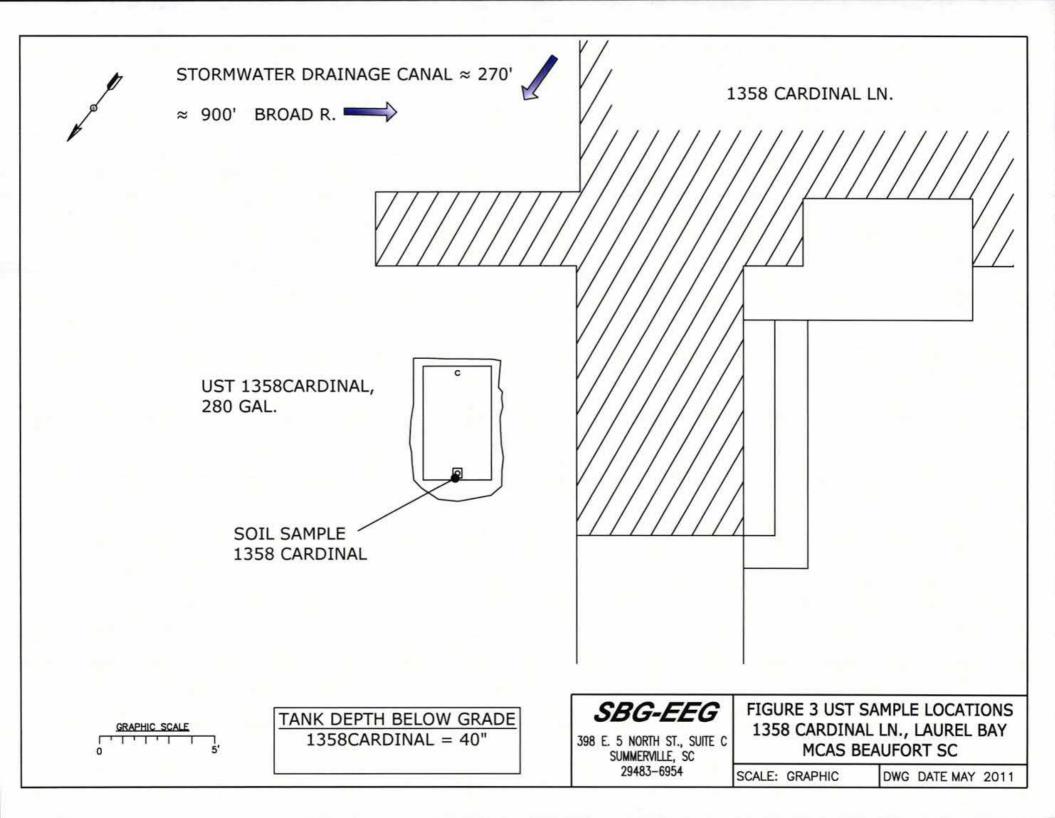
XIII. SITE MAP

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 1358Cardinal.



Picture 2: UST 1358Cardinal.

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.

			<u> </u>		1	<u> </u>	 -
CoC UST	1358Cardinal						
Benzene	ND						
Toluene	0.000930 mg/	кg					
Ethylbenzene	ND						
Xylenes	ND						:
Naphthalene	0.00951 mg/kg	3					
Benzo (a) anthracene	ND						
Benzo (b) fluoranthene	ND						
Benzo (k) fluoranthene	ND						
Chrysene	ND			-			
Dibenz (a, h) anthracene	ND						
TPH (EPA 3550)							
	T T			T	<u> </u>		···-
СоС							
Benzene							
Toluene							
Ethylbenzene							
Xylenes							
Naphthalene							
Benzo (a) anthracene							
Benzo (b) fluoranthene							
Benzo (k) fluoranthene							
Chrysene							
Dibenz (a, h) anthracene							
TPH (EPA 3550)							

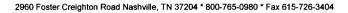
SUMMARY OF ANALYSIS RESULTS (cont'd)
Enter the ground water analytical data for each sample for all CoC in the table below. If free product is present, indicate the measured thickness to the nearest 0.01 feet.

CoC	RBSL				1
		W-1	W-2	W -3	W -4
Free Product Thickness	(μg/l) 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)





May 02, 2011

12:22:56PM

Client:

EEG - Small Business Group, Inc. (2449)

10179 Highway 78

Ladson, SC 29456

Attn:

Tom McElwee

Work Order:

NUD2768

Project Name:

Laurel Bay Housing Project

Project Nbr:

[none] 1027

P/O Nbr: Date Received:

04/16/11

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
1364 Cardinal-2	NUD2768-01	04/11/11 10:30
1430 Dove	NUD2768-02	04/12/11 11:30
1358 Cardinal	NUD2768-03	04/13/11 12:15
1444-Dove-1	NUD2768-04	04/14/11 12:00
1444-Dove-2	NUD2768-05	04/14/11 14:45

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

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

South Carolina Certification Number: 84009

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

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

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

Estimated uncertainty is available upon request.

Koxarre L. Connor

This report has been electronically signed.

Report Approved By:

Roxanne Connor

Program Manager - Conventional Accounts



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NUD2768

Project Name:

Laurel Bay Housing Project

Project Number: Received:

04/16/11 08:45

			ANALY	TICAL REP	OKI					
Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch
Sample ID: NUD2768-01 (1364 C General Chemistry Parameters	Cardinal-2 - S	oil) Samı	oled: 04/11	/11 10:30						
% Dry Solids	90,3		%	0.500	0.500	1	04/25/11 15:07	SW-846	JJR	11D5574
Volatile Organic Compounds by EPA	A Method 8260I	3								
Benzene	ND		mg/kg dry	0.00129	0.00235	1	04/22/11 17:42	SW846 8260B	MJH	11D4866
Ethylbenzene	ND	RL1	mg/kg dry	0.0601	0.123	50	04/22/11 18:13	SW846 8260B	МЈН	11D4866
Naphthalene	0.0153		mg/kg dry	0.00200	0.00588	1	04/22/11 17:42	SW846 8260B	МЈН	11D4866
Toluene	ND	RL1	mg/kg dry	0.0546	0.123	50	04/22/11 18:13	SW846 8260B	МЈН	11D4866
Xylenes, total	ND	RL1	mg/kg dry	0.117	0.307	50	04/22/11 18:13	SW846 8260B	МЈН	11D4866
Surr: 1,2-Dichloroethane-d4 (67-138%)	96 %			0.117	0.507	1	04/22/11/17:42	SW846 8260B	М.ЈН	11D4866
Surr: 1,2-Dichloroethane-d4 (67-138%)	77 %					50	04/22/11 18:13	SW846 8260B	MJH	11D4866
Surr: Dibromofluoromethane (75-125%)	91 %					1	04 22 11 17:42	SW846 8260B	МЈН	11D4866
Surr: Dibromofluoromethane (75-125%)	69 %	Z	Y			50	04:22:11 18:13	SW846 8260B	МЈН	11D4866
Surr: Toluene-d8 (76-129%)	132 %	Z				1	04:22:11 17:42	SW846 8260B	МЈН	111)4866
Surr: Toluene-d8 (76-129%)	106 %					50	04:22:11 18:13	SW846 8260B	МЈН	11D4866
Surr: 4-Bromofluorobenzene (67-147%)	62 %	Z	Y			1	04 22 11 17:42	SW846 8260B	МЈН	11D4866
Surr: 4-Bromofluorobenzene (67-147%)	125 %					50	04-22/11 18:13	SW846 8260B	MJH	11D4866
Polyaromatic Hydrocarbons by EPA	8270D									
Acenaphthene	ND		mg/kg dry	0.151	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Acenaphthylene	ND		mg/kg dry	0.215	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Anthracene	ND		mg/kg dry	0.0968	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Benzo (a) anthracene	ND		mg/kg dry	0.118	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Benzo (a) pyrene	ND		mg/kg dry	0.0860	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Benzo (b) fluoranthene	ND		mg/kg dry	0.409	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0968	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Benzo (k) fluoranthene	ND		mg/kg dry	0.398	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Chrysene	ND		mg/kg dry	0.333	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Dibenz (a,h) anthracene	ND		mg/kg dry	0.161	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Fluoranthene	ND		mg/kg dry	0.118	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Fluorene	ND		mg/kg dry	0.215	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.333	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Naphthalene	ND		mg/kg dry	0.151	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Phenanthrene	ND		mg/kg dry	0.108	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Pyrene	1.57		mg/kg dry	0.247	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
1-Methylnaphthalene	ND		mg/kg dry	0.129	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
2-Methylnaphthalene	ND		mg/kg dry	0.226	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
z-Metnymaphinalene Surr: Terphenyl-d14 (18-120%)	61 %			0.220	0.720	5	04/19/11 22:29	SW846 8270D	BES	11D4497
Surr: 2-Fluorobiphenyl (14-120%)	88 %					5 5	04 19 11 22:29	SW846 8270D	BES BES	11D4497
Surr: Nitrobenzene-d5 (17-120%)	82 %					3	07171122.29	5110400270D	DES	11D4497



