SUMMARY REPORT
843 WEST LAUREL BAY BOULEVARD (FORMERLY 140 WEST LAUREL BAY
BOULEVARD)
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
843 WEST LAUREL BAY BOULEVARD (FORMERLY 140 WEST LAUREL BAY
BOULEVARD)
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

Prepared by:



**Multimedia Joint Venture** 

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	CTION
1.1 1.2		ND INFORMATION
2.0	SAMPLING	ACTIVITIES AND RESULTS 3
2.1 2.2 2.3 2.4	SOIL ANAL GROUNDW	OVAL AND SOIL SAMPLING
3.0	PROPERTY	<b>STATUS</b>
4.0	REFERENC	YES5
Table Table		Tables  Laboratory Analytical Results - Soil  Laboratory Analytical Results - Groundwater
		Appendices
Appen Appen Appen Appen	dix B dix C	Multi-Media Selection Process for LBMH UST Assessment Report Laboratory Analytical Report - Groundwater 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 QAPP Quality Assurance Program Plan

RBSL risk-based screening level

SCDHEC South Carolina Department of Health and Environmental Control

Site LBMH area at MCAS Beaufort, South Carolina

UST underground storage tank
VISL vapor intrusion screening level



### 1.0 INTRODUCTION

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

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

This report summarizes the results the environmental investigation activities associated with the storage of home heating oil and the potential release of petroleum constituents at the referenced property. Based on the results of the investigation, a No Further Action (NFA) determination has been made by the South Carolina Department of Health and Environmental Control (SCDHEC) for 843 West Laurel Bay Boulevard (Formerly 140 West Laurel Bay Boulevard). This NFA determination indicates that there are no unacceptable risks to human health or the environment for the petroleum constituents associated with the home heating oil USTs. The following information is included in this report:

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

## 1.1 Background Information

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



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

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

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

## 1.2 UST Removal and Assessment Process

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

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

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



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

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

## 2.0 SAMPLING ACTIVITIES AND RESULTS

The following section presents the sampling activities and associated results for 843 West Laurel Bay Boulevard (Formerly 140 West Laurel Bay Boulevard). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 140 Laurel Bay Boulevard* (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 – July 2013* (Resolution Consultants, 2015). The laboratory report that includes the pertinent IGWA analytical results for this site is presented in Appendix C.

## 2.1 UST Removal and Soil Sampling

On March 17 2009, two 280 gallon heating oil USTs were removed at 843 West Laurel Bay Boulevard (Formerly 140 West Laurel Bay Boulevard). Tank 1 was removed from the front landscaped bed area adjacent to the driveway. Tank 2 was removed from the front grassed



area adjacent to the driveway. The former UST locations are indicated in Figures 2 and 3 of the UST Assessment Report (Appendix B). The USTs were removed, cleaned, and shipped offsite for recycling. There was no visual evidence (i.e., staining or sheen) of petroleum impact at the time of the UST removal. According to the UST Assessment Report (Appendix B), the depths to the bases of the USTs were 5'11" (Tank 1) and 4'1" (Tank 2) bgs and a single soil sample was collected for each at that depth. The samples were collected from the fill port side of the former USTs to represent a worst case scenario.

Following UST removal, a soil sample was collected from the base of each 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 843 West Laurel Bay Boulevard (Formerly 140 West Laurel Bay Boulevard) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated May 18, 2009, SCDHEC requested an IGWA for 843 West Laurel Bay Boulevard (Formerly 140 West Laurel Bay Boulevard) to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letter is provided in Appendix D.

# 2.3 Groundwater Sampling

On July 23, 2013, a temporary monitoring well was installed at 843 West Laurel Bay Boulevard (Formerly 140 West Laurel Bay Boulevard), 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 locations are indicated in Figures 2 and 3 of the UST Assessment Report (Appendix B). Further details are provided in the *Initial Groundwater Investigation Report – July 2013* (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 – July 2013* (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 843 West Laurel Bay Boulevard (Formerly 140 West Laurel Bay Boulevard) were less than the SCDHEC RBSLs and the site specific groundwater VISLs (Table 2), which indicated that the groundwater was not impacted by COPCs associated with the former UST at concentrations that present a potential risk to human health and the environment.

# 3.0 PROPERTY STATUS

Based on the analytical results for groundwater, SCDHEC made the determination that NFA was required for 843 West Laurel Bay Boulevard (Formerly 140 West Laurel Bay Boulevard). This NFA determination was obtained in a letter dated August 6, 2015. SCDHEC's NFA letter is provided in Appendix D.

### 4.0 REFERENCES

Marine Corps Air Station Beaufort, 2009. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 140 Laurel Bay Boulevard, Laurel Bay Military Housing Area*, April 2009.



- Resolution Consultants, 2015. *Initial Groundwater Investigation Report July 2013 for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina*, June 2015.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2013. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 2.0*, April 2013.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2015. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.0*, May 2015.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2016. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.1*, February 2016.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2017. *R.61-92, Part 280, Underground Storage Tank Control Regulations*, March 2017.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2018. *Underground Storage Tank Assessment Instructions for Permanent Closure and Change-In-Service*, March 2018.
- South Carolina Department of Health and Environmental Control Bureau of Water, 2016. *R.61-71, Well Standards*, June 2016.

# **Tables**



### Table 1

# Laboratory Analytical Results - Soil

# 843 West Laurel Bay Blvd (Formerly 140 West Laurel Bay Blvd)

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

Constituent	SCDHEC RBSLs (1)	Results Sample Collected 03/17/09				
Constituent	SCOREC RBSLS	140 Laurel Bay Blvd-1	140 Laurel Bay Blvd-2			
Volatile Organic Compounds Analyzed	by EPA Method 8260B (mg/kg)	-				
Benzene	0.003	0.0157	ND			
Ethylbenzene	1.15	1.48	4.20			
Naphthalene	0.036	14.3	31.1			
Toluene	0.627	ND	1.33			
Xylenes, Total	13.01	2.24	29.5			
Semivolatile Organic Compounds Analyzed by EPA Method 8270D (mg/kg)						
Benzo(a)anthracene	0.66	0.995	ND			
Benzo(b)fluoranthene	0.66	0.619	ND			
Benzo(k)fluoranthene	0.66	0.528	ND			
Chrysene	0.66	1.18	ND			
Dibenz(a,h)anthracene	0.66	0.0872	ND			

### **Notes:**

<sup>(1)</sup> South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 1.0 and 1.1 (SCDHEC, May 2001 and SCDHEC, February 2011) and the Underground Storage Tank Assessment Guidelines (SCDHEC, February 2006).

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

mg/kg - milligrams per kilogram

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

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

#### Table 2

## Laboratory Analytical Results - Groundwater 843 West Laurel Bay Blvd (Formerly 140 West Laurel Bay Blvd) Laurel Bay Military Housing Area

# Marine Corps Air Station Beaufort Beaufort, South Carolina

Constituent	SCDHEC RBSLs (1)	Site-Specific Groundwater VISLs (µg/L) <sup>(2)</sup>	Results Sample Collected 07/23/13				
Volatile Organic Compounds Analyzed	by EPA Method 8260B (	μg/L)					
Benzene	5	16.24	ND				
Ethylbenzene	700	45.95	ND				
Naphthalene	25	29.33	ND				
Toluene	1000	105,445	ND				
Xylenes, Total	10,000	2,133	ND				
Semivolatile Organic Compounds Ana	Semivolatile Organic Compounds Analyzed by EPA Method 8270D (μg/L)						
Benzo(a)anthracene	10	NA	ND				
Benzo(b)fluoranthene	10	NA	ND				
Benzo(k)fluoranthene	10	NA	ND				
Chrysene	10	NA	ND				
Dibenz(a,h)anthracene	10	NA	ND				

#### Notes:

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

 $^{(2)}$  Site-specific groundwater VISLs were calculated using the EPA JE Model Spreadsheets (Version 3.1, February 2004) and conservative modeling inputs representative of a small single-story house with an 8 foot ceiling. Site-specific groundwater VISLs were developed based on a target risk level of  $1 \times 10^{-6}$ , 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

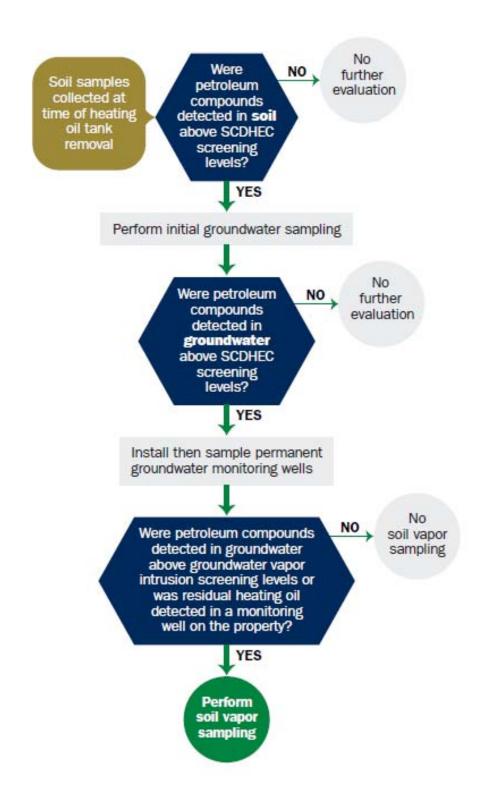
SCDHEC - South Carolina Department Of Health and Environmental Control

μg/L - micrograms per liter

VISL - Vapor Intrusion Screening Level

# Appendix A Multi-Media Selection Process for LBMH





**Appendix A - Multi-Media Selection Process for LBMH** 

# Appendix B UST Assessment Report



04189

Attachment 1

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

Date Received

State Use Only

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



APR 2 4 2009

SITE ASSESSMENT, REMEDIATION &

I. OWNERSHIP OF UST (S)

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

# II. SITE IDENTIFICATION AND LOCATION

Permit I.D. #	
	y Housing Area, Marine Corps Air Station, Beaufort, SC
	d., Laurel Bay Military Housing Area
Street Address or State Roa	(as applicable)
Beaufort,	Beaufort
City	County

Attachment 2

# III. INSURANCE INFORMATION

	Insurance St	atement	
qualify to receive state monies to pay for	appropriate site re en confirmation of	at Permit ID Numberehabilitation activities. Before participation f the existence or non-existence of an enviro ted.	is
Is there now, or has there ever been UST release? YES NO	<del>-</del>	licy or other financial mechanism that cover	rs this
If you answered YES to the	ne above question,	please complete the following information:	
I he policy	provider is: deductible is:		
If you have this type of insurance	, please include a c	copy of the policy with this report.	
IV. 1	REQUEST FOR	R SUPERB FUNDING	
I <b>DO</b> / DO <b>NOT</b> wish to partic	ipate in the SUPEI	RB Program. (Circle one.)	
V. CERTIF	ICATION (To	be signed by the UST owner)	
I certify that I have personally examinattached documents; and that based information, I believe that the submitte	on my inquiry of	liar with the information submitted in the f those individuals responsible for obtait true, accurate, and complete.	is and all ining this
Name (Type or print.)			
Signature			
To be completed by Notary Pul	blic:		
Sworn before me this day	of	, 20	
(Name)			
Notary Public for the state of	sioned outside Sou	 th Carolina	

VI.	UST INFORMATION	140 Laurel	140 Laurel	
		Bay Blvd-1	Bay Blvd-2	
Dec du et	(ex. Gas, Kerosene)	Heating oil	Heating oil	
	ty(ex. 1k, 2k)	280 gal	280 gal	
•		Late 1950s	Late 1950s	
_	ection Material(ex. Steel, FRP)	Steel	Steel	
	•	Mid 1980s	Mid 1980s	
Month/`	Year of Last Use	5'11"	4'1"	
• `	ft.) To Base of Tank	No	No	
Spill Pr	evention Equipment Y/N	No	No	
Overfill	Prevention Equipment Y/N	Removed	Removed	
	of Closure Removed/Filled	3/17/09	3/17/09	
	nks Removed/Filled	Yes	Yes	
Visible Visible	Corrosion or Pitting Y/N  Holes Y/N		Yes	
Method Both	of disposal for any USTs removed from the tanks were removed from the Attachment "A."	Yes e ground (attach dispo	osal manifests) d and recycled.	
disposal	of disposal for any liquid petroleum, sludge I manifests) ontaminated water from both ta		•	ch

