SUMMARY REPORT
342 WEST DOVE LANE (FORMERLY 1381 WEST DOVE LANE)
LAUREL BAY MILITARY HOUSING AREA
MARINE CORPS AIR STATION BEAUFORT
BEAUFORT, SC

Revision: 0 Prepared for:

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

and



Naval Facilities Engineering Command Atlantic 9324 Virginia Avenue Norfolk, Virginia 23511-3095 SUMMARY REPORT
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Prepared by:



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

Contract Number: N62470-14-D-9016

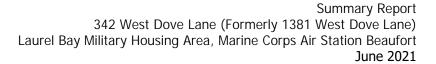
CTO WE52

JUNE 2021



Table of Contents

1.0	INTRODUC	TION1
1.1 1.2		ND INFORMATION
2.0	SAMPLING	ACTIVITIES AND RESULTS4
2.1 2.2 2.3 2.4 2.5 2.6 3.0	SOIL ANALY GROUNDWA GROUNDWA SOIL GAS S SOIL GAS A PROPERTY	VAL AND SOIL SAMPLING
4.0	REFERENC	ES7
		Tables
Table	1	Laboratory Analytical Results - Soil
Table	2	Laboratory Analytical Results - Groundwater
Table	3	Laboratory Analytical Results - Vapor
		Appendices
Appen Appen Appen Appen Appen	dix B dix C dix D	Multi-Media Selection Process for LBMH UST Assessment Report Laboratory Analytical Report - Groundwater Laboratory Analytical Report - Vapor Regulatory Correspondence





List of Acronyms

bgs below ground surface

BTEX benzene, toluene, ethylbenzene, and xylenes

CTO Contract Task Order

COPC constituents of potential concern

ft feet

IDIQ Indefinite Delivery, Indefinite Quantity

IGWA Initial Groundwater Assessment

JV Joint Venture

LBMH Laurel Bay Military Housing MCAS Marine Corps Air Station

NAVFAC Mid-Lant Naval Facilities Engineering Command Mid-Atlantic

NFA No Further Action

PAH polynuclear aromatic hydrocarbon

PPV Public-Private Venture

QAPP Quality Assurance Program Plan

RBSL risk-based screening level RSL regional screening level

SCDHEC South Carolina Department of Health and Environmental Control

Site LBMH area at MCAS Beaufort, South Carolina

UFP SAP Uniform Federal Policy Sampling and Analysis Plan USEPA United States Environmental Protection Agency

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 342 West Dove Lane (Formerly 1381 West Dove 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.

In 2015, the Public-Private Venture (PPV) responsible for the management of the residential area at LBMH initiated a plan to replace outdated homes in the LBMH area. The plan includes the demolition of existing homes and subsequent construction of new homes. In discussions with the PPV it was revealed that construction of the new homes could occur on portions of the property where the USTs were formerly located. In response to this plan, MCAS Beaufort assessed subsurface soil gas concentrations in the area of the former USTs at select properties within the demolition areas. The subject property of this report is one of the properties within the planned demolition area which was selected for a soil gas evaluation. It should be noted that the house at the subject property has since been demolished and this property is an empty lot. There are no current plans for construction in this 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. A multi-media investigation selection process tree, applicable to the LBMH UST investigations, is presented as Appendix A.

In accordance with the multi-media investigation selection process (Appendix A), groundwater analytical results are typically compared to the site specific groundwater vapor intrusion screening levels (VISLs) to evaluate the potential for vapor intrusion into existing homes and the necessity for an investigation associated with this media. However, as previously stated, this property did not have an existing home and instead was among those selected for an evaluation of soil gas because of the planned demolition and construction activities.



2.0 SAMPLING ACTIVITIES AND RESULTS

The following section presents the sampling activities and associated results for 342 West Dove Lane (Formerly 1381 West Dove Lane). The sampling activities at 342 West Dove Lane (Formerly 1381 West Dove Lane) comprised a soil investigation, IGWA sampling, and a soil gas investigation. Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 1381 West Dove 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 vapor intrusion investigation at this site are provided in the *Vapor Intrusion Report – July 2015, January 2016, and May 2016* (Resolution Consultants, 2017). The laboratory report that includes the pertinent soil gas analytical results for this site is presented in Appendix D.

2.1 UST Removal and Soil Sampling

On July 14, 2009, a single 280 gallon heating oil UST was removed from the rear grassed area at 342 West Dove Lane (Formerly 1381 West Dove 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 4'10" 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 342 West Dove Lane (Formerly 1381 West Dove 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 342 West Dove Lane (Formerly 1381 West Dove Lane) to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letter is provided in Appendix E.

2.3 Groundwater Sampling

On June 22, 2015, a temporary monitoring well was installed at 342 West Dove Lane (Formerly 1381 West Dove 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 (SCDHEC, 2016). Field forms are provided in the *Initial Groundwater Investigation Report – May and June 2015* (Resolution Consultants, 2015).

2.4 Groundwater Analytical Results

A summary of the laboratory analytical results and SCDHEC RBSLs is presented in Table 2. A copy of the laboratory analytical data report is included in Appendix C.

The groundwater results collected from 342 West Dove Lane (Formerly 1381 West Dove Lane) were less than the SCDHEC RBSLs and the site specific groundwater VISLs (Table 2), which



indicated that the groundwater was not impacted by COPCs associated with the former UST at concentrations that present a potential risk to human health and the environment.

2.5 Soil Gas Sampling

On July 27, 2015, a temporary subsurface soil gas well was installed at 342 West Dove Lane (Formerly 1381 West Dove Lane) in accordance with the SCDHEC approved *Uniform Federal Policy Sampling and Analysis Plan (UFP SAP) for Vapor Media, Revision 1* (Resolution Consultants, 2015). Soil gas sampling was conducted at this property to assess the potential risk for vapor intrusion associated with the possible construction of a new home on top of former the UST location. The soil gas 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 *Vapor Intrusion Report – July 2015, January 2016, and May 2016* (Resolution Consultants, 2017).

The sampling strategy for this phase of the investigation required a one-time sampling event of the soil gas well. The subsurface soil gas well at 342 West Dove Lane (Formerly 1381 West Dove Lane) was sampled on July 29, 2015. A soil gas sample was collected and shipped to an offsite laboratory for analysis of the petroleum COPCs. Upon completion of soil gas sampling, the temporary well was abandoned in accordance with the *UFP SAP for Vapor Media, Revision 1* (Resolution Consultants, 2015). Field forms are provided in the *Vapor Intrusion Report – July 2015, January 2016, and May 2016* (Resolution Consultants, 2017).

2.6 Soil Gas Analytical Results

A summary of the laboratory analytical results, USEPA (United States Environmental Protection Agency) VISLs, calculated building concentrations, and USEPA regional screening levels (RSLs) for residential air are presented in Table 3. The screening levels used for evaluation were those levels that were in effect at the time of reporting and review by SCDHEC. A copy of the laboratory analytical data report is included in Appendix D.

The soil gas results collected from 342 West Dove Lane (Formerly 1381 West Dove Lane) were above the USEPA VISLs. However, the building concentrations calculated for each COPC with an exceedance of its respective USEPA VISL from 342 West Dove Lane (Formerly 1381 West Dove Lane) were below the USEPA RSLs, which indicated that subsurface soil gas 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

The house at 342 West Dove Lane (Formerly 1381 West Dove Lane) was demolished and the property is an empty lot. There are no current plans for construction in this area. Based on the analytical results for groundwater, SCDHEC made the determination that NFA was required for 342 West Dove Lane (Formerly 1381 West Dove Lane). The NFA determination for groundwater was obtained in a letter dated February 22, 2016. Based on the analytical results for soil gas, it was determined that there was not a vapor intrusion concern at this property and a recommendation was made for no additional vapor intrusion assessment activities. SCDHEC approved the no further vapor intrusion investigation recommendation for 342 West Dove Lane (Formerly 1381 West Dove Lane) in a letter dated June 20, 2017. SCDHEC's letters are 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 1381 West Dove 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, Laurel Bay Military Housing

 Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina, October 2015.
- Resolution Consultants, 2015. *Uniform Federal Policy Sampling and Analysis Plan for Vapor Media, Revision 1, for Laurel Bay Military Housing Area Marine Corps Air Station Beaufort, Beaufort, South Carolina*, April 2015.
- Resolution Consultants, 2017. Vapor Intrusion Report July 2015, January 2016, and May 2016 for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina, May 2017.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2013. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 2.0*, April 2013.



- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2015. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.0*, May 2015.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2016. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.1*, February 2016.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2017. *R.61-92, Part 280, Underground Storage Tank Control Regulations*, March 2017.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2018. *Underground Storage Tank Assessment Instructions for Permanent Closure and Change-In-Service*, March 2018.
- South Carolina Department of Health and Environmental Control Bureau of Water, 2016. *R.61-71, Well Standards*, June 2016.
- United States Environmental Protection Agency, 2015. *Regional Screening Levels Summary Table Resident Air,* June 2015.
- United States Environmental Protection Agency, 2015. *USEPA OSWER Vapor Intrusion Assessment, Vapor Intrusion Screening Level Calculator, Version 3.4,* June 2015.

Tables



Table 1

Laboratory Analytical Results - Soil 342 West Dove Lane (Formerly 1381 West Dove Lane) Laurel Bay Military Housing Area

Marine Corps Air Station Beaufort Beaufort, South Carolina

Constituent	SCDHEC RBSLs (1)	Results Sample Collected 07/14/09	
Volatile Organic Compounds Analyz	ed by EPA Method 8260B (mg/kg)		
Benzene	0.007	0.00527	
Ethylbenzene	1.15	2.07	
Naphthalene	0.036	23.7	
Toluene	1.45	ND	
Xylenes, Total	14.5	0.0383	
Semivolatile Organic Compounds Ar	alyzed by EPA Method 8270D (mg/kg)		
Benzo(a)anthracene	0.066	ND	
Benzo(b)fluoranthene	0.066	ND	
Benzo(k)fluoranthene	0.066	ND	
Chrysene	0.066	ND	
Dibenz(a,h)anthracene	0.066	ND	

Notes:

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

mg/kg - milligrams per kilogram

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

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

⁽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 - Groundwater 342 West Dove Lane (Formerly 1381 West Dove 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 06/22/15
Volatile Organic Compounds Analyze	d by EPA Method 8260B (µ	ıg/L)	
Benzene	5	16.24	ND
Ethylbenzene	700	45.95	3.4
Naphthalene	25	29.33	24
Toluene	1000	105,445	ND
Xylenes, Total	10,000	2,133	ND
Semivolatile Organic Compounds And	alyzed by EPA Method 827	OD (μg/L)	
Benzo(a)anthracene	10	NA	0.056
Benzo(b)fluoranthene	10	NA	0.035
Benzo(k)fluoranthene	10	NA	ND
Chrysene	10	NA	0.053
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 3.0 (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.

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

Table 3

Laboratory Analytical Results - Vapor 342 West Dove Lane (Formerly 1381 West Dove Lane)

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

Constituent	USEPA VISL (1) Soil Gas Results Sample Collected 07/29/15		USEPA RSL (2)	Calculated Building Concentrations (3)	
Volatile Organic Compounds Anal	zed by USEPA Method TO-15	i (μg/m³)			
Benzene	12	79	0.36	0.0061	
Toluene	17000	ND	NA	NA	
Ethylbenzene	37	5100	1.1	0.39	
m,p-Xylenes	350	ND	NA	NA	
o-Xylene	350	ND	NA	NA	
Naphthalene	2.8	520	0.083	0.039	

Notes:

Bold font indicates the analyte was detected.