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

10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NUD2768

Project Name:

Laurel Bay Housing Project

[none] Project Number: Received:

04/16/11 08:45

						Dilution	Analysis			
Analyte	Result	Flag	Units	MDL	MRL	Factor	Date/Time	Method	Analyst	Batch
Sample ID: NUD2768-02 (1430	Dove - Soil) Sa	mpled:	04/12/11 1	1:30						
General Chemistry Parameters										
% Dry Solids	85.6		%	0.500	0.500	1	04/25/11 15:07	SW-846	JJR	11D5574
Volatile Organic Compounds by EF	PA Method 8260I	3								
Benzene	ND		mg/kg dry	0.00119	0.00216	1	04/21/11 18:26	SW846 8260B	MJH	11D4465
Ethylbenzene	0.655		mg/kg dry	0.0514	0.105	50	04/22/11 18:43	SW846 8260B	МЈН	11D4866
Naphthalene	5.01		mg/kg dry	0.0891	0.262	50	04/22/11 18:43	SW846 8260B	МЈН	11D4866
Toluene	0.00104	J	mg/kg dry	0.000961	0.00216	1	04/21/11 18:26	SW846 8260B	МЈН	11D4465
Xylenes, total	1.39		mg/kg dry	0.0996	0.262	50	04/22/11 18:43	SW846 8260B	МЈН	11D4866
Surr: 1,2-Dichloroethane-d4 (67-138%)	78 %					1	04 21 11 18:26	SW846 8260B	МЈН	11D446:
Surr: 1,2-Dichloroethane-d4 (67-138%)	77 %					50	04/22/11 18:43	SW846 8260B	МЈН	11D4866
Surr: Dibromofluoromethane (75-125%)	77 %					1	04/21/11 18:26	SW846 8260B	МЈН	11D4463
Surr: Dibromofluoromethane (75-125%)	74 %	Z.	X			50	04:22:11 18:43	SW846 8260B	MJH	11D4866
Surr: Toluene-d8 (76-129%)	155 %	Z	X			1	04:21:11 18:26	SW846 8260B	MJH	11D446
Surr: Toluene-d8 (76-129%)	108 %					50	04/22/11 18:43	SW846 8260B	MJH	11104866
Surr: 4-Bromofluorobenzene (67-147%)	312%	Z.	X			1	04 21 11 18:26	SW846 8260B	MJH	11D446:
Surr: 4-Bromofluorobenzene (67-147%)	128 %					50	04/22/11 18:43	SW846 8260B	МЈН	11D4866
Polyaromatic Hydrocarbons by EPA	A 8270D									
Acenaphthene	0.586		mg/kg dry	0.0158	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
Acenaphthylene	0.235		mg/kg dry	0.0226	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
Anthracene	0.443		mg/kg dry	0.0102	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
Benzo (a) anthracene	0.692		mg/kg dry	0.0125	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
Benzo (a) pyrene	0.242		mg/kg dry	0.00906	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
Benzo (b) fluoranthene	0.354		mg/kg dry	0.0430	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0102	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
Benzo (k) fluoranthene	0.274		mg/kg dry	0.0419	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
Chrysene	0.583		mg/kg dry	0.0351	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0170	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
Fluoranthene	1.92		mg/kg dry	0.0125	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
Fluorene	1.31		mg/kg dry	0.0226	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
Indeno (1,2,3-cd) pyrene	0.0653	J	mg/kg dry	0.0351	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
* * * * * * * *	1.85	3	mg/kg dry	0.0158	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
Naphthalene	2.79		mg/kg dry	0.0138	0.0759	1	04/19/11 22:50	SW846 8270D	BES	11D4497
Phenanthrene	1,32		mg/kg dry					SW846 8270D	BES	11D4497
Pyrene	7.79		mg/kg dry	0.0260	0.0759	1	04/19/11 22:50	SW846 8270D SW846 8270D	BES	11D4497
1-Methylnaphthalene	12.6		mg/kg dry	0.0679	0.379	5	04/20/11 19:18	SW846 8270D SW846 8270D	BES	11D4497
2-Methylnaphthalene Surr: Terphenyl-d14 (18-120%)			mg/ ng ury	0.119	0.379	5	04/20/11 19:18			
• • • • • • • • • • • • • • • • • • • •	69 %					<i>I</i>	04 19 11 22:50	SW846 8270D	BES	11D4497
Surr: 2-Fluorobiphenyl (14-120%)	73 %					I	04-19-11-22:50	SW846 8270D	BES	11D4497
Surr: Nitrobenzene-d5 (17-120%)	74 %					I	04 19/11 22:50	SW846 8270D	BES	11D449



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

Received:

NUD2768

Project Name:

Laurel Bay Housing Project

Project Number: [none]

