

Shaw Environmental, Inc.
11560 Great Oaks Way, Suite 500
Alpharetta, GA 30022-2424
770.475.8994
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June 7, 2005

DEPARTMENT OF THE NAVY

Mr. Dave Cleland
North Carolina/Caribbean IPT
NAVFAC
6506 Hampton Blvd. Room 3700
Norfolk, VA 23508

Re: Contract N62470-02-D-3260; Task Order 0040
Remediation Alternatives Implementation, BM-820 and H-30 Reports
MCB Camp Lejeune, North Carolina

Dear Mr. Cleland:

Attached find one hardcopy and one CD version of the following Shaw Environmental, Inc. (Shaw) submittals:

- Soil Contamination Report, Berkley Manor 820, which now includes the groundwater data for the new Type III wells
- Soil Removal Report, Building H-30. Please note at this time disposal of the excavated soils has not been completed and finalized disposal manifests can be supplied as an insert into Appendix D upon their receipt.

Two hardcopies (one for State submittal) of each submittal have been provided to EMD as well. Should any additional clarification be needed, please do not hesitate to contact me at 770-663-1453 at your convenience, and thank you for allowing Shaw to continue serving NAVFAC and Camp Lejeune's environmental project needs.

Sincerely,

Shaw Environmental, Inc.

A handwritten signature in black ink, appearing to read "R.B. Kenyon", with a long, sweeping horizontal line extending to the right.

Ronald B. Kenyon
Project Manager

Attachments

pc: A. Smith, EMD
Shaw PMO, Va Beach
Project File 112768

**SOIL CONTAMINATION REPORT
BUILDING 820
MARINE CORPS AIR STATION
CAMP LEJEUNE, NORTH CAROLINA**

Prepared for:

Commander
Naval Facilities Engineering Command



Atlantic Division
Naval Facilities Engineering Command
6506 Hampton Boulevard
Norfolk, Virginia 23508-1273

Prepared by:



11560 Great Oaks Way, Suite 500
Alpharetta, GA 30022-2424

Task Order 0040
Shaw Project No. 112768

June 2005

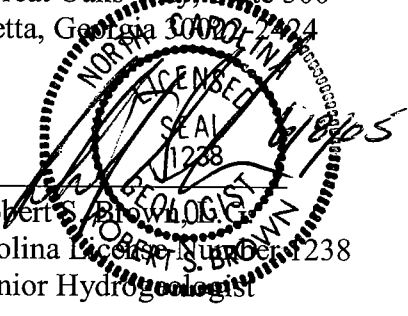
**SOIL CONTAMINATION REPORT
BUILDING 820
MARINE CORPS AIR STATION
CAMP LEJEUNE, NORTH CAROLINA**

Prepared for:

Naval Facilities Engineering Command, Atlantic Division
6506 Hampton Boulevard
Norfolk, Virginia 23508-1273

Prepared by:

Shaw Environmental, Inc.
11560 Great Oaks Way, Suite 500
Alpharetta, Georgia 30024


Robert S. Brown
North Carolina License No. 11238
Senior Hydrogeologist



Ron Kenyon
Project Manager



Roland Moreau, P.E.
Program Manager

Shaw Project 112768
June 2005

Soil Contamination Report

(for Petroleum Releases Only)

A. Site Identification

DATE OF REPORT: 5-18-05

Facility I.D.: NA

UST Incident Number (if known): 23135

Site Name: Marine Corps Base, Camp Lejeune, North Carolina

Site Location: Building 820, Berkeley Manor, Stone Street

Nearest City/Town: Jacksonville, NC County: Onslow

UST Owner: Commanding General, MCB Camp Lejeune

Address: Installation and Environment Department ATTN: EMD
PSC Box 20004, Camp Lejeune, NC 28542-0004 Phone: 910-451-5068

UST Operator: Commanding General, MCB Camp Lejeune

Address: Installation and Environment Department ATTN: EMD
PSC Box 20004, Camp Lejeune, NC 28542-0004 Phone: 910-451-5068

Property Owner: Commanding General, MCB I&E/EMD/EOB

Address: PSC Box 20004, Camp Lejeune, NC 28542 Phone: 910-451-9660

Property

Occupant: Commanding General, MCB I&E/EMD/EOB

Address: PSC Box 20004, Camp Lejeune, NC 28542 Phone: 910-451 9660

Consultant/Contractor: Shaw Environmental, Inc.

Address: 11560 Great Oaks Way, Suite 500, Alpharetta, GA 30022 Phone: 770.663.1453

Release Information

Date Discovered: Early 1990's

Latitude: 77° 21' 16.0669" W Longitude: 34° 42' 0.662077" N

Estimated Quantity of Release: Unknown

Cause of Release:

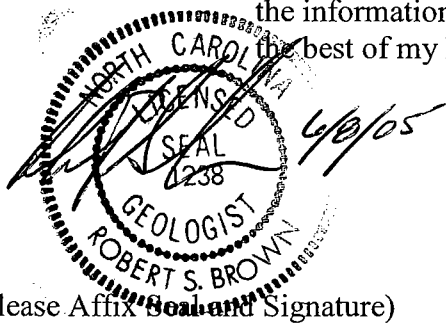
Unknown

Source of Release (Piping):

The plume appeared to originate from the vicinity of the USTs

Sizes and contents of UST system(s) from which the release occurred: Three 10,000 gallon gasoline USTs and one 10,000 gallon diesel UST

I, Robert S. Brown a Licensed Geologist for Shaw Environmental, Inc., do certify that the information contained in this report is correct and accurate to the best of my knowledge.



(Please Affix Seal and Signature)

B. Site History:

Located in Onslow County, North Carolina, MCB Camp Lejeune is a training base for the United States Marine Corps. The Base covers approximately 236 square miles (153,000 acres) and includes 14 miles of coastline. MCB Camp Lejeune is bounded to the southeast by the Atlantic Ocean and to the northeast by State Route 24. Wooded areas are located North, East, and West of the site. The town of Jacksonville, North Carolina is located north of the Base (*Figure 1.1*).

Building 820 is located in the Berkeley Manor residential area of the Marine Corps Base, Camp Lejeune, Onslow County, North Carolina (*Figure 1.2*). The site is located on the west side of Stone Street. The site is determined to be a Category B Intermediate Risk site under the State's Site Priority Ranking System.

Building 820 is currently an active Marine Corps Exchange gas station. Four underground storage tanks (USTs) are located south of the building. These include three 10,000-gallon gasoline USTs and one 10,000-gallon diesel UST. The USTs were upgraded in the late summer of 1995. *Tables B-1* and *B-2* provide a summary Site History and UST Owner/Operator information respectively.

Contamination Investigation History

In the early 1990s, several environmental investigations were carried out in the vicinity of Building 820. Type II wells were installed to investigate the presence of free product and dissolved contaminants in shallow groundwater. Type III wells were installed to investigate conditions deeper in the aquifer at depths as great as 50 feet bls.

Petroleum constituents were detected in both the shallow (Type II) and deep (Type III) wells. Plumes of dissolved petroleum constituents in excess of North Carolina Groundwater Quality Standards were identified in both zones. These constituents included benzene, toluene, ethylbenzene, and xylene (BTEX); and methyl tertiary butyl ether (MTBE).

In both zones, the plumes appeared to originate from the vicinity of the USTs. The plumes appeared to extend primarily to the south (the inferred direction of groundwater flow) for approximately 250 feet, with some lateral migration approximately 150 feet to the west. Near the point of origin, the concentration of dissolved Total BTEX was initially detected at concentrations as high as 157,500 micrograms per liter (ug/L). This concentration was near the saturation level for these compounds.

A passive free product recovery system installed at the site recovered approximately 43 gallons of free product from March 1994 through February 1997. In response to a NCDENR request dated June 8, 2001, additional soil samples were collected in the vicinity of the fuel dispensers and fuel lines. The samples were analyzed for the presence of hydrocarbons by Environmental Protection Agency (EPA) Method 5035/8015B and by MADEP Methods for VPH. All soil analytical results were below the NCDENR guidelines. A letter report presenting results of the additional soil investigation was submitted August 24, 2001.

Corrective Action Plan

Law Engineering and Environmental Services, Inc. (LAW) prepared a CAP dated October 29, 1996. Two potential receptors were identified at greatest apparent risk. One consists of two tributaries of Wallace Creek located approximately 1,500 feet south of the site. The other potential receptor is a drinking water supply well (well HP-623) located approximately 1,300 feet northeast of the site (*Figure 1.2*).

The remedial approach presented in the CAP recommended a combination of treatment technologies to meet the remedial goals at the site. These technologies included:

- Four fields of AS wells. The AS wells would be installed in areas displaying high concentrations of dissolved-phase petroleum constituents to remediate these constituents and prevent further migration of the plume. Their screened intervals would be placed from 47 to 50 feet bbs to remediate the dissolved petroleum constituents in the Type II and Type III well zones.
- Four fields of SVE wells, with an individual SVE point located near each AS well. The SVE wells would remove any residual free product, capture fugitive emissions resulting from the air sparging, and remediate any adsorbed-phase petroleum in that portion of the vadose zone within each well's radius of influence.

The CAP estimated that the system would have to operate for 20 years from startup to successfully remediate the dissolved groundwater plume. Following approval of the CAP, the AS/SVE portion of the system was installed in 1997. The system was placed in operation during October 1997. The locations of the well fields and the treatment compound are shown in *Figure 1.3*.

Revised Corrective Action Plan

CATLIN Engineers and Scientists submitted a CAP Addendum to the NCDENR titled “*Remedial Action Optimization and Revised Corrective Action Plan Building 820*” dated February 26, 2004. The addendum was prepared following a thorough review of available reports and field data since the AS/SVE remedial system was placed in operation as well as a field reconnaissance and interviews with the system operators.

The potential receptors were re-evaluated during preparation of the RCAP using the North Carolina Risk Classification and Land Use Form. Based on the risk characterization, it was determined that the site meets the criteria to be classified as an Intermediate Risk and Residential Land Use site. A receptor survey performed during the risk characterization identified the following receptors within 1,500 feet of the site:

- A potable water supply well 623 located approximately 1,300 feet northeast of the site.
- A tributary of Wallace Creek located approximately 1,200 feet southeast of the site.
- The site is located in an area in which there is potential recharge to the deeper aquifer being used by the potable supply well. The Well Head Protection Plan Update (2002) stated water supply well 623 is 197 feet deep with the pump depth set at 70 feet bls.
- The site is located within a potential well head protection area.
- The closest residence is approximately 400 feet east of the site.
- A youth Sports and Activities Center and a playground are located approximately 300 feet from the site.
- Athletic fields associated with a middle school are located approximately 500 feet northeast of the site.

Based on information provided by MCB Camp Lejeune, these potential receptors have not been reported to have been adversely affected by the potentially contaminated soil and/or groundwater.

The intermediate risk is based on the location of the potable water supply well 623 and the deep groundwater contamination at the site. This ranking revises the target cleanup goals for soil to Residential Maximum Soil Contaminant Concentrations (MSCCs).

Groundwater target cleanup goals remain unchanged from the original CAP (i.e., 2L GWQS). A Notice of Residual Petroleum is not required for the site at this time.

Recommendations of the Revised CAP included:

- Collection of soil samples from the capillary fringe at six locations for Risk Based Analysis (scope-of-work presented in this report).
- Shutting down a portion of the current groundwater remediation system.
- Quarterly groundwater sample collection from shallow monitoring wells (MW-8, MW-10, MW-14, MW-18, MW-20, MW-22, MW-24 and MW-26. The groundwater samples are to be analyzed for VOCs using EPA Method 602 plus xylenes, SVOCs using EPA Method 625 for PAH compounds only, and Standard Prep Method 3030C for lead.
- Install two 50-feet deep Type III monitoring wells.
- Shutdown and properly abandon water supply well 623.
- Quarterly groundwater sample collection from deep monitoring wells (MW-7, MW-19, MW-21, MW-23, MW-25, plus the two additional deep monitoring wells). The groundwater samples are to be analyzed for VOCs using EPA Method 602 plus xylenes, SVOCs using EPA Method 625 for PAH compounds only, and Standard Prep Method 3030C for lead.
- The remaining shallow monitoring wells (MW-2, MW-3, MW-4, MW-5, MW-6, MW-11, MW-12, MW-13, MW-15, MW-16 and MW-27 should be sampled on a semi-annual basis for one year. The groundwater samples are to be analyzed for VOCs using EPA Method 602 plus xylenes, SVOCs using EPA Method 625 for PAH compounds only, and Standard Prep Method 3030C for lead.
- Semi-annual groundwater sample collection from deep monitoring well MW-9D. The groundwater sample is to be analyzed for VOCs using EPA Method 602 plus xylenes, SVOCs using EPA Method 625 for PAH compounds only, and Standard Prep Method 3030C for lead.

Topography

The project area is dominated by relatively flat topography gently sloping to the south toward Wallace Creek and west toward New River. Much of the area immediately surrounding Building 820 consists of asphalt parking lot with wooded areas to the west and south and residential areas to the east. The nearest mapped bodies of surface water are New River approximately one mile to the west and Wallace Creek approximately one mile to the south. Surface water runoff from the site is diverted into a network of storm

drains located at the site. Storm water collected by this system of drains ultimately discharges to the New River.

Regional Geology and Hydrogeology

Sediment and stratigraphy in the vicinity of the site indicates that near surface soils within 6 to 8 feet below land surface (bls) generally consist of sandy clays to clayey fine sands with occasional fine sand or clay lenses. Below the surficial material, soils generally consist of relatively clean fine to medium sands to a depth of approximately 50 feet.