Bold font and shading indicates the concentration exceeds the residential VISL.

NA - not applicable

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

RSL - Regional Screening Level

μg/m³ - micrograms per cubic meter

USEPA - United States Environmental Protection Agency

VISL - Vapor Intrusion Screening Level

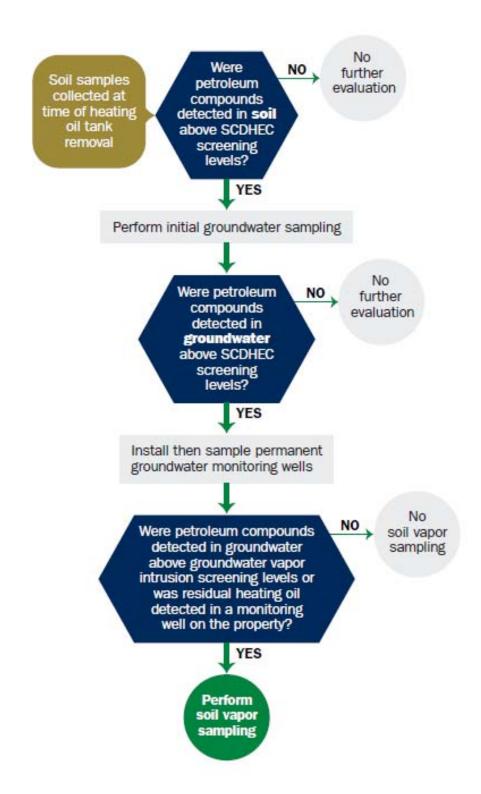
⁽¹⁾ United States Environmental Protection Agency Exterior Soil Gas Vapor Intrusion Screening Level (VISL) from VISL Calculator (Version 3.4, June 2015). VISLs are based or a residual exposure scenario and a target risk level of 1x10-6 and a hazard quotient of 0.1.

⁽²⁾ United States Environmental Protection Agency Regional Screening Levels for Residential Air from the USEPA RSL Table (June 2015), based on a target risk level of 1x10-6 for carcinogens, a target hazard quotient of 0.1 for noncarcinogens, and exposure duration of 26 years.

⁽³⁾ Building concentrations are calculated using Johnson and Ettinger Soil Gas-Advanced Model for vapor intrusion into buildings (USEPA 2004).

Appendix A Multi-Media Selection Process for LBMH



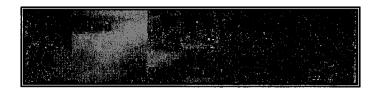


Appendix A - Multi-Media Selection Process for LBMH

Appendix B UST Assessment Report



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



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

I. OWNERSHIP OF UST (S)

	nmanding Officer Attn: NF , Individual, Public Agency, Other)	REAO (Craig Ehde)
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, S	<u>C</u>
Facility Name or Company Site Identifier	
1381 Dove Lane, Laurel Bay Military Housing Area	
Street Address or State Road (as applicable)	
Beaufort, Beaufort	
City County	

Attachment 2

III. INSURANCE INFORMATION

Insurance Sta	itement
The petroleum release reported to DHEC on qualify to receive state monies to pay for appropriate site rehallowed in the State Clean-up fund, written confirmation of t insurance policy is required. This section must be complete	habilitation activities. Before participation is the existence or non-existence of an environmental
Is there now, or has there ever been an insurance poli UST release? YES NO (check one)	icy or other financial mechanism that covers this
If you answered YES to the above question, p	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 co	opy of the policy with this report.
IV. REQUEST FOR	SUPERB FUNDING
I DO / DO NOT wish to participate in the SUPER	B Program. (Circle one.)
V. CERTIFICATION (To	be signed by the UST owner)
I certify that I have personally examined and am familia attached documents; and that based on my inquiry of information, I believe that the submitted information is to	those individuals responsible for obtaining this
Name (Type or print.)	
Signature	1
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	_ . h Carolina

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 1980s
Depth (ft.) To Base of Tank	4'10"
pill Prevention Equipment Y/N	No ·
Overfill Prevention Equipment Y/N	No
Method of Closure Removed/Filled	Removed
Date Tanks Removed/Filled	7/14/09
Visible Corrosion or Pitting Y/N	Yes
/isible Holes Y/N	Yes
Method of disposal for any USTs removed from the UST 1381Dove was removed from the Subtitle "D" landfill. See Attachm	ground and disposed of at a
Method of disposal for any liquid petroleum, sludges isposal manifests) UST 1381Dove had been previously	
	Capacity(ex. 1k, 2k)

VII. PIPING INFORMATION

	1381Dove
	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	*Unknown
Visible Holes Y/N	*Unknown
Age	Late 1950s
If any corrosion, pitting, or holes were observed,	describe the location and extent for each ninin
*All piping had been previously	
VIII. BRIEF SITE DESCR	
The USTs at the residences are c	
and formerly contained fuel oil installed in the late 1950s and	
Installed in the late 1950s and	Tabe used in the mid 1900s.

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,		Х	
C.	Was water present in the UST excavation, soil borings, or trenches? If was, how for below land surface (indicate leastion and donth)?		х	
D.	If yes, how far below land surface (indicate location and depth)? Did contaminated soils remain stockpiled on site after closure? If yes, indicate the stockpile location on the site map.		Х	
	Name of DHEC representative authorizing soil removal:			
E.	Was a petroleum sheen or free product detected on any excavation or boring waters? If yes, indicate location and thickness.		Х	

X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 96012001

B.

							1
Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA#
1381 Dove	Excav at fill end	Soil	Sandy	4'10"	7/14/09 1015 hrs	P. Shaw	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20			0.1. 4. 0	1. 1	10.6		

^{* =} 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.

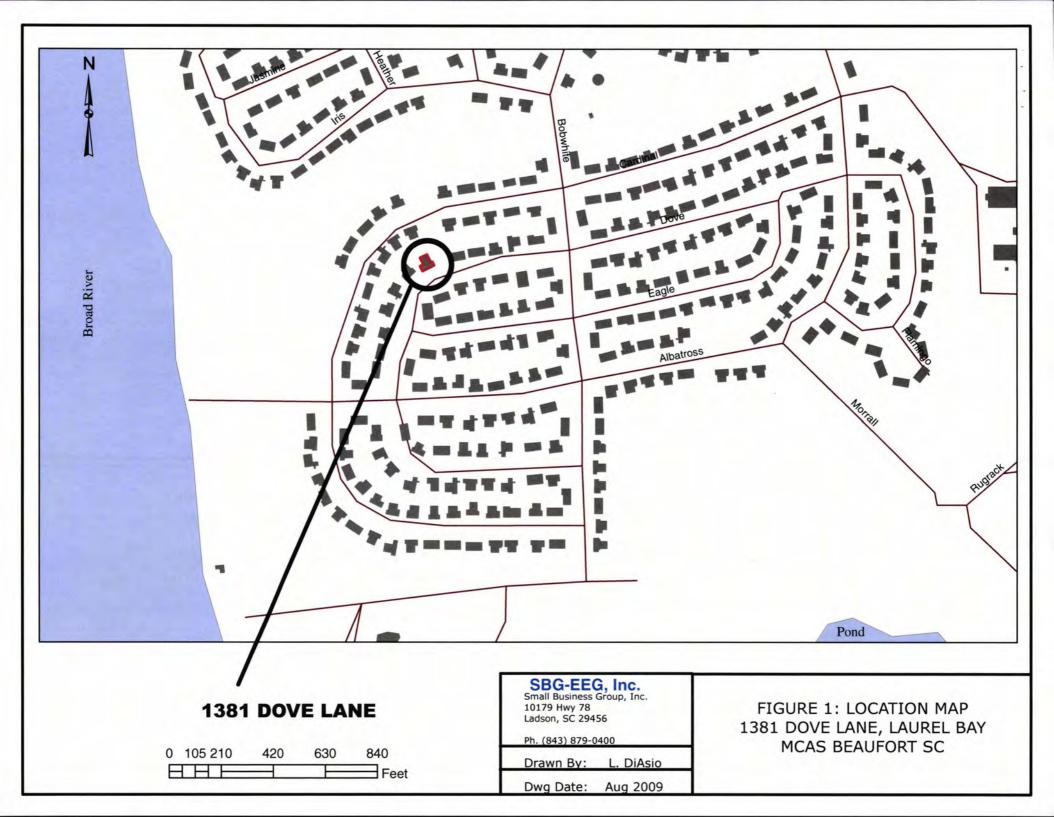
XII. RECEPTORS

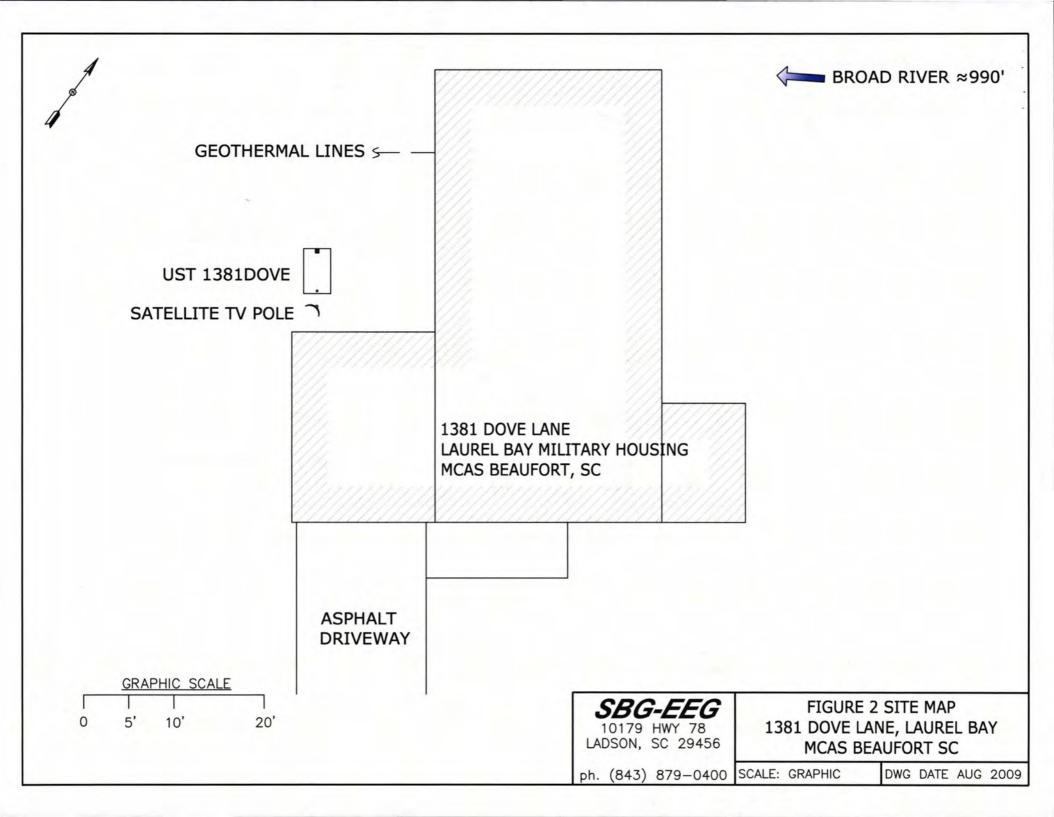
		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system? *Broad R. ~ 990 ft.	*X	
	If yes, indicate type of receptor, distance, and direction on site map.		
В.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?		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 & geother	*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.		