# VII. PIPING INFORMATION

Construction Material(ex. Steel, FRP)  Distance from UST to Dispenser		140 Daurer	140 Laurel	
Construction Material(ex. Steel, FRP)		Bay Blvd-1	Bay Blvd-2	
Distance from UST to Dispenser	Construction Material (ex. Steel FRP)	Steel	Steel	
Number of Dispensers	Construction Material (CA. Steel, 114 )	/Copper	/Copper	
Type of System Pressure or Suction	Distance from UST to Dispenser	N/A	N/A	
Was Piping Removed from the Ground? Y/N  Visible Corrosion or Pitting Y/N	Number of Dispensers	N/A	N/A	
Visible Corrosion or Pitting Y/N	Type of System Pressure or Suction	Suction	Suction	
Visible Holes Y/N	Was Piping Removed from the Ground? Y/N	No*	No*	
Age	Visible Corrosion or Pitting Y/N	Yes	Yes	
If any corrosion, pitting, or holes were observed, describe the location and extent for each piping run Corrosion and pitting were found on the surface of the steel pipe *Steel piping was removed. Copper piping was cut & capped at the edge of the excavation.  VIII. BRIEF SITE DESCRIPTION AND HISTORY The USTs at the residences are constructed of single wall steel and formerly contained fuel oil for heating. These USTs were	Visible Holes Y/N	No	No	
*Steel piping was removed. Copper piping was cut & capped at the edge of the excavation.  *VIII. BRIEF SITE DESCRIPTION AND HISTORY The USTs at the residences are constructed of single wall steel and formerly contained fuel oil for heating. These USTs were	Age	Forder 1050g	Farly 1950g	
VIII. BRIEF SITE DESCRIPTION AND HISTORY  The USTs at the residences are constructed of single wall steel  and formerly contained fuel oil for heating. These USTs were		scribe the location and	d extent for each piping	
	*Steel piping was removed. Copper	scribe the location and	d extent for each piping of the steel pi	
installed in the late 1950s and last used in the mid 1980s.	*Steel piping was removed. Copper at the edge of the excavation.  VIII. BRIEF SITE DESCRIPTION The USTs at the residences are contact the steel piping was removed.	scribe the location and on the surface piping was cu	d extent for each piping to the steel pittle to a capped  TORY  ngle wall steel	
	*Steel piping was removed. Copper at the edge of the excavation.  VIII. BRIEF SITE DESCRIPTION The USTs at the residences are contained fuel oil for	on the surface r piping was cu  PTION AND HIS structed of significant significant structed of significant significant structed of significant significant structed significant structed significant significant structed significant structures are supplied to the surface structure structures are supplied to the surface structures are surface s	d extent for each piping to the steel pint to a capped  TORY  ngle wall steel se USTs were	
	*Steel piping was removed. Copper at the edge of the excavation.  VIII. BRIEF SITE DESCRIPTION The USTs at the residences are contained fuel oil for	on the surface r piping was cu  PTION AND HIS structed of significant significant structed of significant significant structed of significant significant structed significant structed significant significant structed significant structures are supplied to the surface structure structures are supplied to the surface structures are surface s	d extent for each piping to the steel pint to a capped  TORY  ngle wall steel se USTs were	
	*Steel piping was removed. Copper at the edge of the excavation.  VIII. BRIEF SITE DESCRIPTION The USTs at the residences are contained fuel oil for	on the surface r piping was cu  PTION AND HIS structed of significant significant structed of significant significant structed of significant significant structed significant structed significant significant structed significant structures are supplied to the surface structure structures are supplied to the surface structures are surface s	d extent for each piping to the steel pint to a capped  TORY  ngle wall steel se USTs were	
	*Steel piping was removed. Copper at the edge of the excavation.  VIII. BRIEF SITE DESCRIPTION The USTs at the residences are contained fuel oil for	on the surface r piping was cu  PTION AND HIS structed of significant significant structed of significant significant structed of significant significant structed significant structed significant significant structed significant structures are supplied to the surface structure structures are supplied to the surface structures are surface s	d extent for each piping to the steel pint to a capped  TORY  ngle wall steel se USTs were	
	*Steel piping was removed. Copper at the edge of the excavation.  VIII. BRIEF SITE DESCRIPTION The USTs at the residences are contained fuel oil for	on the surface r piping was cu  PTION AND HIS structed of significant significant structed of significant significant structed of significant significant structed significant structed significant significant structed significant structures are supplied to the surface structure structures are supplied to the surface structures are surface s	d extent for each piping to the steel pint to a capped  TORY  ngle wall steel se USTs were	

# IX. SITE CONDITIONS

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

# X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 96012001

В.

В.								
	Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	by	OVA#
140 Bay	Laurel Blvd-1	Excav at fill end	Soil	Clay	5'11"	3/17/09 1355 hrs	S. Pratt	
140	Laurel	Hand on the	Soil			3/17/09	S. Pratt	
	Blvd-2	Excav at fill end	5011	Clay	4'1"	1025 hrs	S. Pracu	
	8							
	9							
	10							. =
	11							
	12							
	14							
·	15							
	16					:		
	17							
	18							
	19							
	20		* - Dan41	D-14 C	J: T	1 Comform		

<sup>\* =</sup> 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.

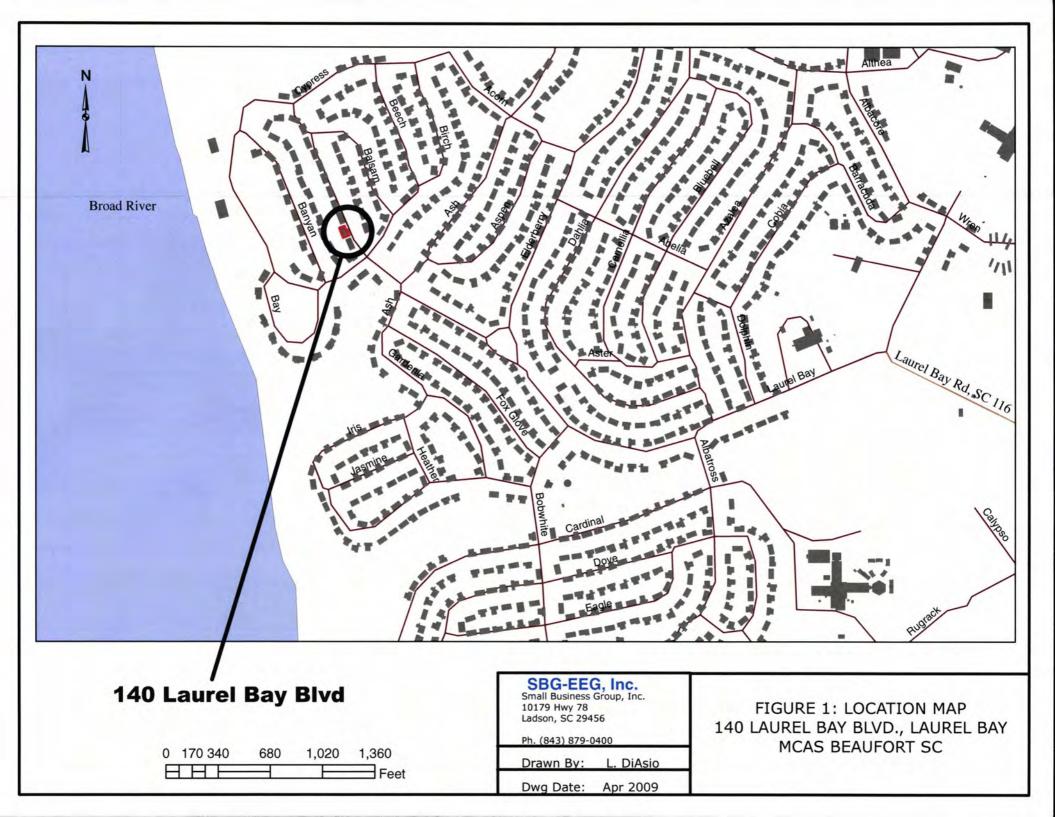
# XII. RECEPTORS

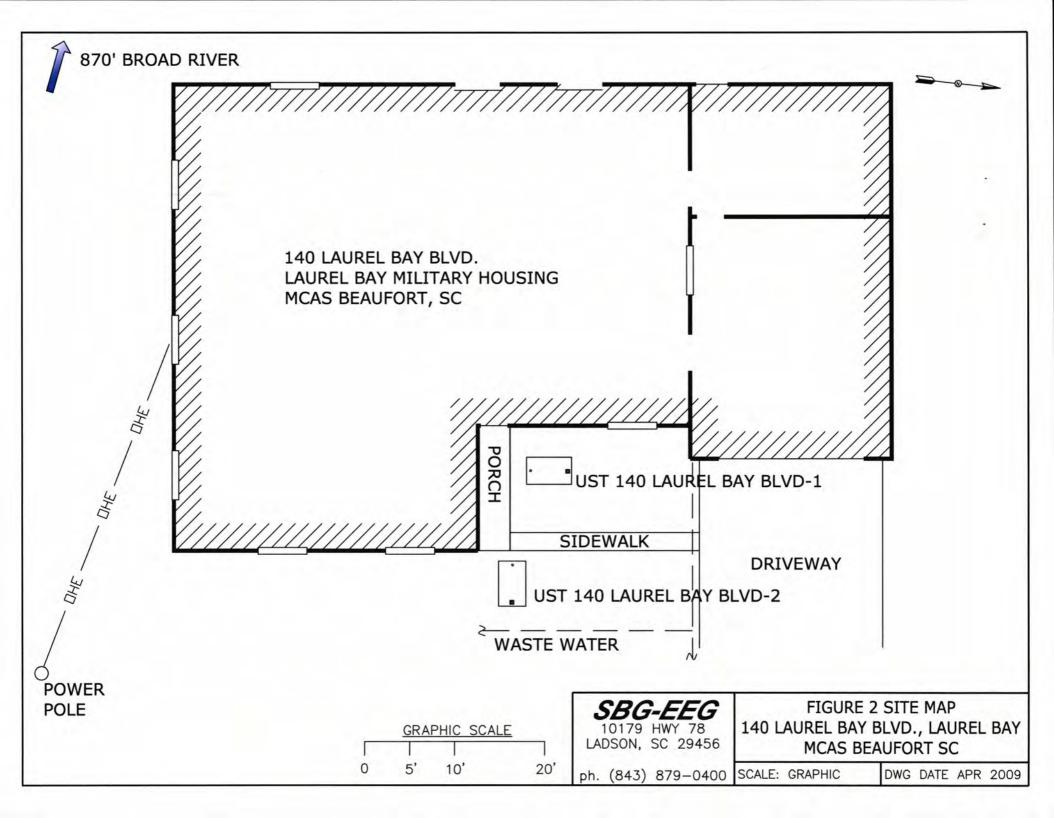
Yes No A. Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system? Х If yes, indicate type of receptor, distance, and direction on site map. B. Are there any public, private, or irrigation water supply wells within Х 1000 feet of the UST system? If yes, indicate type of well, distance, and direction on site map. C. Are there any underground structures (e.g., basements) Х Located within 100 feet of the UST system? If yes, indicate type of structure, distance, and direction on site map. D. Are there any underground utilities (e.g., telephone, electricity, gas, х\* water, sewer, storm drain) located within 100 feet of the UST system that could potentially come in contact with the contamination? \*Sewer, water, electricity, cable, fiber optic If yes, indicate the type of utility, distance, and direction on the site map. Has contaminated soil been identified at a depth less than 3 feet Х below land surface in an area that is not capped by asphalt or concrete? If yes, indicate the area of contaminated soil on the site map.