The groundwater aquifer is classified as a Class GA groundwaters according to the North Carolina Administrative Code (NCAC) Title 2L Subchapter 15A, Section .0201 Groundwater Classifications. Depth to groundwater ranges from 7 to 12 feet bls in shallow Type II monitoring wells and 10 to 18 feet bls in 50-foot deep Type III monitoring wells. In general, the surficial direction of groundwater flow at the site is to the south, while the deeper zone (i.e., 50 feet bls) flows to the north.

C. Site Investigation

On April 22, 2005 Shaw Environmental, Inc. (Shaw) collected soil samples from the capillary fringe (10 feet below land surface) at six locations that were identified in the RCAP at the site. The sample locations are illustrated on *Figure I-3*. Hollow stem auger drilling techniques were used to advance the borings and Standard Penetration Test (SPT) split spoon soil samplers were used to collect the samples. Soil boring logs are provided in *Appendix A*.

The samples were analyzed for EPA Method 8260 with IPE and MTBE, EPA Method 8270 plus 10 highest peaks, MADEP-VPH, and MADEP-EPH. The collected samples were immediately placed in a cooler with ice and sent via overnight courier to Accutest Laboratory located in Orlando, Florida. Soil sample analytical results are presented in *Appendix B*. Complete laboratory analytical reports and chain of custodies are provided in *Appendix C*.

In addition, two 50-foot deep Type III monitoring wells were installed at the site from April 21 through April 23, 2005. The wells were installed by first grouting in place a 6-inch diameter PVC casing from ground surface to 35 feet bls using hollow stem auger drilling techniques. A 2-inch diameter monitoring well was then installed to a depth of 50 feet bls using mud rotary drilling techniques. The well was constructed using 2-inch

diameter Schedule 40 PVC riser and five feet of 0.010 slot PVC screen. The monitoring well boring logs are provided in *Appendix A*. These two monitoring wells were sampled May 25, 2005 during the ongoing semi-annual groundwater monitoring event. The samples were analyzed for MADEP-VPH, MADEP-EPH, VOCs using Method 8260B and SVOCs using Method 8270C.

Site soils observed during boring activities consisted of a fine-medium silty sand to an approximate depth of nine feet bls which transitioned into a silty-sandy clay from 9 to 10 feet bls. Depth to groundwater at the site in the vicinity of the borings was approximately 10 feet bls.

During drilling activities, soil samples were screened for the presence of organic vapors using a Photovac Microtip™ flame ionization detector (FID) for the presence of volatile organics. In addition, the soil samples were examined for evidence of petroleum impact (i.e.: staining, odor, etc.). No staining or odor was observed in any of the soil samples, and all FID readings were non-detect (i.e., 0 ppm).

Non-hazardous Soil Disposal

Approximately 15 drums of soil was generated during soil sampling and monitoring well installation activities. The soil from the drums was combined with other petroleum contaminated IDW soil for disposal.

A composite sample from the stockpiled soil was collected for disposal characterization analysis. The sample was analyzed for TPH-GRO, TPH-DRO, VOC-TCLP, SVOC-TCLP, pesticide TCLP and herbicide TCLP. Analytical results indicated all compounds were below their respective regulatory limits and the soil was determined to be non-hazardous. The soil was subsequently disposed of at the ES&J Enterprises, Inc. facility located in Autryville, North Carolina.

Quality Control Measures for Soil Samples

Soil samples were collected using nitrile gloves and stainless steel split spoons. The split spoon soil sampler was washed before use with a water/liquinix detergent solution to ensure the soil samples were not cross contaminated with contaminants from previous sampling episodes. The collected samples were immediately placed in a cooler with ice and sent via overnight courier to Accutest Laboratory located in Orlando, Florida.

Quality Control Measures for Groundwater Samples

Following purging a minimum of three well volumes from each monitoring well, groundwater samples were collected using a pre-cleaned dedicated polyethylene bailer. The samples were placed in preserved containers supplied by the laboratory. The collected samples were immediately placed in a cooler with ice and sent via overnight courier to Accutest Laboratory located in Orlando, Florida. Copies of the groundwater sample collection field logs are provided in *Appendix D*.

Soil Investigation Results

Laboratory analysis completed on the soil samples from the soil borings included the following analysis: MADEP-VPH, MADEP-EPH, VOCs using Method 8260B, and SVOCs using EPA Method 8270C. Analytical results are summarized below:

- *MADEP EPH Results:* Analytical results from the confirmation samples did not detect MADEP EPH compounds above NC Residential, Industrial or Soil-to-Groundwater Maximum Soil Contaminant Concentrations.
- *MADEP VPH Results:* Analytical results from the confirmation samples did not detect MADEP VPH compounds above NC Residential, Industrial or Soil-to-Groundwater Maximum Soil Contaminant Concentrations.
- *VOCs Method 8260B Results:* Analytical results from the confirmation samples did not detect VOCs above NC Residential, Industrial or Soil-to-Groundwater Maximum Soil Contaminant Concentrations.
- *SVOCs Method 8270C Results:* Analytical results from the confirmation samples did not detect SVOCs above NC Residential, Industrial or Soil-to-Groundwater Maximum Soil Contaminant Concentrations.

Laboratory analysis of confirmation soil samples collected did not result in the detection of regulated hydrocarbon compounds in excess of NC Residential, Industrial or Soil-to-Groundwater Maximum Soil Contaminant Concentrations in soils.

Groundwater Investigation Results

Laboratory analysis completed on the groundwater samples from monitoring wells UST820-MW28 and UST820-MW29 included the following analysis: MADEP-VPH, MADEP-EPH, VOCs using Method 8260B, and SVOCs using EPA Method 8270C.

Analytical results are summarized below:

- *MADEP EPH Results:* Analytical results from the groundwater samples did not detect MADEP EPH compounds above NC 2L GWQS.
- *MADEP VPH Results:* Analytical results from the groundwater sample from monitoring well UST820-MW28 detected C₅-C₈ range compounds (3.28 mg/l) at a concentration above the NC 2L GWQS of 0.42 mg/l.
- *VOCs Method 8260B Results:* Analytical results from the groundwater samples exceeded NC 2L GWQS for the following compounds:
 - UST820-MW28: benzene, 1,110 µg/l; and MTBE, 3,350 µg/l
 - UST820-MW29: benzene, 29.6 µg/l; and chloroform, 2.6 µg/l
- *SVOCs Method 8270C Results:* Analytical results from the groundwater samples did not detect SVOC compounds above NC 2L GWQS.

Groundwater sample analytical results are provided in *Appendix D*. The groundwater sample laboratory analytical reports are provided in *Appendix E*.

CONCLUSIONS AND RECOMMENDATIONS

During the week of April 18, 2005, Shaw completed installation of two Type III monitoring wells and collection of six soil samples from the capillary fringe at Building 820 located in Berkley Manor at Camp Lejeune Marine Corps Base, Jacksonville, North Carolina. The new Type III monitoring wells were sampled on May 25, 2005. The work was completed in accordance with recommendations developed in the Revised Corrective Action Plan prepared by CATLIN. Field screening of soil samples using an OVA-FID did not detect the presence of volatile organics at the site.

Soil sample analytical results did not detect MADEP-EPH; MADEP-VPH; VOCs, or SVOCs, in excess of NC Residential, Industrial or Soil-to-Groundwater Maximum Soil Contaminant Concentration requirements. Groundwater analytical results from the 50 feet deep Type III monitoring wells detected benzene, MTBE and chloroform at concentrations in excess of North Carolina 2L GWQS. Additional contamination assessment work may be required to delineate the horizontal extent of contamination in the deep 50 feet depth interval.

Based on the results of this investigation, Shaw recommends that No Further Investigation with respect to the soil at the Building 820 site is required. The air sparge/soil vapor extraction groundwater remediation system currently in operation at the site will remain in operation until dissolved contaminants are reduced to 2L GWQS.

TABLES

TABLE B-1
Site History
UST System Information

UST ID Number	Product (gas, diesel, jet fuel, etc.)	Capacity (gallons)	Date Installed (m/dd/yy)	Date closed (P) permanently (C) still in use*	Release Associated with UST System (yes/no)
820-1	Gasoline	10,000	Unknown (upgraded 1995)	(C) still in use*	Yes
820-2	Gasoline	10,000	Unknown (upgraded 1995)	(C) still in use*	Yes
820-3	Gasoline	10,000	Unknown (upgraded 1995)	(C) still in use*	Yes
820-4	Diesel	10,000	Unknown (upgraded 1995)	(C) still in use*	Yes

* Still in use means not permanently abandoned

TABLE B-2
UST Owner/Operator Information (most recent first)

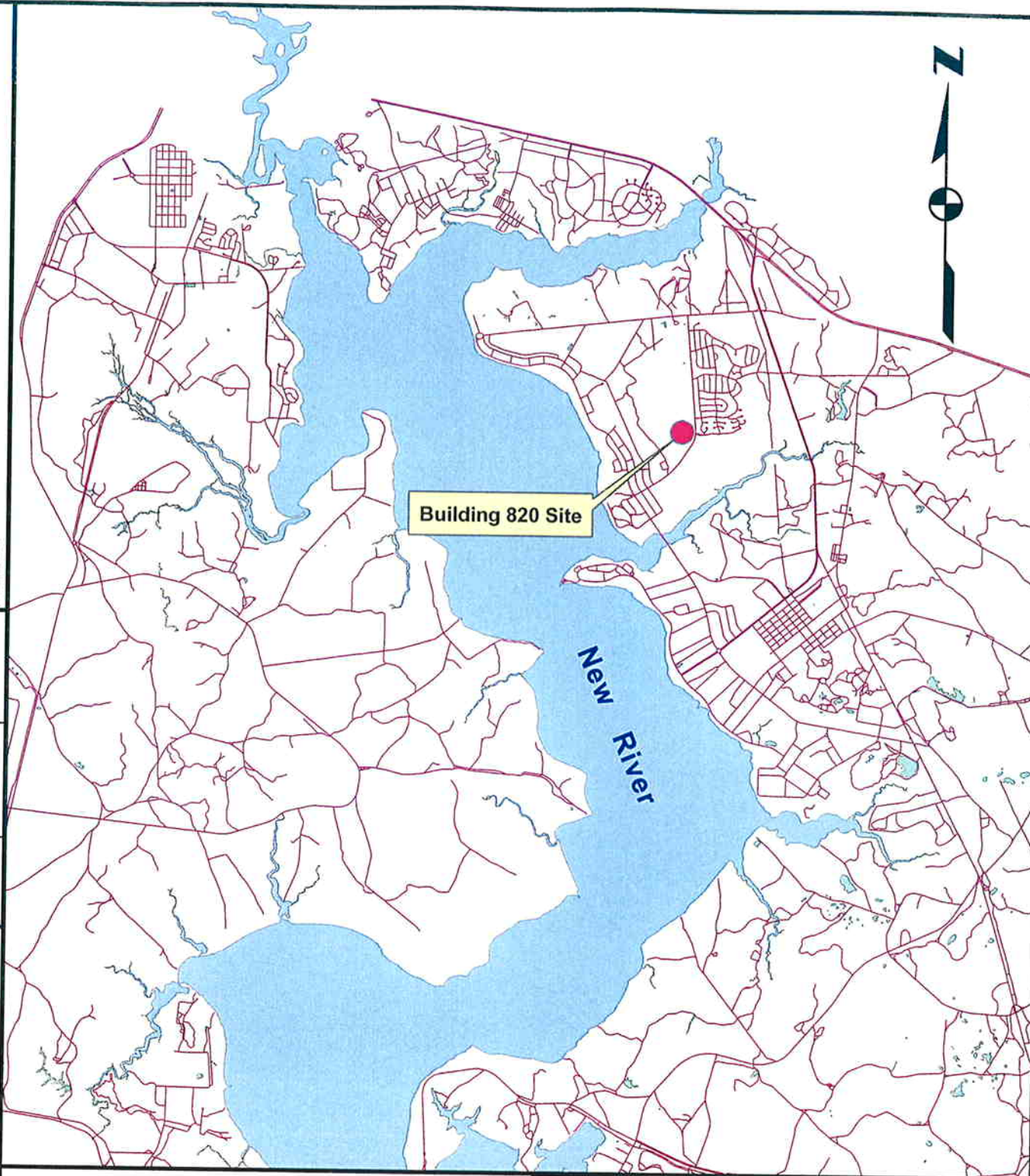
UST ID Number 23135	Name of Owner Commanding General, MCB Camp Lejeune	Dates of Ownership/Operation Unknown	Owner or Operator? Owner
Address:	Installation and Environment Department PSC Box 20004, Camp Lejeune, NC 28542 ATTN: EMD		Telephone Number 910-451-5068

UST ID Number 23135	Name of Operator Commanding General, MCB Camp Lejeune	Dates of Ownership/Operation	Owner or Operator? Operator
Address:	Building 820, Berkley Manor ATTN: EMD		Telephone Number 901-451-5068

UST ID Number	Name of Owner or Operator	Dates of Ownership/Operation	Owner or Operator?
Address:			Telephone Number

UST ID Number N/A	Name of Owner or Operator N/A	Dates of Ownership/Operation N/A	Owner or Operator? N/A
Address:			Telephone Number
N/A			N/A

