

**SUMMARY REPORT  
FORMER 1175 BOBWHITE DRIVE (CURRENT EMPTY LOT)  
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**

**JUNE 2021**

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Norfolk, Virginia 23511-3095**

**Prepared by:**

**CDM - AECOM**  
**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**

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Appendix D	Laboratory Analytical Report - Groundwater
Appendix E	Regulatory Correspondence

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### **List of Acronyms**

bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CTO	Contract Task Order
COPC	constituents of potential concern
IDIQ	Indefinite Delivery, Indefinite Quantity
IGWA	Initial Groundwater Assessment
JV	Joint Venture
LBMH	Laurel Bay Military Housing
MCAS	Marine Corps Air Station
NAVFAC Mid-Lant	Naval Facilities Engineering Command Mid-Atlantic
NFA	No Further Action
PAH	polynuclear aromatic hydrocarbon
QAPP	Quality Assurance Program Plan
RBSL	risk-based screening level
SCDHEC	South Carolina Department of Health and Environmental Control
Site	LBMH area at MCAS Beaufort, South Carolina
USACE	United States Army Corps of Engineers
UST	underground storage tank

## **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 former 1175 Bobwhite Drive. 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.

The LBMH UST removal and assessment process is described below in Section 1.2. The LBMH multi-media investigation selection process tree, used to evaluate the environmental impact of USTs for most sites at LBMH, is presented in Appendix A. It should be noted that because soil and groundwater were not sampled following the UST removal and analytical results were not available for evaluation, the subject property of this report did not follow the typical multi-media investigation selection process presented in Appendix A.

It should also be noted that the house at the subject property has been demolished and the property is an empty lot. There are no current plans for construction in this area.

## **1.2 UST Removal and Assessment Process**

As stated above, the assessment process at this property did not follow the typical process presented in Appendix A.

During the UST removal process, analytical samples were not collected. After the UST removal, a combined soil and initial groundwater assessment (IGWA) investigation was conducted adjacent to the former UST. Soil and groundwater samples collected were analyzed for a

predetermined list of constituents of potential concern (COPC) associated with the petroleum compounds found in home heating oil, 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.

In accordance with SCDHEC's *Quality Assurance Program Plan (QAPP) for the UST Management Division* (SCDHEC, 2001), the soil screening levels consists of SCDHEC risk-based screening levels (RBSLs).

The results of the IGWA sampling were used to determine the presence or absence of the aforementioned COPCs in groundwater and identify whether former UST locations required additional delineation of COPCs in groundwater. Groundwater analytical results were compared to SCDHEC RBSLs for groundwater.

## **2.0 SAMPLING ACTIVITIES AND RESULTS**

The following section presents the sampling activities and associated results for former 1175 Bobwhite Drive. The sampling activities for former 1175 Bobwhite Drive comprised a soil investigation and IGWA sampling. Details regarding the UST removal are included in the letter report provided in Appendix B. Details regarding the soil and IGWA sampling activities at this site are provided in the *Initial Groundwater Assessment Report for 1175 Bob White Drive* (United States Army Corps of Engineers [USACE], 2002). The laboratory report that includes the pertinent soil and IGWA analytical results for this site is presented in Appendices C and D, respectively.

### **2.1 UST Removal**

On August 13, 2001, a single 280 gallon heating oil UST was removed from the front of the house at former 1175 Bobwhite Drive. The UST was removed and properly disposed of (i.e., shipped offsite for recycling or transported to a landfill). Some aboveground spillage was observed when the UST was identified. The impacted soil was removed; however, no analytical samples were collected. Further information can be found in the letter report presented in Appendix B. In a letter dated August 29, 2001, SCDHEC requested soil sampling, at a

minimum, for former 1175 Bobwhite Drive to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letter is provided in Appendix E.

## **2.2 Soil Sampling**

On November 2, 2001, a single soil boring was advanced near the former UST location at former 1175 Bobwhite Drive. The soil boring location was collected with the temporary monitoring well discussed in Section 2.4. A single soil sample was collected at a depth of approximately 6'6" below ground surface (bgs). The soil sample was shipped to an offsite laboratory for analysis of the petroleum COPCs. Soil sampling was performed in accordance with the applicable South Carolina regulation R.61-92, Part 280 (SCDHEC, 2017) and assessment guidelines. Field forms are provided in the *Initial Groundwater Assessment Report for 1175 Bob White Drive* (USACE, 2002).