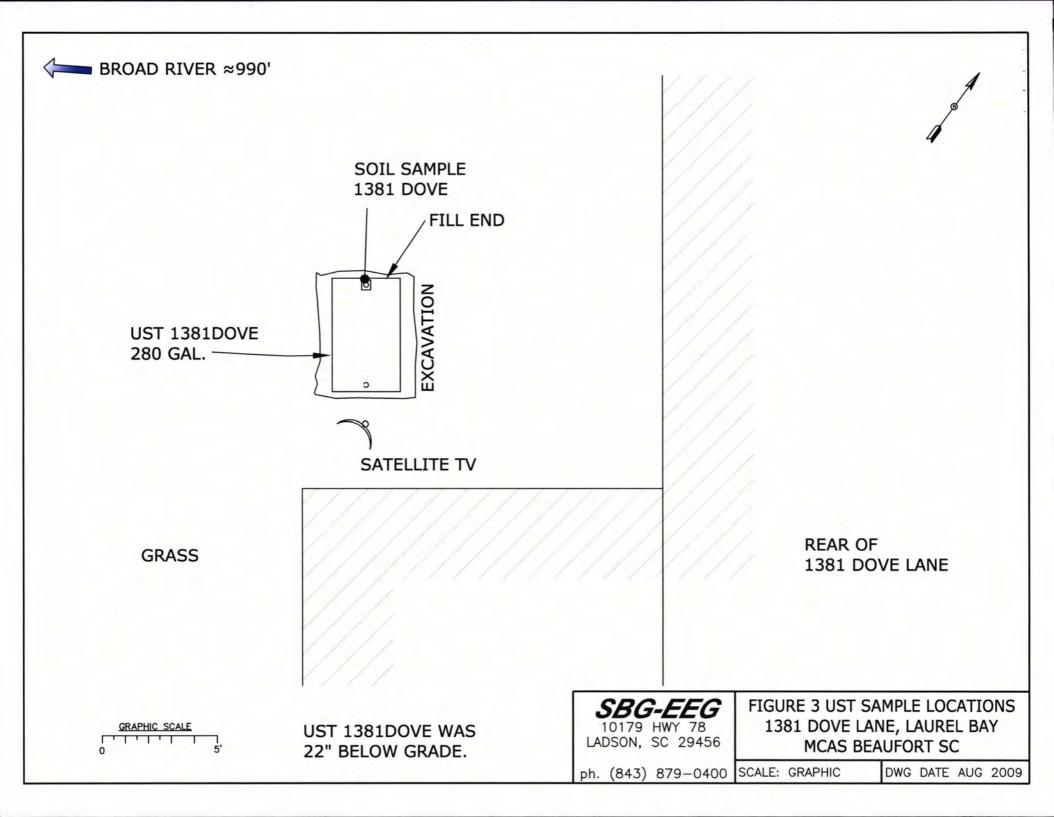
XIII. SITE MAP

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 1381Dove prior to removal.



Picture 2: Removal in progress.

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.

			 † 	i	, ·	
CoC UST	1381Dove					
Benzene	.0.00527 mg/	kg				
Toluene	ND					
Ethylbenzene	2.07 mg/kg					
Xylenes	0.0383 mg/k	g				Ü
Naphthalene	23.7 mg/kg		 			
Benzo (a) anthracene	ND					
Benzo (b) fluoranthene	ND					
Benzo (k) fluoranthene	ND					
Chrysene	ND					
Dibenz (a, h) anthracene	ND					
TPH (EPA 3550)						
СоС			 			
Benzene						
Toluene						
Ethylbenzene						
Xylenes						
Naphthalene						
Benzo (a) anthracene		·				
Benzo (b) fluoranthene						
Benzo (k) fluoranthene						
Chrysene						
Dibenz (a, h) anthracene						
TPH (EPA 3550)						

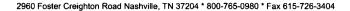
SUMMARY OF ANALYSIS RESULTS (cont'd)
Enter the ground water analytical data for each sample for all CoC in the table below. If free product is present, indicate the measured thickness to the nearest 0.01 feet.

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

XV. ANALYTICAL RESULTS

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

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





July 30, 2009

6:49:11PM

Client:

EEG - Small Business Group, Inc. (2449)

10179 Highway 78

Ladson, SC 29456

Attn: Tom McElwee

Work Order: NSG1390

Project Name: La

Laurel Bay Housing Project

Project Nbr: P/O Nbr: Date Received:

[none] 08129 07/17/09

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
1378 Dove	NSG1390-01	07/13/09 10:00
1377 Dove	NSG1390-02	07/13/09 09:50
1376 Dove	NSG1390-03	07/13/09 15:10
1382 Dove	NSG1390-04	07/13/09 13:30
1381 Dove	NSG1390-05	07/14/09 10:15
1385 Dove	NSG1390-06	07/14/09 15:10

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.

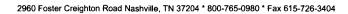
Kem & Hage

This report has been electronically signed.

Report Approved By:

Ken A. Hayes

Senior Project Manager





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG1390

Project Name:

Laurel Bay Housing Project

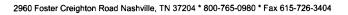
Project Number:

[none]

Received:

07/17/09 08:00

		<i>F</i>	NALYTICAL RE	PORT				
Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NSG1390-01 (1378 Do	ove - Soil) Sam	pled: 07/1	3/09 10:00					
General Chemistry Parameters								
% Dry Solids	78.8		%	0.500	1	07/28/09 08:49	SW-846	9073886
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	ND		mg/kg dry	0.00215	1	07/24/09 16:30	SW846 8260B	9072531
Ethylbenzene	ND		mg/kg dry	0.00215	1	07/24/09 16:30	SW846 8260B	9072531
Naphthalene	ND		mg/kg dry	0.00538	1	07/24/09 16:30	SW846 8260B	9072531
Toluene	ND		mg/kg dry	0.00215	1	07/24/09 16:30	SW846 8260B	9072531
Xylenes, total	ND		mg/kg dry	0.00538	1	07/24/09 16:30	SW846 8260B	9072531
Surr: 1,2-Dichloroethane-d4 (67-138%)	101 %					07/24/09 16:30	SW846 8260B	9072531
Surr: Dibromofluoromethane (75-125%)	100 %					07/24/09 16:30	SW846 8260B	9072531
Surr: Toluene-d8 (76-129%)	106 %					07/24/09 16:30	SW846 8260B	9072531
Surr: 4-Bromofluorobenzene (67-147%)	113 %					07/24/09 16:30	SW846 8260B	9072531
Polyaromatic Hydrocarbons by EPA 82	270D							
Acenaphthene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Acenaphthylene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Anthracene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Benzo (a) anthracene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Benzo (a) pyrene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Benzo (b) fluoranthene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Benzo (k) fluoranthene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Chrysene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Fluoranthene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Fluorene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Naphthalene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Phenanthrene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Pyrene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
1-Methylnaphthalene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
2-Methylnaphthalene	ND		mg/kg dry	0.0845	1	07/19/09 20:39	SW846 8270D	9072561
Surr: Terphenyl-d14 (18-120%)	80 %				-	07/19/09 20:39	SW846 8270D	9072561
Surr: 2-Fluorobiphenyl (14-120%)	63 %					07/19/09 20:39	SW846 8270D	9072561
Surr: Nitrobenzene-d5 (17-120%)	59 %					07/19/09 20:39	SW846 8270D	9072561





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG1390

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received:

07/17/09 08:00

			ANALY HEAL RE	EPUKI				
Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NSG1390-02 (1377 Do	ove - Soil) Sam	pled: 07/1	13/09 09:50					
General Chemistry Parameters								
% Dry Solids	83.5		%	0.500	1	07/28/09 08:49	SW-846	9073886
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	ND		mg/kg dry	0.00216	1	07/24/09 17:02	SW846 8260B	9072531
Ethylbenzene	0.0367		mg/kg dry	0.00216	1	07/24/09 17:02	SW846 8260B	9072531
Naphthalene	1.45		mg/kg dry	0.271	50	07/27/09 17:53	SW846 8260B	9074052
Toluene	0.00577		mg/kg dry	0.00216	1	07/24/09 17:02	SW846 8260B	9072531
Xylenes, total	0.0976		mg/kg dry	0.00539	1	07/24/09 17:02	SW846 8260B	9072531
Surr: 1,2-Dichloroethane-d4 (67-138%)	107 %		gg)	0.00007	,	07/24/09 17:02	SW846 8260B	9072531
Surr: 1,2-Dichloroethane-d4 (67-138%)	97 %					07/27/09 17:53	SW846 8260B	9074052
Surr: Dibromofluoromethane (75-125%)	103 %					07/24/09 17:02	SW846 8260B	9072531
Surr: Dibromofluoromethane (75-125%)	94 %					07/27/09 17:53	SW846 8260B	9074052
Surr: Toluene-d8 (76-129%)	174 %	ZX				07/24/09 17:02	SW846 8260B	9072531
Surr: Toluene-d8 (76-129%)	112 %					07/27/09 17:53	SW846 8260B	9074052
Surr: 4-Bromofluorobenzene (67-147%)	651 %	ZX				07/24/09 17:02	SW846 8260B	9072531
Surr: 4-Bromofluorobenzene (67-147%)	111 %					07/27/09 17:53	SW846 8260B	9074052
Polyaromatic Hydrocarbons by EPA 82	270D							
Acenaphthene	ND		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Acenaphthylene	ND		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Anthracene	ND		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Benzo (a) anthracene	1.84		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Benzo (a) pyrene	1.04		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Benzo (b) fluoranthene	1.53		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Benzo (g,h,i) perylene	ND		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Benzo (k) fluoranthene	0.821		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Chrysene	2.10		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Dibenz (a,h) anthracene	ND		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Fluoranthene	3.02		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Fluorene	1.82		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Naphthalene	1.14		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Phenanthrene	4.41		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
Pyrene	4.06		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
1-Methylnaphthalene	6.55		mg/kg dry	0.801	10	07/20/09 20:34	SW846 8270D	9072561
• •	6.57			0.801	10	07/20/09 20:34	SW846 8270D	9072561
2-Methylnaphthalene			mg/kg dry	0.801	10			
Surr: Terphenyl-d14 (18-120%)	74 % 5 %	7V				07/20/09 20:34	SW846 8270D SW846 8270D	9072561 9072561
Surr: Nitrohanzana d5 (17, 120%)	3 % 64 %	ZX				07/20/09 20:34 07/20/09 20:34	SW846 8270D SW846 8270D	9072561
Surr: Nitrobenzene-d5 (17-120%)	04 %					07/20/09 20:34	S# 040 02/UD	90/2301



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG1390

Project Name: Laurel Bay Housing Project

Project Number:

[none]