FIGURES



Building 820 Site

New River

0 5,000 10,000 20,000 Feet

 **Shaw**™ Shaw Environmental, Inc.

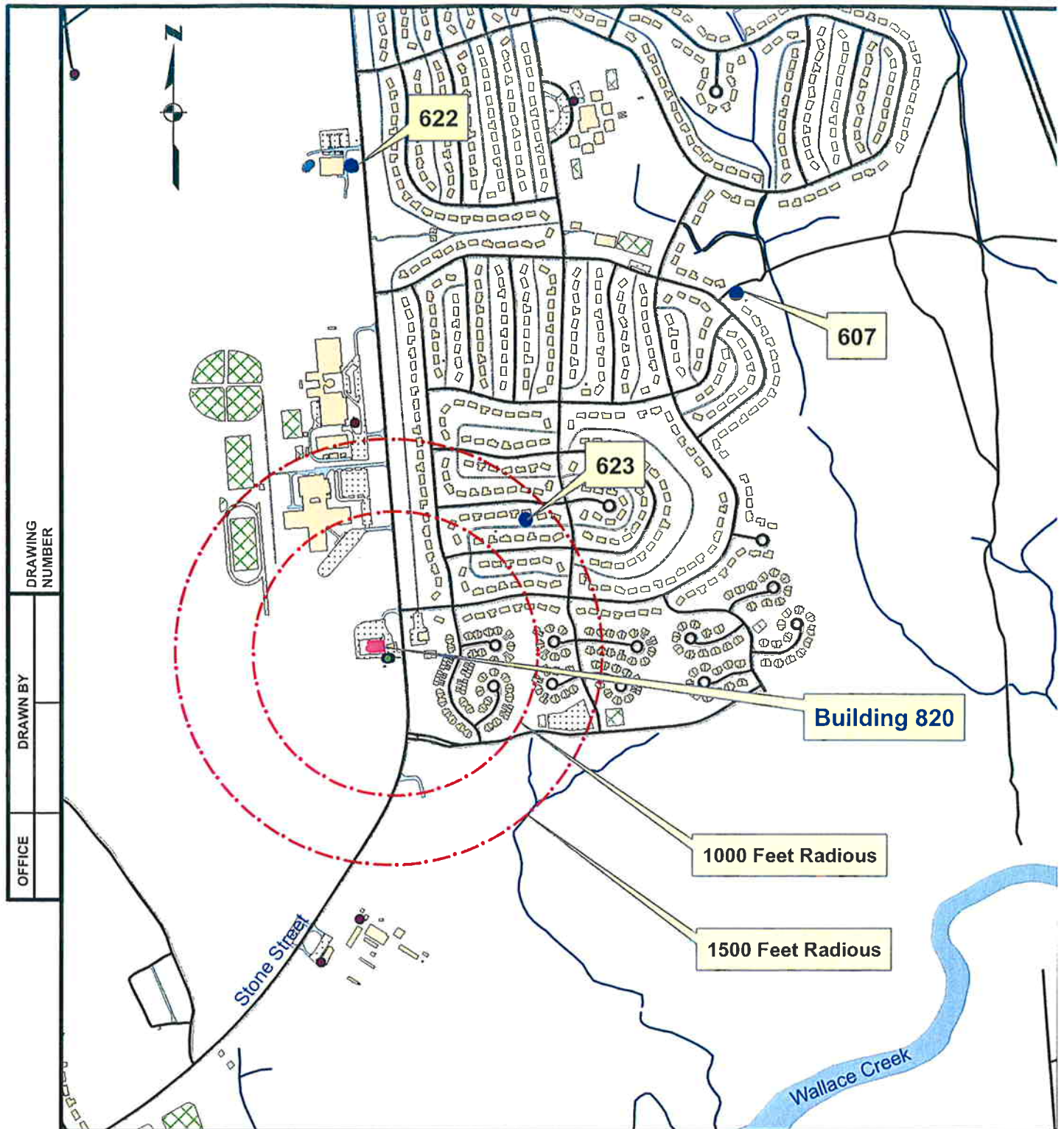
FIGURE 1.1
BASE LOCATION MAP
BUILDING 820
MARINE CORPS BASE
CAMP LEJEUNE

REFERENCE/PROJECTION:

DRAWING
NUMBER

DRAWN BY

OFFICE



OFFICE	DRAWN BY	DRAWING NUMBER



Legend

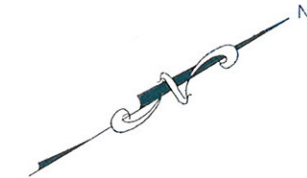
- surf_wat_course_centerline
- buildings_general_area
- surface_water_course_area
- surface_water_body_area
- ABOVE GROUND STORAGE TANK
- UNDERGROUND STORAGE TANK
- ⊞ Athletic Area
- road_area
- vehicle_driveway_area



Shaw Environmental, Inc.

**FIGURE 1.2
SITE LOCATION MAP
BUILDING 820
MARINE CORPS BASE
CAMP LEJEUNE**

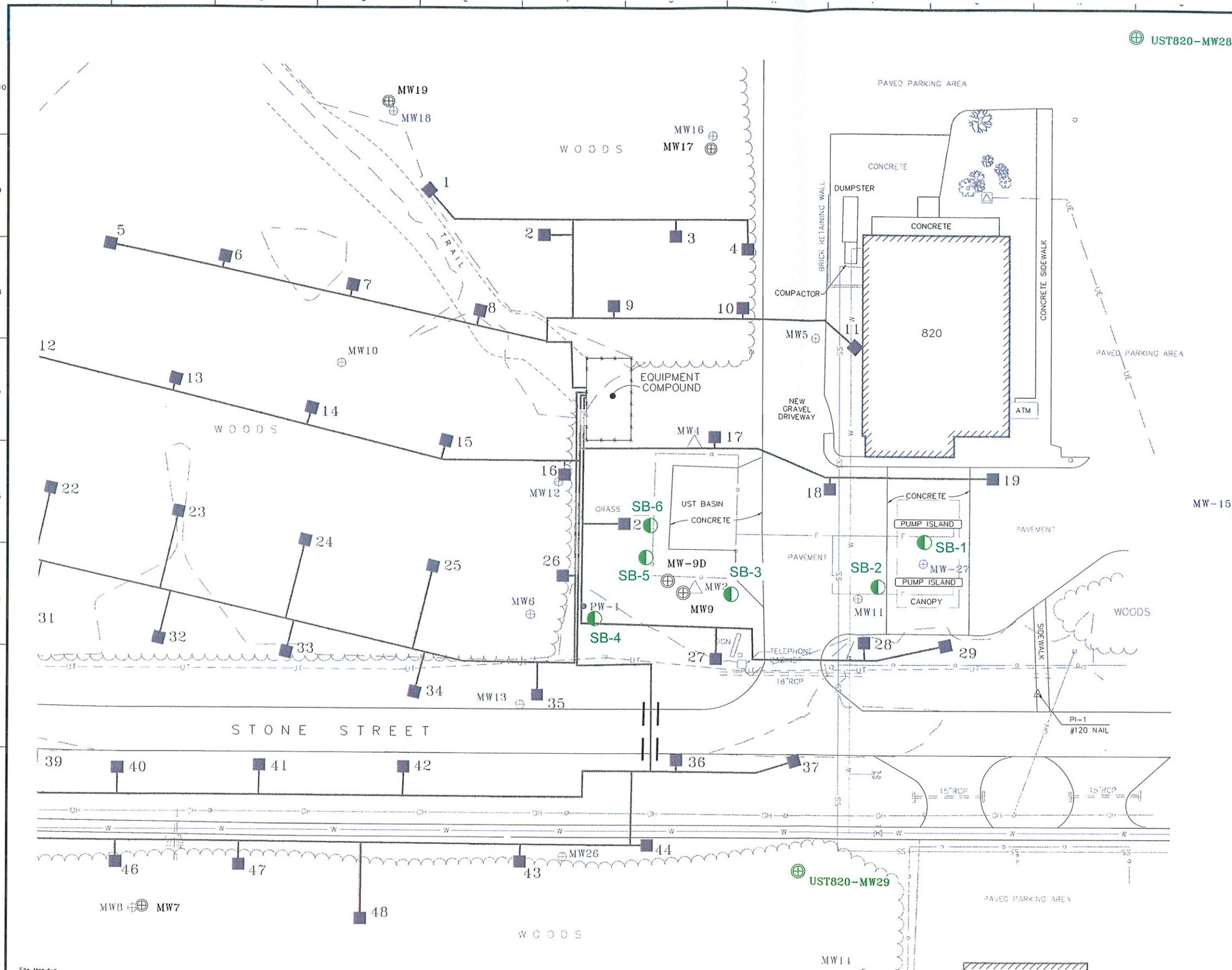
UST820-MW28



LEGEND

- ⊕ MONITORING WELL - TYPE II
- ⊕ MONITORING WELL - TYPE III
- ⊕ NEW TYPE III WELL
- NEW SOIL BORINGS

0 25 50 75 100
SCALE IN FEET



Site_Map.dwg Shaw Shaw Environmental, Inc. SUBMITTED: _____ DATE: _____ PROJECT MANAGER: _____ APPROVED: _____ DATE: _____ SR. PROJECT ENGINEER: _____ APPROVED: _____ DATE: _____ DEPT. MANAGER: _____	AT FULL SCALE (IF NOT 2"=SCALE ACCORDINGLY) CADD FILE: _____ DRAWN: J. LANGE DESIGNED: B. BROWN CHECKED: R. KENYON CHECKED: _____	REVISIONS <table border="1"> <thead> <tr> <th>ZONE</th> <th>REV.</th> <th>DESCRIPTION</th> <th>BY</th> <th>DATE</th> <th>APP.</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	ZONE	REV.	DESCRIPTION	BY	DATE	APP.																																																							DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC DIVISION NAVAL STATION NORFOLK, VIRGINIA CONTRACT N62470-02-D-3260 TASK ORDER NO. 040 OHM PROJECT No. 112768 MARINE CORPS BASE, CAMP LEJEUNE, N.C.	FIGURE 1.3 SITE MAP BERKELEY MANOR 820	NAVFAC DRAWING NO. _____ SHEET NUMBER: _____ of _____ DATE: 5/11/05
	ZONE	REV.	DESCRIPTION	BY	DATE	APP.																																																											

APPENDIX A

BORING LOGS

BORING LOG

1 of 1

Project Name: **Building 820, Berkely Manor**
 Client: **Camp Lejeune, Marine Corps Base**
 Location: **Jacksonville, NC**

Project No.: 112768
 Boring No.: 820-SB1
 Well Diameter: NA
 Date: 22-Apr-05

Well Construct	Description	USCS	Depth (feet)	OVA-FID (ppm)	Blows per 6"	Recovery (inches)	Drilling Observations
	Concrete						
5	Sand, f-med, silty, lt brown dry	SM	5.0	0			Hand auger soil boring
10	Same as above, moist Clay, silty w/ fine sand, light brown, moist	SM CL	10.0	0			UST820-SB1 (soil sample)
15			15.0				
20			20.0				
25			25.0				
30			30.0				
35			35.0				
40			40.0				
45			45.0				
50			50.0				
							LEGEND
							 Grout (with bentonite) Seal

BORING LOG

1 of 1

Project Name: **Building 820, Berkely Manor**
 Client: **Camp Lejeune, Marine Corps Base**
 Location: **Jacksonville, NC**

Project No.: **112768**
 Boring No.: **820-SB2**
 Well Diameter: **NA**
 Date: **22-Apr-05**

Well Construct	Description	USCS	Depth (feet)	OVA-FID (ppm)	Blows per 6"	Recovery (inches)	Drilling Observations
	Asphalt						
5	Sand, f-med, silty, lt brown dry	SM	5.0	0	1/3/3/5	20	6.25" OD Hollow stem auger soil boring
10	Same as above, moist	SM					UST820-SB2 (soil sample)
	Clay, silty w/ fine sand, light brown, moist	CL	10.0	0	1/2/2/3	24	
15			15.0				
20			20.0				
25			25.0				
30			30.0				
35			35.0				
40			40.0				
45			45.0				
50			50.0				
							LEGEND
							 Grout (with bentonite) Seal

BORING LOG

1 of 1

Project Name: **Building 820, Berkely Manor**
 Client: **Camp Lejeune, Marine Corps Base**
 Location: **Jacksonville, NC**

Project No.: **112768**
 Boring No.: **820-SB3**
 Well Diameter: **NA**
 Date: **22-Apr-05**

Well Construct	Description	USCS	Depth (feet)	OVA-FID (ppm)	Blows per 6"	Recovery (inches)	Drilling Observations
	Black organic sandy soil						
5	Sand, f-med, silty, lt brown, dry	SM	5.0	0	1/2/3/4	20	6.25" OD Hollow stem auger soil boring
10	Same as above, moist	SM					UST820-SB3 (soil sample)
	Clay, silty w/ fine sand, light brown w/ gray, moist	CL	10.0	0	2/2/1/2	20	
15			15.0				
20			20.0				
25			25.0				
30			30.0				
35			35.0				
40			40.0				
45			45.0				
50			50.0				
							LEGEND
							 Grout (with bentonite) Seal

BORING LOG

1 of 1

Project Name: **Building 820, Berkely Manor**
 Client: **Camp Lejeune, Marine Corps Base**
 Location: **Jacksonville, NC**