## **2.3 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 Appendix C. The laboratory analytical data report includes the soil results for the additional PAHs that were analyzed, but do not have associated RBSLs.

The soil results collected from former 1175 Bobwhite Drive were less than the SCDHEC RBSLs (Table 1), which indicated that the soil was not impacted by COPCs associated with the former UST at concentrations that present a potential risk to human health and the environment.

## **2.4 Groundwater Sampling**

On November 9, 2001, the soil boring was converted into a temporary monitoring well and then sampled at former 1175 Bobwhite Drive), 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. Further details are provided in the *Initial Groundwater Assessment Report for 1175 Bob White Drive* (USACE, 2002).

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, a



groundwater sample was 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 Assessment Report for 1175 Bob White Drive* (USACE, 2002).

## **2.5 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 D.

The groundwater results collected from former 1175 Bobwhite Drive were less than the SCDHEC RBSLs (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 soil and groundwater, SCDHEC made the determination that NFA was required for former 1175 Bobwhite Drive. This NFA determination was obtained in a letter dated September 3, 2002. SCDHEC's NFA letter is provided in Appendix E.

## **4.0 REFERENCES**

Marine Corps Air Station Beaufort, 2001. *Heating Oil Tank at 1175 Bob White Drive Letter Report, Laurel Bay Military Housing Area*, August 2001.

South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2001. *Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 1.0*, May 2001.

South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2017. *R.61-92, Part 280, Underground Storage Tank Control Regulations*, March 2017.

South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2018. *Underground Storage Tank Assessment Instructions for Permanent Closure and Change-In-Service*, March 2018.

South Carolina Department of Health and Environmental Control Bureau of Water, 2016. *R.61-71, Well Standards*, June 2016.

United States Army Corps of Engineers, 2001. *Initial Groundwater Assessment Report for 1175 Bob White Drive, Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina*, September 2002.

## Tables

**Table 1**  
**Laboratory Analytical Results - Soil**  
**Former 1175 Bobwhite Drive**  
**Laurel Bay Military Housing Area**  
**Marine Corps Air Station Beaufort**  
**Beaufort, South Carolina**

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Results Samples Collected 11/02/01
<b>Volatile Organic Compounds Analyzed by EPA Method 8260B (mg/kg)</b>		
Benzene	0.003	ND
Ethylbenzene	1.15	ND
Naphthalene	0.036	ND
Toluene	0.627	ND
Xylenes, Total	13.01	ND
<b>Semivolatile Organic Compounds Analyzed by EPA Method 8270D (mg/kg)</b>		
Benzo(a)anthracene	0.066	ND
Benzo(b)fluoranthene	0.066	ND
Benzo(k)fluoranthene	0.066	ND
Chrysene	0.066	ND
Dibenz(a,h)anthracene	0.066	ND

**Notes:**

<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 (SCDHEC, May 2001).

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 C.

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

**Table 2**  
**Laboratory Analytical Results - Groundwater**  
**Former 1175 Bobwhite Drive**  
**Laurel Bay Military Housing Area**  
**Marine Corps Air Station Beaufort**  
**Beaufort, South Carolina**

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Results Sample Collected 11/09/01
<b>Volatile Organic Compounds Analyzed by EPA Method 8260B (µg/L)</b>		
Benzene	5	ND
Ethylbenzene	700	ND
Naphthalene	25	ND
Toluene	1000	ND
Xylenes, Total	10,000	ND
<b>Semivolatile Organic Compounds Analyzed by EPA Method 8270D (µg/L)</b>		
Benzo(a)anthracene	10	ND
Benzo(b)fluoranthene	10	ND
Benzo(k)fluoranthene	10	ND
Chrysene	10	ND
Dibenz(a,h)anthracene	10	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 (SCDHEC, May 2001).