0.4/1.6

04/16/11 08:45

						Dilution	•			
Analyte	Result	Flag	Units	MDL	MRL	Factor	Date/Time	Method	Analyst	Batch
Sample ID: NUD2768-03 (1358	Cardinal - Soil) Sample	ed: 04/13/1	1 12:15		•				
General Chemistry Parameters										
% Dry Solids	85.1		%	0.500	0.500	1	04/25/11 15:07	SW-846	JJR	11D5574
Volatile Organic Compounds by EP	A Method 8260l	3								
Benzene	ND		mg/kg dry	0.00115	0.00209	1	04/22/11 16:09	SW846 8260B	МЈН	11D4866
Ethylbenzene	ND		mg/kg dry	0.00102	0.00209	1	04/22/11 16:09	SW846 8260B	MJH	11D4866
Naphthalene	0.00951	CF7	mg/kg dry	0.00195	0.00572	1	04/21/11 18:56	SW846 8260B	МЈН	11D4465
Toluene	0.000930	J	mg/kg dry	0.000930	0.00209	1	04/22/11 16:09	SW846 8260B	МЈН	11D4866
Xylenes, total	ND		mg/kg dry	0.00199	0.00522	1	04/22/11 16:09	SW846 8260B	МЈН	11D4866
Surr: 1,2-Dichloroethane-d4 (67-138%)	96 %					1	04/21/11 18:56	SW846 8260B	МЈН	11D446
Surr: 1,2-Dichloroethane-d4 (67-138%)	87 %					,	04 22 11 16:09	SW846 8260B	МЈН	11D486
Surr: Dibromofluoromethane (75-125%)	95 %					1	04 21 11 18:56	SW846 8260B	МЈН	11D446
Surr: Dibromofluoromethane (75-125%)	87 %					1	04-22:11 16:09	SW846 8260B	МЈН	11D486
Surr: Toluene-d8 (76-129%)	105 %					1	04/21/11 18:56	SW846 8260B	MJH	11D446
Surr: Toluene-d8 (76-129%)	108 %					1	04/22/11 16:09	SW846 8260B	МЈН	11D486
Surr: 4-Bromofluorobenzene (67-147%)	127%					1	04/21/11 18:56	SW846 8260B	<i>MJH</i>	11D446.
Surr: 4-Bromofluorobenzene (67-147%)	158 %	Z	Y			1	04 22 11 16:09	SW846 8260B	MJH	111)486
Polyaromatic Hydrocarbons by EPA	8270D									
Acenaphthene	ND		mg/kg dry	0.0162	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Acenaphthylene	ND		mg/kg dry	0.0232	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Anthracene	ND		mg/kg dry	0.0104	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Benzo (a) anthracene	ND		mg/kg dry	0.0127	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Benzo (a) pyrene	0.106		mg/kg dry	0.00926	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Benzo (b) fluoranthene	ND		mg/kg dry	0.0440	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Benzo (g,h,i) perylene	0.127		mg/kg dry	0.0104	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Benzo (k) fluoranthene	ND		mg/kg dry	0.0428	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Chrysene	ND		mg/kg dry	0.0359	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0174	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Fluoranthene	ND		mg/kg dry	0.0127	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Fluorene	ND		mg/kg dry	0.0232	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Indeno (1,2,3-cd) pyrene	0.0930		mg/kg dry	0.0359	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Naphthalene	ND		mg/kg dry	0.0162	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Phenanthrene	ND		mg/kg dry	0.0116	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Pyrene	ND		mg/kg dry	0.0266	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
1-Methylnaphthalene	ND		mg/kg dry	0.0139	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
2-Methylnaphthalene	ND		mg/kg dry	0.0243	0.0776	1	04/19/11 23:11	SW846 8270D	BES	11D4497
Surr: Terphenyl-d14 (18-120%)	69 %					. 1	04 19 11 23:11	SW846 8270D	BES	11D449
Surr: 2-Fluorobiphenyl (14-120%)	68 %					1 1	04 19 11 23:11	SW846 8270D	BES	11D449
Surr: Nitrobenzene-d5 (17-120%)	82 %					1	04 19 11 23:11	SW846 8270D	BES	11D449



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NUD2768

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received:

04/16/11 08:45

						Dilution	Analysis			
Analyte	Result	Flag	Units	MDL	MRL	Factor	Date/Time	Method	Analyst	Batch
Sample ID: NUD2768-04 (1444-I	Dove-1 - Soil) S	Sampled	: 04/14/11	12:00						
General Chemistry Parameters										
% Dry Solids	79.8		%	0.500	0.500	t	04/25/11 15:07	SW-846	JJR	11D5574
Volatile Organic Compounds by EPA	A Method 8260B									
Benzene	ND		mg/kg dry	0.00125	0.00227	1	04/21/11 19:27	SW846 8260B	МЈН	11D4465
Ethylbenzene	ND		mg/kg dry	0.00111	0.00227	1	04/21/11 19:27	SW846 8260B	МЈН	11D4465
Naphthalene	0.00918		mg/kg dry	0.00193	0,00568	1	04/21/11 19:27	SW846 8260B	МЈН	11D4465
Toluene	ND		mg/kg dry	0.00101	0.00227	1	04/21/11 19:27	SW846 8260B	MJH	11D4465
Xylenes, total	ND		mg/kg dry	0.00216	0.00568	1	04/21/11 19:27	SW846 8260B	MJH	11D4465
Surr: 1,2-Dichloroethane-d4 (67-138%)	84%					1	04/21/11 19:27	SW846 8260B	МЈН	11D4465
Surr: Dibromofluoromethane (75-125%)	84 %					1	04/21/11 19:27	SW846 8260B	МЈН	11D4465
Surr: Toluene-d8 (76-129%)	109 %					1	04 21 11 19:27	SW846 8260B	MJH	11D4465
Surr: 4-Bromofluorobenzene (67-147%)	130 %					1	04 21 11 19:27	SW846 8260B	МЈН	11D4465
Polyaromatic Hydrocarbons by EPA	8270D									
Acenaphthene	0.0832		mg/kg dry	0.0173	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Acenaphthylene	ND		mg/kg dry	0.0247	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Anthracene	ND		mg/kg dry	0.0111	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Benzo (a) anthracene	0.336		mg/kg dry	0.0136	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Benzo (a) pyrene	0.309		mg/kg dry	0.00989	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Benzo (b) fluoranthene	0.660		mg/kg dry	0.0470	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Benzo (g,h,i) perylene	0.119		mg/kg dry	0.0111	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Benzo (k) fluoranthene	0.440		mg/kg dry	0.0457	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Chrysene	0.456		mg/kg dry	0.0383	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Dibenz (a,h) anthracene	0,0840		mg/kg dry	0.0185	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Fluoranthene	0.451		mg/kg dry	0.0136	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Fluorene	0.0783	J	mg/kg dry	0.0247	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Indeno (1,2,3-cd) pyrene	0.145		mg/kg dry	0.0383	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Naphthalene	ND		mg/kg dry	0.0173	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Phenanthrene	0.131		mg/kg đry	0.0124	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Pyrene	1.21		mg/kg dry	0.0284	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
1-Methylnaphthalene	0.117		mg/kg dry	0.0148	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
2-Methylnaphthalene	0.132		mg/kg dry	0.0259	0.0828	1	04/19/11 23:33	SW846 8270D	BES	11D4497
Surr: Terphenyl-d14 (18-120%)	65 %					1	04/19/11 23:33	SW846 8270D	BES	11D4497
Surr: 2-Fluorobiphenyl (14-120%)	60 %					1	04-19/11 23:33	SW846 8270D	BES	11D4497
Surr: Nitrobenzene-d5 (17-120%)	70 %					1	04 19 11 23:33	SW846 8270D	BES	11D4497



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NUD2768

Project Name:

Laurel Bay Housing Project

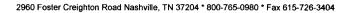
Project Number:

[none]

Received:

04/16/11 08:45

			_			Dilution	Analysis			
Analyte	Result	Flag	Units	MDL	MRL	Factor	Date/Time	Method	Analyst	Batch
Sample ID: NUD2768-05 (1444-	Dove-2 - Soil)	Sampled	: 04/14/11	14:45						
General Chemistry Parameters										
% Dry Solids	82.3		%	0.500	0.500	1	04/25/11 15:07	SW-846	JJR	11D5574
Volatile Organic Compounds by EPA	A Method 82601	В								
Benzene	ND		mg/kg dry	0.00130	0.00236	1	04/21/11 19:58	SW846 8260B	MJH	11D4465
Ethylbenzene	ND		mg/kg dry	0.00116	0.00236	1	04/21/11 19:58	SW846 8260B	MJH	11D4465
Naphthalene	0.00566	J	mg/kg dry	0.00201	0.00591	1	04/21/11 19:58	SW846 8260B	MJH	11D4465
Toluene	ND		mg/kg dry	0.00105	0.00236	1	04/21/11 19:58	SW846 8260B	МЈН	11D4465
Xylenes, total	ND		mg/kg dry	0.00225	0.00591	1	04/21/11 19:58	SW846 8260B	МЈН	11D4465
Surr: 1,2-Dichloroethane-d4 (67-138%)	78 %					1	04/21/11 19:58	SW846 8260B	МЈН	11D4465
Surr: Dibromofluoromethane (75-125%)	78 %					1	04 21 11 19:58	SW846 8260B	МЈН	11D4465
Surr: Toluene-d8 (76-129%)	105 %					1	04 21 11 19:58	SW846 8260B	МЈН	11D4465
Surr: 4-Bromofluorobenzene (67-147%)	124 %					1	04/21/11 19:58	SW846 8260B	MJH	11D4465
Polyaromatic Hydrocarbons by EPA	8270D									
Acenaphthene	ND		mg/kg dry	0.0165	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Acenaphthylene	ND		mg/kg dry	0.0235	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Anthracene	ND		mg/kg dry	0.0106	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Benzo (a) anthracene	ND		mg/kg dry	0.0129	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Benzo (a) pyrene	ND		mg/kg dry	0.00941	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Benzo (b) fluoranthene	ND		mg/kg dry	0.0447	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0106	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Benzo (k) fluoranthene	ND		mg/kg dry	0.0435	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Chrysene	ND		mg/kg dry	0.0365	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0177	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Fluoranthene	ND		mg/kg dry	0.0129	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Fluorene	ND		mg/kg dry	0.0235	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0365	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Naphthalene	ND		mg/kg dry	0.0165	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Phenanthrene	ND		mg/kg dry	0.0118	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Pyrene	ND		mg/kg dry	0.0271	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
1-Methylnaphthalene	ND		mg/kg dry	0.0141	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
2-Methylnaphthalene	ND		mg/kg dry	0.0247	0.0788	1	04/20/11 19:40	SW846 8270D	BES	11D4497
Surr: Terphenyl-d14 (18-120%)	66 %					1	04 20 11 19:40	SW846 8270D	BES	11D4497
Surr: 2-Fluorobiphenyl (14-120%)	52 %					1	04/20/11 19:40	SW846 8270D	BES	11D +49 7
Surr: Nitrobenzene-d5 (17-120%)	58 %					1	04 20 11 19:40	SW846 8270D	BES	11D4497





10179 Highway 78 Ladson, SC 29456

Tom McElwee

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Work Order:

NUD2768

Project Name:

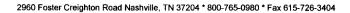
Laurel Bay Housing Project

Project Number: [none]

Received: 04/16/11 08:45

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extract Vol	Date	Analyst	Extraction Method
Polyaromatic Hydrocarbons by EPA 8270	D					<u>-</u>	
SW846 8270D	11D4497	NUD2768-01	30.89	2.00	04/19/11 08:30	SAS	EPA 3550C
SW846 8270D	11D4497	NUD2768-02	30.96	1.00	04/19/11 08:30	SAS	EPA 3550C
SW846 8270D	11D4497	NUD2768-02RE1	30.96	1.00	04/19/11 08:30	SAS	EPA 3550C
SW846 8270D	11D4497	NUD2768-03	30.44	1.00	04/19/11 08:30	SAS	EPA 3550C
SW846 8270D	11D4497	NUD2768-04	30.44	1.00	04/19/11 08:30	SAS	EPA 3550C
SW846 8270D	11D4497	NUD2768-05	30.97	1.00	04/19/11 08:30	SAS	EPA 3550C
Volatile Organic Compounds by EPA Met	hod 8260B						
SW846 8260B	11D4465	NUD2768-01	4.88	5.00	04/11/11 10:30	TSP	EPA 5035
SW846 8260B	11D4866	NUD2768-01RE1	4.71	5.00	04/11/11 10:30	TSP	EPA 5035
SW846 8260B	11D4866	NUD2768-01RE2	4.51	5.00	04/11/11 10:30	TSP	EPA 5035
SW846 8260B	11D4465	NUD2768-02	5.41	5.00	04/12/11 11:30	TSP	EPA 5035
SW846 8260B	11D4866	NUD2768-02RE1	5.57	5.00	04/12/11 11:30	TSP	EPA 5035
SW846 8260B	11D4465	NUD2768-03	5.13	5.00	04/13/11 12:15	TSP	EPA 5035
SW846 8260B	11D4866	NUD2768-03RE1	5.62	5.00	04/13/11 12:15	TSP	EPA 5035
SW846 8260B	11D4465	NUD2768-04	5.52	5.00	04/14/11 12:00	TSP	EPA 5035
SW846 8260B	11D4465	NUD2768-05	5.14	5.00	04/14/11 14:45	TSP	EPA 5035





10179 Highway 78 Ladson, SC 29456

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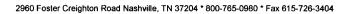
Work Order: NUD2768

Project Name: Laurel Bay Housing Project

Project Number: [none]
Received: 04/16/11 08:45

PROJECT QUALITY CONTROL DATA Blank

						·
analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
atile Organic Compounds by	EPA Method 8260B					
D4465-BLK1						
nzene	< 0.00110		mg/kg wet	11D4465	11D4465-BLK1	04/21/11 13:49
lbenzene	<0.000980		mg/kg wet	11D4465	11D4465-BLK1	04/21/11 13:49
thalene	< 0.00170		mg/kg wet	11D4465	11D4465-BLK1	04/21/11 13:49
ene	< 0.000890		mg/kg wet	11D4465	11D4465-BLK1	04/21/11 13:49
nes, total	< 0.00190		mg/kg wet	11D4465	11D4465-BLK1	04/21/11 13:49
gate: 1,2-Dichloroethane-d4	94%			11D4465	11D4465-BLK1	04/21/11 13:49
gate: Dibromofluoromethane	91%			11D4465	11D4465-BLK1	04/21/11 13:49
gate: Toluene-d8	102%			11D4465	11D4465-BLK1	04/21/11 13:49
gate: 4-Bromofluorobenzene	115%			11D4465	11D4465-BLK1	04/21/11 13:49
1465-BLK2						
ene	< 0.0550		mg/kg wet	11D4465	11D4465-BLK2	04/21/11 14:20
benzene	< 0.0490		mg/kg wet	11D4465	11D4465-BLK2	04/21/11 14:20
thalene	< 0.0850		mg/kg wet	11D4465	11D4465-BLK2	04/21/11 14:20
ene	< 0.0445		mg/kg wet	11D4465	11D4465-BLK2	04/21/11 14:20
es, total	< 0.0950		mg/kg wet	11D4465	11D4465-BLK2	04/21/11 14:20
gate: 1,2-Dichloroethane-d4	83%			11D4465	11D4465-BLK2	04/21/11 14:20
ate: Dibromofluoromethane	78%			11D4465	11D4465-BLK2	04/21/11 14:20
ate: Toluene-d8	103%			11D4465	11D4465-BLK2	04/21/11 14:20
te: 4-Bromofluorobenzene	109%			11D4465	11D4465-BLK2	04/21/11 14:20
866-BLK1						
ne	< 0.00110		mg/kg wet	11D4866	11D4866-BLK1	04/22/11 14:06
nzene	<0.000980		mg/kg wet	11D4866	11D4866-BLK1	04/22/11 14:06
alene	< 0.00170		mg/kg wet	11D4866	11D4866-BLK1	04/22/11 14:06
2	<0.000890		mg/kg wet	11D4866	11D4866-BLK1	04/22/11 14:06
es, total	<0.00190		mg/kg wet	11D4866	11D4866-BLK1	04/22/11 14:06
ate: 1,2-Dichloroethane-d4	102%			11D4866	11D4866-BLK1	04/22/11 14:06
ate: Dibromofluoromethane	99%			11D4866	11D4866-BLK1	04/22/11 14:06
ate: Toluene-d8	103%			11D4866	11D4866-BLK1	04/22/11 14:06
e: 4-Bromofluorobenzene	149%	Z2		11D4866	11D4866-BLK1	04/22/11 14:06
66-BLK2						
ne	<0.0550		mg/kg wet	11D4866	11D4866-BLK2	04/22/11 14:36
enzene	<0.0490		mg/kg wet	11D4866	11D4866-BLK2	04/22/11 14:36
alene	<0.0850		mg/kg wet	11D4866	11D4866-BLK2	04/22/11 14:36
e	<0.0445		mg/kg wet	11D4866	11D4866-BLK2	04/22/11 14:36
s, total	<0.0950		mg/kg wet	11D4866	11D4866-BLK2	04/22/11 14:36
te: 1,2-Dichloroethane-d4	93%			11D4866	11D4866-BLK2	04/22/11 14:36
tte: Dibromofluoromethane	86%			11D4866	11D4866-BLK2	04/22/11 14:36
ite: Toluene-d8	104%			11D4866	11D4866-BLK2	04/22/11 14:36
ite: 4-Bromofluorobenzene	150%	Z2		11D4866	11D4866-BLK2	04/22/11 14:36





10179 Highway 78 Ladson, SC 29456

Tom McElwee

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Work Order: NUD2768

Project Name: La

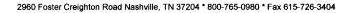
Laurel Bay Housing Project [none]

Project Number: Received:

04/16/11 08:45

PROJECT QUALITY CONTROL DATA Blank - Cont.