Project No.: 112768
 Boring No.: 820-SB4
 Well Diameter: NA
 Date: 22-Apr-05

Well Construct	Description	USCS	Depth (feet)	OVA-FID (ppm)	Blows per 6"	Recovery (inches)	Drilling Observations
	Black organic sandy soil						
5	Sand, f-med, silty, lt brown dry	SM	5.0	0	3/2/3/7	24	6.25" OD Hollow stem auger soil boring
10	Same as above, moist	SM					UST820-SB4 (soil sample)
	Clay, silty w/ fine sand, light brown, moist	CL	10.0	0	6/6/6/7	24	
15			15.0				
20			20.0				
25			25.0				
30			30.0				
35			35.0				
40			40.0				
45			45.0				
50			50.0				
							LEGEND
							 Grout (with bentonite) Seal

BORING LOG

1 of 1

Project Name: **Building 820, Berkely Manor**
 Client: **Camp Lejeune, Marine Corps Base**
 Location: **Jacksonville, NC**

Project No.: 112768
 Boring No.: 820-SB5
 Well Diameter: NA
 Date: 22-Apr-05

Well Construct	Description	USCS	Depth (feet)	OVA-FID (ppm)	Blows per 6"	Recovery (inches)	Drilling Observations
	Black organic sandy soil						
5	Sand, f-med, silty, lt brown dry	SM	5.0	0	1/1/1/1	18	6.25" OD Hollow stem auger soil boring
10	Same as above, moist	SM					
	Clay, silty w/ fine sand, light brown, moist	CL	10.0	0	2/2/3/5	24	UST820-SB5 (soil sample)
15			15.0				
20			20.0				
25			25.0				
30			30.0				
35			35.0				
40			40.0				
45			45.0				
50			50.0				
							LEGEND
							 Grout (with bentonite) Seal

BORING LOG

1 of 1

Project Name: **Building 820, Berkely Manor**
 Client: **Camp Lejeune, Marine Corps Base**
 Location: **Jacksonville, NC**

Project No.: 112768
 Boring No.: 820-SB6
 Well Diameter: NA
 Date: 22-Apr-05

Well Construct	Description	USCS	Depth (feet)	OVA-FID (ppm)	Blows per 6"	Recovery (inches)	Drilling Observations
	Black organic sandy soil						
5	Sand, f-med, silty, lt brown dry	SM	5.0	0			Hand auger soil boring
10	Same as above, moist	SM					UST820-SB6 (soil sample)
	Clay, silty w/ fine sand, light brown, moist	CL	10.0	0			
15			15.0				
20			20.0				
25			25.0				
30			30.0				
35			35.0				
40			40.0				
45			45.0				
50			50.0				
							LEGEND
							 Grout (with bentonite) Seal

BORING LOG

1 of 1

Project Name: Building 820, Berkely Manor
Client: Camp Lejeune, Marine Corps Base
Location: Jacksonville, NC

Project No.: 112768
Boring No.: UST820-MW28
Well Diameter: 2-inch
Date: 21-Apr-05

Well Construct	Description	USCS	Depth (feet)	OVA-FID (ppm)	Blows per 6"	Recovery (inches)	Drilling Observations
	Black organic sandy soil						
5	Sand, f-med, silty, lt gray, moist	SM	5.0	0	1/2/1/4	15	
10	Same as above, wet	SM	10.0	0	1/1/1/1	18	
15	Same as above	SM	15.0	0	1/1/1/1	12	6-inch diameter PVC casing installed from ground surface to 35 feet bls
20	Same as above	SM	20.0	0	1/1/2/5	24	2-inch diameter riser and 5 feet of well screen installed from ground surface to 50 feet bls
25	Same as above	SM	25.0	0	2/4/4/4	24	
30	Same as above	SM	30.0	0	1/1/1/1	24	
35	Clay, w/ fine sand & silt, dk gray	CL	30.0	0	1/1/1/1	24	
	Clay, same as above	CL					
	Sand, f-coarse, silty, dk	SM	35.0	0	2/2/2/2	18	
40			40.0				Mud rotary drilling from 35 to 50 feet bls
45			45.0				
50			50.0				

LEGEND

Grout (with bentonite) Seal
Sand Pack
Well Screen
Bentonite Seal

1 of 1

Project No.: 112768
Boring No.: UST820-MW29
Well Diameter: 2-inch
Date: 22-Apr-05

Well Construct	Description	USCS	Depth (feet)	OVA-FID (ppm)	Blows per 6"	Recovery (inches)	Drilling Observations
	Black organic sandy soil						
5	Sand, f-med, silty, lt brown dry	SM	5.0	0	2/3/6/6	20	
10	Same as above, moist	SM					
	Clay, silty w/ fine sand, lt brown w/ gray & yellows layers	CL	10.0	0	1/2/1/3	18	
15	Same as above	CL					
	Sand, f-med, silty, lt gray, moist	SM	15.0	0	1/2/4/5	18	6-inch diameter PVC casing installed from ground surface to 35 feet bls
20	Same as above	SM	20.0	0	1/1/4/6	15	2-inch diameter riser and 5 feet of well screen installed from ground surface to 50 feet bls
25	Same as above	SM	25.0	0	1/1/2/4	12	
30	Clay, w/ fine sand & silt, dk gray	CL		0	1/1/2/3	15	
	Sand, f-coarse, silty, dk	SM	30.0				
35	Same as above	SM	35.0	0	1/1/2/2	12	
40			40.0				Mud rotary drilling from 35 to 50 feet bls
45			45.0				
50			50.0				

LEGEND

Grout (with bentonite) Seal

Sand Pack

Well Screen

Bentonite Seal

APPENDIX B

SOIL SAMPLE ANALYTICAL RESULTS

Table 3.1

Building 820, Berkely Manor
MADEP-EPH/VPH Summary Confirmation soil Sample Analytical Results

Sample Information and Analytical Results Building 820, Berkely Manor										
Method for Ranges: MADEP-EPH/VPH		Sample Identification			UST820-SB1	UST820-SB2	UST820-SB3	UST820-SB4	UST820-SB5	UST820-SB6
Hydrocarbon Ranges	Units of Measure	Residential	Industrial	Soil to Water						
C9-C18 Aliphatics	mg/kg	9,386	245,280	3,255	<8.2	<7.7	<7.6	<7.6	<7.9	<7.8
C19-C36 Aliphatics	mg/kg	93,860	#	#	<8.2	<7.7	<7.6	<7.6	<7.9	<7.8
C9-C22 Aromatics (Unadj.)	mg/kg	469	12,264	34	<8.2	<7.7	<7.6	<7.6	<7.9	<7.8
C5-C8 Aliphatics	mg/kg	939	24,528	72	<4.1	<3.6	<3.6	<3.4	<3.6	<3.8

= Health Based Level >100% Solubility

Table B-3
Building 820 UST
VOC and SVOC Confirmation Soil Sample Analytical Results

Date: 5/17/2005			Incident Number and Name: 112768 Building 820 UST																
Analytical Method:			8260B																
Contaminant of Concern			Acetone	Benzene	Bromodichloromethane	Bromoform	Chlorobenzene	Chloroethane	Chloroform	Carbon disulfide	Carbon tetrachloride	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	1,2-Dichloropropane	Dibromochloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	trans-1,2-Dichloroethene
Sample ID	Date Collected	Sample Depth (ft. bgs)																	
UST820-SB1	4/22/2005	8-10	<0.052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052
UST820-SB2	4/22/2005	8-10	<0.049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
UST820-SB3	4/22/2005	8-10	<0.046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
UST820-SB4	4/22/2005	8-10	<0.045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
UST820-SB5	4/22/2005	8-10	<0.048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
UST820-SB6	4/22/2005	8-10	<0.055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055
Soil to Groundwater MSCC (mg/kg)			3	0.0056	NS	NS	NS	NS	0.001	4	NS	4	0.045	0.0018	0.0029	0.002	0.35	0.0009	0.38
Residential MSCC (mg/kg)			1564	22	NS	NS	NS	NS	100	1564	NS	1560	1	7	9	7	156	4	320
Industrial/Commercial MSCC (mg/kg)			40800	200	NS	NS	NS	NS	938	40880	NS	40000	10	63	84	68	4000	33	8200

Date: 5/17/2005			Incident Number and Name: 112768 Building 820 UST																
Analytical Method:			8260B																
Contaminant of Concern			trans-1,3-Dichloropropene	Ethylbenzene	2-Hexanone	4-Methyl-2-pentanone	Methyl bromide	Methyl chloride	Methylene chloride	Methyl ethyl ketone	Styrene	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	Tetrachloroethene	Toluene	Trichloroethene	Vinyl chloride	Xylenes (total)
Sample ID	Date Collected	Sample Depth (ft bgs)																	
UST820-SB1	4/22/2005	8-10	<0.0052	<0.0052	<0.026	<0.026	<0.0052	<0.0052	<0.01	<0.026	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.015
UST820-SB2	4/22/2005	8-10	<0.0049	<0.0049	<0.024	<0.024	<0.0049	<0.0049	<0.0098	<0.024	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.015
UST820-SB3	4/22/2005	8-10	<0.0046	<0.0046	<0.023	<0.023	<0.0046	<0.0046	<0.0093	<0.023	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.014
UST820-SB4	4/22/2005	8-10	<0.0045	<0.0045	<0.022	<0.022	<0.0045	<0.0045	<0.0089	<0.022	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.013
UST820-SB5	4/22/2005	8-10	<0.0048	<0.0048	<0.024	<0.024	<0.0048	<0.0048	<0.0096	<0.024	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.014
UST820-SB6	4/22/2005	8-10	<0.0055	<0.0055	<0.028	<0.028	<0.0055	<0.0055	<0.011	<0.028	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.017
Soil to Groundwater MSCC (mg/kg)			0.0009	0.24	1.9	NS	NS	0.02	0.02	0.7	2.24	NS	0.001	NS	0.0074	7	0.0183	NS	5
Residential MSCC (mg/kg)			4	1560	625	NS	NS	49	85	9385	3128	NS	3	NS	12	3200	58	NS	32000
Industrial/Commercial MSCC (mg/kg)			33	40000	16352	NS	NS	440	763	245280	81760	NS	28	NS	110	82000	520	NS	200000

Indicate method detection limit for contaminants when analyzed but not detected (i.e., <1.0)

List any contaminant detected above the method detection limit

MSCC = Maximum Soil Contamination Concentration

ft bgs = feet below ground surface

Results must be reported in mg/kg

mg/kg = milligrams per kilogram

NA = not applicable

NS = no standard

Table B-3
Building 820 UST
VOC and SVOC Confirmation Soil Sample Analytical Results

Date: 5/17/2005			Incident Number and Name: 112768 Building 820 UST																
Analytical Method:			8270C																
Contaminant of Concern			Benzoic acid	2-Chlorophenol	4-Chloro-3-methylphenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-o-cresol	2-Methylphenol	3&4-Methylphenol	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	Acenaphthene	Acenaphthylene
Sample ID	Date Collected	Sample Depth (ft bgs)																	
UST820-SB1	4/22/2005	8-10	<1.0	<0.21	<0.21	<0.21	<0.21	<1.0	<0.41	<0.21	<0.21	<0.21	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21
UST820-SB2	4/22/2005	8-10	<0.97	<0.19	<0.19	<0.19	<0.19	<0.97	<0.39	<0.19	<0.19	<0.19	<0.97	<0.97	<0.19	<0.19	<0.19	<0.19	<0.19
UST820-SB3	4/22/2005	8-10	<0.95	<0.19	<0.19	<0.19	<0.19	<0.95	<0.38	<0.19	<0.19	<0.19	<0.95	<0.95	<0.19	<0.19	<0.19	<0.19	<0.19
UST820-SB4	4/22/2005	8-10	<0.95	<0.19	<0.19	<0.19	<0.19	<0.95	<0.38	<0.19	<0.19	<0.19	<0.95	<0.95	<0.19	<0.19	<0.19	<0.19	<0.19
UST820-SB5	4/22/2005	8-10	<0.99	<0.2	<0.2	<0.2	<0.2	<0.99	<0.4	<0.2	<0.2	<0.2	<0.99	<0.99	<0.2	<0.2	<0.2	<0.2	<0.2
UST820-SB6	4/22/2005	8-10	<0.97	<0.19	<0.19	<0.19	<0.19	<0.97	<0.39	<0.19	<0.19	<0.19	<0.97	<0.97	<0.19	<0.19	<0.19	<0.19	<0.19
Soil to Groundwater MSCC (mg/kg)			NS	NS	NS	NS	0.9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8	11
Residential MSCC (mg/kg)			NS	NS	NS	NS	312	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	940	469
Industrial/Commercial MSCC (mg/kg)			NS	NS	NS	NS	8176	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	24000	12264