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

JE - Johnson & Ettinger

NA - Not Applicable

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

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

µg/L - micrograms per liter

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



Appendix A - Multi-Media Selection Process for LBMH

**Appendix B**  
**UST Removal Letter Report**





UNITED STATES MARINE CORPS  
MARINE CORPS AIR STATION  
BEAUFORT, SOUTH CAROLINA 29904-5000

01829  
**RECEIVED**

**AUG 27 2001**

**Water Monitoring, Assessment &  
Protection Division**

5090  
NREAO/249  
22 August 01

Mr. Michael Bishop  
Groundwater Quality Section  
Bureau of Water  
South Carolina Department of Health  
And Environmental Control  
2600 Bull Street  
Columbia, SC 29201

Re: HEATING OIL TANK AT 1175 BOB WHITE DRIVE, LAUREL BAY

Dear Mr. Bishop:

A 280-gallon heating oil tank was discovered while undertaking structure demolition at the above-referenced residential area on August 13, 2001. The tank was connected underneath a portion of the concrete slab by a vent and fill pipe that went through the slab. The heavy machinery operator ceased demolition activities when the tank was discovered, however, some aboveground spillage had occurred from the fill pipe. No holes were observed during an inspection of the portion of the tank that was visible (which included one side, two ends and the bottom). A drum and pump truck was called in to address the product within the tank and the soils that appeared to be affected by the spillage. The soils under the tank were not stained, and there were no other indicators present that would indicate that fuel had been leaking prior to the demolition.

A larger diameter hole was opened up at the uppermost portion of the tank, as the diameter of the fill pipe was not large enough to allow assess to the product via the pump truck hose. The tank was discovered to have sand in a large portion of the tank along with residual product. This precluded the removal of the product via the pump truck. A decision was made to cover the tank with plastic as rain was threatening.

Rain precluded addressing the tank on the following day, but on the following day a decision was made to empty the

solids (sand) and liquids (fuel oil) so that any endangerment to children in the area would be minimized. The hole in the tank was enlarged to allow for the sand to be shoveled out, thereby creating a sump. This sand was placed into drums, while the residual free product was removed via pump truck. The tank was wiped out with absorbent pads and subsequently removed for recycling. Soils in the vicinity of the spilled product were dug out and staged on and under plastic sheeting until the next day when they were collected for thermal treatment at Soil Safe Technologies, Inc. of Savannah.

Clean fill was brought in to aide in making the site level following demolition activities.

If there are any questions, please contact Mr. Jim White at (843) 228-7317 or via e-mail at [whitejl2@beaufort.usmc.mil](mailto:whitejl2@beaufort.usmc.mil).

*A. G. Howard*

A. G. Howard  
Natural Resources and  
Environmental Affairs Officer  
By Direction of the  
Commanding Officer

**Appendix C**  
**Laboratory Analytical Report – Soil**



4-Nitroaniline	<RL	810
4-Nitrophenol	<RL	810
Acenaphthene	<RL	410
Acenaphthylene	<RL	410
anthracene	<RL	410
benzidine	<RL	410
Benzo(a)anthracene	<RL	410
Benzo(a)pyrene	<RL	410
Benzo(b)fluoranthene	<RL	410
Benzo(g,h,i)perylene	<RL	410
Benzo(k)fluoranthene	<RL	410
Benzoic acid	<RL	2000
Benzyl alcohol	<RL	410
bis(2-Chloroethoxy)methane	<RL	410
bis(2-Chloroethyl)ether	<RL	410
bis(2-Chloroisopropyl)ether	<RL	410
bis(2-Ethylhexyl)phthalate	<RL	410
Butyl benzyl phthalate	<RL	410
Carbazole	<RL	410
Chrysene	<RL	410
Dibenz(a,h)anthracene	<RL	410
Dibenzofuran	<RL	410
Diethylphthalate	<RL	410
Dimethylphthalate	<RL	410
Di-n-butylphthalate	<RL	410
Di-n-octylphthalate	<RL	410
Fluoranthene	<RL	410
Fluorene	<RL	410
Hexachlorobenzene	<RL	410
Hexachlorobutadiene	<RL	410
Hexachlorocyclopentadiene	<RL	410
Hexachloroethane	<RL	410
Indeno(1,2,3-cd)pyrene	<RL	410
Isophorone	<RL	410
Naphthalene	<RL	410
Nitrobenzene	<RL	410
N-Nitrosodimethylamine	<RL	410
N-Nitroso-di-n-propylamine	<RL	410
N-Nitrosodiphenylamine	<RL	410
Pentachlorophenol	<RL	810
Phenanthrene	<RL	410
Phenol	<RL	410
Pyrene	<RL	410

**ANALYSIS: TOC (Total Organic Carbon)**

Method Ref: Walkley-Blac

Date Ext/Dig/Prep: 11/15/01 Date Analyzed: 11/15/01

Result Units: mg/kg

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Total Organic Carbon	<RL		1,310

**ANALYSIS: VOC's - USACE (SOIL)**

Method Ref: 8260B

Date Ext/Dig/Prep: 11/9/01 Date Analyzed: 11/9/01

Result Units: ug/Kg

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
1,1,1,2-Tetrachloroethane	<RL		6.1
1,1,1-Trichloroethane	<RL		6.1
1,1,2,2-Tetrachloroethane	<RL		6.1

ACCURA ANALYTICAL LABORATORY, INC.