Received: 07/17/09 08:00

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NSG1390-03 (1376 Do	ve - Soil) Sam	pled: 07/1	3/09 15:10					
General Chemistry Parameters								
% Dry Solids	88.8		%	0.500	1	07/28/09 08:49	SW-846	9073886
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	ND		mg/kg dry	0.00228	1	07/24/09 17:33	SW846 8260B	9072531
Ethylbenzene	ND		mg/kg dry	0.00228	1	07/24/09 17:33	SW846 8260B	9072531
Naphthalene	ND		mg/kg dry	0.00569	1	07/24/09 17:33	SW846 8260B	9072531
Toluene	ND		mg/kg dry	0.00228	1	07/24/09 17:33	SW846 8260B	9072531
Xylenes, total	ND		mg/kg dry	0.00569	1	07/24/09 17:33	SW846 8260B	9072531
Surr: 1,2-Dichloroethane-d4 (67-138%)	100 %					07/24/09 17:33	SW846 8260B	907253
Surr: Dibromofluoromethane (75-125%)	97 %					07/24/09 17:33	SW846 8260B	907253
Surr: Toluene-d8 (76-129%)	103 %					07/24/09 17:33	SW846 8260B	907253
Surr: 4-Bromofluorobenzene (67-147%)	117%					07/24/09 17:33	SW846 8260B	907253
Polyaromatic Hydrocarbons by EPA 82	270D							
Acenaphthene	ND		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Acenaphthylene	ND		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Anthracene	ND		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Benzo (a) anthracene	ND		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Benzo (a) pyrene	0.368		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Benzo (b) fluoranthene	0.202		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Benzo (g,h,i) perylene	0.142		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Benzo (k) fluoranthene	ND		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Chrysene	ND		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Fluoranthene	ND		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Fluorene	ND		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Indeno (1,2,3-cd) pyrene	0.111		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Naphthalene	ND		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Phenanthrene	ND		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Pyrene	ND		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
1-Methylnaphthalene	ND		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
2-Methylnaphthalene	ND		mg/kg dry	0.0736	1	07/19/09 21:22	SW846 8270D	9072561
Surr: Terphenyl-d14 (18-120%)	74 %					07/19/09 21:22	SW846 8270D	907256
Surr: 2-Fluorobiphenyl (14-120%)	56 %					07/19/09 21:22	SW846 8270D	907256
Surr: Nitrobenzene-d5 (17-120%)	58 %					07/19/09 21:22	SW846 8270D	907256



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order: NSG1390

Project Name: Laurel Bay Housing Project

Project Number: [none]

Received: 07/17/09 08:00

			 		Dilution	Analysis		
Analyte	Result	Flag	Units	MRL	Factor	Date/Time	Method	Batch
Sample ID: NSG1390-04 (1382 Do	ove - Soil) Sam	pled: 07 /1	13/09 13:30					
General Chemistry Parameters								
% Dry Solids	84.0		%	0.500	1	07/28/09 08:49	SW-846	9073886
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	ND		mg/kg dry	0.00224	1	07/24/09 18:08	SW846 8260B	9072531
Ethylbenzene	0.201		mg/kg dry	0.00224	1	07/24/09 18:08	SW846 8260B	9072531
Naphthalene	6.89		mg/kg dry	0.299	50	07/27/09 18:24	SW846 8260B	9074052
Toluene	0.0370		mg/kg dry	0.00224	1	07/24/09 18:08	SW846 8260B	9072531
Xylenes, total	1.52		mg/kg dry	0.299	50	07/27/09 18:24	SW846 8260B	9074052
Surr: 1,2-Dichloroethane-d4 (67-138%)	101 %					07/24/09 18:08	SW846 8260B	9072531
Surr: 1,2-Dichloroethane-d4 (67-138%)	96 %					07/27/09 18:24	SW846 8260B	9074052
Surr: Dibromofluoromethane (75-125%)	99 %					07/24/09 18:08	SW846 8260B	9072531
Surr: Dibromofluoromethane (75-125%)	94 %					07/27/09 18:24	SW846 8260B	9074052
Surr: Toluene-d8 (76-129%)	129 %					07/24/09 18:08	SW846 8260B	9072531
Surr: Toluene-d8 (76-129%)	106 %					07/27/09 18:24	SW846 8260B	9074052
Surr: 4-Bromofluorobenzene (67-147%)	670 %	ZX				07/24/09 18:08	SW846 8260B	9072531
Surr: 4-Bromofluorobenzene (67-147%)	109 %					07/27/09 18:24	SW846 8260B	9074052
Polyaromatic Hydrocarbons by EPA 82	270D							
Acenaphthene	ND		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Acenaphthylene	ND		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Anthracene	ND		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Benzo (a) anthracene	1.69		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Benzo (a) pyrene	ND		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Benzo (b) fluoranthene	0.811		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Benzo (g,h,i) perylene	ND		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Benzo (k) fluoranthene	ND		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Chrysene	1.43		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Dibenz (a,h) anthracene	ND		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Fluoranthene	4.62		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Fluorene	1.31		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Naphthalene	2.31		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Phenanthrene	4.02		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
Pyrene	3.81		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
1-Methylnaphthalene	6.27		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
2-Methylnaphthalene	8.85		mg/kg dry	0.787	10	07/20/09 20:55	SW846 8270D	9072561
• •	75 %		mg/kg dry	0.767	10	07/20/09 20:55	SW846 8270D	9072561
Surr: Terphenyl-d14 (18-120%) Surr: 2-Fluorobiphenyl (14-120%)	73 % 4 %	ZX				07/20/09 20:55	SW846 8270D SW846 8270D	9072561
Surr: 2-r tuorootphenyt (14-120%) Surr: Nitrobenzene-d5 (17-120%)	60 %	<i>2</i> .7				07/20/09 20:55	SW846 8270D	9072561



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG1390

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received: 07/17/09 08:00

ANA	IVTIC	AT D	EPORT
AINA		. A. I K	r.rijki

					Dilution	Analysis		
Analyte	Result	Flag	Units	MRL	Factor	Date/Time	Method	Batch
Sample ID: NSG1390-05 (1381 Do	ve - Soil) Sam	pled: 07 /1	14/09 10:15					
General Chemistry Parameters								
% Dry Solids	79.1		%	0.500	1	07/28/09 08:49	SW-846	9073886
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	0.00527		mg/kg dry	0.00212	1	07/25/09 18:10	SW846 8260B	9074033
Ethylbenzene	2.07		mg/kg dry	0.107	50	07/28/09 15:51	SW846 8260B	9073642
Naphthalene	23.7		mg/kg dry	5.33	1000	07/28/09 16:22	SW846 8260B	9073642
Toluene	ND		mg/kg dry	0.00212	1	07/25/09 18:10	SW846 8260B	9074033
Xylenes, total	0.0383		mg/kg dry	0.00531	1	07/25/09 18:10	SW846 8260B	9074033
Surr: 1,2-Dichloroethane-d4 (67-138%)	119 %				-	07/25/09 18:10	SW846 8260B	9074033
Surr: 1,2-Dichloroethane-d4 (67-138%)	94 %					07/28/09 15:51	SW846 8260B	9073642
Surr: 1,2-Dichloroethane-d4 (67-138%)	99 %					07/28/09 16:22	SW846 8260B	9073642
Surr: Dibromofluoromethane (75-125%)	108 %					07/25/09 18:10	SW846 8260B	9074033
Surr: Dibromofluoromethane (75-125%)	94 %					07/28/09 15:51	SW846 8260B	9073642
Surr: Dibromofluoromethane (75-125%)	98 %					07/28/09 16:22	SW846 8260B	9073642
Surr: Toluene-d8 (76-129%)	566 %	ZX				07/25/09 18:10	SW846 8260B	9074033
Surr: Toluene-d8 (76-129%)	117%					07/28/09 15:51	SW846 8260B	9073642
Surr: Toluene-d8 (76-129%)	105 %					07/28/09 16:22	SW846 8260B	9073642
Surr: 4-Bromofluorobenzene (67-147%)	553 %	ZX				07/25/09 18:10	SW846 8260B	9074033
Surr: 4-Bromofluorobenzene (67-147%)	117 %					07/28/09 15:51	SW846 8260B	9073642
Surr: 4-Bromofluorobenzene (67-147%)	110 %					07/28/09 16:22	SW846 8260B	9073642
Polyaromatic Hydrocarbons by EPA 82	270D							
Acenaphthene	ND		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
Acenaphthylene	ND		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
Anthracene	ND		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
Benzo (a) anthracene	ND		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
Benzo (a) pyrene	ND		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
Benzo (b) fluoranthene	ND		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
Benzo (g,h,i) perylene	ND		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
Benzo (k) fluoranthene	ND		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
Chrysene	ND		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
Dibenz (a,h) anthracene	ND			0.835	10	07/20/09 21:16	SW846 8270D	9072561
* ' '			mg/kg dry					
Fluoranthene	ND		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
Fluorene	4.60		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	
Naphthalene	8.57		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
Phenanthrene	10.2		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
Pyrene	ND		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
I-Methylnaphthalene	36.1		mg/kg dry	0.835	10	07/20/09 21:16	SW846 8270D	9072561
2-Methylnaphthalene	56.3		mg/kg dry	4.18	50	07/21/09 15:40	SW846 8270D	9072561
Surr: Terphenyl-d14 (18-120%)	59 %		·			07/20/09 21:16	SW846 8270D	9072561
Surr: 2-Fluorobiphenyl (14-120%)	43 %					07/20/09 21:16	SW846 8270D	9072561
Surr: Nitrobenzene-d5 (17-120%)	45 %					07/20/09 21:16	SW846 8270D	9072561



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

10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

NSG1390 Work Order:

Laurel Bay Housing Project Project Name:

Project Number:

[none]

Received:

07/17/09 08:00

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NSG1390-06 (1385 Do	ove - Soil) Samj	oled: 07/1	4/09 15:10					
General Chemistry Parameters								
% Dry Solids	82.0		%	0.500	1	07/28/09 08:49	SW-846	9073886
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	0.00500		mg/kg dry	0.00197	1	07/25/09 18:41	SW846 8260B	9074033
Ethylbenzene	2.90		mg/kg dry	0.110	50	07/28/09 16:53	SW846 8260B	9073642
Naphthalene	20.6		mg/kg dry	5.51	1000	07/28/09 17:24	SW846 8260B	9073642
Tolucne	ND		mg/kg dry	0.00197	1	07/25/09 18:41	SW846 8260B	9074033
Xylenes, total	3.75		mg/kg dry	0.276	50	07/28/09 16:53	SW846 8260B	9073642
Surr: 1,2-Dichloroethane-d4 (67-138%)	92 %		mg/kg ury	0.270	50			9074033
Surr: 1,2-Dichloroethane-d4 (67-138%)	92 % 96 %					07/25/09 18:41 07/28/09 16:53	SW846 8260B SW846 8260B	9073642
Surr: 1,2-Dichloroethane-d4 (67-138%)	90 % 98 %					07/28/09 10:33	SW846 8260B	9073642
Surr: Dibromofluoromethane (75-125%)	92 %					07/25/09 17:24	SW846 8260B	9074033
Surr: Dibromofluoromethane (75-125%)	94 %					07/28/09 16:53	SW846 8260B	9073642
Surr: Dibromofluoromethane (75-125%)	97%					07/28/09 17:24	SW846 8260B	9073642
Surr: Toluene-d8 (76-129%)	219 %	ZX				07/25/09 18:41	SW846 8260B	9074033
Surr: Toluene-d8 (76-129%)	119 %					07/28/09 16:53	SW846 8260B	9073642
Surr: Toluene-d8 (76-129%)	105 %					07/28/09 17:24	SW846 8260B	9073642
Surr: 4-Bromofluorobenzene (67-147%)	352 %	ZX				07/25/09 18:41	SW846 8260B	9074033
Surr: 4-Bromofluorobenzene (67-147%)	117%					07/28/09 16:53	SW846 8260B	9073642
Surr: 4-Bromofluorobenzene (67-147%)	108 %					07/28/09 17:24	SW846 8260B	9073642
Polyaromatic Hydrocarbons by EPA 82	270D							
Acenaphthene	ND		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
Acenaphthylene	ND		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
Anthracene	ND		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
Benzo (a) anthracene	1.17		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
Benzo (a) pyrene	ND		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
Benzo (b) fluoranthene	ND		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
Benzo (g,h,i) perylene	ND		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
Benzo (k) fluoranthene	ND		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
` '					10	07/20/09 21:37	SW846 8270D	9072561
Chrysene Dilema (a.b.) anthra anna	1.36		mg/kg dry	0.797				
Dibenz (a,h) anthracene	ND		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
Fluoranthene	2.83		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
Fluorenc	5.11		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
Naphthalene	14.5		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
Phenanthrene	11.8		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
Pyrene	2.98		mg/kg dry	0.797	10	07/20/09 21:37	SW846 8270D	9072561
1-Mcthylnaphthalene	32.2		mg/kg dry	3.98	50	07/22/09 14:50	SW846 8270D	9072561
2-Methylnaphthalene	49.2		mg/kg dry	3.98	50	07/22/09 14:50	SW846 8270D	9072561
Surr: Terphenyl-d14 (18-120%)	80 %					07/20/09 21:37	SW846 8270D	9072561
Surr: 2-Fluorobiphenyl (14-120%)	7%	ZX				07/20/09 21:37	SW846 8270D	9072561
Surr: Nitrobenzene-d5 (17-120%)	83 %					07/20/09 21:37	SW846 8270D	9072561



10179 Highway 78 Ladson, SC 29456

Attn Tom McElwee

Work Order:

NSG1390

Project Name:

Laurel Bay Housing Project

Project Number: [none]

Received: 07/17/09 08:00

SAMPLE EXTRACTION DATA

			Wt/Vol				Extraction
Parameter	Batch	Lab Number	Extracted	Extracted Vol	Date	Analyst	Method
Polyaromatic Hydrocarbons by EPA	8270D						
SW846 8270D	9072561	NSG1390-01	30.19	1.00	07/18/09 12:25	AJK	EPA 3550B
SW846 8270D	9072561	NSG1390-02	30.06	1.00	07/18/09 12:25	AJK	EPA 3550B
SW846 8270D	9072561	NSG1390-02RE1	30.06	1.00	07/18/09 12:25	AJK	EPA 3550B
SW846 8270D	9072561	NSG1390-03	30.76	1.00	07/18/09 12:25	AJK	EPA 3550B
SW846 8270D	9072561	NSG1390-04	30.40	1.00	07/18/09 12:25	AJK	EPA 3550B
SW846 8270D	9072561	NSG1390-04RE1	30.40	1.00	07/18/09 12:25	AJK	EPA 3550B
SW846 8270D	9072561	NSG1390-05	30.42	1.00	07/18/09 12:25	AJK	EPA 3550B
SW846 8270D	9072561	NSG1390-05RE1	30.42	1.00	07/18/09 12:25	AJK	EPA 3550B
SW846 8270D	9072561	NSG1390-05RE2	30.42	1.00	07/18/09 12:25	AJK	EPA 3550B
SW846 8270D	9072561	NSG1390-06	30.77	1.00	07/18/09 12:25	AJK	EPA 3550B
SW846 8270D	9072561	NSG1390-06RE1	30.77	1.00	07/18/09 12:25	AJK	EPA 3550B
SW846 8270D	9072561	NSG1390-06RE2	30.77	1.00	07/18/09 12:25	AJK	EPA 3550B
Selected Volatile Organic Compound	s by EPA Method	8260B					
SW846 8260B	9072531	NSG1390-01	5.90	5.00	07/13/09 10:00	JRL	EPA 5035
SW846 8260B	9072531	NSG1390-02	5.55	5.00	07/13/09 09:50	JRL	EPA 5035
SW846 8260B	9074052	NSG1390-02RE1	5.52	5.00	07/13/09 09:50	JRL	EPA 5035
SW846 8260B	9072531	NSG1390-03	4.95	5.00	07/13/09 15:10	JRL	EPA 5035
SW846 8260B	9072531	NSG1390-04	5.32	5.00	07/13/09 13:30	JRL	EPA 5035
SW846 8260B	9074052	NSG1390-04RE1	4.98	5.00	07/13/09 13:30	JRL	EPA 5035
SW846 8260B	9074052	NSG1390-04RE2	4.98	5.00	07/13/09 13:30	JRL	EPA 5035
SW846 8260B	9074033	NSG1390-05	5.95	5.00	07/14/09 10:15	JRL	EPA 5035
SW846 8260B	9074052	NSG1390-05RE1	5.93	5.00	07/14/09 10:15	JRL	EPA 5035
SW846 8260B	9073642	NSG1390-05RE2	5.93	5.00	07/14/09 10:15	JRL	EPA 5035
SW846 8260B	9073642	NSG1390-05RE3	5.93	5.00	07/14/09 10:15	JRL	EPA 5035
SW846 8260B	9074033	NSG1390-06	6.19	5.00	07/14/09 15:10	JRL	EPA 5035
SW846 8260B	9073642	NSG1390-06RE1	5.53	5.00	07/14/09 15:10	JRL	EPA 5035
SW846 8260B	9073642	NSG1390-06RE2	5.53	5.00	07/14/09 15:10	JRL	EPA 5035



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order: NSG1390

Project Name: Laurel Bay Housing Project

Project Number: [none]

Received: 07/17/09 08:00

PROJECT QUALITY CONTROL DATA Blank

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time	
Selected Volatile Organic Comp	ounds by EPA Method	8260B					
9072531-BLK1							
Benzene	< 0.000670		mg/kg wet	9072531	9072531-BLK1	07/24/09 15:59	
Ethylbenzene	< 0.000670		mg/kg wet	9072531	9072531-BLK1	07/24/09 15:59	
Naphthalene	< 0.00170		mg/kg wet	9072531	9072531-BLK1	07/24/09 15:59	
Toluene	< 0.000400		mg/kg wet	9072531	9072531-BLK1	07/24/09 15:59	
Xylenes, total	< 0.00130		mg/kg wet	9072531	9072531-BLK1	07/24/09 15:59	
Surrogate: 1,2-Dichloroethane-d4	100%			9072531	9072531-BLK1	07/24/09 15:59	
Surrogate: Dibromofluoromethane	98%			9072531	9072531-BLK1	07/24/09 15:59	
Surrogate: Toluene-d8	105%			9072531	9072531-BLK1	07/24/09 15:59	
Surrogate: 4-Bromofluorobenzene	104%			9072531	9072531-BLK1	07/24/09 15:59	
9073642-BLK1							
Benzene	< 0.000670		mg/kg wet	9073642	9073642-BLK1	07/28/09 15:16	
Ethylbenzene	< 0.000670		mg/kg wet	9073642	9073642-BLK1	07/28/09 15:16	
Naphthalene	< 0.00170		mg/kg wet	9073642	9073642-BLK1	07/28/09 15:16	
Toluene	< 0.000400		mg/kg wet	9073642	9073642-BLK1	07/28/09 15:16	
Xylenes, total	< 0.00130		mg/kg wet	9073642	9073642-BLK1	07/28/09 15:16	
Surrogate: 1,2-Dichloroethane-d4	102%			9073642	9073642-BLK1	07/28/09 15:16	
Surrogate: Dibromofluoromethane	98%			9073642	9073642-BLK1	07/28/09 15:16	
Surrogate: Toluene-d8	108%			9073642	9073642-BLK1	07/28/09 15:16	
Surrogate: 4-Bromofluorobenzene	110%			9073642	9073642-BLK1	07/28/09 15:16	
9074033-BLK1							
Benzene	< 0.000670		mg/kg wet	9074033	9074033-BLK1	07/25/09 17:34	
Ethylbenzene	< 0.000670		mg/kg wet	9074033	9074033-BLK1	07/25/09 17:34	
Naphthalene	< 0.00170		mg/kg wet	9074033	9074033-BLK1	07/25/09 17:34	
Toluene	< 0.000400		mg/kg wet	9074033	9074033-BLK1	07/25/09 17:34	
Xylenes, total	< 0.00130		mg/kg wet	9074033	9074033-BLK1	07/25/09 17:34	
Surrogate: 1,2-Dichloroethane-d4	99%			9074033	9074033-BLK1	07/25/09 17:34	
Surrogate: Dibromofluoromethane	99%			9074033	9074033-BLK1	07/25/09 17:34	
Surrogate: Toluene-d8	105%			9074033	9074033-BLK1	07/25/09 17:34	
Surrogate: 4-Bromofluorobenzene	110%			9074033	9074033-BLK1	07/25/09 17:34	
9074052-BLK1							
Benzene	< 0.000670		mg/kg wet	9074052	9074052-BLK1	07/27/09 16:19	
Ethylbenzene	<0.000670		mg/kg wet	9074052	9074052-BLK1	07/27/09 16:19	
Naphthalene	< 0.00170		mg/kg wet	9074052	9074052-BLK1	07/27/09 16:19	
Toluene	< 0.000400		mg/kg wet	9074052	9074052-BLK1	07/27/09 16:19	
Xylenes, total	< 0.00130		mg/kg wet	9074052	9074052-BLK1	07/27/09 16:19	
Surrogate: 1,2-Dichloroethane-d4	101%			9074052	9074052-BLK1	07/27/09 16:19	
Surrogate: Dibromofluoromethane	97%			9074052	9074052-BLK1	07/27/09 16:19	
Surrogate: Toluene-d8	107%			9074052	9074052-BLK1	07/27/09 16:19	
Surrogate: 4-Bromofluorobenzene	109%			9074052	9074052-BLK1	07/27/09 16:19	



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

Received:

NSG1390

Project Name:

Laurel Bay Housing Project

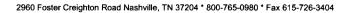
Project Number:

oer: [none]

07/17/09 08:00

PROJECT QUALITY CONTROL DATA Blank - Cont.