Date: 5/17/2005			Incident Number and Name: 112768 Building 820 UST																
Analytical Method:			8270C																
Contaminant of Concern			4-Chlorophenyl phenyl eth	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,4-Dinitrotoluene	2,6-Dinitrotoluene	3,3'-Dichlorobenzidine	Dibenzo(a,h)anthracene	Dibenzofuran	Di-n-butyl phthalate	Di-n-octyl phthalate	Diethyl phthalate	Dimethyl phthalate	Bis(2-ethylhexyl)phthalate	Fluoranthene	Fluorene	Hexachlorobenzene
Sample ID	Date Collected	Sample Depth (ft bgs)																	
UST820-SB1	4/22/2005	8-10	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.41	<0.21	<0.21	<0.41	<0.41	<0.41	<0.41	<0.41	<0.21	<0.21	<0.21
UST820-SB2	4/22/2005	8-10	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.39	<0.19	<0.19	<0.39	<0.39	<0.39	<0.39	<0.39	<0.19	<0.19	<0.19
UST820-SB3	4/22/2005	8-10	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.38	<0.19	<0.19	<0.38	<0.38	<0.38	<0.38	<0.38	<0.19	<0.19	<0.19
UST820-SB4	4/22/2005	8-10	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.38	<0.19	<0.19	<0.38	<0.38	<0.38	<0.38	<0.38	<0.19	<0.19	<0.19
UST820-SB5	4/22/2005	8-10	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	<0.4	<0.4	<0.4	<0.4	<0.4	<0.2	<0.2	<0.2
UST820-SB6	4/22/2005	8-10	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.39	<0.19	<0.19	<0.39	<0.39	<0.39	<0.39	<0.39	<0.19	<0.19	<0.19
Soil to Groundwater MSCC (mg/kg)			NS	7	24	1	NS	NS	NS	0.17	4.7	NS	NS	NS	NS	6.67	276	44	NS
Residential MSCC (mg/kg)			NS	1400	1400	27	NS	NS	NS	0.088	62	NS	NS	NS	NS	48	620	620	NS
Industrial/Commercial MSCC (mg/kg)			NS	36000	36000	240	NS	NS	NS	0.78	1635	NS	NS	NS	NS	410	16400	16400	NS

Indicate method detection limit for contaminants when analyzed but not detected (i.e., <1.0)

List any contaminant detected above the method detection limit

MSCC = Maximum Soil Contamination Concentration

ft bgs = feet below ground surface

Results must be reported in mg/kg

mg/kg = milligrams per kilogram

NA = not applicable

NS = no standard

Table B-3
Building 820 UST
VOC and SVOC Confirmation Soil Sample Analytical Results

Date: 5/17/2005			Incident Number and Name: 112768 Building 820 UST															
Analytical Method:			8270C															
Contaminant of Concern			Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	4-Bromophenyl phenyl ether	Butyl benzyl phthalate	Benzyl alcohol	2-Chloronaphthalene	4-Chloroaniline	Carbazole	Chrysene	Bis(2-chloroethoxy)methane	Bis(2-chloroethyl)ether	Bis(2-chloroisopropyl)ether
Sample ID	Date Collected	Sample Depth (ft bgs)																
UST820-SB1	4/22/2005	8-10	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.41	<0.21	<0.21	<0.41	<0.21	<0.21	<0.21	<0.21	<0.21
UST820-SB2	4/22/2005	8-10	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.39	<0.19	<0.19	<0.39	<0.19	<0.19	<0.19	<0.19	<0.19
UST820-SB3	4/22/2005	8-10	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.38	<0.19	<0.19	<0.38	<0.19	<0.19	<0.19	<0.19	<0.19
UST820-SB4	4/22/2005	8-10	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.38	<0.19	<0.19	<0.38	<0.19	<0.19	<0.19	<0.19	<0.19
UST820-SB5	4/22/2005	8-10	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	<0.4	<0.2	<0.2	<0.2	<0.2	<0.2
UST820-SB6	4/22/2005	8-10	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.39	<0.19	<0.19	<0.77	<0.19	<0.19	<0.19	<0.19	<0.19
Soil to Groundwater MSCC (mg/kg)			995	0.34	0.081	1	6720	12	NS	NS	NS	NS	NS	NS	38	NS	0.0002	NS
Residential MSCC (mg/kg)			4600	0.88	0.088	0.88	469	9	NS	NS	NS	NS	NS	NS	88	NS	0.58	NS
Industrial/Commercial MSCC (mg/kg)			122000	8	0.78	8	12264	78	NS	NS	NS	NS	NS	NS	780	NS	5.2	NS

Date: 5/17/2005			Incident Number and Name: 112768 Building 820 UST															
Analytical Method:			8270C															
Contaminant of Concern			Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-cd)pyrene	Isophorone	2-Methylnaphthalene	2-Nitroaniline	3-Nitroaniline	4-Nitroaniline	Naphthalene	Nitrobenzene	N-Nitroso-di-n-propylamine	N-Nitrosodiphenylamine	Phenanthrene	Pyrene	1,2,4-Trichlorobenzene
Sample ID	Date Collected	Sample Depth (ft bgs)																
UST820-SB1	4/22/2005	8-10	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.41	<0.41	<0.41	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
UST820-SB2	4/22/2005	8-10	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.39	<0.39	<0.39	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
UST820-SB3	4/22/2005	8-10	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.38	<0.38	<0.38	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
UST820-SB4	4/22/2005	8-10	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.38	<0.38	<0.38	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
UST820-SB5	4/22/2005	8-10	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.4	<0.4	<0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
UST820-SB6	4/22/2005	8-10	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.39	<0.39	<0.39	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
Soil to Groundwater MSCC (mg/kg)			0.28	NS	NS	3	NS	3	NS	NS	NS	0.58	NS	NS	NS	60	286	2.6
Residential MSCC (mg/kg)			3.1	NS	NS	0.88	NS	63	NS	NS	NS	63	NS	NS	NS	469	469	156
Industrial/Commercial MSCC (mg/kg)			73	NS	NS	8	NS	1635	NS	NS	NS	1835	NS	NS	NS	12264	12264	4088

Indicate method detection limit for contaminants when analyzed but not detected (i.e., <1.0)

List any contaminant detected above the method detection limit

MSCC = Maximum Soil Contamination Concentration

ft bgs = feet below ground surface

Results must be reported in mg/kg

mg/kg = milligrams per kilogram

NA = not applicable

NS = no standard

Building 820, Berkely Manor
MADEP-EPH/VPH Summary Confirmation soil Sample Analytical Results

Sample Information and Analytical Results Building 820, Berkely Manor										
Method for Ranges: MADEP-EPH/VPH		Sample Identification			UST820-SB1	UST820-SB2	UST820-SB3	UST820-SB4	UST820-SB5	UST820-SB6
Hydrocarbon Ranges	Units of Measure	Residential	Industrial	Soil to Water						
C9-C18 Aliphatics	mg/kg	9,386	245,280	3,255	<8.2	<7.7	<7.6	<7.6	<7.9	<7.8
C19-C36 Aliphatics	mg/kg	93,860	#	#	<8.2	<7.7	<7.6	<7.6	<7.9	<7.8
C9-C22 Aromatics (Unadj.)	mg/kg	469	12,264	34	<8.2	<7.7	<7.6	<7.6	<7.9	<7.8
C5-C8 Aliphatics	mg/kg	939	24,528	72	<4.1	<3.6	<3.6	<3.4	<3.6	<3.8

= Health Based Level >100% Solubility

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.

Project Name: Camp Lejeune-BM 820

Site Location: _____

Laboratory Name: Accutest Southeast

NC Certification # (Lab):

Sample Matrix : Soil

Sample Information and Analytical Results					
Method for Ranges: MADEP-EPH-98-1 EPH Surrogate Standards Aliphatic: 1-Chlorooctadecane Aromatic: o-Terphenyl EPH Fractionation Surrogates #1: 2-Fluorobiphenyl #2: 2-Bromonaphthalene		Sample Identification		UST820-SB1	
		Date Collected		04/22/2005	
		Date Received		04/23/2005	
		Date Extracted		04/27/2005	
		Date Analyzed		05/03/2005	
		% Dry Solids		80.7	
		Dilution Factor		1	
Hydrocarbon Ranges	Units of Measure	MDL	RL	BLANK	
C9-C18 Aliphatics	ug/kg	8200	8200	ND	ND
C19-C36 Aliphatics	ug/kg	8200	8200	ND	ND
C11-C22 Aromatics (Unadj.)	ug/kg	8200	8200	ND	ND
Sample Surrogate Acceptance Range				40-140	40-140
Aliphatic Surrogate % Recovery				70	78
Aromatic Surrogate % Recovery				92	97
Fractionation Surrogate Acceptance Range					
Fractionation Surrogate #1 % Recovery				86	97
Fractionation Surrogate #2 % Recovery				87	81
* Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range. MDL = Method Detection Limit RL = Reporting Limit					

EPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved?

Yes

Was blank correction applied as a significant modification of the method?

Yes

Were any significant modifications to the eph method made?

No

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____

Laboratory Name: Accutest Southeast
 NC Certification # (Lab): 573
 Sample Matrix : Soil

Sample Information and Analytical Results					
Method for Ranges: MADEP VPH VPH Surrogate Standards Aliphatic: BFB Aromatic: BFB		Sample Identification		UST820-SB1	
		Collection Option (for soil)*		1	
		Date Collected		04/22/2005	
		Date Received		04/23/2005	
		Date Extracted		04/23/2005	
		Date Analyzed		05/03/2005	
		% Dry Solids		80.7	
		Dilution Factor		1	
Hydrocarbon Ranges	Units of Measure	MDL	RL	BLANK	
C5- C8 Aliphatics (Unadj.)	ug/kg	2200	4100	ND	ND
C9- C12 Aliphatics (Unadj.)	ug/kg	1600	3000	ND	ND
C9- C10 Aromatics (Unadj.)	ug/kg	540	1100	ND	ND
Sample Surrogate Acceptance Range				70-130%	70-130%
Aliphatic Surrogate % Recovery - FID				82	73
Aromatic Surrogate % Recovery - PID				85	75
* Option 1 = Established fill line on vial Option 2 = Sampling Device (indicate brand, e.g. EnCore™) Option 3 = Field weight of soil ** Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range. MDL = Method Detection Limit RL = Reporting Limit					

VPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved?
 Were any significant modifications to the VPH method made?

Yes
 No

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____

Laboratory Name: Accutest Southeast
 NC Certification # (Lab):
 Sample Matrix : Soil

Sample Information and Analytical Results							
Method for Ranges: MADEP-EPH-98-1 EPH Surrogate Standards Aliphatic: 1-Chlorooctadecane Aromatic: o-Terphenyl EPH Fractionation Surrogates #1: 2-Fluorobiphenyl #2: 2-Bromonaphthalene		Sample Identification		UST820-SB2			
		Date Collected		04/22/2005			
		Date Received		04/23/2005			
		Date Extracted		04/27/2005			
		Date Analyzed		05/03/2005			
		% Dry Solids		84.8			
		Dilution Factor		1			
Hydrocarbon Ranges	Units of Measure	MDL	RL	BLANK			
C9-C18 Aliphatics	ug/kg	7700	7700	ND	ND		
C19-C36 Aliphatics	ug/kg	7700	7700	ND	ND		
C11-C22 Aromatics (Unadj.)	ug/kg	7700	7700	ND	ND		
Sample Surrogate Acceptance Range				40-140	40-140		
Aliphatic Surrogate % Recovery				70	57		
Aromatic Surrogate % Recovery				92	90		
Fractionation Surrogate Acceptance Range							
Fractionation Surrogate #1 % Recovery				86	103		
Fractionation Surrogate #2 % Recovery				87	101		
* Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range. MDL = Method Detection Limit RL = Reporting Limit							

EPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved?

Yes

Was blank correction applied as a significant modification of the method?

Yes

Were any significant modifications to the eph method made?

No

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____

Laboratory Name: Accutest Southeast
 NC Certification # (Lab): 573
 Sample Matrix : Soil

Sample Information and Analytical Results					
Method for Ranges: MADEP VPH VPH Surrogate Standards Aliphatic: BFB Aromatic: BFB		Sample Identification		UST820-SB2	
		Collection Option (for soil)*		1	
		Date Collected		04/22/2005	
		Date Received		04/23/2005	
		Date Extracted		04/23/2005	
		Date Analyzed		05/03/2005	
		% Dry Solids		84.8	
		Dilution Factor		1	
Hydrocarbon Ranges	Units of Measure	MDL	RL	BLANK	
C5- C8 Aliphatics (Unadj.)	ug/kg	1900	3600	ND	ND
C9- C12 Aliphatics (Unadj.)	ug/kg	1500	2700	ND	ND
C9- C10 Aromatics (Unadj.)	ug/kg	480	970	ND	ND
Sample Surrogate Acceptance Range				70-130%	70-130%
Aliphatic Surrogate % Recovery - FID				82	73
Aromatic Surrogate % Recovery - PID				85	75
* Option 1 = Established fill line on vial Option 2 = Sampling Device (indicate brand, e.g. EnCoreTM) Option 3 = Field weight of soil ** Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range. MDL = Method Detection Limit RL = Reporting Limit					

VPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved?
Were any significant modifications to the VPH method made?

Yes
No

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____

Laboratory Name: Accutest Southeast
 NC Certification # (Lab):
 Sample Matrix : Soil

Sample Information and Analytical Results

Method for Ranges: MADEP-EPH-98-1 EPH Surrogate Standards Aliphatic: 1-Chlorooctadecane Aromatic: o-Terphenyl EPH Fractionation Surrogates #1: 2-Fluorobiphenyl #2: 2-Bromonaphthalene		Sample Identification			UST820-SB3			
		Date Collected			04/22/2005			
		Date Received			04/23/2005			
		Date Extracted			04/27/2005			
		Date Analyzed			05/03/2005			
		% Dry Solids			87			
		Dilution Factor			1			
Hydrocarbon Ranges	Units of Measure	MDL	RL	BLANK				
C9-C18 Aliphatics	ug/kg	7600	7600	ND	ND			
C19-C36 Aliphatics	ug/kg	7600	7600	ND	ND			
C11-C22 Aromatics (Unadj.)	ug/kg	7600	7600	ND	ND			
Sample Surrogate Acceptance Range				40-140	40-140			
Aliphatic Surrogate % Recovery				70	62			
Aromatic Surrogate % Recovery				92	85			
Fractionation Surrogate Acceptance Range								
Fractionation Surrogate #1 % Recovery				86	94			
Fractionation Surrogate #2 % Recovery				87	92			

* Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.