<RL = Less than Reporting Limit

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Client Sample ID: BW-SB-1

AALSample ID #: AC21774

Accura Project #: 29050

1,1,2-Trichloroethane	<RL	6.1
1,1-Dichloroethane	<RL	6.1
1,1-Dichloroethene	<RL	6.1
1,1-Dichloropropene	<RL	6.1
1,2,3-Trichlorobenzene	<RL	6.1
1,2,3-Trichloropropane	<RL	6.1
1,2,4-Trichlorobenzene	<RL	6.1
1,2,4-Trimethylbenzene	<RL	6.1
1,2-Dibromo-3-Chloropropane	<RL	6.1
1,2-Dibromoethane	<RL	6.1
1,2-Dichlorobenzene	<RL	6.1
1,2-Dichloroethane	<RL	6.1
1,2-Dichloropropane	<RL	6.1
1,3,5-Trimethylbenzene	1.4	6.1
1,3-Dichlorobenzene	<RL	6.1
1,3-Dichloropropane	<RL	6.1
1,4-Dichlorobenzene	<RL	6.1
2,2-Dichloropropane	<RL	6.1
2-Butanone	<RL	6.1
2-Chloroethyl Vinyl Ether	<RL	6.1
2-Chlorotoluene	<RL	6.1
2-Hexanone	<RL	12
4-Chlorotoluene	<RL	6.1
4-Methyl-2-Pentanone	<RL	12
Acetone	<RL	120
Acrolein	<RL	120
Acrylonitrile	<RL	6.1
Benzene	<RL	6.1
Bromobenzene	<RL	6.1
Bromochloromethane	<RL	6.1
Bromodichloromethane	<RL	6.1
Bromoform	<RL	6.1
Bromomethane	<RL	12
Carbon Disulfide	<RL	6.1
Carbon Tetrachloride	<RL	6.1
Chlorobenzene	<RL	6.1
Chlorodibromomethane	<RL	6.1
Chloroethane	<RL	6.1
Chloroform	<RL	6.1
Chloromethane	<RL	12
cis-1,2-Dichloroethene	<RL	6.1
cis-1,3-Dichloropropene	<RL	6.1
cis-1,4-Dichloro-2-Butene	<RL	6.1
Dibromomethane	<RL	6.1
Dichlorodifluoromethane	<RL	12
Ethylbenzene	<RL	6.1
Hexachlorobutadiene	<RL	6.1
Iodomethane	<RL	6.1
Isopropylbenzene	<RL	6.1
Methyl Methacrylate	<RL	6.1
Methylene Chloride	<RL	6.1
Methyl-tert-Butyl Ether	<RL	6.1
Naphthalene	<RL	6.1
n-Butylbenzene	<RL	6.1
n-Propylbenzene	<RL	6.1
p-Isopropyltoluene	<RL	6.1

ACCURA ANALYTICAL LABORATORY, INC.

<RL = Less than Reporting Limit

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Client Sample ID: BW-SB-1

AALSample ID #: AC21774

Accura Project #: 29050

sec-Butylbenzene	<RL	6.1
Styrene	<RL	6.1
tert-butylbenzene	<RL	6.1
Tetrachloroethene	<RL	6.1
Toluene	<RL	6.1
trans-1,2-Dichloroethene	<RL	6.1
trans-1,3-Dichloropropene	<RL	6.1
trans-1,4-Dichloro-2-Butene	<RL	6.1
Trichloroethene	<RL	6.1
Trichlorofluoromethane	<RL	6.1
Vinyl Acetate	<RL	6.1
Vinyl Chloride	<RL	2.4
Xylenes (Total)	<RL	6.1

**ANALYSIS: X VOC Sample Surrogates-Soil**

Method Ref: 5035/8260B

Date Ext/Dig/Prep: 11/9/01 Date Analyzed: 11/9/01 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4 (Range 60-136)	75		
4-Bromofluorobenzene (Range 75-135)	95		
Toluene-d8 (Range 83-126)	106		