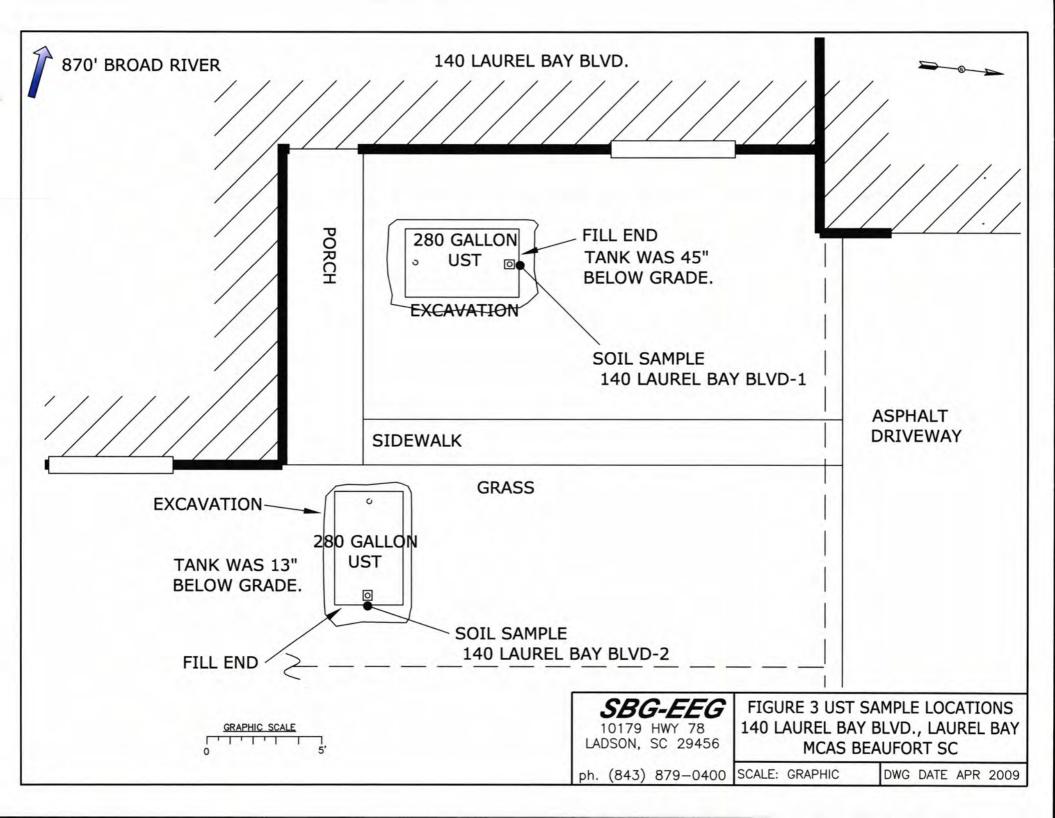
# XIII. SITE MAP

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: 140 Laurel Bay Blvd site.



Picture 2: UST 140LaurelBayBlvd-1 being removed from the excavation.



Picture 3: UST 140LaurelBayBlvd-2 being removed from the excavation.

# 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.

СоС	140 Laurel Bay Blvd-1	140 Laurel Bay Blvd-2
Benzene	0.0157 mg/kg	ND
Toluene	ND	1.33 mg/kg
Ethylbenzene	1.48 mg/kg	4.20 mg/kg
Xylenes	2.24 mg/kg	29.5 mg/kg
Naphthalene	14.3 mg/kg	31.1 mg/kg
Benzo (a) anthracene	0.995 mg/kg	ND
Benzo (b) fluoranthene	0.619 mg/kg	ND
Benzo (k) fluoranthene	0.528 mg/kg	ND
Chrysene	1.18 mg/kg	ND
Dibenz (a, h) anthracene	0.0872 mg/kg	ND
TPH (EPA 3550)		

	Lopo	00.40	GD 44	I 00 40	05.40		T	
CoC	SB-9	SB-10	SB-11	SB-12	SB-13	SB-14	SB-15	SB-16
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)

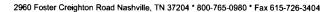
Enter the ground water analytical data for each sample for all CoC in the table below. If free product is present, indicate the measured thickness to the nearest 0.01 feet.

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

# XV. ANALYTICAL RESULTS

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

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





March 31, 2009

5:14:39PM

Client:

EEG - Env. Enterprise Group (2449)

10179 Highway 78

Ladson, SC 29456

Attn:

Tom McElwee

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

Project Nbr:

[none]

P/O Nbr: Date Received:

08087 03/20/09

SAMPLE	IDENTIFICATION

#### LAB NUMBER **COLLECTION DATE AND TIME** 142 Laurel Bay Blvd. NSC1899-01 03/16/09 09:15 140 Laurel Bay Blvd.-1 NSC1899-02 03/17/09 13:55 140 Laurel Bay Blvd.-2 NSC1899-03 03/17/09 10:25 144 Laurel Bay Blvd. NSC1899-04 03/18/09 10:30 148 Laurel Bay Blvd. NSC1899-05 03/19/09 10:20

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.

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.

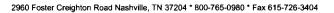
Roxarre L. Corner

This report has been electronically signed.

Report Approved By:

Roxanne Connor

Program Manager - Conventional Accounts





Client EEG - Env. Enterprise Group (2449)

10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

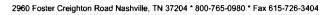
Laurel Bay Housing Project

Project Number: [none]
Received: 03/20/0

03/20/09 08:00

# ANALYTICAL REPORT

Analyte	Result	Flag Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
CI- ID. NCC1900 01 (143 I			0.1 <i>5</i>				
Sample ID: NSC1899-01 (142 Lau		Soil) Sampled: 03/10/09 05	9:15				
Polyaromatic Hydrocarbons by EPA 8							
Acenaphthene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Acenaphthylene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Anthracene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Benzo (a) anthracene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Benzo (a) pyrene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Benzo (b) fluoranthene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Benzo (g,h,i) perylene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Benzo (k) fluoranthene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Chrysene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Dibenz (a,h) anthracene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Fluoranthene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Fluorene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Indeno (1,2,3-cd) pyrene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Naphthalene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Phenanthrene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Pyrene	ND	mg/kg dry	0.0820	1	03/23/09 22:12	SW846 8270D	9033305
Surr: Terphenyl-d14 (26-128%)	87 %				03/23/09 22:12	SW846 8270D	9033305
Surr: 2-Fluorobiphenyl (19-109%)	74 %				03/23/09 22:12	SW846 8270D	9033305
Surr: Nitrobenzene-d5 (22-104%)	67 %				03/23/09 22:12	SW846 8270D	9033305
General Chemistry Parameters							
% Dry Solids	80.4	%	0.500	1	03/26/09 08:19	SW-846	9033632
Selected Volatile Organic Compounds	by EPA Method	8260B					
Benzene	ND	mg/kg dry	0.00204	1	03/25/09 23:19	SW846 8260B	9033095
Ethylbenzene	ND	mg/kg dry	0.00204	1	03/25/09 23:19	SW846 8260B	9033095
Naphthalene	0.00608	mg/kg dry	0.00510	1	03/25/09 23:19	SW846 8260B	9033095
Toluene	ND	mg/kg dry	0.00204	1	03/25/09 23:19	SW846 8260B	9033095
Xylenes, total	ND	mg/kg dry	0.00510	1	03/25/09 23:19	SW846 8260B	9033095
Surr: 1,2-Dichloroethane-d4 (41-150%)	92 %				03/25/09 23:19	SW846 8260B	9033095
Surr: Dibromofluoromethane (55-139%)	104 %				03/25/09 23:19	SW846 8260B	9033095
Surr: Toluene-d8 (57-148%)	115 %				03/25/09 23:19	SW846 8260B	9033095
Surr: 4-Bromofluorobenzene (58-150%)	145 %				03/25/09 23:19	SW846 8260B	9033095





Client EEG - Env. Enterprise Group (2449)

10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

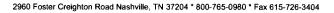
Project Number: [none]

Received:

03/20/09 08:00

## ANALYTICAL REPORT

			NALY HCAL RE	LPURI				
					Dilution	Analysis		
Analyte	Result	Flag	Units	MRL	Factor	Date/Time	Method	Batch
Sample ID: NSC1899-02 (140 Lau	rel Bay Blvd1	- Soil) Sa	mpled: 03/17/09	13:55				
Polyaromatic Hydrocarbons by EPA 82	270D							
Acenaphthene	ND		mg/kg dry	0.0842	1	03/23/09 22:35	SW846 8270D	9033305
Acenaphthylene	ND		mg/kg dry	0.0842	1	03/23/09 22:35	SW846 8270D	9033305
Anthracene	0.697		mg/kg dry	0.0842	1	03/23/09 22:35	SW846 8270D	9033305
Benzo (a) anthracene	0.995		mg/kg dry	0.0842	1	03/23/09 22:35	SW846 8270D	9033305
Benzo (a) pyrene	0.549		mg/kg dry	0.0842	1	03/23/09 22:35	SW846 8270D	9033305
Benzo (b) fluoranthene	0.619		mg/kg dry	0.0842	1	03/23/09 22:35	SW846 8270D	9033305
Benzo (g,h,i) perylene	0.207		mg/kg dry	0.0842	1	03/23/09 22:35	SW846 8270D	9033305
Benzo (k) fluoranthene	0.528		mg/kg dry	0.0842	1	03/23/09 22:35	SW846 8270D	9033305
Chrysene	1.18		mg/kg dry	0.0842	1	03/23/09 22:35	SW846 8270D	9033305
Dibenz (a,h) anthracene	0.0872		mg/kg dry	0.0842	1	03/23/09 22:35	SW846 8270D	9033305
Fluoranthene	2.11		mg/kg dry	0.0842	1	03/23/09 22:35	SW846 8270D	9033305
Fluorene	ND		mg/kg dry	0.0842	1	03/23/09 22:35	SW846 8270D	9033305
Indeno (1,2,3-cd) pyrene	0.216		mg/kg dry	0.0842	1	03/23/09 22:35	SW846 8270D	9033305
Naphthalene	12.3		mg/kg dry	0.421	5	03/24/09 12:28	SW846 8270D	9033305
Phenanthrene	9.51		mg/kg dry	0.421	5	03/24/09 12:28	SW846 8270D	9033305
Pyrene	2,08		mg/kg dry	0.0842	1	03/23/09 22:35	SW846 8270D	9033305
Surr: Terphenyl-d14 (26-128%)	95 %					03/23/09 22:35	SW846 8270D	9033305
Surr: 2-Fluorobiphenyl (19-109%)	88 %					03/23/09 22:35	SW846 8270D	9033305
Surr: Nitrobenzene-d5 (22-104%)	199 %	ZX				03/23/09 22:35	SW846 8270D	9033305
General Chemistry Parameters								
% Dry Solids	79.0		%	0.500	1	03/26/09 08:19	SW-846	9033632
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	0.0157		mg/kg dry	0.00174	1	03/26/09 00:20	SW846 8260B	9033095
Ethylbenzene	1.48		mg/kg dry	0.101	50	03/26/09 17:29	SW846 8260B	9034182
Naphthalene	14.3		mg/kg dry	0.506	100	03/27/09 14:36	SW846 8260B	9034202
Toluene	ND		mg/kg dry	0.00174	1	03/26/09 00:20	SW846 8260B	9033095
Xylenes, total	2.24		mg/kg dry	0.253	50	03/26/09 17:29	SW846 8260B	9034182
Surr: 1,2-Dichloroethane-d4 (41-150%)	89 %					03/26/09 00:20	SW846 8260B	9033095
Surr: 1,2-Dichloroethane-d4 (41-150%)	88 %					03/26/09 17:29	SW846 8260B	9034182
Surr: 1,2-Dichloroethane-d4 (41-150%)	91 %					03/27/09 14:36	SW846 8260B	9034202
Surr: Dibromofluoromethane (55-139%)	91 %					03/26/09 00:20	SW846 8260B	9033095
Surr: Dibromofluoromethane (55-139%)	93 %					03/26/09 17:29	SW846 8260B	9034182
Surr: Dibromofluoromethane (55-139%)	94 %			•		03/27/09 14:36	SW846 8260B	9034202
Surr: Toluene-d8 (57-148%)	154 %	ZX				03/26/09 00:20	SW846 8260B	9033095
Surr: Toluene-d8 (57-148%)	105 %					03/26/09 17:29	SW846 8260B	9034182
Surr: Toluene-d8 (57-148%) Surr: 4-Bromofluorobenzene (58-150%)	103 % 136 %					03/27/09 14:36 03/26/09 00:20	SW846 8260B SW846 8260B	9034202 9033095
Surr: 4-Bromofluorobenzene (58-150%) Surr: 4-Bromofluorobenzene (58-150%)	136 % 108 %					03/26/09 00:20	SW846 8260B	9033093
Surr: 4-Bromofluorobenzene (58-150%)	108 %					03/27/09 14:36	SW846 8260B	9034202
	.00,0					22.237 17.30	J J O=00D	





