SUMMARY REPORT
184 EAST CYPRESS STREET (FORMERLY 230 EAST CYPRESS STREET)
LAUREL BAY MILITARY HOUSING AREA
MARINE CORPS AIR STATION BEAUFORT
BEAUFORT, SC

Revision: 0 Prepared for:

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

and



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

Prepared by:



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**Contract Number: N62470-14-D-9016** 

CTO WE52

**JUNE 2021** 



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### **List of Acronyms**

bgs below ground surface

BTEX benzene, toluene, ethylbenzene, and xylenes

CTO Contract Task Order

COPC constituents of potential concern

ft feet

IDIQ Indefinite Delivery, Indefinite Quantity

IGWA Initial Groundwater Assessment

JV Joint Venture

LBMH Laurel Bay Military Housing MCAS Marine Corps Air Station

NAVFAC Mid-Lant Naval Facilities Engineering Command Mid-Atlantic

NFA No Further Action

PAH polynuclear aromatic hydrocarbon QAPP Quality Assurance Program Plan

RBSL risk-based screening level

SCDHEC South Carolina Department of Health and Environmental Control

Site LBMH area at MCAS Beaufort, South Carolina

UST underground storage tank
VISL vapor intrusion screening level



### 1.0 INTRODUCTION

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

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

This report summarizes the results the environmental investigation activities associated with the storage of home heating oil and the potential release of petroleum constituents at the referenced property. Based on the results of the investigation, a No Further Action (NFA) determination has been made by the South Carolina Department of Health and Environmental Control (SCDHEC) for 184 East Cypress Street (Formerly 230 East Cypress Street). 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 184 East Cypress Street (Formerly 230 East Cypress Street). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 230 Cypress Street* (MCAS Beaufort, 2008). The UST Assessment Report is provided in Appendix B. Details regarding the IGWA sampling activities at this site are provided in the *Investigation of Ground Water at Leaking Heating Oil UST Sites Report –* (Resolution Consultants, 2008). 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 June 26, 2007, a single 280 gallon heating oil UST was removed from the north western front yard area adjacent to the house at 184 East Cypress Street (Formerly 230 East Cypress Street). The former UST location is indicated on the figures of the UST Assessment Report (Appendix B). The UST was removed, cleaned, and shipped offsite for recycling. There was no



visual evidence (i.e., staining or sheen) of petroleum impact at the time of the UST removal. According to the UST Assessment Report (Appendix B), the depth to the base of the UST was 5'2" bgs and a single soil sample was collected from that depth. An additional soil sample was collected from the side of the excavation at a depth of 3'2". The samples were collected from the fill port side of the former UST to represent a worst case scenario.

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

### 2.2 Soil Analytical Results

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

The soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form (Appendix B). The results of the soil sampling at the former UST location were used by MCAS Beaufort, in consultation with SCDHEC, to determine a path forward (i.e., additional sampling or NFA) for the property. The soil results collected from 184 East Cypress Street (Formerly 230 East Cypress Street) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated September 3, 2008, SCDHEC requested an IGWA for 184 East Cypress Street (Formerly 230 East Cypress Street) 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 29, 2008, a temporary monitoring well was installed at 184 East Cypress Street (Formerly 230 East Cypress Street), in accordance with the South Carolina Well Standards and Regulations (R.61-71.H-I, updated June 24, 2016). In order to provide data that can be used to determine whether COPCs are migrating to underlying groundwater, the monitoring well was placed in the same general location as the former heating oil UST. The former UST location is indicated on the figures of the UST Assessment Report (Appendix B). Further



details are provided in the *Investigation of Ground Water at Leaking Heating Oil UST Sites Report* (Resolution Consultants, 2008).

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 *Investigation of Ground Water at Leaking Heating Oil UST Sites Report* (Resolution Consultants, 2008).

### 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 184 East Cypress Street (Formerly 230 East Cypress Street) 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 184 East Cypress Street (Formerly 230 East Cypress Street). This NFA determination was obtained in a letter dated December 17, 2008. SCDHEC's NFA letter is provided in Appendix D.

### 4.0 REFERENCES

Marine Corps Air Station Beaufort, 2008. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 230 Cypress Street, Laurel Bay Military Housing Area,* January 2008.

Resolution Consultants, 2008. *Investigation of Ground Water at Leaking Heating Oil UST Sites*Report for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military



- Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina, November 2008.
- 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 184 East Cypress Street (Formerly 230 East Cypress Street)

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

Constituent	SCDHEC RBSLs (1)	Results Samples Collected 07/25/07			
Constituent	SCOREC RBSLS V	230 Cypress Bottom 01	230 Cypress Side 02		
Volatile Organic Compounds Analyz	ed by EPA Method 8260B (mg/kg)				
Benzene	0.003	0.000577	0.000325		
Ethylbenzene	1.15	0.00707	0.00743		
Naphthalene	0.036	0.0663	0.106		
Toluene	0.627	0.00311	0.00117		
Xylenes, Total	13.01	0.00153	0.00179		
Semivolatile Organic Compounds Ar	nalyzed by EPA Method 8270D (mg/kg)				
Benzo(a)anthracene	0.66	0.0231	0.234		
Benzo(b)fluoranthene	0.66	0.0225	0.152		
Benzo(k)fluoranthene	0.66	0.0225	0.0696		
Chrysene	0.66	0.0256	0.28		
Dibenz(a,h)anthracene	0.66	0.0281	0.0292		

### Notes:

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

mg/kg - milligrams per kilogram

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

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

<sup>&</sup>lt;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).