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
Volatile Organic Compounds b	oy EPA Method 8260B					
Polyaromatic Hydrocarbons by	y EPA 8270D					
11D4497-BLK1						
Acenaphthene	< 0.0140		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Acenaphthylene	< 0.0200		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Anthracene	<0.00900		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Benzo (a) anthracene	< 0.0110		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Benzo (a) pyrene	< 0.00800		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Benzo (b) fluoranthene	< 0.0380		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Benzo (g,h,i) perylene	< 0.00900		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Benzo (k) fluoranthene	< 0.0370		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Chrysene	< 0.0310		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Dibenz (a,h) anthracene	< 0.0150		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Fluoranthene	< 0.0110		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Fluorene	< 0.0200		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Indeno (1,2,3-cd) pyrene	< 0.0310		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Naphthalene	< 0.0140		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Phenanthrene	< 0.0100		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Pyrene	< 0.0230		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
1-Methylnaphthalene	< 0.0120		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
2-Methylnaphthalene	< 0.0210		mg/kg wet	11D4497	11D4497-BLK1	04/19/11 20:21
Surrogate: Terphenyl-d14	78%			11D4497	11D4497-BLK1	04/19/11 20:21
Surrogate: 2-Fluorobiphenyl	66%			11D4497	11D4497-BLK1	04/19/11 20:21
Surrogate: Nitrobenzene-d5	78%			11D4497	11D4497-BLK1	04/19/11 20:21





10179 Highway 78 Ladson, SC 29456

Tom McElwee

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Work Order:

NUD2768

Project Name:

Laurel Bay Housing Project

Project Number: [none]

Received:

04/16/11 08:45

PROJECT QUALITY CONTROL DATA

Duplicate

Analyte	Orig. Val.	Duplicate	Q	Units	RPD	Limit	Batch	Sample Duplicated	% Rec.	Analyzed Date/Time
General Chemistry Parameters 11D5574-DUP1						,				
% Dry Solids	90.3	91.2		%	1	20	11D5574	NUD2768-01		04/25/11 15:07



10179 Highway 78 Ladson, SC 29456

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Client

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Work Order:

NUD2768

Project Name:

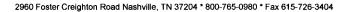
Laurel Bay Housing Project

Project Number: [none]

Received: 04/16/11 08:45

PROJECT QUALITY CONTROL DATA LCS

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
Volatile Organic Compounds by E	PA Method 8260B		-					
11D4465-BS1								
Benzene	50.0	55.7		ug/kg	111%	78 - 126	11D4465	04/21/11 12:17
Ethylbenzene	50.0	60.6		ug/kg	121%	79 - 130	11D4465	04/21/11 12:17
Naphthalene	50.0	58.0		ug/kg	116%	72 - 150	11D4465	04/21/11 12:17
Toluene	50.0	60.2		ug/kg	120%	76 - 126	11D4465	04/21/11 12:17
Xylenes, total	150	188		ug/kg	126%	80 - 130	11D4465	04/21/11 12:17
Surrogate: 1,2-Dichloroethane-d4	50.0	50.6			101%	67 - 138	11D4465	04/21/11 12:17
Surrogate: Dibromofluoromethane	50.0	48.9			98%	75 - 125	11D4465	04/21/11 12:17
Surrogate: Toluene-d8	50.0	51.0			102%	76 - 129	11D4465	04/21/11 12:17
Surrogate: 4-Bromofluorobenzene	50.0	51.1			102%	67 - 147	11D4465	04/21/11 12:17
11D4866-BS1								
Benzene	50.0	46.7		ug/kg	93%	78 - 126	11D4866	04/22/11 12:33
Ethylbenzene	50.0	60.2		ug/kg	120%	79 - 130	11D4866	04/22/11 12:33
Naphthalene	50.0	55.5		ug/kg	111%	72 - 150	11D4866	04/22/11 12:33
Toluene	50.0	58.8		ug/kg	118%	76 - 126	11D4866	04/22/11 12:33
Xylenes, total	150	186		ug/kg	124%	80 - 130	11D4866	04/22/11 12:33
Surrogate: 1,2-Dichloroethane-d4	50.0	42.0			84%	67 - 138	11D4866	04/22/11 12:33
Surrogate: Dibromofluoromethane	50.0	41.6			83%	75 - 125	11D4866	04/22/11 12:33
Surrogate: Toluene-d8	50.0	52.8			106%	76 - 129	11D4866	04/22/11 12:33
Surrogate: 4-Bromofluorobenzene	50.0	58.1			116%	67 - 147	11D4866	04/22/11 12:33
Polyaromatic Hydrocarbons by EF	PA 8270D							
11D4497-BS1								
Acenaphthene	1.67	1.30		mg/kg wet	78%	49 - 120	11D4497	04/19/11 20:42
Acenaphthylene	1.67	1.33		mg/kg wet	80%	52 - 120	11D4497	04/19/11 20:42
Anthracene	1.67	1.55		mg/kg wet	93%	58 - 120	11D4497	04/19/11 20:42
Benzo (a) anthracene	1.67	1.54		mg/kg wet	92%	57 - 120	11D4497	04/19/11 20:42
Benzo (a) pyrene	1.67	1.57		mg/kg wet	94%	55 - 120	11D4497	04/19/11 20:42
Benzo (b) fluoranthene	1.67	1.58		mg/kg wet	95%	51 - 123	11D4497	04/19/11 20:42
Benzo (g,h,i) perylene	1.67	1.30		mg/kg wet	78%	49 - 121	11D4497	04/19/11 20:42
Benzo (k) fluoranthene	1.67	1.58		mg/kg wet	95%	42 - 129	11D4497	04/19/11 20:42
Chrysene	1.67	1.46		mg/kg wet	88%	55 - 120	11D4497	04/19/11 20:42
Dibenz (a,h) anthracene	1.67	1,45		mg/kg wet	87%	50 - 123	11D4497	04/19/11 20:42
Fluoranthene	1.67	1.52		mg/kg wet	91%	58 - 120	11D4497	04/19/11 20:42
Fluorene	1.67	1.42		mg/kg wet	85%	54 - 120	11D4497	04/19/11 20:42
Indeno (1,2,3-cd) pyrene	1.67	1.40		mg/kg wet	84%	50 - 122	11D4497	04/19/11 20:42
Naphthalene	1.67	1.18		mg/kg wet	71%	28 - 120	11D4497	04/19/11 20:42
Phenanthrene	1.67	1.47		mg/kg wet	88%	56 - 120	11D4497	04/19/11 20:42
Pyrene	1.67	1.61		mg/kg wet	97%	56 - 120	11D4497	04/19/11 20:42
1-Methylnaphthalene	1.67	1.07		mg/kg wet	64%	36 - 120	11D4497	04/19/11 20:42
2-Methylnaphthalene	1.67	1.22		mg/kg wet	73%	36 - 120	11D4497	04/19/11 20:42





10179 Highway 78 Ladson, SC 29456

Tom McElwee

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Work Order:

NUD2768

Project Name:

Laurel Bay Housing Project

Project Number:

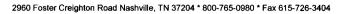
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Received:

04/16/11 08:45

PROJECT QUALITY CONTROL DATA LCS - Cont.