MDL = Method Detection Limit RL = Reporting Limit

EPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved?

Yes

Was blank correction applied as a significant modification of the method?

Yes

Were any significant modifications to the eph method made?

No

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____

Laboratory Name: Accutest Southeast
 NC Certification # (Lab): 573
 Sample Matrix : Soil

Sample Information and Analytical Results					
Method for Ranges: MADEP VPH VPH Surrogate Standards Aliphatic: BFB Aromatic: BFB		Sample Identification		UST820-SB3	
		Collection Option (for soil)*		1	
		Date Collected		04/22/2005	
		Date Received		04/23/2005	
		Date Extracted		04/23/2005	
		Date Analyzed		05/03/2005	
		% Dry Solids		87	
		Dilution Factor		1	
Hydrocarbon Ranges	Units of Measure	MDL	RL	BLANK	
C5- C8 Aliphatics (Unadj.)	ug/kg	1900	3600	ND	ND
C9- C12 Aliphatics (Unadj.)	ug/kg	1500	2700	ND	ND
C9- C10 Aromatics (Unadj.)	ug/kg	480	970	ND	ND
Sample Surrogate Acceptance Range				70-130%	70-130%
Aliphatic Surrogate % Recovery - FID				82	74
Aromatic Surrogate % Recovery - PID				85	76
* Option 1 = Established fill line on vial Option 2 = Sampling Device (indicate brand, e.g. EnCore™) Option 3 = Field weight of soil ** Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range. MDL = Method Detection Limit RL = Reporting Limit					

VPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved?

Yes

Were any significant modifications to the VPH method made?

No

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____

Laboratory Name: Accutest Southeast
 NC Certification # (Lab):
 Sample Matrix : Soil

Sample Information and Analytical Results							
Method for Ranges: MADEP-EPH-98-1 EPH Surrogate Standards Aliphatic: 1-Chlorooctadecane Aromatic: o-Terphenyl EPH Fractionation Surrogates #1: 2-Fluorobiphenyl #2: 2-Bromonaphthalene		Sample Identification		UST820-SB4			
		Date Collected		04/22/2005			
		Date Received		04/23/2005			
		Date Extracted		04/27/2005			
		Date Analyzed		05/03/2005			
		% Dry Solids		86			
		Dilution Factor		1			
Hydrocarbon Ranges	Units of Measure	MDL	RL	BLANK			
C9-C18 Aliphatics	ug/kg	7600	7600	ND	ND		
C19-C36 Aliphatics	ug/kg	7600	7600	ND	ND		
C11-C22 Aromatics (Unadj.)	ug/kg	7600	7600	ND	ND		
Sample Surrogate Acceptance Range				40-140	40-140		
Aliphatic Surrogate % Recovery				70	61		
Aromatic Surrogate % Recovery				92	97		
Fractionation Surrogate Acceptance Range							
Fractionation Surrogate #1 % Recovery				86	96		
Fractionation Surrogate #2 % Recovery				87	93		
* Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range. MDL = Method Detection Limit RL = Reporting Limit							

EPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved?
 Was blank correction applied as a significant modification of the method?
 Were any significant modifications to the eph method made?

Yes
 Yes
 No

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____

Laboratory Name: Accutest Southeast
 NC Certification # (Lab): 573
 Sample Matrix : Soil

Sample Information and Analytical Results

Method for Ranges: MADEP VPH VPH Surrogate Standards Aliphatic: BFB Aromatic: BFB		Sample Identification			UST820-SB4			
		Collection Option (for soil)*			1			
		Date Collected			04/22/2005			
		Date Received			04/23/2005			
		Date Extracted			04/23/2005			
		Date Analyzed			05/03/2005			
		% Dry Solids			86			
		Dilution Factor			1			
Hydrocarbon Ranges	Units of Measure	MDL	RL	BLANK				
C5- C8 Aliphatics (Unadj.)	ug/kg	1800	3400	ND	ND			
C9- C12 Aliphatics (Unadj.)	ug/kg	1400	2500	ND	ND			
C9- C10 Aromatics (Unadj.)	ug/kg	460	920	ND	ND			
Sample Surrogate Acceptance Range				70-130%	70-130%			
Aliphatic Surrogate % Recovery - FID				82	75			
Aromatic Surrogate % Recovery - PID				85	77			

* Option 1 = Established fill line on vial Option 2 = Sampling Device (indicate brand, e.g. EnCore™) Option 3 = Field weight of soil

** Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.

MDL = Method Detection Limit RL = Reporting Limit

VPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved?

Yes

Were any significant modifications to the VPH method made?

No

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____

Laboratory Name: Accutest Southeast
 NC Certification # (Lab):
 Sample Matrix : Soil

Sample Information and Analytical Results

Method for Ranges: MADEP-EPH-98-1 EPH Surrogate Standards Aliphatic: 1-Chlorooctadecane Aromatic: o-Terphenyl EPH Fractionation Surrogates #1: 2-Fluorobiphenyl #2: 2-Bromonaphthalene		Sample Identification			UST820-SB5			
		Date Collected			04/22/2005			
		Date Received			04/23/2005			
		Date Extracted			04/27/2005			
		Date Analyzed			05/03/2005			
		% Dry Solids			83.8			
		Dilution Factor			1			
Hydrocarbon Ranges	Units of Measure	MDL	RL	BLANK				
C9-C18 Aliphatics	ug/kg	7900	7900	ND	ND			
C19-C36 Aliphatics	ug/kg	7900	7900	ND	ND			
C11-C22 Aromatics (Unadj.)	ug/kg	7900	7900	ND	ND			
Sample Surrogate Acceptance Range				40-140	40-140			
Aliphatic Surrogate % Recovery				70	60			
Aromatic Surrogate % Recovery				92	87			
Fractionation Surrogate Acceptance Range								
Fractionation Surrogate #1 % Recovery				86	98			
Fractionation Surrogate #2 % Recovery				87	85			

* Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.

MDL = Method Detection Limit RL = Reporting Limit

EPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved?

Yes

Was blank correction applied as a significant modification of the method?

Yes

Were any significant modifications to the eph method made?

No

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____

Laboratory Name: Accutest Southeast
 NC Certification # (Lab): 573
 Sample Matrix : Soil

Sample Information and Analytical Results						
Method for Ranges: MADEP VPH VPH Surrogate Standards Aliphatic: BFB Aromatic: BFB		Sample Identification		UST820-SB5		
		Collection Option (for soil)*		1		
		Date Collected		04/22/2005		
		Date Received		04/23/2005		
		Date Extracted		04/23/2005		
		Date Analyzed		05/03/2005		
		% Dry Solids		83.8		
		Dilution Factor		1		
Hydrocarbon Ranges	Units of Measure	MDL	RL	BLANK		
C5- C8 Aliphatics (Unadj.)	ug/kg	1900	3600	ND	ND	
C9- C12 Aliphatics (Unadj.)	ug/kg	1400	2600	ND	ND	
C9- C10 Aromatics (Unadj.)	ug/kg	470	950	ND	ND	
Sample Surrogate Acceptance Range				70-130%	70-130%	
Aliphatic Surrogate % Recovery - FID				82	74	
Aromatic Surrogate % Recovery - PID				85	75	
* Option 1 = Established fill line on vial Option 2 = Sampling Device (indicate brand, e.g. EnCore™) Option 3 = Field weight of soil ** Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range. MDL = Method Detection Limit RL = Reporting Limit						

VPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved?
Were any significant modifications to the VPH method made?

Yes
No

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____

Laboratory Name: Accutest Southeast
 NC Certification # (Lab):
 Sample Matrix : Soil

Sample Information and Analytical Results

Method for Ranges: MADEP-EPH-98-1 EPH Surrogate Standards Aliphatic: 1-Chlorooctadecane Aromatic: o-Terphenyl EPH Fractionation Surrogates #1: 2-Fluorobiphenyl #2: 2-Bromonaphthalene		Sample Identification		UST820-SB6			
		Date Collected		04/22/2005			
		Date Received		04/23/2005			
		Date Extracted		04/27/2005			
		Date Analyzed		05/03/2005			
		% Dry Solids		84.7			
		Dilution Factor		1			
Hydrocarbon Ranges	Units of Measure	MDL	RL	BLANK			
C9-C18 Aliphatics	ug/kg	7800	7800	ND	ND		
C19-C36 Aliphatics	ug/kg	7800	7800	ND	ND		
C11-C22 Aromatics (Unadj.)	ug/kg	7800	7800	ND	ND		
Sample Surrogate Acceptance Range				40-140	40-140		
Aliphatic Surrogate % Recovery				70	63		
Aromatic Surrogate % Recovery				92	85		
Fractionation Surrogate Acceptance Range							
Fractionation Surrogate #1 % Recovery				86	88		
Fractionation Surrogate #2 % Recovery				87	84		
* Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range. MDL = Method Detection Limit RL = Reporting Limit							

EPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved?

Yes

Was blank correction applied as a significant modification of the method?

Yes

Were any significant modifications to the eph method made?

No

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____

Laboratory Name: Accutest Southeast
 NC Certification # (Lab): 573
 Sample Matrix : Soil

Sample Information and Analytical Results					
Method for Ranges: MADEP VPH VPH Surrogate Standards Aliphatic: BFB Aromatic: BFB		Sample Identification		UST820-SB6	
		Collection Option (for soil)*		1	
		Date Collected		04/22/2005	
		Date Received		04/23/2005	
		Date Extracted		04/23/2005	
		Date Analyzed		05/03/2005	
		% Dry Solids		84.7	
		Dilution Factor		1	
Hydrocarbon Ranges	Units of Measure	MDL	RL	BLANK	
C5- C8 Aliphatics (Unadj.)	ug/kg	2000	3800	ND	ND
C9- C12 Aliphatics (Unadj.)	ug/kg	1500	2800	ND	ND
C9- C10 Aromatics (Unadj.)	ug/kg	500	1000	ND	ND
Sample Surrogate Acceptance Range				70-130%	70-130%
Aliphatic Surrogate % Recovery - FID				82	73
Aromatic Surrogate % Recovery - PID				85	74
* Option 1 = Established fill line on vial Option 2 = Sampling Device (indicate brand, e.g. EnCoreTM) Option 3 = Field weight of soil ** Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range. MDL = Method Detection Limit RL = Reporting Limit					

VPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved?

Yes

Were any significant modifications to the VPH method made?

No

APPENDIX C

SOIL SAMPLE LABORATORY ANALYTICAL REPORTS



05/06/05

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-BM 820

112768

Accutest Job Number: F31365

Sampling Date: 04/22/05

Report to:

Shaw E & I, Inc.
5700 Thurston Ave. Suite 116-B
Virginia Beach, VA 23455
natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 86



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi
Harry Behzadi, Ph.D.
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK
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Sample Summary

Shaw E & I, Inc.

Job No: F31365

Camp Lejeune-BM 820
Project No: 112768

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F31365-1	04/22/05	15:45 MM	04/23/05	SO	Soil	UST820-SB1
F31365-2	04/22/05	16:25 MM	04/23/05	SO	Soil	UST820-SB2
F31365-3	04/22/05	14:50 MM	04/23/05	SO	Soil	UST820-SB3
F31365-4	04/22/05	15:10 MM	04/23/05	SO	Soil	UST820-SB4
F31365-5	04/22/05	16:00 MM	04/23/05	SO	Soil	UST820-SB5
F31365-6	04/22/05	16:15 MM	04/23/05	SO	Soil	UST820-SB6
F31365-7	04/22/05	00:00 MM	04/23/05	AQ	Trip Blank Soil	UST820-TRIP BLANK

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Report of Analysis

Client Sample ID: UST820-SB1
 Lab Sample ID: F31365-1
 Matrix: SO - Soil
 Method: SW846 8260B
 Project: Camp Lejeune-BM 820

Date Sampled: 04/22/05
 Date Received: 04/23/05
 Percent Solids: 80.7

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H030505.D	1	05/02/05	NAF	n/a	n/a	VH1154
Run #2							

Run #	Initial Weight
Run #1	6.01 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	52	26	ug/kg	
71-43-2	Benzene	ND	5.2	2.1	ug/kg	
75-27-4	Bromodichloromethane	ND	5.2	2.1	ug/kg	
75-25-2	Bromoform	ND	5.2	2.1	ug/kg	
108-90-7	Chlorobenzene	ND	5.2	2.1	ug/kg	
75-00-3	Chloroethane	ND	5.2	2.1	ug/kg	
67-66-3	Chloroform	ND	5.2	2.1	ug/kg	
75-15-0	Carbon disulfide	ND	5.2	2.1	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.2	2.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.2	2.1	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.2	3.1	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.2	2.1	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.2	2.1	ug/kg	
124-48-1	Dibromochloromethane	ND	5.2	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.2	2.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.2	2.1	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.2	2.1	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.2	2.1	ug/kg	
100-41-4	Ethylbenzene	ND	5.2	2.1	ug/kg	
591-78-6	2-Hexanone	ND	26	10	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	26	10	ug/kg	
74-83-9	Methyl bromide	ND	5.2	2.1	ug/kg	
74-87-3	Methyl chloride	ND	5.2	2.1	ug/kg	
75-09-2	Methylene chloride	ND	10	10	ug/kg	
78-93-3	Methyl ethyl ketone	ND	26	10	ug/kg	
100-42-5	Styrene	ND	5.2	2.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.2	2.1	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.2	2.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.2	2.1	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.2	2.1	ug/kg	
108-88-3	Toluene	ND	5.2	2.1	ug/kg	
79-01-6	Trichloroethylene	ND	5.2	2.1	ug/kg	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB1	Date Sampled:	04/22/05
Lab Sample ID:	F31365-1	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	80.7
Method:	SW846 8260B		
Project:	Camp Lejeune-BM 820		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	5.2	2.6	ug/kg	
1330-20-7	Xylene (total)	ND	15	4.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		78-123%
2037-26-5	Toluene-D8	101%		71-137%
460-00-4	4-Bromofluorobenzene	95%		61-157%
17060-07-0	1,2-Dichloroethane-D4	100%		74-125%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-SB1