#### Table 2

# Laboratory Analytical Results - Groundwater 184 East Cypress Street (Formerly 230 East Cypress Street) 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 07/29/08
<b>Volatile Organic Compounds Analyzed</b>	by EPA Method 8260B	(μg/L)	
Benzene	5	16.24	ND
Ethylbenzene	700	45.95	ND
Naphthalene	25	29.33	ND
Toluene	1000	105,445	ND
Xylenes, Total	10,000	2,133	ND
Semivolatile Organic Compounds Ana	lyzed by EPA Method 8	270D (μg/L)	
Benzo(a)anthracene	10	NA	ND
Benzo(b)fluoranthene	10	NA	ND
Benzo(k)fluoranthene	10	NA	ND
Chrysene	10	NA	ND
Dibenz(a,h)anthracene	10	NA	ND

#### Notes:

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

(2) Site-specific groundwater VISLs were calculated using the EPA JE Model Spreadsheets (Version 3.1, February 2004) and conservative modeling inputs representative of a small single-story house with an 8 foot ceiling. Site-specific groundwater VISLs were developed based on a target risk level of 1x10<sup>-6</sup>, 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

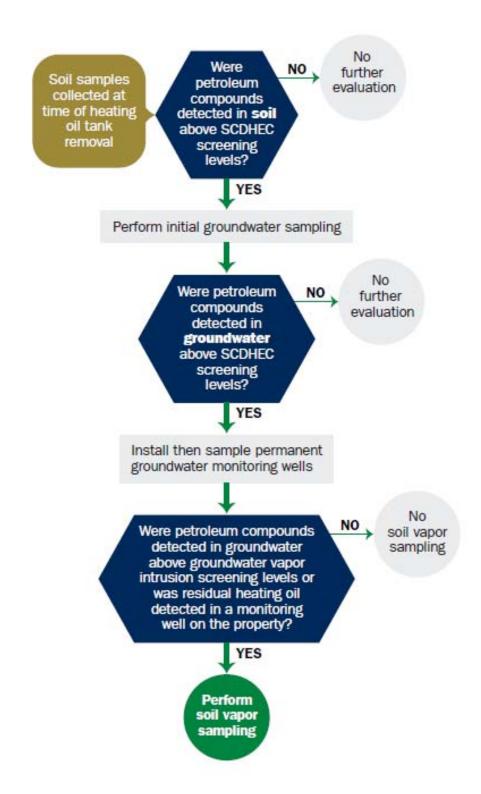
SCDHEC - South Carolina Department Of Health and Environmental Control

μg/L - micrograms per liter

VISL - Vapor Intrusion Screening Level

# Appendix A Multi-Media Selection Process for LBMH



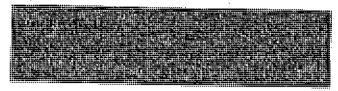


**Appendix A - Multi-Media Selection Process for LBMH** 

# Appendix B UST Assessment Report



# Attachment 1 South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank (UST) Assessment Report



Submit Completed Form To:
UST Program
SCDHEC
2600 Bull Street
Columbia, South Carolina 29201
Telephone (803) 896-6240

<u>I.</u>	OWNERSHIP OF UST (S)	
Beaulo Owner Name (	Corporation, Individual, Public Agency, Other)	
Mailing Address	LAURET BAY BRUD.	
Bea City	state 29906 State Zip Code	
R43 Area Code	Telephone Number Contact Person	F007

II. SITE IDENTIFICATION AND LOCATION

N/A

Permit I.D. # Actus Lend Lease Construction

Facility Name or Company Site Identifier\_

230 CYPRESS

Street Address or State Road (as applicable)

Beaufort, SC 29906

City ZIP County

# Attachment 2 III. INSURANCE INFORMATION

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

<b>.</b> .	γ· USI IIV")RMATION		7	·===			
• •		Tank 1	Tank 2	ank 3	Tank 4	Tank 5	Tank 6
 A.	Product(ex. Gas, Kerosene)	#Z DIESO					
B.		2806 <b>V</b> 888					
C.	Age						
D.	Construction Material(ex. Steel, FRP)	Steel					
E.	Month/Year of Last Use						
F.	Depth (ft.) To Base of Tank	62,,			•		
G.	Spill Prevention Equipment Y/N	N					
H.	Overfill Prevention Equipment Y/N	N					
I.	Method of Closure Removed Filled	Removed					
J.	Date Tanks Removed/Filled						
K.	Visible Corrosion or Pitting Y/N	6-26-07		_			
L.	Visible Holes Y/N	N					
		N					
M.	Method of disposal for any USTs removed from the g	round (att	ach dispo	sal man	ifests)		<del></del> !
	Recycling - Scap Stee	1					
N.	Method of disposal for any liquid petroleum, sludges, disposal manifests)  TREATMENT FACILITY  SALIDI GOLDANIA	TY-F	PRAN	م مرددا ا	<del>-</del> /		ch <i>F(V</i> L
	Solidification + 5	46+17	1/e /	<u> </u>	AND +	911	
Ο.	If any corrosion, pitting, or holes were observed, descr						
		mic IOC	anon and	extent i	or each (	JST	

# VI. PIPING NFORMATION

		Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
	Construction Material(ex. Steel, FRP)	Steel					
	Distance from UST to Dispenser	NIA				<u> </u>	
	Number of Dispensers	<u> </u>					
	Type of System Pressure or Suction	-0 -					
	Was Piping Removed from the Ground? Y/N	Electric Pump					
	Visible Corrosion or Pitting Y/N	4					
	Visible Holes Y/N					_	
	Age						
		N					
		İ	i		j	ļ	
	If any corrosion, pitting, or holes were observed,	describe the	location	and exter	nt for eac	h piping	run.
	MINOR CORROSION + 1	Rust (	Pittini	c) 2	ne en	· · · ·	
	MINOR CORROSION + 14  PREsent on the	Cill +	1/en	T I	1065	- , ,	<u> </u>
				<del>- [</del>	1/200		
				<del></del> .		<del></del> .	
	VII. BRIEF SITE DESCRIPTION AN	D HISTOI	RY				
•							
-	Home Heating Oil T	ANK -	Re	SIDE	NTIA	_	
_							
_							
	·						
						· · · · ·	
_	·						

## VIII. SITE COND...ONS

	• .		
	Yes	No	Unk
A. Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells?  If yes, indicate depth and location on the site map.		X	
B. Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells?  If yes, indicate location on site map and describe the odor (strong, mild, etc.)	X		·
C. Was water present in the UST excavation, soil borings, or trenches?  If yes, how far below land surface (indicate location and depth)?		*	
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:		*	
E. Was a petroleum sheen or free product detected on any excavation or boring waters?  If yes, indicate location and thickness.		*	