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
Selected Volatile Organic Co	ompounds by EPA Method	8260B				
Polyaromatic Hydrocarbons	s by EPA 8270D					
9072561-BLK1						
Acenaphthene	< 0.0320		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
Acenaphthylene	< 0.0310		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
Anthracene	< 0.0330		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
Benzo (a) anthracene	< 0.0380		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
Benzo (a) pyrene	< 0.0300		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
Benzo (b) fluoranthene	< 0.0300		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
enzo (g,h,i) perylene	< 0.0300		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
enzo (k) fluoranthene	< 0.0300		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
hrysene	< 0.0400		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
Dibenz (a,h) anthracene	< 0.0310		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
uoranthene	< 0.0340		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
luorene	< 0.0360		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
ndeno (1,2,3-cd) pyrene	< 0.0310		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
aphthalene	< 0.0410		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
henanthrene	< 0.0340		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
yrene	< 0.0410		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
Methylnaphthalene	< 0.0320		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
Methylnaphthalene	< 0.0330		mg/kg wet	9072561	9072561-BLK1	07/19/09 17:27
rogate: Terphenyl-d14	101%			9072561	9072561-BLK1	07/19/09 17:27
rrogate: 2-Fluorobiphenyl	71%			9072561	9072561-BLK1	07/19/09 17:27
rrogate: Nitrobenzene-d5	68%			9072561	9072561-BLK1	07/19/09 17:27





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG1390

Project Name:

Laurel Bay Housing Project

Project Number:

Received:

[none]

07/17/09 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 9073886-DUP1 % Dry Solids	78.8	79.6		%	1	20	9073886	NSG1390-01		07/28/09 08:49



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order: NSG1390

Project Name: Laurel Bay Housing Project

Project Number: [none]

Received: 07/17/09 08:00

PROJECT QUALITY CONTROL DATA LCS

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
Selected Volatile Organic Compour	nds by EPA Method 82	60B						
9072531-BS1	·							
Benzene	50.0	49.5		ug/kg	99%	78 - 126	9072531	07/24/09 13:38
Ethylbenzene	50.0	62.7		ug/kg	125%	79 - 130	9072531	07/24/09 13:38
Naphthalene	50.0	63.2		ug/kg	126%	72 - 150	9072531	07/24/09 13:38
Toluene	50.0	57.1		ug/kg	114%	76 - 126	9072531	07/24/09 13:38
Xylenes, total	150	191		ug/kg	128%	80 - 130	9072531	07/24/09 13:38
Surrogate: 1,2-Dichloroethane-d4	50.0	47.7			95%	67 - 138	9072531	07/24/09 13:38
Surrogate: Dibromofluoromethane	50.0	49.1			98%	75 - 125	9072531	07/24/09 13:38
Surrogate: Toluene-d8	50.0	52.7			105%	76 - 129	9072531	07/24/09 13:38
Surrogate: 4-Bromofluorobenzene	50.0	50.4			101%	67 - 147	9072531	07/24/09 13:38
9073642-BS1								
Benzene	50.0	49.6		ug/kg	99%	78 - 126	9073642	07/28/09 13:41
Ethylbenzene	50.0	59.2		ug/kg	118%	79 - 130	9073642	07/28/09 13:41
Naphthalene	50.0	66.9		ug/kg	134%	72 - 150	9073642	07/28/09 13:41
Toluene	50.0	55.5		ug/kg	111%	76 - 126	9073642	07/28/09 13:41
Xylenes, total	150	177		ug/kg	118%	80 - 130	9073642	07/28/09 13:41
Surrogate: 1,2-Dichloroethane-d4	50.0	52.3			105%	67 - 138	9073642	07/28/09 13:41
Surrogate: Dibromofluoromethane	50.0	49.9			100%	75 - 125	9073642	07/28/09 13:41
Surrogate: Toluene-d8	50.0	53.1			106%	76 - 129	9073642	07/28/09 13:41
Surrogate: 4-Bromofluorobenzene	50.0	53.8			108%	67 - 147	9073642	07/28/09 13:41
9074033-BS1								
Benzene	50.0	50.6		ug/kg	101%	78 - 126	9074033	07/25/09 15:10
Ethylbenzene	50.0	50.0		ug/kg	100%	79 - 130	9074033	07/25/09 15:10
Naphthalene	50.0	54.8		ug/kg	110%	72 - 150	9074033	07/25/09 15:10
Toluene	50.0	51.8		ug/kg	104%	76 - 126	9074033	07/25/09 15:10
Xylenes, total	150	145		ug/kg	97%	80 - 130	9074033	07/25/09 15:10
Surrogate: 1,2-Dichloroethane-d4	50.0	51.1			102%	67 - 138	9074033	07/25/09 15:10
Surrogate: Dibromofluoromethane	50.0	51.2			102%	75 - 125	9074033	07/25/09 15:10
Surrogate: Toluene-d8	50.0	52.6			105%	76 - 129	9074033	07/25/09 15:10
Surrogate: 4-Bromofluorobenzene	50.0	57.8			116%	67 - 147	9074033	07/25/09 15:10
9074052-BS1								
Benzene	50.0	50.0		ug/kg	100%	78 - 126	9074052	07/27/09 14:10
Ethylbenzene	50.0	57.8		ug/kg	116%	79 - 130	9074052	07/27/09 14:10
Naphthalene	50.0	60.8		ug/kg	122%	72 - 150	9074052	07/27/09 14:10
Toluene	50.0	53.8		ug/kg	108%	76 - 126	9074052	07/27/09 14:10
Xylenes, total	150	172		ug/kg	115%	80 - 130	9074052	07/27/09 14:10
Surrogate: 1,2-Dichloroethane-d4	50.0	52.2			104%	67 - 138	9074052	07/27/09 14:10
Surrogate: Dibromofluoromethane	50.0	49.8			100%	75 - 125	9074052	07/27/09 14:10
Surrogate: Toluene-d8	50.0	52.4			105%	76 - 129	9074052	07/27/09 14:10
Surrogate: 4-Bromofluorobenzene	50.0	52.0			104%	67 - 147	9074052	07/27/09 14:10



10179 Highway 78 Ladson, SC 29456

Tom McElwee

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Work Order: NSG1390

Project Name: Laurel Bay Housing Project

Project Number: [none]

Received: 07/17/09 08:00

PROJECT QUALITY CONTROL DATA LCS - Cont.

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
Selected Volatile Organic Compo	ounds by EPA Method 82	60B						
Polyaromatic Hydrocarbons by F	EPA 8270D							
9072561-BS1								
Acenaphthene	1.67	1.43		mg/kg wet	86%	49 - 120	9072561	07/19/09 17:4
Acenaphthylene	1.67	1.52		mg/kg wet	91%	52 - 120	9072561	07/19/09 17:4
Anthracene	1.67	1.72		mg/kg wet	103%	58 - 120	9072561	07/19/09 17:4
Benzo (a) anthracene	1.67	1.64		mg/kg wet	98%	57 - 120	9072561	07/19/09 17:4
Benzo (a) pyrene	1.67	1.69		mg/kg wet	102%	55 - 120	9072561	07/19/09 17:4
Benzo (b) fluoranthene	1.67	1.50		mg/kg wet	90%	51 - 123	9072561	07/19/09 17:4
Benzo (g,h,i) perylene	1.67	1.72		mg/kg wet	103%	49 - 121	9072561	07/19/09 17:4
Benzo (k) fluoranthene	1.67	1.62		mg/kg wet	97%	42 - 129	9072561	07/19/09 17:4
Chrysene	1.67	1.59		mg/kg wet	95%	55 - 120	9072561	07/19/09 17:4
Dibenz (a,h) anthracene	1.67	1.76		mg/kg wet	106%	50 - 123	9072561	07/19/09 17:4
Fluoranthene	1.67	1.54		mg/kg wet	92%	58 - 120	9072561	07/19/09 17:4
Fluorene	1.67	1.48		mg/kg wet	89%	54 - 120	9072561	07/19/09 17:4
Indeno (1,2,3-cd) pyrene	1.67	1.77		mg/kg wet	106%	50 - 122	9072561	07/19/09 17:4
Naphthalene	1.67	1.38		mg/kg wet	83%	28 - 107	9072561	07/19/09 17:4
Phenanthrene	1.67	1.56		mg/kg wet	94%	56 - 120	9072561	07/19/09 17:4
Pyrene	1.67	1.61		mg/kg wet	97%	56 - 120	9072561	07/19/09 17:4
l-Methylnaphthalene	1.67	1.23		mg/kg wet	74%	36 - 120	9072561	07/19/09 17:4
2-Methylnaphthalene	1.67	1.27		mg/kg wet	76%	36 - 120	9072561	07/19/09 17:4
Surrogate: Terphenyl-d14	1.67	1.60			96%	18 - 120	9072561	07/19/09 17:4
Surrogate: 2-Fluorobiphenyl	1.67	1.50			90%	14 - 120	9072561	07/19/09 17:4
Surrogate: Nitrobenzene-d5	1.67	1.21			72%	17 - 120	9072561	07/19/09 17:



10179 Highway 78 Ladson, SC 29456

Tom McElwec

Attn

Work Order: NSG1390

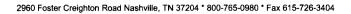
Project Name: Laurel Bay Housing Project

Project Number: [none]

Received: 07/17/09 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 Compo	ounds by EPA N	Aethod 826	60 B									
9072531-BSD1												
Benzene		48.7		ug/kg	50.0	97%	78 - 126	2	50	9072531		07/24/09 14:1
Ethylbenzene		60.9		ug/kg	50.0	122%	79 - 130	3	50	9072531		07/24/09 14:1
Naphthalene		67.7		ug/kg	50.0	135%	72 - 150	7	50	9072531		07/24/09 14:1
Toluene		54.9		ug/kg	50.0	110%	76 - 126	4	50	9072531		07/24/09 14:1
Xylenes, total		187		ug/kg	150	124%	80 - 130	3	50	9072531		07/24/09 14:1
Surrogate: 1,2-Dichloroethane-d4		50.6		ug/kg	50.0	101%	67 - 138			9072531		07/24/09 14:1
Surrogate: Dibromofluoromethane		49.6		ug/kg	50.0	99%	75 - 125			9072531		07/24/09 14:1
Surrogate: Toluene-d8		51.9		ug/kg	50.0	104%	76 - 129			9072531		07/24/09 14:1
Surrogate: 4-Bromofluorobenzene		50.6		ug/kg	50.0	101%	67 - 147			9072531		07/24/09 14:10
9073642-BSD1												
Benzene		49.1		ug/kg	50.0	98%	78 - 126	1	50	9073642		07/28/09 14:1:
Ethylbenzene		59.0		ug/kg	50.0	118%	79 - 130	0.4	50	9073642		07/28/09 14:1:
Naphthalene		54.7		ug/kg	50.0	109%	72 - 150	20	50	9073642		07/28/09 14:1:
Toluene		54.2		ug/kg	50,0	108%	76 - 126	2	50	9073642		07/28/09 14:1:
Xylenes, total		175		ug/kg	150	117%	80 - 130	1	50	9073642		07/28/09 14:13
Surrogate: 1,2-Dichloroethane-d4		49.8		ug/kg	50.0	100%	67 - 138			9073642		07/28/09 14:13
Surrogate: Dibromofluoromethane		48.7		ug/kg	50.0	97%	75 - 125			9073642		07/28/09 14:1:
Surrogate: Toluene-d8		52.4		ug/kg	50.0	105%	76 - 129			9073642		07/28/09 14:13
Surrogate: 4-Bromofluorobenzene		53.1		ug/kg	50.0	106%	67 - 147			9073642		07/28/09 14:13
9074033-BSD1												
Benzene		51.8		ug/kg	50.0	104%	78 - 126	2	50	9074033		07/25/09 15:5
Ethylbenzene		53.0		ug/kg	50.0	106%	79 - 130	6	50	9074033		07/25/09 15:5
Naphthalene		49.0		ug/kg	50.0	98%	72 - 150	11	50	9074033		07/25/09 15:5
Toluene		53.0		ug/kg	50.0	106%	76 - 126	2	50	9074033		07/25/09 15:5
Xylenes, total		155		ug/kg	150	103%	80 - 130	6	50	9074033		07/25/09 15:5
Surrogate: 1,2-Dichloroethane-d4		49.7		ug/kg	50.0	99%	67 - 138			9074033		07/25/09 15:5
Surrogate: Dibromofluoromethane		49.4		ug/kg	50.0	99%	75 - 125			9074033		07/25/09 15:5
Surrogate: Toluene-d8		52.0		ug/kg	50.0	104%	76 - 129			9074033		07/25/09 15:5
Surrogate: 4-Bromofluorobenzene		52.4		ug/kg	50.0	105%	67 - 147			9074033		07/25/09 15:5
074052-BSD1												
Benzene		49.3		ug/kg	50.0	99%	78 - 126	1	50	9074052		07/27/09 14:4
Ethylbenzene		56.9		ug/kg	50.0	114%	79 - 130	2	50	9074052		07/27/09 14:4
Naphthalene		60.1		ug/kg	50.0	120%	72 - 150	1	50	9074052		07/27/09 14:4
Toluene		52.6		ug/kg	50.0	105%	76 - 126	2	50	9074052		07/27/09 14:4
Xylenes, total		170		ug/kg	150	113%	80 - 130	1	50	9074052		07/27/09 14:4
urrogate: 1,2-Dichloroethane-d4		50.5		ug/kg	50.0	101%	67 - 138			9074052		07/27/09 14:4
urrogate: Dibromofluoromethane		49.1		ug/kg	50.0	98%	75 - 125			9074052		07/27/09 14:4
Surrogate: Toluene-d8		51.9		ug/kg	50.0	104%	76 - 129			9074052		07/27/09 14:4





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSG1390

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received:

07/17/09 08:00

PROJECT QUALITY CONTROL DATA LCS Dup - Cont.