**ANALYSIS: X SVOC Sample Surrogates (Soils)**

Method Ref: 8270C

Date Ext/Dig/Prep: 11/13/01 Date Analyzed: 11/14/01 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
2,4,6-Tribromophenol (Range 20-110)	71		
2-Fluorobiphenyl (Range 30-110)	66		
2-Fluorophenol (Range 22-96)	60		
Nitrobenzene-d5 (Range 22-104)	61		
Phenol-d6 (Range 25-100)	66		
p-Terphenyl-d14 (Range 30-130)	103		

**Appendix D**  
**Laboratory Analytical Report - Groundwater**



# ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia 30071, Phone (770)449-8800, FAX (770)449-5477  
 FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

## LABORATORY REPORT

Accura Sample ID #: AC22294

Accura Project #: 29110

Client: US Army Corp of Engrs, Savann.

Date Sampled: 11/9/01

Client Contact: MARK HARVISON

Date Received: 11/10/01

Client Project Number: TASK ORDER #0159

Date Reported: 11/21/01

Client Project Name: MCAS BEAUFORT DAY TANKS, SC

Sample Matrix: WATER

Client Sample ID: BW-MW-1-11-01

### ANALYSIS: VOC's - USACE

Method Ref: 8260B

Date Ext/Dig/Prep: 11/14/01

Date Analyzed: 11/14/01

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
1,1,1,2-Tetrachloroethane	<RL		5.0
1,1,1-Trichloroethane	<RL		5.0
1,1,2,2-Tetrachloroethane	<RL		5.0
1,1,2-Trichloroethane	<RL		5.0
1,1-Dichloroethane	<RL		5.0
1,1-Dichloroethene	<RL		5.0
1,1-Dichloropropene	<RL		5.0
1,2,3-Trichlorobenzene	<RL		5.0
1,2,3-Trichloropropane	<RL		5.0
1,2,4-Trichlorobenzene	<RL		5.0
1,2,4-Trimethylbenzene	<RL		5.0
1,2-Dibromo-3-Chloropropane	<RL		5.0
1,2-Dibromoethane	<RL		5.0
1,2-Dichlorobenzene	<RL		5.0
1,2-Dichloroethane	<RL		5.0
1,2-Dichloropropane	<RL		5.0
1,3,5-Trimethylbenzene	<RL		5.0
1,3-Dichlorobenzene	<RL		5.0
1,3-Dichloropropane	<RL		5.0
1,4-Dichlorobenzene	<RL		5.0
2,2-Dichloropropane	<RL		5.0
2-Butanone	<RL		5.0
2-Chloroethyl Vinyl Ether	<RL		5.0
2-Chlorotoluene	<RL		5.0
2-Hexanone	<RL		10
4-Chlorotoluene	<RL		5.0
4-Methyl-2-Pentanone	<RL		10
Acetone	<RL		100
Acrolein	<RL		100
Acrylonitrile	<RL		5.0
Benzene	<RL		5.0
Bromobenzene	<RL		5.0
Bromochloromethane	<RL		5.0
Bromodichloromethane	<RL		5.0
Bromoform	<RL		5.0
Bromomethane	<RL		10

Carbon Disulfide	<RL	5.0
Carbon Tetrachloride	<RL	5.0
Chlorobenzene	<RL	5.0
Chlorodibromomethane	<RL	5.0
Chloroethane	<RL	5.0
Chloroform	<RL	5.0
Chloromethane	<RL	10
cis-1,2-Dichloroethene	<RL	5.0
cis-1,3-Dichloropropene	<RL	5.0
cis-1,4-Dichloro-2-Butene	<RL	5.0
Dibromomethane	<RL	5.0
Dichlorodifluoromethane	<RL	10
Ethylbenzene	<RL	5.0
Hexachlorobutadiene	<RL	5.0
Iodomethane	<RL	5.0
Isopropylbenzene	<RL	5.0
Methyl Methacrylate	<RL	5.0
Methylene Chloride	<RL	5.0
Methyl-tert-Butyl Ether	<RL	5.0
Naphthalene	<RL	5.0
n-Butylbenzene	<RL	5.0
n-Propylbenzene	<RL	5.0
p-Isopropyltoluene	<RL	5.0
sec-Butylbenzene	<RL	5.0
Styrene	<RL	5.0
tert-butylbenzene	<RL	5.0
Tetrachloroethene	<RL	5.0
Toluene	<RL	5.0
trans-1,2-Dichloroethene	<RL	5.0
trans-1,3-Dichloropropene	<RL	5.0
trans-1,4-Dichloro-2-Butene	<RL	5.0
Trichloroethene	<RL	5.0
Trichlorofluoromethane	<RL	5.0
Vinyl Acetate	<RL	50
Vinyl Chloride	<RL	2.0
Xylenes (Total)	<RL	5.0