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
Polyaromatic Hydrocarbons by EI	PA 8270D							
11D4497-BS1								
Surrogate: Terphenyl-d14	1.67	1.42			85%	18 - 120	11D4497	04/19/11 20:42
Surrogate: 2-Fluorobiphenyl	1.67	1.22			73%	14 - 120	11D4497	04/19/11 20:42
Surrogate: Nitrobenzene-d5	1.67	1.30			78%	17 - 120	11D4497	04/19/11 20:42





10179 Highway 78 Ladson, SC 29456

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Work Order:

NUD2768

Project Name:

Laurel Bay Housing Project

Project Number: [none]

Received:

04/16/11 08:45

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
Volatile Organic Compounds by	EPA Method 8	260B										
11D4465-BSD1												
Benzene		49.7		ug/kg	50.0	99%	78 - 126	11	50	11D4465		04/21/11 12:4
Ethylbenzene		59.4		ug/kg	50.0	119%	79 - 130	2	50	11D4465		04/21/11 12:4
Naphthalene		55.2		ug/kg	50.0	110%	72 - 150	5	50	11D4465		04/21/11 12:4
Toluene		59.6		ug/kg	50.0	119%	76 - 126	1	50	11D4465		04/21/11 12:48
Xylenes, total		187		ug/kg	150	125%	80 - 130	0.9	50	11D4465		04/21/11 12:4
Surrogate: 1,2-Dichloroethane-d4		45.7		ug/kg	50.0	91%	67 - 138			11D4465		04/21/11 12:4
Surrogate: Dibromofluoromethane		44.4		ug/kg	50.0	89%	75 - 125			11D4465		04/21/11 12:4
Surrogate: Toluene-d8		51.4		ug/kg	50.0	103%	76 - 129			11D4465		04/21/11 12:4
Surrogate: 4-Bromofluorobenzene		52.0		ug/kg	50.0	104%	67 - 147			11D4465		04/21/11 12:4



10179 Highway 78 Ladson, SC 29456

Tom McElwee

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Work Order:

NUD2768

Project Name:

Laurel Bay Housing Project

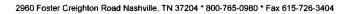
Project Number:

[none]

Received: 04/16/11 08:45

PROJECT QUALITY CONTROL DATA Matrix Spike

				viati ix Spin						
Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
Volatile Organic Compounds by I	EPA Method 8260)B								
11D4465-MS1										
Benzene	ND	2.36		mg/kg wet	2.47	96%	42 - 141	11D4465	NUD2041-01R E2	04/21/11 23:33
Ethylbenzene	ND	2.90		mg/kg wet	2.47	117%	21 - 165	11D4465	NUD2041-01R E2	04/21/11 23:33
Naphthalene	0.235	2.44		mg/kg wet	2.47	89%	10 - 160	11D4465	NUD2041-01R E2	04/21/11 23:33
Toluene	ND	2.83		mg/kg wet	2.47	115%	45 - 145	11D4465	NUD2041-01R E2	04/21/11 23:33
Xylenes, total	ND	8.89		mg/kg wet	7.40	120%	31 - 159	11D4465	NUD2041-01R E2	04/21/11 23:33
Surrogate: 1,2-Dichloroethane-d4		43.6		ug/kg	50.0	87%	67 - 138	11D4465	NUD2041-01R E2	04/21/11 23:33
Surrogate: Dibromofluoromethane		43.9		ug/kg	50.0	88%	75 - 125	11D4465	NUD2041-01R E2	04/21/11 23:33
Surrogate: Toluene-d8		53.6		ug/kg	50.0	107%	76 - 129	11D4465	NUD2041-01R E2	04/21/11 23:33
Surrogate: 4-Bromofluorobenzene		57.6		ug/kg	50.0	115%	67 - 147	11D4465	NUD2041-01R E2	04/21/11 23:33
11D4866-MS1										
Benzene	ND	2.03		mg/kg dry	2.62	77%	42 - 141	11D4866	NUD2768-02R E1	04/22/11 22:50
Ethylbenzene	0.655	3.44		mg/kg dry	2.62	106%	21 - 165	11D4866	NUD2768-02R E1	04/22/11 22:50
Naphthalene	5.01	7.45		mg/kg dry	2.62	93%	10 - 160	11D4866	NUD2768-02R E1	04/22/11 22:50
Toluene	ND	2.63		mg/kg dry	2.62	100%	45 - 145	11D4866	NUD2768-02R E1	04/22/11 22:50
Xylenes, total	1.39	10.0		mg/kg dry	7.87	110%	31 - 159	11D4866	NUD2768-02R E1	04/22/11 22:50
Surrogate: 1,2-Dichloroethane-d4		39.6		ug/kg	50.0	79%	67 - 138	11D4866	NUD2768-02R E1	04/22/11 22:50
Surrogate: Dibromofluoromethane		39.3		ug/kg	50.0	79%	75 - 125	11D4866	NUD2768-02R E1	04/22/11 22:50
Surrogate: Toluene-d8		53,9		ug/kg	50.0	108%	76 - 129	11D4866	NUD2768-02R E1	04/22/11 22:50
Surrogate: 4-Bromofluorobenzene		59.9		ug/kg	50.0	120%	67 - 147	11D4866	NUD2768-02R E1	04/22/11 22:50
Polyaromatic Hydrocarbons by E	PA 8270D									
11D4497-MS1										
Acenaphthene	ND	1.65		mg/kg dry	2.55	65%	42 - 120	11D4497	NUD1535-01	04/19/11 21:04
Acenaphthylene	ND	1.71		mg/kg dry	2.55	67%	32 - 120	11D4497	NUD1535-01	04/19/11 21:04
Anthracene	ND	1.99		mg/kg dry	2.55	78%	10 - 200	11D4497	NUD1535-01	04/19/11 21:04
Benzo (a) anthracene	ND	1.97		mg/kg dry	2.55	77%	41 - 120	11D4497	NUD1535-01	04/19/11 21:04
Benzo (a) pyrene	ND	1.97		mg/kg dry	2.55	77%	33 - 121	11D4497	NUD1535-01	04/19/11 21:04
Benzo (b) fluoranthene	ND	2.19		mg/kg dry	2.55	86%	26 - 137	11D4497	NUD1535-01	04/19/11 21:04





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NUD2768

Project Name:

Laurel Bay Housing Project

Project Number: [none]

Received:

04/16/11 08:45

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	EPA 8270D									
11D4497-MS1										
Benzo (g,h,i) perylene	ND	1.61		mg/kg dry	2.55	63%	21 - 124	11D4497	NUD1535-01	04/19/11 21:04
Benzo (k) fluoranthene	ND	1.84		mg/kg dry	2.55	72%	14 - 140	11D4497	NUD1535-01	04/19/11 21:04
Chrysene	ND	1.85		mg/kg dry	2.55	73%	28 - 123	11D4497	NUD1535-01	04/19/11 21:04
Dibenz (a,h) anthracene	ND	1.83		mg/kg dry	2.55	72%	25 - 127	11D4497	NUD1535-01	04/19/11 21:04
Fluoranthene	ND	2.01		mg/kg dry	2.55	79%	38 - 120	11D4497	NUD1535-01	04/19/11 21:04
Fluorene	ND	1.84		mg/kg dry	2.55	72%	41 - 120	11D4497	NUD1535-01	04/19/11 21:04
Indeno (1,2,3-cd) pyrene	ND	1.78		mg/kg dry	2.55	70%	25 - 123	11D4497	NUD1535-01	04/19/11 21:04
Naphthalene	ND	1.54		mg/kg dry	2.55	60%	25 - 120	11D4497	NUD1535-01	04/19/11 21:04
Phenanthrene	ND	1.89		mg/kg dry	2.55	74%	37 - 120	11D4497	NUD1535-01	04/19/11 21:04
Pyrene	ND	2.05		mg/kg dry	2.55	81%	29 - 125	11D4497	NUD1535-01	04/19/11 21:04
1-Methylnaphthalene	ND	1.39		mg/kg dry	2.55	55%	19 - 120	11D4497	NUD1535-01	04/19/11 21:04
2-Methylnaphthalene	ND	1.60		mg/kg dry	2.55	63%	11 - 120	11D4497	NUD1535-01	04/19/11 21:04
Surrogate: Terphenyl-d14		1.67		mg/kg dry	2.55	66%	18 - 120	11D4497	NUD1535-01	04/19/11 21:04
Surrogate: 2-Fluorobiphenyl		1.50		mg/kg dry	2.55	59%	14 - 120	11D4497	NUD1535-01	04/19/11 21:04
Surrogate: Nitrobenzene-d5		1.62		mg/kg dry	2.55	63%	17 - 120	11D4497	NUD1535-01	04/19/11 21:04



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NUD2768

Project Name:

Laurel Bay Housing Project

Project Number:

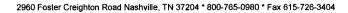
[none]

Received:

04/16/11 08:45

PROJECT QUALITY CONTROL DATA Matrix Spike Dup

						Г						
Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
Volatile Organic Compounds by	EPA Method 8	3260B										
11D4465-MSD1												
Benzene	ND	2.13		mg/kg wet	2.47	86%	42 - 141	10	50	11D4465	NUD2041-01R	04/22/11 00:04
Ethylbenzene	ND	3.04		mg/kg wet	2.47	123%	21 - 165	5	50	11D4465	E2	04/22/11 00:04
Emylocizene	ND	3.04		mg kg wei	2.47	12370	21 - 103	,	30	11104403	NUD2041-01R E2	04/22/11 00.04
Naphthalene	0.235	2.50		mg/kg wet	2.47	92%	10 - 160	2	50	11D4465	NUD2041-01R	04/22/11 00:04
Toluene	ND	2.93		mg/kg wet	2.47	119%	45 - 145	4	50	11D4465	E2 NUD2041-01R	04/22/11 00:04
Totale	ND	2.73		mg/kg wet	2	11770	43 - 143	7	50	11154405	E2	04/22/11 00:04
Xylenes, total	ND	9.37		mg/kg wet	7.40	127%	31 - 159	5	50	11D4465	NUD2041-01R	04/22/11 00:04
Surrogate: 1,2-Dichloroethane-d4		37.6		ug/kg	50.0	75%	67 - 138			11D4465	E2 NUD2041-01R	04/22/11 00:04
Surrogate. 1,2 Diemorecinane u		27.0				7370	0. 150			1121103	E2	01/22/11 00.01
Surrogate: Dibromofluoromethane		38.4		ug/kg	50.0	77%	75 - 125			11D4465	NUD2041-01R	04/22/11 00:04
Surrogate: Toluene-d8		53.6		ug/kg	50.0	107%	76 - 129			11D4465	E2 NUD2041-01R	04/22/11 00:04
Surrogate. Totalene do		33.0		u _B , K _B		10770	70 127			1121103	E2	04/22/11 00:04
Surrogate: 4-Bromofluorobenzene		58.9		ug/kg	50.0	118%	67 - 147			11D4465	NUD2041-01R	04/22/11 00:04
											E2	
11D4866-MSD1												
Benzene	ND	2.40		mg/kg dry	2.62	92%	42 - 141	17	50	11D4866	NUD2768-02R	04/22/11 23:21
F1. 11	0.455	0.00			2 (2	4.5.00.					E1	0.10011.000
Ethylbenzene	0.655	3.73		mg/kg dry	2.62	117%	21 - 165	8	50	11D4866	NUD2768-02R E1	04/22/11 23:21
Naphthalene	5.01	7.50		mg/kg dry	2.62	95%	10 - 160	0.7	50	11D4866	NUD2768-02R	04/22/11 23:21
											E1	
Toluene	ND	3.05		mg/kg dry	2.62	116%	45 - 145	15	50	11D4866	NUD2768-02R	04/22/11 23:21
Xylenes, total	1.39	11.0		mg/kg dry	7.87	122%	31 - 159	9	50	11D4866	E1 NUD2768-02R	04/22/11 23:21
•											E1	
Surrogate: 1,2-Dichloroethane-d4		40.6		ug/kg	50.0	81%	67 - 138			11D4866	NUD2768-02R	04/22/11 23:21
Surrogate: Dibromofluoromethane		40.4		ug/kg	50.0	81%	75 - 125			11D4866	E1 NUD2768-02R	04/22/11 23:21
											E1	
Surrogate: Toluene-d8		53.7		ug/kg	50.0	107%	76 - 129			11D4866	NUD2768-02R	04/22/11 23:21
Surrogate: 4-Bromofluorobenzene		57.7		ug/kg	50.0	115%	67 - 147			11D4866	E1 NUD2768-02R	04/22/11 23:21
				-55							E1	
Polyaromatic Hydrocarbons by I	EPA 8270D											
11D4497-MSD1												
Acenaphthene	ND	1.80		mg/kg dry	2.56	70%	42 - 120	8	40	11D4497	NUD1535-01	04/19/11 21:25
Acenaphthylene	ND	1.87		mg/kg dry	2.56	73%	32 - 120	9	30	11D4497	NUD1535-01	04/19/11 21:25
Anthracene	ND	2.12		mg/kg dry	2.56	83%	10 - 200	6	50	11D4497	NUD1535-01	04/19/11 21:25
Benzo (a) anthracene	ND	2.16		mg/kg dry	2.56 2.56	84%	41 - 120	9	30	11D4497	NUD1535-01 NUD1535-01	04/19/11 21:25
Benzo (a) pyrene Benzo (b) fluoranthene	ND ND	2.13 2.09		mg/kg dry	2.56	83% 82%	33 - 121 26 - 137	8	33 42	11D4497 11D4497		04/19/11 21:25
Benzo (g,h,i) perylene	ND ND	1.69		mg/kg dry	2.56	82% 66%	21 - 124	4 5	32	11D4497 11D4497	NUD1535-01 NUD1535-01	04/19/11 21:25 04/19/11 21:25
Benzo (k) fluoranthene	ND ND	2.19		mg/kg dry mg/kg dry	2.56	85%	14 - 140	3 17	32 39	11D4497 11D4497	NUD1535-01 NUD1535-01	04/19/11 21:25
Denzo (k) muorammene	ND	2.19		mg/kg ury	2.30	0370	14 - 140	1/	27	110447/	10-001003	V4/19/11 21.23





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NUD2768

Project Name:

Laurel Bay Housing Project

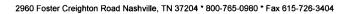
Project Number:

[none]

Received: 04/16/11 08:45

PROJECT QUALITY CONTROL DATA Matrix Spike Dup - Cont.