Lab Sample ID: F31365-1

Matrix: SO - Soil

Method: SW846 8270C SW846 3550B

Project: Camp Lejeune-BM 820

Date Sampled: 04/22/05

Date Received: 04/23/05

Percent Solids: 80.7

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L025789.D	1	04/30/05	ME	04/27/05	OP13125	SL1360
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	1000	410	ug/kg	
95-57-8	2-Chlorophenol	ND	210	41	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	210	41	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	210	41	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	210	41	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1000	410	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	410	82	ug/kg	
95-48-7	2-Methylphenol	ND	210	41	ug/kg	
	3&4-Methylphenol	ND	210	41	ug/kg	
88-75-5	2-Nitrophenol	ND	210	41	ug/kg	
100-02-7	4-Nitrophenol	ND	1000	410	ug/kg	
87-86-5	Pentachlorophenol	ND	1000	410	ug/kg	
108-95-2	Phenol	ND	210	41	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	210	41	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	210	41	ug/kg	
83-32-9	Acenaphthene	ND	210	41	ug/kg	
208-96-8	Acenaphthylene	ND	210	41	ug/kg	
120-12-7	Anthracene	ND	210	41	ug/kg	
56-55-3	Benzo(a)anthracene	ND	210	41	ug/kg	
50-32-8	Benzo(a)pyrene	ND	210	41	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	210	41	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	210	82	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	210	41	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	210	41	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	410	100	ug/kg	
100-51-6	Benzyl Alcohol	ND	210	41	ug/kg	
91-58-7	2-Chloronaphthalene	ND	210	41	ug/kg	
106-47-8	4-Chloroaniline	ND	410	160	ug/kg	
86-74-8	Carbazole	ND	210	41	ug/kg	
218-01-9	Chrysene	ND	210	41	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	210	41	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	210	82	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB1	Date Sampled:	04/22/05
Lab Sample ID:	F31365-1	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	80.7
Method:	SW846 8270C SW846 3550B		
Project:	Camp Lejeune-BM 820		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	210	41	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	210	41	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	210	41	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	210	41	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	210	41	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	210	82	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	210	82	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	410	210	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	210	82	ug/kg	
132-64-9	Dibenzofuran	ND	210	41	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	410	100	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	410	210	ug/kg	
84-66-2	Diethyl phthalate	ND	410	100	ug/kg	
131-11-3	Dimethyl phthalate	ND	410	100	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	410	210	ug/kg	
206-44-0	Fluoranthene	ND	210	41	ug/kg	
86-73-7	Fluorene	ND	210	41	ug/kg	
118-74-1	Hexachlorobenzene	ND	210	41	ug/kg	
87-68-3	Hexachlorobutadiene	ND	210	82	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	210	82	ug/kg	
67-72-1	Hexachloroethane	ND	210	82	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	210	82	ug/kg	
78-59-1	Isophorone	ND	210	41	ug/kg	
91-57-6	2-Methylnaphthalene	ND	210	41	ug/kg	
88-74-4	2-Nitroaniline	ND	410	100	ug/kg	
99-09-2	3-Nitroaniline	ND	410	100	ug/kg	
100-01-6	4-Nitroaniline	ND	410	140	ug/kg	
91-20-3	Naphthalene	ND	210	41	ug/kg	
98-95-3	Nitrobenzene	ND	210	41	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	210	82	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	210	41	ug/kg	
85-01-8	Phenanthrene	ND	210	41	ug/kg	
129-00-0	Pyrene	ND	210	82	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	210	41	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	82%		45-114%
4165-62-2	Phenol-d5	83%		44-124%
118-79-6	2,4,6-Tribromophenol	87%		50-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB1	Date Sampled:	04/22/05
Lab Sample ID:	F31365-1	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	80.7
Method:	SW846 8270C SW846 3550B		
Project:	Camp Lejeune-BM 820		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		41-123%
321-60-8	2-Fluorobiphenyl	79%		46-122%
1718-51-0	Terphenyl-d14	89%		45-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

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2.1

2

Client Sample ID: UST820-SB1
 Lab Sample ID: F31365-1
 Matrix: SO - Soil
 Method: MADEP VPH
 Project: Camp Lejeune-BM 820

Date Sampled: 04/22/05
 Date Received: 04/23/05
 Percent Solids: 80.7

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV016888.D	1	05/03/05	RAW	n/a	n/a	GUV992
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.85 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	4100	2200	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	3000	1600	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	1100	540	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	75%		70-130%
460-00-4	BFB	73%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	UST820-SB1	Date Sampled:	04/22/05
Lab Sample ID:	F31365-1	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	80.7
Method:	MADEP-EPH-98-1 SW846 3550B		
Project:	Camp Lejeune-BM 820		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF16737.D	1	05/03/05	SM	04/27/05	OP13122	GZF787
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.4 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	8200	8200	ug/kg	
	C9-C18 Aliphatics	ND	8200	8200	ug/kg	
	C19-C36 Aliphatics	ND	8200	8200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	78%		40-140%
580-13-2	2-Bromonaphthalene	81%		40-140%
84-15-1	o-Terphenyl	97%		40-140%
321-60-8	2-Fluorobiphenyl	97%		40-140%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-SB2
 Lab Sample ID: F31365-2
 Matrix: SO - Soil
 Method: SW846 8260B
 Project: Camp Lejeune-BM 820

Date Sampled: 04/22/05
 Date Received: 04/23/05
 Percent Solids: 84.8

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H030506.D	1	05/02/05	NAF	n/a	n/a	VH1154
Run #2							

Run #	Initial Weight
Run #1	6.03 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	49	24	ug/kg	
71-43-2	Benzene	ND	4.9	2.0	ug/kg	
75-27-4	Bromodichloromethane	ND	4.9	2.0	ug/kg	
75-25-2	Bromoform	ND	4.9	2.0	ug/kg	
108-90-7	Chlorobenzene	ND	4.9	2.0	ug/kg	
75-00-3	Chloroethane	ND	4.9	2.0	ug/kg	
67-66-3	Chloroform	ND	4.9	2.0	ug/kg	
75-15-0	Carbon disulfide	ND	4.9	2.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.9	2.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.9	2.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.9	2.9	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.9	2.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.9	2.0	ug/kg	
124-48-1	Dibromochloromethane	ND	4.9	2.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.9	2.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.9	2.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	4.9	2.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.9	2.0	ug/kg	
100-41-4	Ethylbenzene	ND	4.9	2.0	ug/kg	
591-78-6	2-Hexanone	ND	24	9.8	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	24	9.8	ug/kg	
74-83-9	Methyl bromide	ND	4.9	2.0	ug/kg	
74-87-3	Methyl chloride	ND	4.9	2.0	ug/kg	
75-09-2	Methylene chloride	ND	9.8	4.9	ug/kg	
78-93-3	Methyl ethyl ketone	ND	24	9.8	ug/kg	
100-42-5	Styrene	ND	4.9	2.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.9	2.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.9	2.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.9	2.0	ug/kg	
127-18-4	Tetrachloroethylene	ND	4.9	2.0	ug/kg	
108-88-3	Toluene	ND	4.9	2.0	ug/kg	
79-01-6	Trichloroethylene	ND	4.9	2.0	ug/kg	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB2	Date Sampled:	04/22/05
Lab Sample ID:	F31365-2	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	84.8
Method:	SW846 8260B		
Project:	Camp Lejeune-BM 820		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	4.9	2.4	ug/kg	
1330-20-7	Xylene (total)	ND	15	4.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		78-123%
2037-26-5	Toluene-D8	99%		71-137%
460-00-4	4-Bromofluorobenzene	99%		61-157%
17060-07-0	1,2-Dichloroethane-D4	103%		74-125%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB2	Date Sampled:	04/22/05
Lab Sample ID:	F31365-2	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	84.8
Method:	SW846 8270C SW846 3550B		
Project:	Camp Lejeune-BM 820		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L025790.D	1	04/30/05	ME	04/27/05	OP13125	SL1360
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	970	390	ug/kg	
95-57-8	2-Chlorophenol	ND	190	39	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	39	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	39	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	39	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	970	390	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	390	78	ug/kg	
95-48-7	2-Methylphenol	ND	190	39	ug/kg	
	3&4-Methylphenol	ND	190	39	ug/kg	
88-75-5	2-Nitrophenol	ND	190	39	ug/kg	
100-02-7	4-Nitrophenol	ND	970	390	ug/kg	
87-86-5	Pentachlorophenol	ND	970	390	ug/kg	
108-95-2	Phenol	ND	190	39	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	39	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	39	ug/kg	
83-32-9	Acenaphthene	ND	190	39	ug/kg	
208-96-8	Acenaphthylene	ND	190	39	ug/kg	
120-12-7	Anthracene	ND	190	39	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	39	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	39	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	39	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	78	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	39	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	39	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	390	97	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	39	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	39	ug/kg	
106-47-8	4-Chloroaniline	ND	390	160	ug/kg	
86-74-8	Carbazole	ND	190	39	ug/kg	
218-01-9	Chrysene	ND	190	39	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	39	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	78	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB2		Date Sampled:	04/22/05
Lab Sample ID:	F31365-2		Date Received:	04/23/05
Matrix:	SO - Soil		Percent Solids:	84.8
Method:	SW846 8270C SW846 3550B			
Project:	Camp Lejeune-BM 820			

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	190	39	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	39	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	39	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	39	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	39	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	78	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	78	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	390	190	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	78	ug/kg	
132-64-9	Dibenzofuran	ND	190	39	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	390	97	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	390	190	ug/kg	
84-66-2	Diethyl phthalate	ND	390	97	ug/kg	
131-11-3	Dimethyl phthalate	ND	390	97	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	390	190	ug/kg	
206-44-0	Fluoranthene	ND	190	39	ug/kg	
86-73-7	Fluorene	ND	190	39	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	39	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	78	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	78	ug/kg	
67-72-1	Hexachloroethane	ND	190	78	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	78	ug/kg	
78-59-1	Isophorone	ND	190	39	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	39	ug/kg	
88-74-4	2-Nitroaniline	ND	390	97	ug/kg	
99-09-2	3-Nitroaniline	ND	390	97	ug/kg	
100-01-6	4-Nitroaniline	ND	390	140	ug/kg	
91-20-3	Naphthalene	ND	190	39	ug/kg	
98-95-3	Nitrobenzene	ND	190	39	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	78	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	39	ug/kg	
85-01-8	Phenanthrene	ND	190	39	ug/kg	
129-00-0	Pyrene	ND	190	78	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	39	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	70%		45-114%
4165-62-2	Phenol-d5	75%		44-124%
118-79-6	2,4,6-Tribromophenol	77%		50-128%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB2	Date Sampled:	04/22/05
Lab Sample ID:	F31365-2	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	84.8
Method:	SW846 8270C SW846 3550B		
Project:	Camp Lejeune-BM 820		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		41-123%
321-60-8	2-Fluorobiphenyl	71%		46-122%
1718-51-0	Terphenyl-d14	77%		45-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID: UST820-SB2
 Lab Sample ID: F31365-2
 Matrix: SO - Soil
 Method: MADEP VPH
 Project: Camp Lejeune-BM 820

Date Sampled: 04/22/05
 Date Received: 04/23/05
 Percent Solids: 84.8

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV016889.D	1	05/03/05	RAW	n/a	n/a	GUV992
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.21 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	3600	1900	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	2700	1500	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	970	480	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	75%		70-130%
460-00-4	BFB	73%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB2	Date Sampled:	04/22/05
Lab Sample ID:	F31365-2	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	84.8
Method:	MADEP-EPH-98-1 SW846 3550B		
Project:	Camp Lejeune-BM 820		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF16738.D	1	05/03/05	SM	04/27/05	OP13122	GZF787
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.6 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	7700	7700	ug/kg	
	C9-C18 Aliphatics	ND	7700	7700	ug/kg	
	C19-C36 Aliphatics	ND	7700	7700	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
3386-33-2	1-Chlorooctadecane	57%		40-140%		
580-13-2	2-Bromonaphthalene	101%		40-140%		
84-15-1	o-Terphenyl	90%		40-140%		
321-60-8	2-Fluorobiphenyl	103%		40-140%		

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-SB3
 Lab Sample ID: F31365-3
 Matrix: SO - Soil
 Method: SW846 8260B
 Project: Camp Lejeune-BM 820

Date Sampled: 04/22/05
 Date Received: 04/23/05
 Percent Solids: 87.0

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H030507.D	1	05/02/05	NAF	n/a	n/a	VH1154
Run #2							