**ANALYSIS: X VOC Sample Surrogates-Waters**

Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/14/01 Date Analyzed: 11/14/01 Result Units: %

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
1,2-Dichloroethane-d4 (81-132)	103		
4-Bromofluorobenzene (80-120)	95		
Toluene-d8 (80-119)	96		

## **Appendix E**

### **Regulatory Correspondence**

# D H E C



2600 Bull Street  
Columbia, SC 29201-1708

COMMISSIONER:  
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Larry R. Chewning, Jr., DMD

29 August 2001

United States Marine Corps Air Station  
Commanding Officer  
Attention: S-4 NREAO (A.G. Howard)  
P.O. Box 55001  
Beaufort, SC 29904-5001

Re: MCAS – Heating Oil Tank @ 1175 Bob White Drive – Laurel Bay  
**Site Identification # 01829**  
Release Report and Proposed Closure of Heating Oil UST  
Beaufort County

Dear Ms. Howard:

Per your letter dated 22 August 2001, a heating oil UST was discovered at the referenced address during structure demolition. The tank and associated piping was disturbed during demolition activities causing a small amount of product to be released to the environment. Upon further inspection, it was discovered that the tank contained both solids and some residual product. According to the referenced letter, MCAS has removed the tank and a small amount of contaminated soil as part of tank closure activities.

Since a release was confirmed, MCAS must demonstrate that contamination is not present in excess of established regulatory limits. At a minimum, soil sampling should be conducted in the area of the release to determine what, if any, contamination is present.

The soil sampling report for the referenced UST should be submitted to the Department no later than 17 December 2001. Should you have any questions please contact me at 803-898-3553 (office phone), 803-898-3795 (fax) or [bishopma@columb32.dhec.state.sc.us](mailto:bishopma@columb32.dhec.state.sc.us).

Sincerely,

Michael A. Bishop, Hydrogeologist  
Groundwater Quality Section  
Bureau of Water

cc: Low Country EQC  
Matt Tetrault - BLWM  
Technical File



3 September 2002

00 Bull Street  
Columbia, SC 29201-1708

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Michael Blackmon

Harry R. Chewning, Jr., DMD

United States Marine Corps Air Station  
Commanding Officer  
Attention: S-4 NREAO (A.G. Howard)  
P.O. Box 55001  
Beaufort, SC 29904-5001

Re: MCAS – Heating Oil Tank @ 1175 Bob White Drive – Laurel Bay  
**Site Identification # 01829**  
Initial Ground Water Assessment Report received 3 September 2002  
No Further Action  
Beaufort County

Dear Ms. Howard:

The Department has reviewed the referenced assessment report. As submitted, the report documents efforts to monitor soil and ground water for hydrocarbon contamination at the subject site. Based on this review, it appears that maximum contaminant levels have not been exceeded in soil and/or ground water at the site.

Based on the information and analytical data submitted, the Department recognizes that the Marine Corps Air Station 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. Furthermore, the Department retains the right to request further investigation if deemed necessary.

The monitoring well(s) may be permanently abandoned by a certified well driller licensed in South Carolina in accordance with the South Carolina Well Standards and Regulations, R.61-71 or properly maintained. Should you choose to abandon the well, please submit a well abandonment record to my attention no later than 31 December 2002. Should you choose to properly maintain the monitoring well, please notify me within 14 days of this correspondence.

Should you have any questions, please contact me at 803-898-3553 (office phone), 803-898-2893 (fax) or [bishopma@dhec.state.sc.us](mailto:bishopma@dhec.state.sc.us).

Sincerely,

Michael Bishop, Hydrogeologist  
Groundwater Quality Section  
Bureau of Water

Tom Knight, Manager  
Groundwater Quality Section  
Bureau of Water

cc: Low Country District EQC  
Matt Tetrault, BLWM  
Commander, NAVFACENGCOM Southern Division, Attn: Code ES24 (Gabriel Magwood), P.O.  
Box 190010, North Charleston, SC 29419-9010  
Technical File