10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

Project Number:

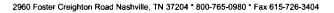
[none]

Received:

03/20/09 08:00

#### ANALYTICAL REPORT

			·		Dilution	Analysis		
Analyte	Result	Flag	Units	MRL	Factor	Date/Time	Method	Batch
Sample ID: NSC1899-03 (140 Lau	rel Bay Blvd2	2 - Soil) Sa	mpled: 03/17/09	10:25				
Polyaromatic Hydrocarbons by EPA 82	270D							
Acenaphthene	ND		mg/kg dry	0.0898	1	03/23/09 22:58	SW846 8270D	9033305
Acenaphthylene	ND		mg/kg dry	0.0898	1	03/23/09 22:58	SW846 8270D	9033305
Anthracene	0.540		mg/kg dry	0.0898	1	03/23/09 22:58	SW846 8270D	9033305
Benzo (a) anthracene	ND		mg/kg dry	0.0898	1	03/23/09 22:58	SW846 8270D	9033305
Benzo (a) pyrene	ND		mg/kg dry	0.0898	1	03/23/09 22:58	SW846 8270D	9033305
Benzo (b) fluoranthene	ND		mg/kg dry	0.0898	1	03/23/09 22:58	SW846 8270D	9033305
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0898	1	03/23/09 22:58	SW846 8270D	9033305
Benzo (k) fluoranthene	ND		mg/kg dry	0.0898	1	03/23/09 22:58	SW846 8270D	9033305
Chrysene	ND		mg/kg dry	0.0898	1	03/23/09 22:58	SW846 8270D	9033305
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0898	1	03/23/09 22:58	SW846 8270D	9033305
Fluoranthene	ND		mg/kg dry	0.0898	1	03/23/09 22:58	SW846 8270D	9033305
Fluorene	2.90		mg/kg dry	0.0898	1	03/23/09 22:58	SW846 8270D	9033305
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0898	1	03/23/09 22:58	SW846 8270D	9033305
Naphthalene	8.56		mg/kg dry	0.449	5	03/24/09 12:51	SW846 8270D	9033305
Phenanthrene	8.58		mg/kg dry	0.449	5	03/24/09 12:51	SW846 8270D	9033305
Pyrene	0.698		mg/kg dry	0.0898	1	03/23/09 22:58	SW846 8270D	9033305
Surr: Terphenyl-d14 (26-128%)	83 %		0 0 1			03/23/09 22:58	SW846 8270D	9033305
Surr: 2-Fluorobiphenyl (19-109%)	77 %					03/23/09 22:58	SW846 8270D	9033305
Surr: Nitrobenzene-d5 (22-104%)	139 %	ZX				03/23/09 22:58	SW846 8270D	9033305
General Chemistry Parameters								
% Dry Solids	72.4		%	0.500	1	03/26/09 08:19	SW-846	9033632
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	ND		mg/kg dry	0.133	50	03/26/09 18:00	SW846 8260B	9034182
Ethylbenzene	4.20		mg/kg dry	0.133	50	03/26/09 18:00	SW846 8260B	9034182
Naphthalene	31.1		mg/kg dry	3.32	500	03/27/09 15:06	SW846 8260B	9034202
Toluene	1.33		mg/kg dry	0.133	50	03/26/09 18:00	SW846 8260B	9034182
Xylenes, total	29.5		mg/kg dry	0.332	50	03/26/09 18:00	SW846 8260B	9034182
Surr: 1,2-Dichloroethane-d4 (41-150%)	89 %				• •	03/26/09 18:00	SW846 8260B	9034182
Surr: 1,2-Dichloroethane-d4 (41-150%)	89 %					03/27/09 15:06	SW846 8260B	9034202
Surr: Dibromofluoromethane (55-139%)	91 %					03/26/09 18:00	SW846 8260B	9034182
Surr: Dibromofluoromethane (55-139%)	96 %					03/27/09 15:06	SW846 8260B	9034202
Surr: Toluene-d8 (57-148%)	108 %					03/26/09 18:00	SW846 8260B	9034182
Surr: Toluene-d8 (57-148%)	102 %					03/27/09 15:06	SW846 8260B	9034202
Surr: 4-Bromofluorobenzene (58-150%)	107 %					03/26/09 18:00	SW846 8260B	9034182
Surr: 4-Bromofluorobenzene (58-150%)	110 %					03/27/09 15:06	SW846 8260B	9034202





Client EEG - Env. Enterprise Group (2449)

10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

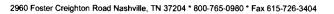
Project Number: [none]

Received:

03/20/09 08:00

#### ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NSC1899-04 (144 Lau	rel Bay Blvd	Soil) Sam	pled: 03/18/09 1	0:30				
Polyaromatic Hydrocarbons by EPA 82	270D							
Acenaphthene	ND		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Acenaphthylene	ND		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Anthracene	ND		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Benzo (a) anthracene	0.0973		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Benzo (a) pyrene	0.0920		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Benzo (b) fluoranthene	0.170		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Benzo (g,h,i) perylene	ND		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Benzo (k) fluoranthene	0.0994		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Chrysene	0.166		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Fluoranthene	0.161		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Fluorene	ND		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Indeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Naphthalene	ND		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Phenanthrene	ND		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Pyrene	0.228		mg/kg dry	0.0829	1	03/27/09 10:53	SW846 8270D	9033201
Surr: Terphenyl-d14 (26-128%)	69 %					03/27/09 10:53	SW846 8270D	9033201
Surr: 2-Fluorobiphenyl (19-109%)	58 %					03/27/09 10:53	SW846 8270D	9033201
Surr: Nitrobenzene-d5 (22-104%)	53 %					03/27/09 10:53	SW846 8270D	9033201
General Chemistry Parameters								
% Dry Solids	80.6		%	0.500	1	03/26/09 08:19	SW-846	9033632
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	ND		mg/kg dry	0.00205	1	03/25/09 23:50	SW846 8260B	9033095
Ethylbenzene	ND		mg/kg dry	0.00205	1	03/25/09 23:50	SW846 8260B	9033095
Naphthalene	ND		mg/kg dry	0.00513	1	03/25/09 23:50	SW846 8260B	9033095
Toluene	ND		mg/kg dry	0.00205	1	03/25/09 23:50	SW846 8260B	9033095
Xylenes, total	ND		mg/kg dry	0.00513	1	03/25/09 23:50	SW846 8260B	9033095
Surr: 1,2-Dichloroethane-d4 (41-150%)	90 %					03/25/09 23:50	SW846 8260B	9033095
Surr: Dibromofluoromethane (55-139%)	97 %					03/25/09 23:50	SW846 8260B	9033095
Surr: Toluene-d8 (57-148%)	108 %					03/25/09 23:50	SW846 8260B	9033095
Surr: 4-Bromofluorobenzene (58-150%)	128 %					03/25/09 23:50	SW846 8260B	9033095





Client EEG - Env. Enterprise Group (2449)

10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

Project Number:

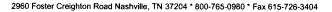
[none]

Received:

03/20/09 08:00

#### ANALYTICAL REPORT

		-			Dilution	Analysis		
Analyte	Result	Flag	Units	MRL	Factor	Date/Time	Method	Batch
Sample ID: NSC1899-05 (148 Lau	rel Bav Blvd	Soil) San	npled: 03/19/09 1	0:20				
Polyaromatic Hydrocarbons by EPA 82			•					
Acenaphthene	0.880		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Acenaphthylene	ND		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Anthracene	ND		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Benzo (a) anthracene	0.697		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Benzo (a) pyrene	0.342		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Benzo (b) fluoranthene	0.421		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Benzo (g,h,i) perylene	0.137		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Benzo (k) fluoranthene	0.300		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Chrysene	0.749		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Dibenz (a,h) anthracene	ND		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Fluoranthene	1.27		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Fluorene	1.80		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Indeno (1,2,3-cd) pyrene	0.130		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Naphthalene	2.02		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Phenanthrene	7.51		mg/kg dry	0.749	10	03/27/09 11:14	SW846 8270D	9033201
Pyrene	2.07		mg/kg dry	0.0749	1	03/27/09 00:08	SW846 8270D	9033201
Surr: Terphenyl-d14 (26-128%)	72 %			0.07 19	•	03/27/09 00:08	SW846 8270D	9033201
Surr: 2-Fluorobiphenyl (19-109%)	49 %					03/27/09 00:08	SW846 8270D	9033201
Surr: Nitrobenzene-d5 (22-104%)	54 %					03/27/09 00:08	SW846 8270D	9033201
General Chemistry Parameters								
% Dry Solids	88.6		%	0.500	1	03/26/09 08:19	SW-846	9033632
Selected Volatile Organic Compounds	by EPA Method	8260B						
Benzene	ND		mg/kg dry	0.00197	1	03/26/09 01:21	SW846 8260B	9033095
Ethylbenzene	0.116		mg/kg dry	0.00197	1	03/26/09 01:21	SW846 8260B	9033095
Naphthalene	4.20		mg/kg dry	0.311	50	03/26/09 18:30	SW846 8260B	9034182
Toluene	ND		mg/kg dry	0.00197	1	03/26/09 01:21	SW846 8260B	9033095
Xylenes, total	0.229		mg/kg dry	0.00492	1	03/26/09 01:21	SW846 8260B	9033095
Surr: 1,2-Dichloroethane-d4 (41-150%)	91 %		g. kg u. j	0.00152	•	03/26/09 01:21	SW846 8260B	9033095
Surr: 1,2-Dichloroethane-d4 (41-150%)	91 %					03/26/09 18:30	SW846 8260B	9034182
Surr: Dibromofluoromethane (55-139%)	101 %					03/26/09 01:21	SW846 8260B	9033095
Surr: Dibromofluoromethane (55-139%)	96 %					03/26/09 18:30	SW846 8260B	9034182
Surr: Toluene-d8 (57-148%)	131 %					03/26/09 01:21	SW846 8260B	9033095
Surr: Toluene-d8 (57-148%)	101 %					03/26/09 18:30	SW846 8260B	9034182
Surr: 4-Bromofluorobenzene (58-150%)	675 %	ZX				03/26/09 01:21	SW846 8260B	9033095
Surr: 4-Bromofluorobenzene (58-150%)	101 %					03/26/09 18:30	SW846 8260B	9034182





Client EEG - Env. Enterprise Group (2449)

10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

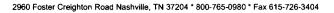
Project Number: [none]

Received:

03/20/09 08:00

#### SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
Polyaromatic Hydrocarbons by EPA	8270D						
SW846 8270D	9033305	NSC1899-01	30.50	1.00	03/23/09 13:50	TEM	EPA 3550B
SW846 8270D	9033305	NSC1899-02	30.20	1.00	03/23/09 13:50	TEM	EPA 3550B
SW846 8270D	9033305	NSC1899-02RE1	30.20	1.00	03/23/09 13:50	TEM	EPA 3550B
SW846 8270D	9033305	NSC1899-03	30.93	1.00	03/23/09 13:50	TEM	EPA 3550B
SW846 8270D	9033305	NSC1899-03RE1	30.93	1.00	03/23/09 13:50	TEM	EPA 3550B
SW846 8270D	9033201	NSC1899-04	30.08	1.00	03/25/09 08:38	DMG	EPA 3550B
SW846 8270D	9033201	NSC1899-05	30.27	1.00	03/25/09 08:38	DMG	EPA 3550B
SW846 8270D	9033201	NSC1899-05RE1	30.27	1.00	03/25/09 08:38	DMG	EPA 3550B
Selected Volatile Organic Compoun	ds by EPA Method	8260B					
SW846 8260B	9033095	NSC1899-01	6.10	5.00	03/16/09 09:15	JRL	EPA 5035
SW846 8260B	9033095	NSC1899-02	7.27	5.00	03/17/09 13:55	JRL	EPA 5035
SW846 8260B	9034182	NSC1899-02RE1	6.25	5.00	03/17/09 13:55	JRL	EPA 5035
SW846 8260B	9034202	NSC1899-02RE2	6.25	5.00	03/17/09 13:55	JRL	EPA 5035
SW846 8260B	9033095	NSC1899-03	5.53	5.00	03/17/09 10:25	JRL	EPA 5035
SW846 8260B	9034182	NSC1899-03RE1	5.20	5.00	03/17/09 10:25	JRL	EPA 5035
SW846 8260B	9034202	NSC1899-03RE2	5.20	5.00	03/17/09 10:25	JRL	EPA 5035
SW846 8260B	9033095	NSC1899-04	6.05	5.00	03/18/09 10:30	JRL	EPA 5035
SW846 8260B	9033095	NSC1899-05	5.74	5.00	03/19/09 10:20	JRL	EPA 5035
SW846 8260B	9034182	NSC1899-05RE1	4.54	5.00	03/19/09 10:20	JRL	EPA 5035