SCDHEC Lab Certification Number DW: 84009002

В.						7.	
Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA#
						ECHEVARR	A
1	BOTTOM	5	CLAY	62"	6-26-07	AMANG	<del></del>
2	SIDE	5	SAND	38"	1030 6-26-07 1040	A Mayory	ND
3						,	,
4							
5		·					
6							
7 .							
8		:					
9	·		···		,		
10							
11				-			
12				•			
13		· · · · · · · · · · · · · · · · · · ·				-	
14							<del>-</del>
15							
16		-	<del>-                                    </del>			-	
17							
18							
19							
						<u>·</u>	
20				Ĭ			,

\* = Depth Below the Surrounding Land Surface

### 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.

EPA Method 8260 B Volatile ORGANIC Compounds - Preservative: Zea Sodium Bisulfate lea
- Presendative: Zea Sodium Bisulfate lea
EPA METHOD 8270 Poly Aromatic Hydro CARBONS
- NO PRESERVATIVE
DNE (1) SIDEWALL And ONE (1) Bottom
DNE (1) SIDEWALL And ONE (1) Bottom  SAmple were secured from tank excavation
Samples were stoned and shipped in AN INSURATED COOLER W/ ICE.
INSURATED COOLER W/ ICE.

### XI. RECEPTOR.

		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?		
	If yes, indicate type of receptor, distance, and direction on site map.		X
B.	Are there any public, private, or irrigation water supply wells within 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) 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, water, sewer, storm drain) located within 100 feet of the UST system that could potentially come in contact with the contamination?		
•	If yes, indicate the type of utility, distance, and direction on the site map.		<b>1</b>
E.	Has contaminated soil been identified at a depth less than 3 feet below land surface in an area that is not capped by asphalt or concrete?		1
	If yes, indicate the area of contaminated soil on the site map.		

# SUMMARY OF ANALYSIS RESULTS

NIA

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

CoC	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SB-8
Benzene			·	<del>                                     </del>	<del>                                     </del>			
Toluene								
Ethylbenzene					<del> </del> -	<u>.                                    </u>		
Xylenes								
Naphthalene			<del> </del>	<del> </del>				
Benzo(a)anthracene								
Benzo(b)flouranthene								
Benzo(k)flouranthene				<u> </u>				
Chrysene							· · · · · · · · · · · · · · · · · · ·	<u> </u>
Dibenz(a,h)anthracene		i						·····
TPH (EPA 3550)								·

CoC	SB-9	SB-10	SB-11	SB-12	SB-13	SB-14	SB-15	SB-16
Benzene				-		<del> </del>		
Toluene				†~ <del></del>	<del> </del>			
Ethylbenzene					<del> </del>	-		
Xylenes	1		<u>-</u>	·				
Naphthalene				<u> </u>				<u> </u>
Benzo(a)anthracene			·		,			
Benzo(b)flouranthene				<u> </u>				
Benzo(k)flouranthene				<del></del> -			<del>- · · · -</del>	
Chrysene								<u> </u>
Dibenz(a,h)anthracene								
TPH (EPA 3550)								

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.

brescht, marcate the measured	anomicos to	me nearest v.	71 10ct.		
СоС	RBSL (µg/l)	W-1	W-2	W -3	W-4
Free Product Thickness	None				
Benzene	5				
Toluene	1,000				
Ethylbenzene	700				
Xylenes	10,000				
Total BTEX	N/A				
MTBE	40				·
Naphthalene	25				
Benzo(a)anthracene	10				
Benzo(b)flouranthene	10				
Benzo(k)flouranthene	10				
Chrysene	10				
Dibenz(a,h)anthracen e	10				
EDB	.05				
1,2-DCA	.05		•		
Lead	Site specific				

## 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)



4310 East Anderson Road Orlando, F \_\_\_ 312 \* 800-851-2560 \* Fax 407-856-0886

Client: EPG, INC.

Attn:

PO BOX 1096

MT PLEASANT, SC 29465

JOHN MAHONEY

Work Order: .

Project:

OQG0558

LAUREL BAY

Project Number: EP 2362 Sampled: 07/25/07

Received: 07/27/07

### LABORATORY REPORT

Sample ID: 390 ACORN SIDE 02 - Lab Number: OQG0558-02 - Matrix: Solid/Soil

CAS#	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
Volatile	Organic Compounds by EPA	Method 826	0B - Ca	nt.		-					··
100-41-4	Ethylbenzene	<b>2.</b> 77		ug/kg dry	0.518	1.22	I	08/03/07 16:53	JWT	EPA 8260B	7H03050
₹1-20-3	Naphthalene	53.3		ug/kg dry	0.676	1.22	1	08/03/07 16:53	JWT	EPA 8260B	7H03050
108-88-3	Toluene	1.74		ug/kg dry	1.06	1.22	1	08/03/07 16:53	JWT	EPA 8260B	7H03050
1330-20-7	Xylenes, total	2.28	v	ug/kg dry	0.636	1.22	1	08/03/07 16:53	JWT	EPA 8260B	7H03050
	l,2-Dichloroethane-d4 (73-137%)	120 %						<del>-</del>			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	4-Bromofluorobenzene (59-118%)	100 %									
	Dibromofluoromethane (55-145%)	108 %			•						
Surrogate:	Toluene-d8 (80-117%)	100 %									
Polynuck	ear Aromatic Hydrocarbons	by EPA Meti	hod 827	'O							
<b>13-32-9</b>	Acenaphthene	220		ug/kg dry	96.4	218	1	08/08/07 22:08	REM	EPA 8270C	7H01015
208-96-8	Acenaphthylene	127	U	ug/kg dry	127	218	1	08/08/07 22:08	REM	EPA 8270C	7H01015
20-12-7	Anthracene	220		ng/kg dry	<b>69 </b>	218	1	08/08/07 22:08	PEM	EPA 8270C	7401015
6-55-3	Benzo (a) anthracene	384		ug/kg dry	23.6	218	1	08/08/07 22:08	REM	EPA 8270C	7H01015
:05-99-2	Benzo (b) fluoranthene	264		ug/kg dry	22.9	218	1	08/08/07 22:08	REM	EPA 8270C	7H01015
107-08-9	Benzo (k) fluoranthene	95.1	I	ug/kg dry	22.9	218	, 1	08/08/07 22:08	REM	EPA 8270C	7H01015
91-24-2	Benzo (g,h,i) perylene	27.4	I	ug/kg dry	22.6	218	1	08/08/07 22:08	REM	EPA 8270C	7H01015
0-32-8	Benzo (a) pyrene	141	1	ug/kg dry	26.8	218	1	08/08/07 22:08		EPA 8270C	7H01015
·0-12-0	1-Methylnaphthalene	1480		ug/kg dry	109	218	1	08/08/07 22:08	REM		7H01015
.18-01-9	Chrysene	412		ug/kg dry	26.0	218	1	08/08/07 22:08	REM		7H01015
3-70-3	Dibenz (a,h) anthracene	28.6	U	ug/kg dry	28.6	218	1	08/08/07 22:08	REM		7H01015
06-44-0	Fluoranthene	833		ug/kg dry	31.3	218	1	08/08/07 22:08	REM		7H01015
6-73-7	Fluorene	330		ug/kg dry	85.1	218	1	08/08/07 22:08	REM	EPA 8270C	7H01015
93-39-5	Indeno (1,2,3-cd) pyrene	37.3	I	ug/kg dry	28.2	218		08/08/07 22:08	REM	EPA 8270C	7H01015
1-57-6	2-Methylnaphthalene	2320	-	ug/kg dry	92.8	218		08/08/07 22:08	REM		7H01015
1 <b>-20</b> -3	Naphthalene	466		ug/kg dry	87.4	218		08/08/07 22:08		-, -	1
5-01-8	Phenanthrene	1040		ug/kg dry	51.3	218		08/08/07 22:08			7H0I015
29-00-0	Pyrene	781		ug/kg dry	44.2	218			REM	EPA 8270C	7H01015
urrogate: 2-	Fluorobiphenyl (24-121%)	51 %	•	~P. vP m.l	<del>111</del> .2	- 10	1	08/08/07 22:08	KEM	EPA 8270C	7H01015
	itrobenzene-d5 (19-111%)	49 %									
	rphenyl-d14 (44-171%)	92 %		•							
_		14 10		•							

### LABORATORY REPORT

### Sample ID: 230 CYPRESS BOTTOM 01 - Lab Number: OQG0558-03 - Matrix: Solid/Soil

CAS#	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
eneral A	Chemistry Parameters % Solids	78.2		%,	0.100	0.100	; 1	08/01/07 17:50	RRP	EPA 160.3	7H01058
olatile	Organic Compounds by EP. Benzene	A Method 8260 0.577	В	ug/kg dry	0.459	1.25	1	08/03/07 17:10	JWT	EPA 8260B	7H03050
10-41-4	Ethylbenzene	7.07		ug/kg dry	0.531	1.25	1	08/03/07 17:10	JWT	EPA 8260B	7H03050
-20-3	Naphthalene	66.3		ug/kg dry	0.693	1.25	1	08/03/07 17:10	JWT	EPA 8260B	7H03050
8-88-3	Toluene	3.11		ug/kg dry	1.08	1.25	1	08/03/07 17:10	JWT	EPA 8260B	7H03050



Client: EPG, INC.

PO BOX 1096

Attn: JOHN MAHONEY

MT PLEASANT, SC 29465

Work Order: Project:

Project Number:

OQG0558

LAUREL BAY EP 2362

Sampled: 07/25/07

Received: 07/27/07

LABORATORY REPORT

Sample ID: 230 CYPRESS BOTTOM 01 - Lab Number: OQG0558-03 - Matrix: Solid/Soil

CAS#	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
Volatile	Organic Compounds by EPA	Method 826	0B - C	ont.				<del></del>			
1330-20-7	Aylenes, total	1.53	٧	ug/kg dry	0.651	1.25	1	08/03/07 17:10	JWT	EPA 8260B	7H03050
	1,2-Dichloroethane-d4 (73-137%)	117 %						00.05.07 17.10	J PT 1	L: A 0200D	71103030
	4-Bromofluorobenzene (59-118%)	100 %									
	Dibromofluoromethane (55-145%)	107 %									9
iurrogate:	Toluene-d8 (80-117%)	98 %								•	
Polynuci	lear Aromatic Hydrocarbons	by EPA Met	hod 827	70							
13-32-9	Acenaphthene	94.7	U	ug/kg dry	94.7	214	1	08/08/07 22:30	REM	EPA 8270C	7H01015
:08-96-8	Acenaphthylene	125	U	ug/kg dry	125	214	1	08/08/07 22:30	REM		7H01015
20-12-7	Anthracene	68.1	U	ug/kg dry	68.1	214	1	08/08/07 22:30	REM	EPA 8270C	
6-55-3	Benzo (a) anthracene	23.1	U	ug/kg dry	23.1	214	1	08/08/07 22:30	REM		7H01015
05-99-2	Benzo (b) fluoranthene	22.5	U .	ug/kg dry	22.5	214	1	-			7H01015
07-08-9	Benzo (k) fluoranthene	22.5	U	ug/kg dry	22.5	214	_	08/08/07 22:30	REM	EPA 8270C	7H01015
91-24-2	Benzo (g,h,i) perylene	22,2	U	ug/kg dry	22.2	214	1	08/08/07 22:30	REM	EPA 8270C	7H01015
0-32-8	Benzo (a) pyrene	26.3	U	ug/kg dry	26.3		1	08/08/07 22:30	REM	EPA 8270C	7H01015
0-12-0	1-Methylnaphthalene	107	U	ug/kg dry	107	214	1	08/08/07 22:30	REM	EPA 8270C	7H01015
18-01 <b>-</b> 9	Chrysene	25.6	บ	ug/kg dry		214	1	08/08/07 22:30	REM	EPA 8270C	7H01015
3- <b>70-</b> 3	Dibenz (a,h) anthracene	28.1	บ		25.6	214	1	08/08/07 22:30	REM	EPA 8270C	7H01015
06-44-0	Fluoranthene	30.7	U	ug/kg dry	28.1	214	1	08/08/07 22:30	REM	EPA 8270C	7H01015
5-73-7	Fluorene	83.6	-	ug/kg dry	30.7	214	1	08/08/07 22:30	REM	EPA 8270C	7H01015
93-39-5	Indeno (1,2,3-cd) pyrene	27.7	U 	ug/kg dry	83.6	214	1 .	08/08/07 22:30	REM	EPA 8270C	7H01015
-57-6	2-Methylnaphthalene	91.1	U	ug/kg dry	27.7	214	1	08/08/07 22:30	REM	EPA 8270C	7H01015
-20-3	Naphthalene		Ü	ug/kg dry	91.1	214	1	08/08/07 22:30	REM	EPA 8270C	7H01015
-01-8	Phenanthrene	85.8	U	ug/kg dry	85.8	214	i	08/08/07 22:30	REM	EPA 8270C	7H01015
9-00-0	Pyrene	50.4	U	ug/kg dry	50.4	214	1	08/08/07 22:30	REM	EPA 8270C	7H01015
	-Fluorobiphenyl (24-121%)	43.4	υ.	ug/kg dry	43.4	214	1	08/08/07 22:30	REM	EPA 8270C	7H01015
		51 %	e e		•						
	itrobenzene-d5 (19-111%)	48 %									
nogate: 16	erphenyl-d14 (44-171%)	95 %									