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
Polyaromatic Hydrocarbons by E	PA 8270D											
11D4497-MSD1												
Chrysene	ND	1.95		mg/kg dry	2.56	76%	28 - 123	5	34	11D4497	NUD1535-01	04/19/11 21:25
Dibenz (a,h) anthracene	ND	1.93		mg/kg dry	2.56	75%	25 - 127	6	31	11D4497	NUD1535-01	04/19/11 21:25
Fluoranthene	ND	2.18		mg/kg dry	2.56	85%	38 - 120	8	35	11D4497	NUD1535-01	04/19/11 21:25
Fluorene	ND	2.00		mg/kg dry	2.56	78%	41 - 120	8	37	11D4497	NUD1535-01	04/19/11 21:25
Indeno (1,2,3-cd) pyrene	ND	1.83		mg/kg dry	2.56	71%	25 - 123	3	32	11D4497	NUD1535-01	04/19/11 21:25
Naphthalene	ND	1.70		mg/kg dry	2.56	66%	25 - 120	10	42	11D4497	NUD1535-01	04/19/11 21:25
Phenanthrene	ND	2.04		mg/kg dry	2.56	80%	37 - 120	8	32	11D4497	NUD1535-01	04/19/11 21:25
Pyrene	ND	2.13		mg/kg dry	2.56	83%	29 - 125	3	40	11D4497	NUD1535-01	04/19/11 21:25
1-Methylnaphthalene	ND	1.55		mg/kg dry	2.56	61%	19 - 120	11	45	11D4497	NUD1535-01	04/19/11 21:25
2-Methylnaphthalene	ND	1.78		mg/kg dry	2.56	70%	11 - 120	11	50	11D4497	NUD1535-01	04/19/11 21:25
Surrogate: Terphenyl-d14		1.70		mg/kg dry	2.56	66%	18 - 120			11D4497	NUD1535-01	04/19/11 21:25
Surrogate: 2-Fluorobiphenyl		1.61		mg/kg dry	2.56	63%	14 - 120			11D4497	NUD1535-01	04/19/11 21:25
Surrogate: Nitrobenzene-d5		1.75		mg/kg dry	2.56	68%	17 - 120			11D4497	NUD1535-01	04/19/11 21:25





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Work Order:

NUD2768

Project Name:

Laurel Bay Housing Project

Project Number: [none]

Received:

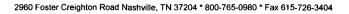
04/16/11 08:45

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				





10179 Highway 78 Ladson, SC 29456 Work Order:

NUD2768

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Tom McElwee

Attn

Received:

04/16/11 08:45

DATA QUALIFIERS AND DEFINITIONS

CF7 Result may be elevated due to carry over from previously analyzed sample.

J Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).

Concentrations within this range are estimated.

RL1 Reporting limit raised due to sample matrix effects.

Z2 Surrogate recovery was above the acceptance limits. Data not impacted.

ZX Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.

ND Not detected at the reporting limit (or method detection limit if shown)

METHOD MODIFICATION NOTES

NUD2768

05/02/11 23 59																										
TestAmer		Nashville 2960 Fost Nashville,	er Crei	ghtor	1		Te	di Fr	ee: 8	315-726 300-768 315-726	5-098	80						metho		his wo	k being	roper ar g condu				
Client Name/Account #:	EEG - SBG # 2	449		_																(Complia	ance Mo	onitoring	9?	Yes	 _ N
Address:	10179 Highway	78												_							Enforc	ement	Action?	•	Yes	 _ N
City/State/Zip:	Ladson, SC 294	156														Site	State:	sc								
Project Manager:	Tom McElwee	mail: mcelw	/00@0 <u>0</u>	ginc.n	et			- 7:	_					,			PO#:		10	<u>zʻ</u>	<u></u>					
Telephone Number:		1		<u></u>		Fax	No.	43	7	87	2	_	24	<u>o</u> /		TA Qu	ote #:									
Sampler Name: (Print) PRAH Shaw									Proje	ect ID:	Laure	Bay H	ousing	Projec	t											
Sampler Signature:		Mo														Proj	ject #:									
						工	- 51	Jese	vativ	e	31		Matr	ix						A	nalyze	For:				ī
Sample 10 / Description 1364 CARDINIA - 2 1430 DOUR 1358 CARDINAL 1444 DOUR - 1 1444 DOUR - 2	4/11/11 4/12/11 4/14/11	1230 1235 1200 1445	960 Containers Shipper	X X X X X	Composite	Treed Timered		2 2 2	H ₂ SO, Plestic (Yellow Label)	H-SO, Glesse(Yellow Labe)	Other (Specify) Mile Jhy	Groundweller	Drinking Water	aborns X X X	Other (specify):	XXXX BTEX + Napth - 8260	XXXXX		2545							RUSH TAT (Pre-Schedule
					- }-	十	11	+		++	十	十		1							1					一
Special Instructions: Relinquished by Relinquished by	1 Dat 15 Dat	1:11	Tin	00	Receive	d by:	ethod o	- x	pmen	nt:			Date	•	DEX	Time		Labor		erature	Upon l	Receipt space?	7	P	<u>.</u>	Y
							<u>-</u>				2	-14	16/	<u> </u>	2	2(5	<u> </u>		·							

ATTACHMENT A



WM NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST	1. Generator's US EPA	ID No.	Manifest Doc	No.	2. Page 1	of			
3. Generator's Mailing Address: MCAS, BEAUFORT LAUREL BAY HOUSING BEAUFORT, SC 29907 4. Generator's Phone 843-2:	nailing):	Production of the	st Number MNA B. State (00316811 e Generator's ID					
5. Transporter 1 Company Name EEG, INC. 7. Transporter 2 Company Name	PA ID Number		100000000000000000000000000000000000000	ransporter's II orter's Phone	THE REPORT OF THE PROPERTY OF				
9. Designated Facility Name and Site HICKORY HILL LANDFILL 2621 LOW COUNTRY ROAD	Address	10. US	EPA ID Number		F. Transpo	CONTRACTOR I	SH	987-464	2
RIDGELAND, SC 29936 11. Description of Waste Materials				ntainers	13. Total	acility Phone		lisc Commer	11, 1
a. HEATING OIL TANKS FILLED WM Profi			No.	Joy.	Quantity 6-50	Wt./Vol			
WM Profile # c. WM Profile # d.									
WM Profile # J. Additional Descriptions for Materi	als Listed Above		K. Dispos	sal Location	N		Level		
15. Special Handling Instructions and	Additional Information 2) 144 1 NA (3) 76	4 Dour-	2/4) A-2/5	4	DOUR 8 EAS	2	362	CAR	dip
Purchase Order # 16. GENERATOR'S CERTIFICATE: I hereby certify that the above-describe accurately described, classified and page.		ardous wastes as o		art 261 or a			ive been fu	ly and	
Printed Name Charles H Herro 17. Transporter 1 Acknowledgement Printed Name		Signature "On b	ehalf of	Hen			Month 5	Day //	Year //
	of Receipt of Materials	Signature	o Bal	Qui_			5 Month	12 Day	// Year
19. Certificate of Final Treatment/Dis I certify, on behalf of the above listed applicable laws, regulations, permits a 20. Facility Owner or Operator: Certi	treatment facility, that to and licenses on the dates	listed above.	The second second		See Haratan	as managed in	complianc	e with all	
Printed Name White- TREATMENT, STORAGE, DISPO	eld c	Signature	ni Co	fuld		low- GENERA	Month	Day (2)	Year //

Gold-TRANSPORTER #1 COPY

Pink- FACILITY USE ONLY

Appendix C Regulatory Correspondence





W. Marshall Taylor Jr., Acting Director

Promoting and protecting the health of the public and the environment

April 9, 2014

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

RE: No Further Action

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 Tanks (USTs) 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 and agrees there is no indication of soil or groundwater contamination on these properties, 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 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)



W. Marshall Taylor Jr., Acting Director Promoting and protecting the health of the public and the environment

Attachment to: Krieg to Drawdy

Subject: NFA Dated 4/9/2015

Laurel Bay Underground Storage Tank Assessment Reports for: (9 addresses/10 tanks)

1179 Bobwhite	1380 Dove					
1188 Bobwhite Tank 1	1383 Dove					
1188 Bobwhite Tank 2	1400 Eagle					
1358 Cardinal	1402 Eagle					
1372 Dove	1419 Albatross					