10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

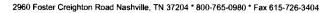
Laurel Bay Housing Project

Project Number: [none]

Received: 03/20/09 08:00

### PROJECT QUALITY CONTROL DATA Blank

Analyte	Blank Value	Q Units	Q.C. Batch	Lab Number	Analyzed Date/Time	
Polyaromatic Hydrocarbons b	oy EPA 8270D					
9033201-BLK1						
Acenaphthene	< 0.0310	mg/kg wct	9033201	9033201-BLK1	03/26/09 21:41	
Acenaphthylene	<0.0320	mg/kg wct	9033201	9033201-BLK1	03/26/09 21:41	
Anthracene	<0.0330	mg/kg wet	9033201	9033201-BLK1	03/26/09 21:41	
Benzo (a) anthracene	< 0.0380	mg/kg wet	9033201	9033201-BLK1	03/26/09 21:41	
Benzo (a) pyrene	<0.0290	mg/kg wet	9033201	9033201-BLK1	03/26/09 21:41	
Benzo (b) fluoranthene	< 0.0320	mg/kg wet	9033201	9033201-BLK1	03/26/09 21:41	
Benzo (g,h,i) perylene	< 0.0290	mg/kg wet	9033201	9033201-BLK1	03/26/09 21:41	
Benzo (k) fluoranthene	<0.0290	mg/kg wet	9033201	9033201-BLK1	03/26/09 21:41	
Chrysene	< 0.0390	mg/kg wet	9033201	9033201-BLK1	03/26/09 21:41	
Dibenz (a,h) anthracene	< 0.0310	mg/kg wet	9033201	9033201-BLK1	03/26/09 21:41	
Fluoranthene	< 0.0340	mg/kg wet	9033201	9033201-BLK1	03/26/09 21:41	
Fluorene	<0.0390	mg/kg wet	9033201	9033201-BLK1	03/26/09 21:41	
Indeno (1,2,3-cd) pyrene	<0.0310	mg/kg wet	9033201	9033201-BLK1	03/26/09 21:41	
Naphthalene	< 0.0410	mg/kg wet	9033201	9033201-BLK1	03/26/09 21:41	
Phenanthrene	< 0.0340	mg/kg wct	9033201	9033201-BLK1	03/26/09 21:41	
Pyrenc	< 0.0410	mg/kg wet	9033201	9033201-BLK1	03/26/09 21:41	
Surrogate: Terphenyl-d14	68%		9033201	9033201-BLK1	03/26/09 21:41	
Surrogate: 2-Fluorobiphenyl	62%		9033201	9033201-BLK1	03/26/09 21:41	
Surrogate: Nitrobenzene-d5	62%		9033201	9033201-BLK1	03/26/09 21:41	
9033305-BLK1						
Acenaphthene	< 0.0310	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Acenaphthylene	< 0.0320	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Anthracenc	< 0.0330	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Benzo (a) anthracene	< 0.0380	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Benzo (a) pyrene	< 0.0290	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Benzo (b) fluoranthene	< 0.0320	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Benzo (g,h,i) perylene	<0.0290	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Benzo (k) fluoranthene	<0.0290	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Chrysene	< 0.0390	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Dibenz (a,h) anthracene	< 0.0310	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Fluoranthene	<0.0340	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Fluorene	<0.0390	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Indeno (1,2,3-cd) pyrene	< 0.0310	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Naphthalene	<0.0410	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Phenanthrene	<0.0340	mg/kg wet	9033305	9033305-BLK1	03/23/09 18:25	
Pyrenc	<0.0410	mg/kg wct	9033305	9033305-BLK1	03/23/09 18:25	
Surrogate: Terphenyl-d14	100%		9033305	9033305-BLK1	03/23/09 18:25	
Surrogate: 2-Fluorobiphenyl	91%		9033305	9033305-BLK1	03/23/09 18:25	
Surrogate: Nitrobenzene-d5	93%		9033305	9033305-BLK1	03/23/09 18:25	





Client EEG - Env. Enterprise Group (2449)

10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

Project Number: Received: [none] 03/20/09 08:00

## PROJECT QUALITY CONTROL DATA Blank - Cont.

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
Selected Volatile Organic Comp	ounds by EPA Method	8260B				
9033095-BLK1	•					
Benzene	< 0.000670		mg/kg wet	9033095	9033095-BLK1	03/25/09 20:16
Ethylbenzene	< 0.000670		mg/kg wet	9033095	9033095-BLK1	03/25/09 20:16
Naphthalene	< 0.00151		mg/kg wet	9033095	9033095-BLK1	03/25/09 20:16
Toluene	< 0.000670		mg/kg wet	9033095	9033095-BLK1	03/25/09 20:16
Xylenes, total	< 0.00172		mg/kg wet	9033095	9033095-BLK1	03/25/09 20:16
Surrogate: 1,2-Dichloroethane-d4	104%			9033095	9033095-BLK1	03/25/09 20:16
Surrogate: Dibromofluoromethane	95%			9033095	9033095-BLK1	03/25/09 20:16
Surrogate: Toluene-d8	101%			9033095	9033095-BLK1	03/25/09 20:16
Surrogate: 4-Bromofluorobenzene	116%			9033095	9033095-BLK1	03/25/09 20:16
9034182-BLK1						
Benzene	< 0.000670		mg/kg wet	9034182	9034182-BLK1	03/26/09 15:11
Ethylbenzene	< 0.000670		mg/kg wet	9034182	9034182-BLK1	03/26/09 15:11
Naphthalene	< 0.00151		mg/kg wet	9034182	9034182-BLK1	03/26/09 15:11
Tolucne	< 0.000670		mg/kg wet	9034182	9034182-BLK1	03/26/09 15:11
Xylenes, total	< 0.00172		mg/kg wet	9034182	9034182-BLK1	03/26/09 15:11
Surrogate: 1,2-Dichloroethane-d4	95%			9034182	9034182-BLK1	03/26/09 15:11
Surrogate: Dibromofluoromethane	101%			9034182	9034182-BLK1	03/26/09 15:11
Surrogate: Toluene-d8	100%			9034182	9034182-BLK1	03/26/09 15:11
Surrogate: 4-Bromofluorobenzene	112%			9034182	9034182-BLK1	03/26/09 15:11
9034202-BLK1						
Benzene	< 0.000670		mg/kg wet	9034202	9034202-BLK1	03/27/09 13:23
Ethylbenzene	< 0.000670		mg/kg wct	9034202	9034202-BLK1	03/27/09 13:23
Naphthalene	< 0.00151		mg/kg wet	9034202	9034202-BLK1	03/27/09 13:23
Toluene	< 0.000670		mg/kg wet	9034202	9034202-BLK1	03/27/09 13:23
Xylenes, total	< 0.00172		mg/kg wet	9034202	9034202-BLK1	03/27/09 13:23
Surrogate: 1,2-Dichloroethane-d4	88%			9034202	9034202-BLK1	03/27/09 13:23
Surrogate: Dibromofluoromethane	97%			9034202	9034202-BLK1	03/27/09 13:23
Surrogate: Toluene-d8	98%			9034202	9034202-BLK1	03/27/09 13:23
Surrogate: 4-Bromofluorobenzene	104%			9034202	9034202-BLK1	03/27/09 13:23



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

Client EEG - Env. Enterprise Group (2449)

10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

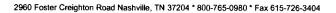
Received:

03/20/09 08:00

#### PROJECT QUALITY CONTROL DATA

#### Duplicate

Analyte Orig	. Val.	Duplicate	Q	Units	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
General Chemistry Parameters 9033632-DUP1 % Dry Solids 84	4.3	86.9		%		20	9033632	NSC1794-05	03/26/09 08:19





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

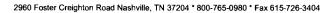
Laurel Bay Housing Project

Project Number: [none]

Received: 03/20/09 08:00

# PROJECT QUALITY CONTROL DATA LCS

Analyte	Known Val.	Analyzed Val Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
Polyaromatic Hydrocarbons by E	EPA 8270D						
9033201-BS1							
Acenaphthene	1.67	1.49	mg/kg wet	89%	52 - 106	9033201	03/26/09 22:02
Acenaphthylene	1.67	1.51	mg/kg wet	91%	53 - 109	9033201	03/26/09 22:02
Anthracene	1.67	1.66	mg/kg wet	100%	54 - 124	9033201	03/26/09 22:02
Benzo (a) anthracene	1.67	1.44	mg/kg wet	87%	53 - 111	9033201	03/26/09 22:02
Benzo (a) pyrene	1.67	1.61	mg/kg wet	97%	52 - 122	9033201	03/26/09 22:02
Benzo (b) fluoranthene	1.67	1.57	mg/kg wet	94%	48 - 115	9033201	03/26/09 22:02
Benzo (g,h,i) perylene	1.67	1.46	mg/kg wct	88%	46 - 114	9033201	03/26/09 22:02
Benzo (k) fluoranthene	1.67	1.46	mg/kg wet	88%	41 - 121	9033201	03/26/09 22:02
Chrysene	1.67	1.44	mg/kg wet	86%	49 - 113	9033201	03/26/09 22:02
Dibenz (a,h) anthracene	1.67	1.49	mg/kg wct	89%	47 - 117	9033201	03/26/09 22:02
Fluoranthene	1.67	1.56	mg/kg wet	94%	52 - 113	9033201	03/26/09 22:02
Fluorenc	1.67	1.51	mg/kg wet	91%	54 - 107	9033201	03/26/09 22:02
Indeno (1,2,3-cd) pyrene	1.67	1.50	mg/kg wct	90%	47 - 115	9033201	03/26/09 22:02
Naphthalene	1.67	1.37	mg/kg wct	82%	34 - 107	9033201	03/26/09 22:02
Phenanthrene	1,67	1.47	mg/kg wet	88%	53 - 108	9033201	03/26/09 22:02
Pyrene	1.67	1.47	mg/kg wet	88%	54 - 113	9033201	03/26/09 22:02
Surrogate: Terphenyl-d14	1.67	1.08		65%	26 - 128	9033201	03/26/09 22:02
Surrogate: 2-Fluorobiphenyl	1.67	1.16		69%	19 - 109	9033201	03/26/09 22:02
Surrogate: Nitrobenzene-d5	1.67	1.18		70%	22 - 104	9033201	03/26/09 22:02
9033305-BS1							
Acenaphthene	1.67	1.45	mg/kg wet	87%	52 - 106	9033305	03/23/09 18:47
Acenaphthylene	1.67	1.48	mg/kg wct	89%	53 - 109	9033305	03/23/09 18:47
Anthracene	1.67	1.65	mg/kg wet	99%	54 - 124	9033305	03/23/09 18:47
Benzo (a) anthracene	1.67	1.55	mg/kg wet	93%	53 - 111	9033305	03/23/09 18:47
Benzo (a) pyrene	1.67	1.59	mg/kg wet	96%	52 - 122	9033305	03/23/09 18:47
Benzo (b) fluoranthene	1.67	1.56	mg/kg wet	94%	48 - 115	9033305	03/23/09 18:47
Benzo (g,h,i) pcrylene	1.67	1.48	mg/kg wct	89%	46 - 114	9033305	03/23/09 18:47
Benzo (k) fluoranthene	1.67	1.53	mg/kg wet	92%	41 - 121	9033305	03/23/09 18:47
Chrysene	1.67	1.53	mg/kg wet	92%	49 - 113	9033305	03/23/09 18:47
Dibenz (a,h) anthracene	1.67	1.53	mg/kg wet	92%	47 - 117	9033305	03/23/09 18:47
Fluoranthene	1.67	1.45	mg/kg wet	87%	52 - 113	9033305	03/23/09 18:47
Fluorene	1.67	1.46	mg/kg wet	88%	54 - 107	9033305	03/23/09 18:47
Indeno (1,2,3-ed) pyrcne	1.67	1.54	mg/kg wet	93%	47 - 115	9033305	03/23/09 18:47
Naphthalene	1.67	1.22	mg/kg wet	73%	34 - 107	9033305	03/23/09 18:47
Phenanthrene	1.67	1.50	mg/kg wet	90%	53 - 108	9033305	03/23/09 18:47
Pyrene	1.67	1.66	mg/kg wet	100%	54 - 113	9033305	03/23/09 18:47
Surrogate: Terphenyl-d14	1.67	1.58		95%	26 - 128	9033305	03/23/09 18:47
Surrogate: 2-Fluorobiphenyl	1.67	1.45		87%	19 - 109	9033305	03/23/09 18:47
Surrogate: Nitrobenzene-d5	1.67	1.30		78%	22 - 104	9033305	03/23/09 18:47