LABORATORY REPORT

Sample ID: 230 CYPRESS SIDE 02 - Lab Number: OQG0558-04 - Matrix: Solid/Soil

AS#	Analyte	a e Result.e-	Q.	ere Units	MDL	PQL	Dil Factor	Analyzed Date/l'ime	Ву	Method	Batch
eneral C	Chemistry Parameters										
<b>L</b>	% Solids	75.2		%.	0.100	0.100	1	08/01/07 17:50	RRP	TDA 1600	<b>51701050</b>
olatile O	Organic Compounds by EPA	Method 826	OR			0.100	•	08/01/07 17:30	KKP	EPA 160.3	7H01058
43-2	Benzene	0.325	ט	ug/kg dry	0.325	0.887	1	00/02/07 17 76	Tr. ee	Ens secon	
)-41-4	Ethylbenzene	7.43				*	1	08/03/07 17:26	JWT	EPA 8260B	7H03050
20-3	Naphthalene			ug/kg dry	0.37 <i>5</i>	0.887	1	08/03/07 17:26	JWT	EPA 8260B	7H03050
	•	106		ug∕kg dry	0.490	0.887	1	08/03/07 17:26	JWT	EPA 8260B	7H03050
1-88-3	Toluene	I.17		ug/kg dry	0.766	0.887	1	08/03/07 17:26	JWT		
0-20-7	Xylenes, total	1.79						00/03/07 17:20	JWI	EPA 8260B	7H03050
rogate: 1.2	2-Dichloroethane-d4 (73-137%)		. •	ug/kg dry	0.461	0.887	1	08/03/07 17:26	JWT	EPA 8260B	7H03050
		122 %							•	•	
	Bromofluorobenzene (59-118%)	96 %								1	
rogate: Di	ibromofluoromethane (55-145%)	110%									

Project Manager

THE LEADER IN ENVIRONMENTAL TE

Client: EPG, INC.

PO BOX 1096

MT PLEASANT, SC 29465

Attn: JOHN MAHONEY Work Order:

Project:

OQG0558

LAUREL BAY Project Number: EP 2362

Sampled: 07/25/07

Received: 07/27/07

### LABORATORY REPORT

Sample ID: 230 CYPRESS SIDE 02 - Lab Number: OQG0558-04 - Matrix: Solid/Soil

CAS#	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
Volatile Surrogate	e Organic Compounds by El : Toluene-d8 (80-117%)	PA Method 826	0B - C	ont.		<u> </u>		<del></del>			
Polynuc	clear Aromatic Hydrocarbo	ns by EPA Met	hod 82	70							·
33-32-9	Асепарьтые	340	nou oz	ug/kg dry	98.4	222		00100100			
208-96-8	Acenaphthylene	130	บ	ug/kg dry	130	222		08/08/07 22:53		EPA 8270C	7H01015
20-12-7	Anthracene	314	_	ug/kg dry	70.8	222	1	08/08/07 22:53	REM	EPA 8270C	7H01015
6-55-3	Benzo (a) anthracene	234		ug/kg dry	70.8 24.1		1	08/08/07 22:53	REM	EPA 8270C	7H01015
05-99-2	Benzo (b) fluoranthene	152	Ţ	ug/kg dry	- · · -	222	1	08/08/07 22:53	REM	EPA 8270C	7H01015
07-08-9	Benzo (k) fluoranthene	69.6	ı		23.4	222		08/08/07 22:53	REM	EPA 8270C	7H01015
91-24-2	Benzo (g,h,i) perylene	23.1	บ	ug/kg dry	23.4	222		08/08/07 22:53	REM	EPA 8270C	7H01015
0-32-8	Benzo (a) pyrene	102	_	ug∕kg dry	23.1	222		08/08/07 22:53	REM	EPA 8270C	7H01015
0-12-0	1-Methylnaphthalene	1850	I	ug/kg dry	27.3	222	1	08/08/07 22:53	REM	EPA 8270C	7H01015
18-01-9	Chrysene	280		ug/kg dry	112	222	1	08/08/07 22:53	REM	EPA 8270C	7H01015
3-70-3	Dibenz (a,h) anthracene			ug/kg drj	26.6	222	ï	08/08/07 22.53	REW	EPA 8270C	7H01015
06-44-0	Fluoranthene	29.2	υ	ug/kg dry	29.2	222	1	08/08/07 22:53	REM	EPA 8270C	7H01015
5-73-7	Fluorene	403		u <i>g/</i> kg dry	32.0	222	1	08/08/07 22:53	REM	EPA 8270C	7H01015
3-39-5	Indeno (1,2,3-cd) pyrene	591		ug/kg dry	86.9	222	1	08/08/07 22:53	REM	EPA 8270C	7H01015
-57-6	2-Methylnaphthalene	30.2	1	ug/kg dry	28.8	222	1 (	08/08/07 22:53	REM	EPA 8270C	7H01015
-20-3		2080		ug/kg dry	94.7	222	1 (	08/08/07 22:53	2	EPA 8270C	7H01015
-01-8	Naphthalene Dhamant	132	I	ug/kg dry	89.2	222		08/08/07 22:53		EPA 8270C	7H01015
9-00-0	Phenanthrene	1460	•	ug/kg dry	52.4	222		08/08/07 22:53		EPA 8270C	7H01015
	Pyrene	419		ug/kg dry	45.1	222	· ·	08/08/07 22:53		EPA 8270C	
	-Fluorobiphenyl (24-121%)	50 %					• `	/G/G/G/ 22.55	KEM	EFA 6270C	7H01015
	litrobenzene-d5 (19-111%)	47 %				•					
rogate: T	erphenyl-d14 (44-171%)	111%			÷				•		