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD Limit	Batch	Sample Duplicated	Analyzed Date/Time
Selected Volatile Organic Compo	ands by EPA	Method 826	50B								
9074052-BSD1											
Surrogate: 4-Bromofluorobenzene		51.7		ug/kg	50.0	103%	67 - 147		9074052		07/27/09 14:41



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order: NSG1390

Project Name: Laurel Bay Housing Project

Project Number: [none]

Received: 07/17/09 08:00

PROJECT QUALITY CONTROL DATA Matrix Spike

				Mail IX Spir	<u> </u>					
Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
Selected Volatile Organic Compour	nds by EPA Me	thod 8260B		-						
9073642-MS1										
Benzene	16.9	66.8		ug/kg	50.0	100%	42 - 141	9073642	NSG2001-03	07/28/09 22:49
Ethylbenzene	280	502	M7	ug/kg	50.0	445%	21 - 165	9073642	NSG2001-03	07/28/09 22:49
Naphthalene	356	755	M7	ug/kg	50.0	798%	10 - 160	9073642	NSG2001-03	07/28/09 22:49
Toluene	14.7	66.3		ug/kg	50.0	103%	45 - 145	9073642	NSG2001-03	07/28/09 22:49
Xylenes, total	32.4	230		ug/kg	150	132%	31 - 159	9073642	NSG2001-03	07/28/09 22:49
Surrogate: 1,2-Dichloroethane-d4		45.0		ug/kg	50.0	90%	67 - 138	9073642	NSG2001-03	07/28/09 22:49
Surrogate: Dibromofluoromethane		40.1		ug/kg	50.0	80%	75 - 125	9073642	NSG2001-03	07/28/09 22:49
Surrogate: Toluene-d8		85.1	ZX	ug/kg	50.0	170%	76 - 129	9073642	NSG2001-03	07/28/09 22:49
Surrogate: 4-Bromofluorobenzene		· 110	ZX	ug/kg	50.0	220%	67 - 147	9073642	NSG2001-03	07/28/09 22:49
Polyaromatic Hydrocarbons by EP	A 8270D									
9072561-MS1										
Acenaphthene	ND	1.29		mg/kg dry	1.85	70%	42 - 120	9072561	NSG1390-03	07/19/09 18:09
Acenaphthylene	ND	1.30		mg/kg dry	1.85	70%	32 - 120	9072561	NSG1390-03	07/19/09 18:09
Anthracene	ND	1.60		mg/kg dry	1.85	86%	10 - 200	9072561	NSG1390-03	07/19/09 18:09
Benzo (a) anthracene	ND	1.40		mg/kg dry	1.85	76%	41 - 120	9072561	NSG1390-03	07/19/09 18:09
Benzo (a) pyrene	0.368	1.50		mg/kg dry	1.85	61%	33 - 121	9072561	NSG1390-03	07/19/09 18:09
Benzo (b) fluoranthene	0.202	1.71		mg/kg dry	1.85	82%	26 - 137	9072561	NSG1390-03	07/19/09 18:09
Benzo (g,h,i) perylene	0.142	1.57		mg/kg dry	1.85	77%	21 - 124	9072561	NSG1390-03	07/19/09 18:09
Benzo (k) fluoranthene	ND	1.61		mg/kg dry	1.85	87%	14 - 140	9072561	NSG1390-03	07/19/09 18:09
Chrysene	0.0670	1.56		mg/kg dry	1.85	81%	28 - 123	9072561	NSG1390-03	07/19/09 18:09
Dibenz (a,h) anthracene	ND	1.50		mg/kg dry	1.85	81%	25 - 127	9072561	NSG1390-03	07/19/09 18:09
Fluoranthene	ND	1.52		mg/kg dry	1.85	82%	38 - 120	9072561	NSG1390-03	07/19/09 18:09
Fluorene	ND	1.51		mg/kg dry	1.85	81%	41 - 120	9072561	NSG1390-03	07/19/09 18:09
Indeno (1,2,3-cd) pyrene	0.111	1.63		mg/kg dry	1.85	82%	25 - 123	9072561	NSG1390-03	07/19/09 18:09
Naphthalene	ND	1.19		mg/kg dry	1.85	64%	25 - 120	9072561	NSG1390-03	07/19/09 18:09
Phenanthrene	ND	1.51		mg/kg dry	1.85	81%	37 - 120	9072561	NSG1390-03	07/19/09 18:09
Pyrene	ND	1.55		mg/kg dry	1.85	84%	29 - 125	9072561	NSG1390-03	07/19/09 18:09
1-Methylnaphthalene	ND	1.14		mg/kg dry	1.85	62%	19 - 120	9072561	NSG1390-03	07/19/09 18:09
2-Methylnaphthalene	ND	1.15		mg/kg dry	1.85	62%	11 - 120	9072561	NSG1390-03	07/19/09 18:09
Surrogate: Terphenyl-d14		1.52		mg/kg dry	1.85	82%	18 - 120	9072561	NSG1390-03	07/19/09 18:09
Surrogate: 2-Fluorobiphenyl										
Burroguie. 2-1 tuorootphenyt		1.15		mg/kg dry	1.85	62%	14 - 120	9072561	NSG1390-03	07/19/09 18:09



10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

Received:

NSG1390

Project Name:

Laurel Bay Housing Project

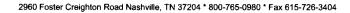
Project Number:

[none]

07/17/09 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 82	60B									
9073642-MSD1												
Benzene	18.7	57.0		ug/kg	50.0	77%	42 - 141	16	50	9073642	NSG2001-03	07/28/09 23:20
Ethylbenzene	310	431	M 7	ug/kg	50.0	243%	21 - 165	15	50	9073642	NSG2001-03	07/28/09 23:20
Naphthalene	394	403	R2	ug/kg	50.0	19%	10 - 160	61	50	9073642	NSG2001-03	07/28/09 23:20
Toluene	16.2	58.2		ug/kg	50.0	84%	45 - 145	13	50	9073642	NSG2001-03	07/28/09 23:20
Xylenes, total	35.9	186		ug/kg	150	100%	31 - 159	21	50	9073642	NSG2001-03	07/28/09 23:20
Surrogate: 1,2-Dichloroethane-d4		46.1		ug/kg	50.0	92%	67 - 138			9073642	NSG2001-03	07/28/09 23:20
Surrogate: Dibromofluoromethane		41.2		ug/kg	50.0	82%	75 - 125			9073642	NSG2001-03	07/28/09 23:20
Surrogate: Toluene-d8		86.4	ZX	ug/kg	50.0	173%	76 - 129			9073642	NSG2001-03	07/28/09 23:20
Surrogate: 4-Bromofluorobenzene		106	ZX	ug/kg	50.0	212%	67 - 147			9073642	NSG2001-03	07/28/09 23:20
Polyaromatic Hydrocarbons by	EPA 8270D											
9072561-MSD1												
Acenaphthene	ND	1.33		mg/kg dry	1.86	71%	42 - 120	3	40	9072561	NSG1390-03	07/19/09 18:31
Acenaphthylene	ND	1.32		mg/kg dry	1.86	71%	32 - 120	2	30	9072561	NSG1390-03	07/19/09 18:3
Anthracene	ND	1.62		mg/kg dry	1.86	87%	10 - 200	2	50	9072561	NSG1390-03	07/19/09 18:3
Benzo (a) anthracene	ND	1.46		mg/kg dr y	1.86	78%	41 - 120	4	30	9072561	NSG1390-03	07/19/09 18:31
Benzo (a) pyrene	0.368	1.49		mg/kg dry	1.86	60%	33 - 121	1	33	9072561	NSG1390-03	07/19/09 18:31
Benzo (b) fluoranthene	0.202	1.77		mg/kg dry	1.86	84%	26 - 137	3	42	9072561	NSG1390-03	07/19/09 18:31
Benzo (g,h,i) perylene	0.142	1.60		mg/kg dry	1.86	78%	21 - 124	2	32	9072561	NSG1390-03	07/19/09 18:31
Benzo (k) fluoranthene	ND	1.50		mg/kg dry	1.86	80%	14 - 140	7	39	9072561	NSG1390-03	07/19/09 18:31
Chrysene	0.0670	1.50		mg/kg dry	1.86	77%	28 - 123	3	34	9072561	NSG1390-03	07/19/09 18:31
Dibenz (a,h) anthracene	ND	1.51		mg/kg dry	1.86	81%	25 - 127	0.8	31	9072561	NSG1390-03	07/19/09 18:31
Fluoranthene	ND	1.60		mg/kg dry	1.86	86%	38 - 120	5	35	9072561	NSG1390-03	07/19/09 18:31
Fluorene	ND	1.48		mg/kg dry	1.86	79%	41 - 120	2	37	9072561	NSG1390-03	07/19/09 18:31
Indeno (1,2,3-cd) pyrene	0.111	1.65		mg/kg dry	1.86	83%	25 - 123	1	32	9072561	NSG1390-03	07/19/09 18:31
Naphthalene	ND	1.21		mg/kg dry	1.86	65%	25 - 120	2	42	9072561	NSG1390-03	07/19/09 18:31
Phenanthrene	ND	1.52		mg/kg dry	1.86	81%	37 - 120	0.7	32	9072561	NSG1390-03	07/19/09 18:31
Pyrene	ND	1.49		mg/kg dry	1.86	80%	29 - 125	4	40	9072561	NSG1390-03	07/19/09 18:31
1-Methylnaphthalene	ND	1.16		mg/kg dry	1.86	62%	19 - 120	1	45	9072561	NSG1390-03	07/19/09 18:31
2-Methylnaphthalene	ND	1.16		mg/kg dry	1.86	62%	11 - 120	0.5	50	9072561	NSG1390-03	07/19/09 18:31
Surrogate: Terphenyl-d14		1.46		mg/kg dry	1.86	78%	18 - 120			9072561	NSG1390-03	07/19/09 18:31
Surrogate: 2-Fluorobiphenyl		1.24		mg/kg dry	1.86	67%	14 - 120			9072561	NSG1390-03	07/19/09 18:31
Surrogate: Nitrobenzene-d5		1.09		mg/kg dry	1.86	59%	17 - 120			9072561	NSG1390-03	07/19/09 18:31





10179 Highway 78

Ladson, SC 29456

Attn Tom McElwee

Work Order:

Received:

NSG1390

Project Name:

Laurel Bay Housing Project

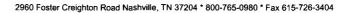
Project Number: [none]

07/17/09 08:00

CERTIFICATION SUMMARY

TestAmerica Nashville

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





10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSG1390

Project Name:

Laurel Bay Housing Project

Project Number: Received:

07/17/09 08:00

DATA QUALIFIERS AND DEFINITIONS

M7 The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS).