10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

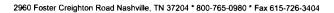
Project Number:

[none]

Received: 03/20/09 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 Compour	nds by EPA Method 82	60B					* * *	
9033095-BS1								
Benzene	50.0	50.5		ug/kg	101%	76 - 130	9033095	03/25/09 17:42
Ethylbenzene	50.0	53.4		ug/kg	107%	80 - 128	9033095	03/25/09 17:42
Naphthalene	50.0	65.2		ug/kg	130%	63 - 144	9033095	03/25/09 17:42
Tolucne	50.0	55.1		ug/kg	110%	80 - 125	9033095	03/25/09 17:42
Xylenes, total	150	160		ug/kg	107%	79 - 130	9033095	03/25/09 17:42
Surrogate: 1,2-Dichloroethane-d4	50.0	49.9			100%	41 - 150	9033095	03/25/09 17:42
Surrogate: Dibromofluoromethane	50.0	48.9			98%	55 - 139	9033095	03/25/09 17:42
Surrogate: Toluene-d8	50.0	51.2			102%	57 - 148	9033095	03/25/09 17:42
Surrogate: 4-Bromofluorobenzene	50.0	53.0			106%	58 - 150	9033095	03/25/09 17:42
9034182-BS1								
Benzene	50.0	51.4		ug/kg	103%	76 - 130	9034182	03/26/09 13:09
Ethylbenzene	50.0	55.2		ug/kg	110%	80 - 128	9034182	03/26/09 13:09
Naphthalene	50.0	60.4		ug/kg	121%	63 - 144	9034182	03/26/09 13:09
Toluene	50.0	56.0		ug/kg	112%	80 - 125	9034182	03/26/09 13:09
Xylenes, total	150	165		ug/kg	110%	79 - 130	9034182	03/26/09 13:09
Surrogate: 1,2-Dichloroethane-d4	50.0	47.9			96%	41 - 150	9034182	03/26/09 13:09
Surrogate: Dibromofluoromethane	50.0	48.3			97%	55 - 139	9034182	03/26/09 13:09
Surrogate: Toluene-d8	50.0	51.2			102%	57 - 148	9034182	03/26/09 13:09
Surrogate: 4-Bromofluorobenzene	50.0	52.4			105%	58 - 150	9034182	03/26/09 13:09
9034202-BS1								
Benzene	50.0	56.4		ug/kg	113%	76 - 130	9034202	03/27/09 11:21
Ethylbenzene	50.0	61.2		ug/kg	122%	80 - 128	9034202	03/27/09 11:21
Naphthalene	50.0	70.1		ug/kg	140%	63 - 144	9034202	03/27/09 11:21
Toluene	50.0	64.6	Ll	ug/kg	129%	80 - 125	9034202	03/27/09 11:21
Xylenes, total	150	182		ug/kg	121%	79 - 130	9034202	03/27/09 11:21
Surrogate: 1,2-Dichloroethane-d4	50.0	44.7			89%	41 - 150	9034202	03/27/09 11:21
Surrogate: Dibromofluoromethane	50.0	49.6			99%	55 - 139	9034202	03/27/09 11:21
Surrogate: Toluene-d8	50.0	50.2			100%	57 - 148	9034202	03/27/09 11:21
Surrogate: 4-Bromofluorobenzene	50.0	57.1			114%	58 - 150	9034202	03/27/09 11:21





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

Project Number: [none] Received: 03/20/0

03/20/09 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
Polyaromatic Hydrocarbons by	EPA 8270D									
9033305-BSD1										
Acenaphthene	1.47	mg/kg wet	1.67	88%	52 - 106	2	33	9033305		03/23/09 19:10
Acenaphthylene	1.48	mg/kg wet	1.67	89%	53 - 109	0.1	38	9033305		03/23/09 19:10
Anthracene	1.61	mg/kg wet	1.67	96%	54 - 124	3	32	9033305		03/23/09 19:10
Benzo (a) anthracene	1.52	mg/kg wet	1.67	91%	53 - 111	2	26	9033305		03/23/09 19:10
Benzo (a) pyrene	1.61	mg/kg wet	1.67	97%	52 - 122	1	31	9033305		03/23/09 19:10
Benzo (b) fluoranthene	1.59	mg/kg wet	1.67	96%	48 - 115	2	37	9033305		03/23/09 19:10
Benzo (g,h,i) perylene	1.45	mg/kg wet	1.67	87%	46 - 114	2	28	9033305		03/23/09 19:10
Benzo (k) fluoranthene	1.46	mg/kg wet	1.67	88%	41 - 121	4	35	9033305		03/23/09 19:10
Chrysene	1.53	mg/kg wet	1.67	92%	49 - 113	0.09	31	9033305		03/23/09 19:10
Dibenz (a,h) anthracene	1.50	mg/kg wet	1.67	90%	47 - 117	2	32	9033305		03/23/09 19:10
Fluoranthene	1.42	mg/kg wet	1.67	85%	52 - 113	2	36	9033305		03/23/09 19:10
Fluorene	1.46	mg/kg wet	1.67	88%	54 - 107	0.4	35	9033305		03/23/09 19:10
Indeno (1,2,3-cd) pyrene	1.51	mg/kg wet	1.67	91%	47 - 115	2	28	9033305		03/23/09 19:10
Naphthalene	1.21	mg/kg wet	1.67	73%	34 - 107	1	34	9033305		03/23/09 19:10
Phenanthrene	1.48	mg/kg wet	1.67	89%	53 - 108	1	33	9033305		03/23/09 19:10
Pyrene	1.65	mg/kg wet	1.67	99%	54 - 113	0.5	36	9033305		03/23/09 19:10
Surrogate: Terphenyl-d14	1.62	mg/kg wet	1.67	97%	26 - 128			9033305		03/23/09 19:10
Surrogate: 2-Fluorobiphenyl	1.53	mg/kg wet	1.67	92%	19 - 109			9033305		03/23/09 19:10
Surrogate: Nitrobenzene-d5	1.33	mg/kg wet	1.67	80%	22 - 104			9033305		03/23/09 19:10
Selected Volatile Organic Comp	ounds by EPA Method 8260B									
9033095-BSD1										
Benzene	48.6	ug/kg	50.0	97%	76 - 130	4	43	9033095		03/25/09 18:23
Ethylbenzene	50.5	ug/kg	50.0	101%	80 - 128	6	48	9033095		03/25/09 18:23
Naphthalene	63.8	ug/kg	50.0	128%	63 - 144	2	50	9033095		03/25/09 18:23
Toluene	51.4	ug/kg	50.0	103%	80 - 125	7	44	9033095		03/25/09 18:23
Xylenes, total	152	ug/kg	150	101%	79 - 130	5	48	9033095		03/25/09 18:23
Surrogate: 1,2-Dichloroethane-d4	52.6	ug/kg	50.0	105%	41 - 150			9033095		03/25/09 18:23
Surrogate: Dibromofluoromethane	48.8	ug/kg	50.0	98%	55 - 139			9033095		03/25/09 18:23
Surrogate: Toluene-d8	51.0	ug/kg	50.0	102%	57 - 148			9033095		03/25/09 18:23
Surrogate: 4-Bromofluorobenzene	55.8	ug/kg	50.0	112%	58 - 150			9033095		03/25/09 18:23
9034182-BSD1										
Benzene	52.4	ug/kg	50.0	105%	76 - 130	2	43	9034182		03/26/09 13:40
Ethylbenzene	55.5	ug/kg	50.0	111%	80 - 128	0.5	48	9034182		03/26/09 13:40
Naphthalene	61.9	ug/kg	50.0	124%	63 - 144	2	50	9034182		03/26/09 13:40
Toluene	57.0	ug/kg	50.0	114%	80 - 125	2	44	9034182		03/26/09 13:40
Xylenes, total	165	ug/kg	150	110%	79 - 130	0.3	48	9034182		03/26/09 13:40
Surrogate: 1,2-Dichloroethane-d4	47.4	ug/kg	50.0	95%	41 - 150			9034182		03/26/09 13:40
Surrogate: Dibromofluoromethane	48.9	ug/kg	50.0	98%	55 - 139			9034182		03/26/09 13:40
Surrogate: Toluene-d8	50.0	ug/kg	50.0	100%	57 - 148			9034182		03/26/09 13:40



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

Client EEG - Env. Enterprise Group (2449)

10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

Project Number:

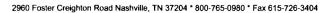
[none]

Received:

03/20/09 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	ounds by EPA	Method 826	0B									
9034182-BSD1												
Surrogate: 4-Bromofluorobenzene		52.8		ug/kg	50.0	106%	58 - 150			9034182		03/26/09 13:40
9034202-BSD1												
Benzene		58.0		ug/kg	50.0	116%	76 - 130	3	43	9034202		03/27/09 11:51
Ethylbenzene		61.5		ug/kg	50.0	123%	80 - 128	0.5	48	9034202		03/27/09 11:51
Naphthalene		67.0		ug/kg	50.0	134%	63 - 144	5	50	9034202		03/27/09 11:51
Toluene		62.7		ug/kg	50.0	125%	80 - 125	3	44	9034202		03/27/09 11:51
Xylenes, total		181		ug/kg	150	120%	79 - 130	0.5	48	9034202		03/27/09 11:51
Surrogate: 1,2-Dichloroethane-d4		48.1		ug/kg	50.0	96%	41 - 150			9034202		03/27/09 11:51
Surrogate: Dibromofluoromethane		48.7		ug/kg	50.0	97%	55 - 139			9034202		03/27/09 11:51
Surrogate: Toluene-d8		51.2		ug/kg	50.0	102%	57 - 148			9034202		03/27/09 11:51
Surrogate: 4-Bromosluorobenzene		53.8		ug/kg	50.0	108%	58 - 150			9034202		03/27/09 11:51





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

Project Number:

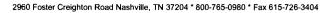
[none]