### LABORATORY REPORT

Sample ID: 388 ACORN BOTTOM 01 - Lab Number: OQG0558-05 - Matrix: Solid/Soil

									~ ~		
4S#	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
eral	Chemistry Parameters										
	% Solids	83.7		%.	0.100	0.100	_				
latile	Organic Compounds by EPA	Mathad 2240	inger i e	a war a same	0.100	0.100	1	08/01/07 17:50	RRP	EPA 160.3	7H01058
13-2	Benzene	0.389	ים ט	ug/kg dry							
41-4	Ethylbenzene	1.02			0.389	1.06	1	08/03/07 17:43	JWT	EPA 8260B	7H03050
20-3	Naphthalene		1	ug/kg dry	0.450	1.06	1	08/03/07 17:43	JWT	EPA 8260B	7H03050
-88-3	Toluene	14.3		ug/kg dry	0.587	1.06	1	08/03/07 17:43	JWT	EPA 8260B	7H03050
)-20-7	Xylenes, total	1.79	•	ug/kg dry	0.919	1.06	1	08/03/07 17:43	JWT	EPA 8260B	7H03050
		1.21		ug∕kg dry	0.552	1.06	1	08/03/07 17:43	JWT	EPA 8260B	
ogate: I	,2-Dichloroethane-d4 (73-137%)	122 %					•	00.03/07 17.43	3 44 1	CFA 0200B	7H03050
ogate. 4	(-Bromofluorobenzene (59-118%)	101 %									
	Dibromofluoromethane (55-145%)	107 %					•				
ogate-I	oluene-d8 (80-117%)	100 %		<del></del>			_				
ynucle 2-9	ar Aromatic Hydrocarbons b		od 827	0			•	4			

Acenaphthene 1010 ug/kg dry 88.5 200 08/08/07 23:15 REM EPA 8270C

TestAmerica - Orlando, FL Enid Ortiz For Shali Brown Project Manager

To assist us in using the proper analytical methods. is this work being conducted for regulatory purposes? Compliance Monitoring Client Name Client #: 24// POBOX 1096 Address: Project Name: City/State/Zip Code: Project #: Project Manager: MAHONEY Site/Location ID: State: Telephone Number: Report To: Sampler Name: (Print Name) Invoice To: Sampler Signature: Quote #: PO#: Matrix Preservation & # of Containers Analyze For: Standard QC Deliverables Rush (surcharges may apply) None Level 2 Date Needed: (Batch QC) Level 3 Fax Results: 6 Level 4 Other: SAMPLE ID 390 Acopen Bottom-o REMARKS 390ACORN 5108-02 DI دن 230 CM PREST Bot- 01 10:30 03 K ٥Y æ 5-02 tr B-0 u u 07 11 08 09 5-0 (D E-MAIL RESULTS to : JOHN CEASSC. COM LABORATORY COMMENTS: Init Lab Temp: Rec Lab Temp Relinquished By: Received OFFICE Custody Seals: 173 N 7 N/A Bottles Supplied by Test America: Colinduiphed By Received By: Time:9:30 Date:7 Relinquished By: Date: Time: Received By:

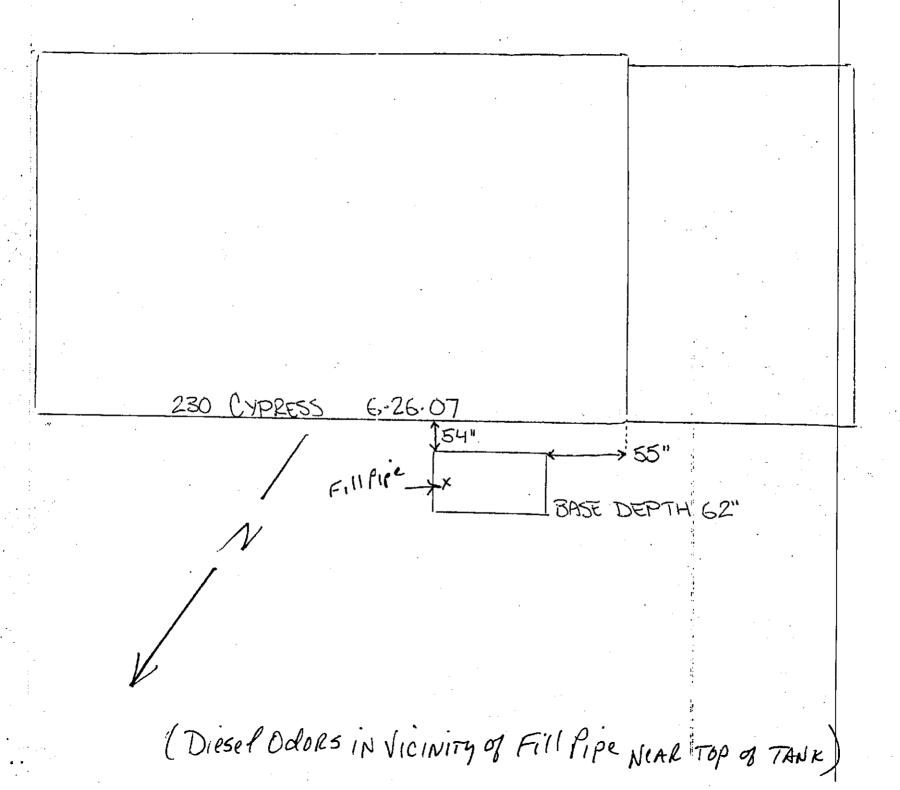
Date:

Tima:

Method of Shipment







230 A B X TANK | BASE 62"

### CYPRESS STREET

### TANK I EXCAVATION

A-SOIL TEST SIDE SAMPLE @ 49'' B-SOIL TEST BOTTOM SAMPLE @ 62'' X-MILD DIESEL ODOR @ FILL PIPE



<u></u>		
CUSTOMER:	SCALE: 1/16'=1'-0'	EPG INC.
BEAUFORT MILITARY COMPLEX FAMILY HOUSING	SUPPLIER	P.O. BOX 1096
SITE ADORESS:	EPG INC.	MOUNT PLEASANT, SC 29465-1096
230 CYPRESS STREET	9/27/2007	mastri - 22.12/4/11 64 85 105 .

# Appendix C Laboratory Analytical Report - Groundwater





Pace Analytical Services, Inc. 2225 Riverside Dr. Asheville, NC 28804

(828)254-7176

Pace Analytical Services, Inc. 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 (704)875-9092

### **ANALYTICAL RESULTS**

Project:

LAUREL BAY SAMPLING 7/29/08

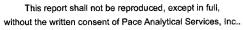
Pace Project No.: 9224564

Sample: 398 ACORN A	Lab ID: 9224	564019	Collected: 07/29/0	8 17:00	Received: 07	/31/08 13:40 M	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
260 MSV Low Level	Analytical Meth	od: EPA 82	60					
Ethylbenzene	7.3 ug/	L	1.0	1		08/06/08 00:39	100-41-4	
Naphthalene	71.1 ug/	L	2.0	1		08/06/08 00:39	91-20-3	
Toluene	ND ug/	L	1.0	1		08/06/08 00:39	108-88-3	
m&p-Xylene	/ ND ug/	L	2.0	1		08/06/08 00:39	1330-20-7	
o-Xylene	ND ug/	L	1.0	1		08/06/08 00:39	95-47-6	
4-Bromofluorobenzene (S)	99 %		87-109	1		08/06/08 00:39	460-00-4	
Dibromofluoromethane (S)	95 %		85-115	1		08/06/08 00:39	1868-53-7	
1,2-Dichloroethane-d4 (S)	97 %		79-120	1		08/06/08 00:39	17060-07-0	
Toluene-d8 (S)	102 %		70-120	1		08/06/08 00:39	2037-26-5	
Sample: 230 CYPRESS A	Lab ID: 9224	564020	Collected: 07/29/0	8 17:20	Received: 07	/31/08 13:40 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
3270 MSSV PAH by SIM SPE	Analytical Meth	od: EPA 82	270 by SIM Preparat	on Meth	od: EPA 3535			
Acenaphthene	ND ug/	L	2.0	. 1	08/04/08 00:00	08/13/08 06:47	83-32-9	
Acenaphthylene	ND ug/		1.5	1		08/13/08 06:47		
Anthracene	ND ug/		0.050	1		08/13/08 06:47		
Benzo(a)anthracene	ND ug/		0.10	1	08/04/08 00:00	08/13/08 06:47	56-55-3	
Benzo(a)pyrene	ND ug/		0.20	1		08/13/08 06:47		
Benzo(b)fluoranthene	ND ug/		0.30	1		08/13/08 06:47		
Benzo(g,h,i)perylene	ND ug/		0.20	1		08/13/08 06:47		
Benzo(k)fluoranthene	ND ug/		0.20	1		08/13/08 06:47		
Chrysene	ND ug/		0.10	1		08/13/08 06:47		
Dibenz(a,h)anthracene	ND ug/		0.20	1		08/13/08 06:47		
Fluoranthene	ND ug/		0.30	1		08/13/08 06:47		
Fluorene	ND ug/		0.31	1		08/13/08 06:47		
ndeno(1,2,3-cd)pyrene	ND ug/		0.20	1		08/13/08 06:47		
1-Methylnaphthalene	ND ug/		2.0	1		08/13/08 06:47		
2-Methylnaphthalene	ND ug/		2.0	1		08/13/08 06:47		
Naphthalene	ND ug/		1.5	1		08/13/08 06:47		
Phenanthrene	ND ug		0.20	1		08/13/08 06:47		
Pyrene	ND ug		0.10	1		08/13/08 06:47		
Nitrobenzene-d5 (S)	47 %	_	50-150	1		08/13/08 06:47		1g
2-Fluorobiphenyl (S)	62 %		50-150	1		08/13/08 06:47		-
Terphenyl-d14 (S)	95 %		50-150	1		08/13/08 06:47		
260 MSV Low Level	Analytical Meth	od: EPA 82	260					
Benzene	ND ug	'L	1.0	1		08/06/08 16:04	71-43-2	
Ethylbenzene	ND ug		1.0	1		08/06/08 16:04	100-41-4	
Naphthalene	ND ug		2.0	1		08/06/08 16:04	91-20-3	
Toluene	ND ug/		1.0	1		08/06/08 16:04	108-88-3	
m&p-Xylene	ND ug		2.0	1		08/06/08 16:04	1330-20-7	
o-Xylene	ND ug/		1.0	1		08/06/08 16:04		
4-Bromofluorobenzene (S)	99 %		87-109	1		08/06/08 16:04	460.00-4	

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REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc. 2225 Riverside Dr. Asheville, NC 28804 (828)254-7176 Pace Analytical Services, Inc. 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 (704)875-9092

### **ANALYTICAL RESULTS**

Project:

LAUREL BAY SAMPLING 7/29/08

Pace Project No.:

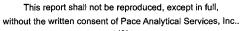
9224564

Sample: 230 CYPRESS A	Lab ID: 92245	<b>64020</b> Co	ollected: 07/29/0	8 17:20	Received: 07	/31/08 13:40 N	/latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Metho	d: EPA 8260						
Dibromofluoromethane (S)	98 %		85-115	1		08/06/08 16:04	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		79-120	1		08/06/08 16:04	17060-07-0	
Toluene-d8 (S)	99 %		70-120	1		08/06/08 16:04	2037-26-5	
Sample: 299 BIRCH A	Lab ID: 92245	64021 C	ollected: 07/29/0	8 17:45	Received: 07	/31/08 13:40 M	//atrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM SPE	Analytical Metho	d: EPA 8270 l	oy SIM Preparati	on Meth	od: EPA 3535			
Acenaphthene	ND ug/L		2.0	1	08/04/08 00:00	08/13/08 07:10	83-32-9	
Acenaphthylene	ND ug/L		1.5	1	08/04/08 00:00	08/13/08 07:10	208-96-8	
Anthracene	<b>0.40</b> ug/L		0.050	1		08/13/08 07:10		
Benzo(a)anthracene	ND ug/L		0.10	1		08/13/08 07:10		
Benzo(a)pyrene	ND ug/L		0.20	1	08/04/08 00:00	08/13/08 07:10	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.30	1	08/04/08 00:00	08/13/08 07:10	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.20	1	08/04/08 00:00	08/13/08 07:10	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.20	1		08/13/08 07:10		
Chrysene	ND ug/L		0.10	1		08/13/08 07:10		
Dibenz(a,h)anthracene	ND ug/L		0.20	1		08/13/08 07:10		
Fluoranthene	ND ug/L		0.30	1		08/13/08 07:10		
Fluorene	2.7 ug/L		0.31	1		08/13/08 07:10		
indeno(1,2,3-cd)pyrene	ND ug/L		0.20	1		08/13/08 07:10		
1-Methylnaphthalene	38.4 ug/L		2.0	1		08/13/08 07:10		
2-Methylnaphthalene	56.7 ug/L		2.0	1		08/13/08 07:10		
Naphthalene	19.6 ug/L		1.5	1		08/13/08 07:10		
Phenanthrene	5.1 ug/L		0.20	1		08/13/08 07:10		
Pyrene	ND ug/L		0.10	1		08/13/08 07:10		
Nitrobenzene-d5 (S)	56 %		50-150	1		08/13/08 07:10		
2-Fluorobiphenyl (S)	53 %		50-150	1		08/13/08 07:10		
Terphenyl-d14 (S)	50 %		50-150	1		08/13/08 07:10		
8260 MSV Low Level	Analytical Metho	d: EPA 8260						
Benzene	ND ug/L		1.0	1		08/06/08 16:27	71-43-2	
Ethylbenzene	<b>6.5</b> ug/L		1.0	1		08/06/08 16:27	100-41-4	
Naphthalene	<b>65.1</b> ug/L		2.0	1		08/06/08 16:27	91-20-3	
Toluene	ND ug/L		1.0	1		08/06/08 16:27		
m&p-Xylene	ND ug/L		2.0	1		08/06/08 16:27		
o-Xylene	ND ug/L		1.0	1		08/06/08 16:27	95-47-6	
4-Bromofluorobenzene (S)	98 %		87-109	1		08/06/08 16:27	460-00-4	
Dibromofluoromethane (S)	98 %		85-115	1		08/06/08 16:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	99 %		79-120	1		08/06/08 16:27	17060-07-0	
Toluene-d8 (S)	100 %		70-120	1		08/06/08 16:27	2037-26-5	

Date: 08/14/2008 04:20 PM

**REPORT OF LABORATORY ANALYSIS** 

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### Appendix D Regulatory Correspondence



BOARD: Paul C. Aughtry, III Chairman Edwin H. Cooper, III Vice Chairman Steven G. Kisner Secretary



3 September 2008

C. Earl Hunter, Commissioner Promoting and protecting the health of the public and the environment

Henry C. Scott M. David Mitchell, MD

Glenn A. McCall

BOARD:

Coleman F. Buckhouse, MD

Beaufort Military Complex Family Housing ATTN: Kyle Broadfoot 1510 Laurel Bay Blvd. Beaufort, SC 29906

Re:

MCAS - Laurel Bay Housing - 230 Cypress

Site ID # 04031

UST Closure Reports received 31 January 2008

**Beaufort County** 

Dear Mr. Broadfoot:

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 803-898-3553 (office phone), 803-898-2893 (fax) or bishopma@dhec.sc.gov.

Sincerely,

Michael Bishop, Hydrogeologist Groundwater Quality Section

Bureau of Water

cc:

Region 8 District EQC (via pdf)

MCAS, Commanding Officer, Attention: S-4 NREAO (William Drawdy) (via pdf)

Technical File (via pdf)



#### C. Earl Hunter, Commissioner

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

### 17 December 2008

Commanding Officer ATTN: S-4 NREAO (Craig Ehde) MCAS PO Box 55001 Beaufort, SC 29904-5001

Re:

MCAS – Laurel Bay Housing – 230 Cypress

Site ID # 04031

Groundwater Sampling Results received 6 November 2008

**Beaufort County** 

### Dear Mr. Ehde:

Per the Department's request, a groundwater sample was collected from the referenced site. The groundwater results were reported as non-detect. Based on the information and analytical data submitted, the Department recognizes that MCAS has adequately addressed the known environmental contamination identified on the property to date in accordance with the approved scope of work. Consequently, no further investigation is required at this time. Please note, this statement pertains only to the portion of the site addressed in the referenced report and does not apply to other areas of the site and/or any other potential regulatory violations. Further, the Department retains the right to request further investigation if deemed necessary.

Should you have any questions, please contact me at 803-896-4179 (office phone), 803-896-6245 (fax) or cookejt@dhec.sc.gov.

Sincerely,
AST Petroleum Restoration
& Site Environmental Investigations Section
Land Revitalization Division
Bureau of Land and Waste Management
SC Dept. of Health & Environmental Control

Jan T. Cooke, Hydrogeologist

B. Thomas Knight, Manager

CC:

Region 8 District EQC

Tri-Command Communities; Attn: Mr. Robert Bible; 600 Laurel Bay Road Beaufort, SC

29906

Technical File