R2 The RPD exceeded the acceptance limit.

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

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

METHOD MODIFICATION NOTES

NSG1390 07/31/09 23:59

TestAmeri		Nashville (2960 Foste Nashville,	er Creig	ghton	,		Te	oll Fr	ee: 8(15-726- 00-765- 15-726-	0980	0						meth	ods, is	in using this woo	ig the p ork being s?	roper s g cond	nalytic ucted f	al or			
Client Name/Account #:	EEG # 2449													_						(Compli	ance M	lonitorii	ng?	Yes	s	_ No
Address:	10179 Highway	78																			Enfor	cemen	Action	?	Yes	 s	No No
City/State/Zip:	Ladson, SC 294	56														Site	State:	sc									- '
Project Manager:	Tom McElwee e	mail: mcelwe	e@eeg	jinc.ne	et									_,			PO#:		08	72	9						
Telephone Number:						Fax	No.:	8	43	·-\$7	9	-0	40	<u> </u>		TA Qu	ıote #:										
Sampler Name: (Print)	PRI	AH.	Sh	40	رري									_		Proje	ect ID:	Laure	Bay F	lousing	Projec	ot .					
Sampler Signature:		11					<u>ं)</u>				<u>~</u>			_		Pro	ject #:										
	- 1	1				厂	ते	rese	rvative		J_		Matri	ix						A	nalyze	For:					1
Sample ID/Description 1778 DOUR 1377 DOUR 1376 DOUR 1382 DOUR 1381 DOUR 1385 DOUR	7/13/09 7/13/09 7/13/09 7/13/09 7/14/09	1510	S C Solipped	Grab	Composite	רופוס רוופוכט	NOVO NO NAO-(Red Label)	NaOH (Orange Label)	H-SO, Plastic (Yellow Label)	N N N N N N N N None (Black Laber)	Groundwater	Wastewater	Drinking Water	agonis > + + × ×		(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	W W W W PAH - 8270D										RUSH TAT (Pre-Schedule
	<u> </u>	ļ				\bot	\Box	4-	$\vdash \downarrow$	+	1	++	4	_	\sqcup				<u> </u>	<u> </u>	↓						
	<u></u>	L			L			1_			\perp	$\perp \perp$	Д.	Т.	Ш		<u></u>	<u> </u>	<u></u>	<u></u>	<u> </u>	<u></u>					
Relinquished by:	7/16 Det	09	Tim / 46	20	Receive	ed by:		X	pment	:		7	Date Date	e	EDEX	Time	•	Labo	Temp		ents: Upon in the second seco						Y

ATTACHMENT A



NON-HAZARDOUS MANIFES

CAMA

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)	D No.	Manifost				
NON-HAZARDOUS MANIFEST	D NO.	Manifest ocument No.	2. Page	e 1		
3. Generator's Name and Mailing Address				fest Number	6	A STATE OF THE PARTY.
MCAS, Beaution Laurol Bay Housing Beaution SC 29804						13 1.494.
36 3 1901 542 2004 543 226 5 560			B. State	Generator's ID		
5. Transporter 1 Company Name 6.	US EPA ID Number		C. State	Transporter's ID	<u> </u>	
EEG, inc.		1 1 1	D. Trans	sporter's Phone	3 879	A411
7. Transporter 2 Company Name 8.	US EPA ID Number		E. State	Transporter's ID		
				sporter's Phone		
Designated Facility Name and Site Address 10.	US EPA ID Number		G. State	Facility's ID		
HICKORY HILL LANDFILL			H. Facili	ity's Phone		
ROUTE 1, BOX 121 RIDGELANO SC 29836		1 1 1		-	3 367	4643
11. Description of Waste Materials	 	12. Cont	ainers	13. Total	14. Unit	
aticaling Oil Tank fled with Sand		No.	Туре	Quantity	Wt./Vol.	Misc. Comments
LA SACREGUE AND ANY COMP. DESCRIPTION OF ANY CONTRACT.				6.45		
g WM Profile #	%6 %	0 0 A		1 1 1 1		
b.						
b. WM Profile # WM Profile #			1 1			
WM Profile #					1	
" c.						
WM Profile #] , ,] ,]	1 1 1 1		
		+ $+$ $+$			┼	
) (
WM Profile #						
J. Additional Descriptions for Materials Listed Above			K. Dis	posal Location		
Landfill Solidification			Cell		Leve	el
Bio Remediation						
		7 75	Grid	To July To		N. J. 1997
15. Special Handling Instructions and Additional Information	Service	A SANTA		the desired on and condition as a	terioldenis A	Martinalia of
		1. A. 1. M.	jį v			الواسوب عوق عا الدراع
Purchase Order #	✓ EMERGENCY CONTACT:	:			_	
16. GENERATOR'S CERTIFICATION:						
I hereby certify that the above-described materia						
applicable state law, have been fully and accurat	•	ied and p	ackag	ged, and are	in prop	per condition
for transportation according to applicable regulat						
Printed/Typed Name	Signature "On behalf of"			Jrs.		Month Day Year
T 17. Transporter 1 Acknowledgement of Receipt of Materials	1 CALLAS	X-41 M	A Same to	· ese ·		
R Printed/Tuned Name	Signature					Month Day Year
S Joseph Wile Sten						11/4/1/1/1
18. Transporter 2 Acknowledgement of Receipt of Materials					_	
Printed/Typed Name	Signature				1	Month Day Yeary
1.6. Certificate of Final Treatment/Disposal						
I certify, on behalf of the above listed treatment for	acility that to the bos	t of my b	ממשממ	dae the abo	ie-dec	crihed waste
			1UVVIE	age, the abo	v = -u = S	UIDEU WASIE
					es liste	
was managed in compliance with all applicable la	aws, regulations, perr	mits and I			es liste	
	aws, regulations, perr	mits and I			es liste	

Appendix C Laboratory Analytical Report - Groundwater



Volatile Organic Compounds by GC/MS

Client: AECOM - Resolution Consultants

Description: BEALB1381TW01WG20150622

Laboratory ID: QF24009-005

Matrix: Aqueous

Date Sampled: 06/22/2015 1650 Date Received: 06/24/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date Analyst	Prep Date	Batch
1	5030B	8260B	1	07/03/2015 0100 JJG		78739

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	LOD	DL Units Run
Benzene	71-43-2	8260B	0.45	U	5.0	0.45	0.21 ug/L 1
Ethylbenzene	100-41-4	8260B	3.4	J	5.0	0.51	0.21 ug/L 1
Naphthalene	91-20-3	8260B	24		5.0	0.96	0.14 ug/L 1
Toluene	108-88-3	8260B	0.48	U	5.0	0.48	0.24 ug/L 1
Xylenes (total)	1330-20-7	8260B	0.57	U	5.0	0.57	0.19 ug/L 1

Surrogate	Run 1 A Q % Recovery	Acceptance Limits	
Bromofluorobenzene	99	75-120	
1,2-Dichloroethane-d4	117	70-120	
Toluene-d8	102	85-120	
Dibromofluoromethane	93	85-115	

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

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

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

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

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

P = The RPD between two GC columns exceeds 40%

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 (SIM)

Client: AECOM - Resolution Consultants

Laboratory ID: QF24009-005

Description: BEALB1381TW01WG20150622

Matrix: Aqueous

Date Sampled: 06/22/2015 1650 Date Received: 06/24/2015

Run Prep Method **Analytical Method Dilution Analysis Date Analyst** Batch **Prep Date** 1 3520C 8270D (SIM) 07/08/2015 1455 DRB1 06/25/2015 1604 78141

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzo(a)anthracene	56-55-3	8270D (SIM)	0.056	J	0.20	0.040	0.019	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D (SIM)	0.035	J	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)	0.053	J	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		121	15-139
Fluoranthene-d10		85	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 - Vapor



ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client:AECOMALS Project ID: P1503199Client Sample ID:BEALB 1381 SG01 GS20150729ALS Sample ID: P1503199-015

Client Project ID: WE56-Laurel Bay Military Housing Area, MCAS Beaufort / 60342031.FI.WI

Test Code: EPA TO-15 Date Collected: 7/29/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 8/5/15
Analyst: Simon Cao Date Analyzed: 8/12/15

Sampling Media: 6.0 L Silonite Canister Volume(s) Analyzed: 0.0050 Liter(s)

Test Notes:

Container ID: SSC00263

Initial Pressure (psig): -3.72 Final Pressure (psig): 3.56

Canister Dilution Factor: 1.66

CAS#	Compound	Result μg/m³	$LOQ \ \mu g/m^3$	LOD μg/m³	MDL μg/m³	Data Qualifier
71-43-2	Benzene	79	170	150	53	J
108-88-3	Toluene	150	170	150	56	\mathbf{U}
100-41-4	Ethylbenzene	5,100	170	150	53	
179601-23-1	m,p-Xylenes	290	330	290	100	${f U}$
95-47-6	o-Xylene	140	170	140	50	${f U}$
91-20-3	Naphthalene	520	170	150	60	

U = Undetected at the limit of detection: The associated data value is the limit of detection, adjusted by any dilution factor used in the analysis. LOQ = Limit of Quantitation - The minimum quantity of a target analyte that can be confidently determined by the referenced method. J = The result is an estimated concentration that is less than the LOQ but greater than or equal to the MDL.

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

LINA

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)

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 Fur	ther 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	7371
453 Elderberry Drive	1414 Albatross Drive	
464 Dogwood Drive	1417 Albatross Drive	
466 Dogwood Drive	1421 Albatross Drive	20214
467 Dogwood Drive	1422 Albatross Drive	10011
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 20, 2017

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

RE: Approval Response to Comments and Draft Final Revision 1 Vapor Intrusion Report July 2015, January 2016 and May 2016, Laurel Bay Military Housing Area, Multiple Properties

RE: Approval Response to Comments and Draft Final Revision 1 Letter Report - Petroleum Vapor Intrusion Investigations - June 2016 and January 2017, Multiple Properties, Laurel Bay Military Housing Area

Dear Mr. Drawdy:

The South Carolina Department of Health and Environmental Control (DHEC) received the above referenced response to comments and errata pages on May 24 and June 7, 2017. 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 response to comments and errata pages. Based on this review, DHEC did not generate any additional comments. 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

ZI RE

Department of Defense Corrective Action Section

Cc:

Russell Berry, EQC Region 8

Shawn Dolan, Resolution Consultants Bryan Beck, NAVFAC MIDLANT