Received: 03

03/20/09 08:00

## PROJECT QUALITY CONTROL DATA Matrix Spike

Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
Polyaromatic Hydrocarbons by	FDA 9270D									
9033201-MS1	E1 A 02/0D									
Accnaphthene	ND	1.53		mg/kg wet	1.62	94%	28 - 117	9033201	NSC1962-04	03/26/09 22:23
Acenaphthylene	ND	1.53		mg/kg wet	1.62	94%	33 - 113	9033201	NSC1962-04	03/26/09 22:23
Anthracene	ND	1.65		mg/kg wet	1.62	102%	31 - 131	9033201	NSC1962-04	03/26/09 22:23
Benzo (a) anthracene	ND	1.43		mg/kg wet	1.62	88%	29 - 124	9033201	NSC1962-04	03/26/09 22:23
Benzo (a) pyrene	ND	1.58		mg/kg wet	1.62	97%	30 - 127	9033201	NSC1962-04	03/26/09 22:23
Benzo (b) fluoranthene	ND	1.47		mg/kg wet	1.62	91%	26 - 128	9033201	NSC1962-04	03/26/09 22:23
Benzo (g,h,i) perylene	ND	1.45		mg/kg wet	1.62	89%	21 - 122	9033201	NSC1962-04	03/26/09 22:23
Benzo (k) fluoranthene	ND	1.55		mg/kg wet	1.62	96%	20 - 130	9033201	NSC1962-04	03/26/09 22:23
Chrysenc	ND	1.47		mg/kg wet	1.62	91%	30 - 119	9033201	NSC1962-04	03/26/09 22:23
Dibenz (a,h) anthracene	ND	1.47		mg/kg wet	1.62	90%	27 - 122	9033201	NSC1962-04	03/26/09 22:23
Fluoranthene	ND	1.61		mg/kg wet	1.62	99%	23 - 132	9033201	NSC1962-04	03/26/09 22:23
Fluorene	ND	1.52		mg/kg wct	1.62	94%	38 - 110	9033201	NSC1962-04	03/26/09 22:23
Indeno (1,2,3-cd) pyrene	ND	1.50		mg/kg wct	1.62	92%	24 - 122	9033201	NSC1962-04	03/26/09 22:23
Naphthalene	ND	1.36		mg/kg wet	1.62	84%	14 - 117	9033201	NSC1962-04	03/26/09 22:23
Phenanthrene	ND	1.47		mg/kg wet	1.62	91%	21 - 130	9033201	NSC1962-04	03/26/09 22:23
Pyrene	ND	1.51		mg/kg wet	1.62	93%	24 - 133	9033201	NSC1962-04	03/26/09 22:23
Surrogate: Terphenyl-d14		1.06		mg/kg wet	1.62	66%	26 - 128	9033201	NSC1962-04	03/26/09 22:23
Surrogate: 2-Fluorobiphenyl		1.20		mg/kg wet	1.62	74%	19 - 109	9033201	NSC1962-04	03/26/09 22:23
Surrogate: Nitrobenzene-d5		1.17		mg/kg wet	1.62	72%	22 - 104	9033201	NSC1962-04	03/26/09 22:23
9033305-MS1										
Acenaphthene	ND	0.161	M2	mg/kg dry	2.29	7%	28 - 117	9033305	NSC1899-03	03/23/09 19:33
Acenaphthylene	ND	0.936		mg/kg dry	2.29	41%	33 - 113	9033305	NSC1899-03	03/23/09 19:33
Anthracene	0.540	2.10		mg/kg dry	2.29	68%	31 - 131	9033305	NSC1899-03	03/23/09 19:33
Benzo (a) anthracene	ND	2.01		mg/kg dry	2.29	88%	29 - 124	9033305	NSC1899-03	03/23/09 19:33
Benzo (a) pyrene	ND	2.04		mg/kg dry	2.29	89%	30 - 127	9033305	NSC1899-03	03/23/09 19:33
Benzo (b) fluoranthene	ND	2.07		mg/kg dry	2.29	91%	26 - 128	9033305	NSC1899-03	03/23/09 19:33
Benzo (g,h,i) perylene	ND	1.90		mg/kg dry	2.29	83%	21 - 122	9033305	NSC1899-03	03/23/09 19:33
Benzo (k) fluoranthenc	ND	1.88		mg/kg dry	2.29	82%	20 - 130	9033305	NSC1899-03	03/23/09 19:33
Chrysenc	0.0831	2.05		mg/kg dry	2.29	86%	30 - 119	9033305	NSC1899-03	03/23/09 19:33
Dibenz (a,h) anthracene	ND	1.93		mg/kg dry	2.29	84%	27 - 122	9033305	NSC1899-03	03/23/09 19:33
Fluoranthene	ND	2.38		mg/kg dry	2.29	104%	23 - 132	9033305	NSC1899-03	03/23/09 19:33
Fluorene	2.90	0.464	M2	mg/kg dry	2.29	-106%	38 - 110	9033305	NSC1899-03	03/23/09 19:33
Indeno (1,2,3-cd) pyrene	ND ·	1.94		mg/kg dry	2.29	85%	24 - 122	9033305	NSC1899-03	03/23/09 19:33
Naphthalene	8.43	11.9	MI	mg/kg dry	2.29	149%	14 - 117	9033305	NSC1899-03	03/23/09 19:33
Phenanthrene	5.98	8.27		mg/kg dry	2.29	100%	21 - 130	9033305	NSC1899-03	03/23/09 19:33
Pyrene	0.698	2.44		mg/kg dry	2.29	76%	24 - 133	9033305	NSC1899-03	03/23/09 19:33





Client EEG - Env. Enterprise Group (2449)

10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

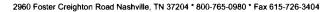
Project Number: [none]

Received:

03/20/09 08:00

## PROJECT QUALITY CONTROL DATA Matrix Spike - Cont.

Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
Polyaromatic Hydrocarbons by E	PA 8270D									
9033305-MS1										
Surrogate: Terphenyl-d14		2.00		mg/kg dry	2.29	88%	26 - 128	9033305	NSC1899-03	03/23/09 19:33
Surrogate: 2-Fluorobiphenyl		1.88		mg/kg dry	2.29	82%	19 - 109	9033305	NSC1899-03	03/23/09 19:33
Surrogate: Nitrobenzene-d5		3.67	ZX	mg/kg dry	2.29	160%	22 - 104	9033305	NSC1899-03	03/23/09 19:33
Selected Volatile Organic Compo	unds by EPA Me	thod 8260B								
9034182-MS1										
Benzene	ND	2.86		mg/kg dry	2.82	101%	33 - 146	9034182	NSC1899-05RE	03/26/09 19:01
Ethylbenzene	0.0709	3.14		mg/kg dry	2.82	109%	16 - 160	9034182	NSC1899-05RE	03/26/09 19:01
Naphthalene	4.20	7.03		mg/kg dry	2.82	101%	10 - 151	9034182	NSC1899-05RE 1	03/26/09 19:01
Toluene	ND	3.08		mg/kg dry	2.82	109%	30 - 145	9034182	NSC1899-05RE 1	03/26/09 19:01
Xylenes, total	0.163	9.59		mg/kg dry	8.47	111%	16 - 159	9034182	NSC1899-05RE 1	03/26/09 19:01
Surrogate: 1,2-Dichloroethane-d4		45.7		ug/kg	50.0	91%	41 - 150	9034182	NSC1899-05RE 1	03/26/09 19:01
Surrogate: Dibromofluoromethane		49.7		ug/kg	50.0	99%	55 - 139	9034182	NSC1899-05RE 1	03/26/09 19:01
Surrogate: Toluene-d8		49.9		ug/kg	50.0	100%	57 - 148	9034182	NSC1899-05RE 1	03/26/09 19:01
Surrogate: 4-Bromofluorobenzene		49.2		ug/kg	50.0	98%	58 - 150	9034182	NSC1899-05RE	03/26/09 19:01





10179 Highway 78 Ladson, SC 29456

Tom McElwee

Attn

Work Order:

NSC1899

Project Name: Laurel Bay Housing Project

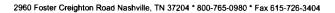
Project Number:

[none]

Received: 03/20/09 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
Polyaromatic Hydrocarbons by EPA	A 8270D											
9033201-MSD1												
Acenaphthene	ND	1.48		mg/kg wet	1.63	91%	28 - 117	3	33	9033201	NSC1962-04	03/26/09 22:44
Acenaphthylene	ND	1.52		mg/kg wet	1.63	93%	33 - 113	0.6	38	9033201	NSC1962-04	03/26/09 22:44
Anthracene	ND	1.64		mg/kg wet	1.63	101%	31 - 131	0.8	32	9033201	NSC1962-04	03/26/09 22:44
Benzo (a) anthracene	ND	1.38		mg/kg wet	1.63	85%	29 - 124	3	26	9033201	NSC1962-04	03/26/09 22:44
Benzo (a) pyrene	ND	1.60		mg/kg wet	1.63	98%	30 - 127	1	31	9033201	NSC1962-04	03/26/09 22:44
Benzo (b) fluoranthene	ND	1.27		mg/kg wet	1.63	78%	26 - 128	14	37	9033201	NSC1962-04	03/26/09 22:44
Benzo (g,h,i) perylenc	ND	1.44		mg/kg wet	1.63	88%	21 - 122	0.6	28	9033201	NSC1962-04	03/26/09 22:44
Benzo (k) fluoranthene	ND	1.79		mg/kg wet	1.63	110%	20 - 130	14	35	9033201	NSC1962-04	03/26/09 22:44
Chrysene	ND	1.47		mg/kg wct	1.63	90%	30 - 119	0.05	31	9033201	NSC1962-04	03/26/09 22:44
Dibenz (a,h) anthracene	ND	1.46		mg/kg wct	1.63	90%	27 - 122	0.4	32	9033201	NSC1962-04	03/26/09 22:44
Fluoranthene	ND	1.58		mg/kg wet	1.63	97%	23 - 132	2	36	9033201	NSC1962-04	03/26/09 22:44
Fluorene	ND	1.48		mg/kg wet	1.63	91%	38 - 110	3	35	9033201	NSC1962-04	03/26/09 22:44
Indeno (1,2,3-ed) pyrene	ND	1.53		mg/kg wet	1.63	94%	24 - 122	2	28	9033201	NSC1962-04	03/26/09 22:44
Naphthalene	ND	1.43		mg/kg wet	1.63	88%	14 - 117	5	34	9033201	NSC1962-04	03/26/09 22:44
Phenanthrene	ND	1.49		mg/kg wet	1.63	92%	21 - 130	0.9	33	9033201	NSC1962-04	03/26/09 22:44
Pyrenc	ND	1.46		mg/kg wet	1.63	90%	24 - 133	3	36	9033201	NSC1962-04	03/26/09 22:44
Surrogate: Terphenyl-d14		1.06		mg/kg wet	1.63	65%	26 - 128			9033201	NSC1962-04	03/26/09 22:44
Surrogate: 2-Fluorobiphenyl		1.16		mg/kg wet	1.63	71%	19 - 109			9033201	NSC1962-04	03/26/09 22:44
Surrogate: Nitrobenzene-d5		1.17		mg/kg wet	1.63	72%	22 - 104			9033201	NSC1962-04	03/26/09 22:44
9033305-MSD1												
Acenaphthene	ND	2.31	R	mg/kg dry	2.25	102%	28 - 117	174	33	9033305	NSC1899-03	03/23/09 19:55
Acenaphthylene	ND	0.903		mg/kg dry	2.25	40%	33 - 113	4	38	9033305	NSC1899-03	03/23/09 19:55
Anthracene	0.540	2.49		mg/kg dry	2.25	86%	31 - 131	17	32	9033305	NSC1899-03	03/23/09 19:55
Benzo (a) anthracene	ND	2.19		mg/kg dry	2.25	97%	29 - 124	9	26	9033305	NSC1899-03	03/23/09 19:55
Benzo (a) pyrene	ND	2.19		mg/kg dry	2.25	97%	30 - 127	7	31	9033305	NSC1899-03	03/23/09 19:55
Benzo (b) fluoranthene	ND	2.33		mg/kg dry	2.25	103%	26 - 128	12	37	9033305	NSC1899-03	03/23/09 19:55
Benzo (g,h,i) perylene	ND	2.02		mg/kg dry	2.25	90%	21 - 122	6	28	9033305	NSC1899-03	03/23/09 19:55
Benzo (k) fluoranthene	ND	1.95		mg/kg dry	2.25	86%	20 - 130	3	35	9033305	NSC1899-03	03/23/09 19:55
Chrysene	0.0831	2.22		mg/kg dry	2.25	95%	30 - 119	8	31	9033305	NSC1899-03	03/23/09 19:55
Dibenz (a,h) anthracene	ND	2.07		mg/kg dry	2.25	92%	27 - 122	7	32	9033305	NSC1899-03	03/23/09 19:55
Fluoranthene	ND	2.42		mg/kg dry	2.25	107%	23 - 132	2	36	9033305	NSC1899-03	03/23/09 19:55
Fluorene	2.90	0.541	M2	mg/kg dry	2.25	-105%	38 - 110	15	35	9033305	NSC1899-03	03/23/09 19:55
Indeno (1,2,3-cd) pyrene	ND	2.08		mg/kg dry	2.25	92%	24 - 122	7	28	9033305	NSC1899-03	03/23/09 19:55
Naphthalene	8.43	9.79		mg/kg dry	2.25	60%	14 - 117	19	34	9033305	NSC1899-03	03/23/09 19:55
Phenanthrene	5.98	7.74		mg/kg dry	2.25	78%	21 - 130	7	33	9033305	NSC1899-03	03/23/09 19:55
Pyrene	0.698	2.73		mg/kg dry	2.25	90%	24 - 133	11	36	9033305	NSC1899-03	03/23/09 19:55
Surrogate: Terphenyl-d14		2.24		mg/kg dry	2.25	99%	26 - 128			9033305	NSC1899-03	03/23/09 19:55
Surrogate: 2-Fluorobiphenyl		2.06		mg/kg dry	2.25	91%	19 - 109			9033305	NSC1899-03	03/23/09 19:55
Surrogate: Nitrobenzene-d5		3.14	ZX	mg/kg dry	2.25	139%	22 - 104			9033305	NSC1899-03	03/23/09 19:55





10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received: 03/20/09 08:00

# PROJECT QUALITY CONTROL DATA Matrix Spike Dup - Cont.

Analyte	Orig. Val.	Duplicate Q	Units	Spike Conc	% Rec.	Target Range	RPD Limi	Batch	Sample Duplicated	Analyzed Date/Time
Selected Volatile Organic Compour	ds by EPA	Method 8260B								
<b>9034182-MSD1</b> Benzene	ND	3.14	mg/kg dry	2.82	111%	33 - 146	10 43	9034182	NSC1899-05RE	03/26/09 19:31
Ethylbenzene	0.0709	3.44	mg/kg dry	2.82	120%	16 - 160	9 48	9034182	NSC1899-05RE	03/26/09 19:31
Naphthalone	4.20	7.14	mg/kg dry	2.82	104%	10 - 151	2 50	9034182	1 NSC1899-05RE	03/26/09 19:31
Toluene	ND	3.38	mg/kg dry	2.82	120%	30 - 145	9 44	9034182	NSC1899-05RE	03/26/09 19:31
Xylenes, total	0.163	10.6	mg/kg dry	8.47	123%	16 - 159	10 48	9034182	1 NSC1899-05RE	03/26/09 19:31
Surrogate: 1,2-Dichloroethane-d4		45.1	ug/kg	50.0	90%	41 - 150		9034182	NSC1899-05RE	03/26/09 19:31
Surrogate: Dibromofluoromethane		49.7	ug/kg	50.0	99%	55 - 139		9034182	1 NSC1899-05RE	03/26/09 19:31
Surrogate: Toluene-d8		49.4	ug/kg	50.0	99%	57 - 148		9034182	NSC1899-05RE	03/26/09 19:31
Surrogate: 4-Bromofluorobenzene		53.3	ug/kg	50.0	107%	58 - 150		9034182	1 NSC1899-05RE	03/26/09 19:31



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

EEG - Env. Enterprise Group (2449) Client

10179 Highway 78 Ladson, SC 29456

Tom McElwee

Work Order:

NSC1899

Project Name:

Laurel Bay Housing Project

Project Number:

[none]

Received:

03/20/09 08:00

#### **CERTIFICATION SUMMARY**

#### TestAmerica Nashville

Attn

Method	Matrix	AlhA	Nelac	South Carolina	
ere and the second of the second of					
SW846 8260B	Soil	N/A	X	X	
SW846 8270D	Soil			X	
SW-846	Soil				



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

Client EEG - Env. Enterprise Group (2449)

10179 Highway 78 Ladson, SC 29456 Tom McElwee

Attn

Work Order: Project Name: NSC1899

Name: Laurel Bay Housing Project

Project Number:

[none]

Received: 03/20/09 08:00

**DATA QUALIFIERS AND DEFINITIONS** 

L1 Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above acceptance limits.

M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
 M2 The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

R The RPD exceeded the method control limit. The individual analyte QA/QC recoveries, however, were within acceptance limits.

**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

TestAmerica Nashville Division

ONLY IN TACHMINOCHARLY

Cilent Name/Account #: EEG # 2449

2960 Foster Creighton Nashville, TN 37204

Phone: 615-726-0177 Toll Free: 800-765-0980 Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?

Yes Yes Compliance Monitoring? Enforcement Action?

ŝ, ŝ

Site State: SC . #0 TA Quote #:

FAX NO.: 843-879-040

Project Manager: Tom McEwee email: mcewee@eeginc.net

Telephone Number: 843.412.2097

Sampler Name: (Print) Sampler Signature:

Address: 10179 Highway 78 City/State/Zip: Ladson, SC 29456 Project ID: Laurel Bay Housing Project

Project #:

10 W 2 N eluberio2-erq) TAT H2UR 04/03/09 23:59 **NSC1899** PAH - 8270C ale BTEX + Napth - 82606 lios Shudge etsW gnishning (NaOH ( Orange Label) (0765-3NO benalliii blaii Composite No. of Containers Shipped 1030 0201 3160 1355 220 Time Sampled 3/16/09 Date Sampled 40 Lungel Buy Blod. 2 40 LAMEL BAY BLAG-44 LAUCE BAY B)vd 142 LANCE BAY BINC 486muca Sample ID / Descrip

Special Instructions

006 Time 60% 3/19/

Refinquished by:

ine in

FEE

Method of Shipment:

Date

7.4

Temperature Upon Receipt. VOCs Free of Headspace?

Laboratory Comments:

0200 30000 Date

Time

### ATTACHMENT A

# **UST Certificate of Disposal**

### **CONTRACTOR**

Small Business Group, Inc. 10179 Highway 78 Ladson, SC 29456

TEL (843) 879-0403 FAX (843) 879-0401

### **TANK ID & LOCATION**

UST 140 Laurel Bay Blvd – 1 & 2, 140 Laurel Bay Blvd, Laurel Bay Housing Area, MCAS Beaufort, S.C.

### **DISPOSAL LOCATION**

Coastal Auto Salvage Co., Inc. 130 Laurel Bay Road Beaufort, S.C. 29906

TYPE OF TANK	SIZE (GAL)
Steel	280

### **CLEANING/DISPOSAL METHOD**

The tanks and piping were unearthed, cut open, cleaned with a pressure washer, cut into sections, and recycled.

### **DISPOSAL CERTIFICATION**

I certify that the above tanks, piping and equipment have been properly cleaned and disposed of.

1 4/8/09 (Name) (Date)

# Appendix C Laboratory Analytical Report - Groundwater



### Volatile Organic Compounds by GC/MS

Client: AECOM - Resolution Consultants

Description: BEALB140TW01WG20130723

Laboratory ID: OG25027-013

Matrix: Aqueous

Date Sampled: 07/23/2013 1350 Date Received: 07/25/2013

Run Prep Method Analytical Method Dilution Analysis Date Analyst Prep Date Batch 1 5030B 8260B 1 08/02/2013 1658 ALL 26393

Parameter	CAS Number	Analytical Method	Result Q	LOQ	LOD	DL Units Run
Benzene	71-43-2	8260B	ND	0.50	0.25	0.027 ug/L 1
Ethylbenzene	100-41-4	8260B	ND	0.50	0.25	0.17 ug/L 1
Naphthalene	91-20-3	8260B	ND	0.50	0.25	0.12 ug/L 1
Toluene	108-88-3	8260B	ND	0.50	0.25	0.17 ug/L 1
Xylenes (total)	1330-20-7	8260B	ND	0.50	0.25	0.17 ug/L 1
	Dun 1 Assent	0000				

Surrogate	Q	Run 1 % Recovery	Limits
1,2-Dichloroethane-d4		103	70-120
Toluene-d8		101	85-120
Bromofluorobenzene		110	75-120
Dibromofluoromethane		98	85-115

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

B = Detected in the method blank
J = Estimated result < PQL and >\_MDL

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

 $\label{eq:power_power} \mbox{E = Quantitation of compound exceeded the calibration range} \\ \mbox{P = The RPD between two GC columns exceeds } 40\%$ 

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

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

Shealy Environmental Services, Inc.

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

Level 1 Report v2.1

### Semivolatile Organic Compounds by GC/MS

Client: AECOM - Resolution Consultants

Description: BEALB140TW01WG20130723

Laboratory ID: OG25027-013

Matrix: Aqueous

Date Sampled: 07/23/2013 1350 Date Received: 07/25/2013

Terphenyl-d14

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/26/2013 1634	RBH	07/25/2013 1509	25843

81

Parameter		CA: Number	. ,	Result	Q	LOQ	LOD	DL	Units	Run
Benzo(a)anthracene		56-55-	3 8270D	ND		0.22	0.11	0.088	ug/L	1
Benzo(b)fluoranthene		205-99-2	2 8270D	ND		0.22	0.11	0.094	ug/L	1
Benzo(k)fluoranthene		207-08-9	9 8270D	ND		0.22	0.11	0.099	ug/L	1
Chrysene		218-01-9	9 8270D	ND		0.22	0.11	0.058	ug/L	1
Dibenzo(a,h)anthracene		53-70-	3 8270D	ND		0.22	0.11	0.062	ug/L	1
Surrogate	Q		ceptance Limits							
2-Fluorobiphenyl	_	82	50-110					•		
Nitrobenzene-d5		85	40-110							

50-135

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

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

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

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

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

Shealy Environmental Services, Inc.

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

Level 1 Report v2.1

# Appendix D Regulatory Correspondence





#### C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

May 18, 2009

Commanding Officer

ATTN: S-4 NREAO (Craig Ehde)

**MCAS** 

PO Box 55001

Beaufort, SC 29904-5001

Re:

MCAS - Laurel Bay Housing -140 Laurel Bay

Site ID # 04189

UST Closure Report received 24 April 2009

**Beaufort County** 

Dear Mr. Ehde:

The purpose of this letter is to verify a release of fuel oil at the referenced residence. According to information received by the Department, the source of the release is from past onsite use of fuel oil USTs. To date, initial activities by the facility have included tank removal and soil sampling. Based on the information contained in the closure report, a potential violation of the South Carolina Pollution Control Act has occurred in that there has been an unauthorized release of petroleum to the environment.

Additional assessment activities are required for this site. Specifically the Department requests that a groundwater sample be collected from this site. Please note, the Department approved a groundwater sampling proposal for Laurel Bay submitted by MCAS under separate cover dated 16 June 2008.

Should you have any questions, please contact me at 803-896-4179 or cookejt@dhec.sc.gov.

Sincerely,

Jan T. Cooke, Hydrogeologist

AST Petroleum Restoration & Site Environmental Investigations Section

Division of Site Assessment, Remediation & Revitalization

Bureau of Land and Waste Management

Jan Cul

cc: Region 8 District EQC



# 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

August 6, 2015

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 Concurrence with Final Initial Groundwater Investigation Report-July 2013

Laurel Bay Military Housing Area Multiple Properties

Dated June 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 10 stated addresses. For the remaining 25 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

FURX

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-July 2013

Specifice Property Recommendations Dated August 6, 2015

### Draft Final Initial Groundwater Investigation Report for (35 addresses/38 tanks)

Permanent Monito	ring Well Investigation recommendation (10 addresses/11 tanks)
119 Banyan	156 Laurel Bay
128 Banyan	1033 Foxglove
132 Banyan	1055 Gardenia
135 Birch	1059 Gardenia
148 Laurel Bay	1168 Jasmine
	her Action recommendation (25 addresses/27 tanks):
115 Banyan	386 Acorn
116 Banyan	395 Acorn
120 Banyan	399 Acorn
124 Banyan	1021 Foxglove
125 Banyan	1027 Foxglove
136 Birch	1030 Foxglove
140 Laurel Bay	1032 Foxglove
144 Laurel Bay	1053 Gardenia
152 Laurel Bay	1058 Gardenia
160 Cypress	1061 Gardenia
263 Beech	1166 Jasmine
203 Deecii	
269 Birch	1169 Jasmine