Run #	Initial Weight
Run #1	6.18 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	46	23	ug/kg	
71-43-2	Benzene	ND	4.6	1.9	ug/kg	
75-27-4	Bromodichloromethane	ND	4.6	1.9	ug/kg	
75-25-2	Bromoform	ND	4.6	1.9	ug/kg	
108-90-7	Chlorobenzene	ND	4.6	1.9	ug/kg	
75-00-3	Chloroethane	ND	4.6	1.9	ug/kg	
67-66-3	Chloroform	ND	4.6	1.9	ug/kg	
75-15-0	Carbon disulfide	ND	4.6	1.9	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.6	1.9	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.6	1.9	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.6	2.8	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.6	1.9	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.6	1.9	ug/kg	
124-48-1	Dibromochloromethane	ND	4.6	1.9	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.6	1.9	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.6	1.9	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	4.6	1.9	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.6	1.9	ug/kg	
100-41-4	Ethylbenzene	ND	4.6	1.9	ug/kg	
591-78-6	2-Hexanone	ND	23	9.3	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	23	9.3	ug/kg	
74-83-9	Methyl bromide	ND	4.6	1.9	ug/kg	
74-87-3	Methyl chloride	ND	4.6	1.9	ug/kg	
75-09-2	Methylene chloride	ND	9.3	4.6	ug/kg	
78-93-3	Methyl ethyl ketone	ND	23	9.3	ug/kg	
100-42-5	Styrene	ND	4.6	1.9	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.6	1.9	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.6	1.9	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.6	1.9	ug/kg	
127-18-4	Tetrachloroethylene	ND	4.6	1.9	ug/kg	
108-88-3	Toluene	ND	4.6	1.9	ug/kg	
79-01-6	Trichloroethylene	ND	4.6	1.9	ug/kg	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 2 of 2

Client Sample ID:	UST820-SB3	Date Sampled:	04/22/05
Lab Sample ID:	F31365-3	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	87.0
Method:	SW846 8260B		
Project:	Camp Lejeune-BM 820		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	4.6	2.3	ug/kg	
1330-20-7	Xylene (total)	ND	14	4.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		78-123%
2037-26-5	Toluene-D8	97%		71-137%
460-00-4	4-Bromofluorobenzene	98%		61-157%
17060-07-0	1,2-Dichloroethane-D4	100%		74-125%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-SB3

Lab Sample ID: F31365-3

Date Sampled: 04/22/05

Matrix: SO - Soil

Date Received: 04/23/05

Method: SW846 8270C SW846 3550B

Percent Solids: 87.0

Project: Camp Lejeune-BM 820

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L025791.D	1	04/30/05	ME	04/27/05	OP13125	SL1360
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	950	380	ug/kg	
95-57-8	2-Chlorophenol	ND	190	38	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	38	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	38	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	38	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	950	380	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	380	76	ug/kg	
95-48-7	2-Methylphenol	ND	190	38	ug/kg	
	3&4-Methylphenol	ND	190	38	ug/kg	
88-75-5	2-Nitrophenol	ND	190	38	ug/kg	
100-02-7	4-Nitrophenol	ND	950	380	ug/kg	
87-86-5	Pentachlorophenol	ND	950	380	ug/kg	
108-95-2	Phenol	ND	190	38	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	38	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	38	ug/kg	
83-32-9	Acenaphthene	ND	190	38	ug/kg	
208-96-8	Acenaphthylene	ND	190	38	ug/kg	
120-12-7	Anthracene	ND	190	38	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	38	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	38	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	38	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	76	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	38	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	38	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	380	95	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	38	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	38	ug/kg	
106-47-8	4-Chloroaniline	ND	380	150	ug/kg	
86-74-8	Carbazole	ND	190	38	ug/kg	
218-01-9	Chrysene	ND	190	38	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	38	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	76	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB3	Date Sampled:	04/22/05
Lab Sample ID:	F31365-3	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	87.0
Method:	SW846 8270C SW846 3550B		
Project:	Camp Lejeune-BM 820		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	190	38	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	38	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	38	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	38	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	38	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	76	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	76	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	380	190	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	76	ug/kg	
132-64-9	Dibenzofuran	ND	190	38	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	380	95	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	380	190	ug/kg	
84-66-2	Diethyl phthalate	ND	380	95	ug/kg	
131-11-3	Dimethyl phthalate	ND	380	95	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	380	190	ug/kg	
206-44-0	Fluoranthene	ND	190	38	ug/kg	
86-73-7	Fluorene	ND	190	38	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	38	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	76	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	76	ug/kg	
67-72-1	Hexachloroethane	ND	190	76	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	76	ug/kg	
78-59-1	Isophorone	ND	190	38	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	38	ug/kg	
88-74-4	2-Nitroaniline	ND	380	95	ug/kg	
99-09-2	3-Nitroaniline	ND	380	95	ug/kg	
100-01-6	4-Nitroaniline	ND	380	130	ug/kg	
91-20-3	Naphthalene	ND	190	38	ug/kg	
98-95-3	Nitrobenzene	ND	190	38	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	76	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	38	ug/kg	
85-01-8	Phenanthrene	ND	190	38	ug/kg	
129-00-0	Pyrene	ND	190	76	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	38	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	80%		45-114%
4165-62-2	Phenol-d5	80%		44-124%
118-79-6	2,4,6-Tribromophenol	83%		50-128%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB3	Date Sampled:	04/22/05
Lab Sample ID:	F31365-3	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	87.0
Method:	SW846 8270C SW846 3550B		
Project:	Camp Lejeune-BM 820		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	74%		41-123%
321-60-8	2-Fluorobiphenyl	80%		46-122%
1718-51-0	Terphenyl-d14	87%		45-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID: UST820-SB3
 Lab Sample ID: F31365-3
 Matrix: SO - Soil
 Method: MADEP VPH
 Project: Camp Lejeune-BM 820

Date Sampled: 04/22/05
 Date Received: 04/23/05
 Percent Solids: 87.0

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV016890.D	1	05/03/05	RAW	n/a	n/a	GUV992
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.06 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	3600	1900	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	2700	1500	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	970	480	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	76%		70-130%
460-00-4	BFB	74%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-SB3

Lab Sample ID: F31365-3

Date Sampled: 04/22/05

Matrix: SO - Soil

Date Received: 04/23/05

Method: MADEP-EPH-98-1 SW846 3550B

Percent Solids: 87.0

Project: Camp Lejeune-BM 820

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF16739.D	1	05/03/05	SM	04/27/05	OP13122	GZF787
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	7600	7600	ug/kg	
	C9-C18 Aliphatics	ND	7600	7600	ug/kg	
	C19-C36 Aliphatics	ND	7600	7600	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	62%		40-140%
580-13-2	2-Bromonaphthalene	92%		40-140%
84-15-1	o-Terphenyl	85%		40-140%
321-60-8	2-Fluorobiphenyl	94%		40-140%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID: UST820-SB4
 Lab Sample ID: F31365-4
 Matrix: SO - Soil
 Method: SW846 8260B
 Project: Camp Lejeune-BM 820

Date Sampled: 04/22/05
 Date Received: 04/23/05
 Percent Solids: 86.0

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H030508.D	1	05/02/05	NAF	n/a	n/a	VH1154
Run #2							

Run #	Initial Weight
Run #1	6.50 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	45	22	ug/kg	
71-43-2	Benzene	ND	4.5	1.8	ug/kg	
75-27-4	Bromodichloromethane	ND	4.5	1.8	ug/kg	
75-25-2	Bromoform	ND	4.5	1.8	ug/kg	
108-90-7	Chlorobenzene	ND	4.5	1.8	ug/kg	
75-00-3	Chloroethane	ND	4.5	1.8	ug/kg	
67-66-3	Chloroform	ND	4.5	1.8	ug/kg	
75-15-0	Carbon disulfide	ND	4.5	1.8	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.5	1.8	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.5	1.8	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.5	2.7	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.5	1.8	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.5	1.8	ug/kg	
124-48-1	Dibromochloromethane	ND	4.5	1.8	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.5	1.8	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.5	1.8	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	4.5	1.8	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.5	1.8	ug/kg	
100-41-4	Ethylbenzene	ND	4.5	1.8	ug/kg	
591-78-6	2-Hexanone	ND	22	8.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	22	8.9	ug/kg	
74-83-9	Methyl bromide	ND	4.5	1.8	ug/kg	
74-87-3	Methyl chloride	ND	4.5	1.8	ug/kg	
75-09-2	Methylene chloride	ND	8.9	8.9	ug/kg	
78-93-3	Methyl ethyl ketone	ND	22	8.9	ug/kg	
100-42-5	Styrene	ND	4.5	1.8	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.5	1.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.5	1.8	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.5	1.8	ug/kg	
127-18-4	Tetrachloroethylene	ND	4.5	1.8	ug/kg	
108-88-3	Toluene	ND	4.5	1.8	ug/kg	
79-01-6	Trichloroethylene	ND	4.5	1.8	ug/kg	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB4	Date Sampled:	04/22/05
Lab Sample ID:	F31365-4	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	86.0
Method:	SW846 8260B		
Project:	Camp Lejeune-BM 820		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	4.5	2.2	ug/kg	
1330-20-7	Xylene (total)	ND	13	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		78-123%
2037-26-5	Toluene-D8	98%		71-137%
460-00-4	4-Bromofluorobenzene	97%		61-157%
17060-07-0	1,2-Dichloroethane-D4	102%		74-125%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-SB4

Lab Sample ID: F31365-4

Date Sampled: 04/22/05

Matrix: SO - Soil

Date Received: 04/23/05

Method: SW846 8270C SW846 3550B

Percent Solids: 86.0

Project: Camp Lejeune-BM 820

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L025792.D	1	04/30/05	ME	04/27/05	OP13125	SL1360
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.6 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	950	380	ug/kg	
95-57-8	2-Chlorophenol	ND	190	38	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	38	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	38	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	38	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	950	380	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	380	76	ug/kg	
95-48-7	2-Methylphenol	ND	190	38	ug/kg	
	3&4-Methylphenol	ND	190	38	ug/kg	
88-75-5	2-Nitrophenol	ND	190	38	ug/kg	
100-02-7	4-Nitrophenol	ND	950	380	ug/kg	
87-86-5	Pentachlorophenol	ND	950	380	ug/kg	
108-95-2	Phenol	ND	190	38	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	38	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	38	ug/kg	
83-32-9	Acenaphthene	ND	190	38	ug/kg	
208-96-8	Acenaphthylene	ND	190	38	ug/kg	
120-12-7	Anthracene	ND	190	38	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	38	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	38	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	38	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	76	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	38	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	38	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	380	95	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	38	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	38	ug/kg	
106-47-8	4-Chloroaniline	ND	380	150	ug/kg	
86-74-8	Carbazole	ND	190	38	ug/kg	
218-01-9	Chrysene	ND	190	38	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	38	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	76	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB4		
Lab Sample ID:	F31365-4	Date Sampled:	04/22/05
Matrix:	SO - Soil	Date Received:	04/23/05
Method:	SW846 8270C SW846 3550B	Percent Solids:	86.0
Project:	Camp Lejeune-BM 820		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	190	38	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	38	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	38	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	38	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	38	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	76	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	76	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	380	190	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	76	ug/kg	
132-64-9	Dibenzofuran	ND	190	38	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	380	95	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	380	190	ug/kg	
84-66-2	Diethyl phthalate	ND	380	95	ug/kg	
131-11-3	Dimethyl phthalate	ND	380	95	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	380	190	ug/kg	
206-44-0	Fluoranthene	ND	190	38	ug/kg	
86-73-7	Fluorene	ND	190	38	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	38	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	76	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	76	ug/kg	
67-72-1	Hexachloroethane	ND	190	76	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	76	ug/kg	
78-59-1	Isophorone	ND	190	38	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	38	ug/kg	
88-74-4	2-Nitroaniline	ND	380	95	ug/kg	
99-09-2	3-Nitroaniline	ND	380	95	ug/kg	
100-01-6	4-Nitroaniline	ND	380	130	ug/kg	
91-20-3	Naphthalene	ND	190	38	ug/kg	
98-95-3	Nitrobenzene	ND	190	38	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	76	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	38	ug/kg	
85-01-8	Phenanthrene	ND	190	38	ug/kg	
129-00-0	Pyrene	ND	190	76	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	38	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	84%		45-114%
4165-62-2	Phenol-d5	86%		44-124%
118-79-6	2,4,6-Tribromophenol	90%		50-128%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB4	Date Sampled:	04/22/05
Lab Sample ID:	F31365-4	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	86.0
Method:	SW846 8270C SW846 3550B		
Project:	Camp Lejeune-BM 820		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		41-123%
321-60-8	2-Fluorobiphenyl	86%		46-122%
1718-51-0	Terphenyl-d14	92%		45-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-SB4
 Lab Sample ID: F31365-4
 Matrix: SO - Soil
 Method: MADEP VPH
 Project: Camp Lejeune-BM 820

Date Sampled: 04/22/05
 Date Received: 04/23/05
 Percent Solids: 86.0

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV016891.D	1	05/03/05	RAW	n/a	n/a	GUV992
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.47 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	3400	1800	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	2500	1400	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	920	460	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	77%		70-130%
460-00-4	BFB	75%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-SB4

Lab Sample ID: F31365-4

Date Sampled: 04/22/05

Matrix: SO - Soil

Date Received: 04/23/05

Method: MADEP-EPH-98-1 SW846 3550B

Percent Solids: 86.0

Project: Camp Lejeune-BM 820

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF16743.D	1	05/03/05	SM	04/27/05	OP13122	GZF787
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	7600	7600	ug/kg	
	C9-C18 Aliphatics	ND	7600	7600	ug/kg	
	C19-C36 Aliphatics	ND	7600	7600	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	61%		40-140%
580-13-2	2-Bromonaphthalene	93%		40-140%
84-15-1	o-Terphenyl	97%		40-140%
321-60-8	2-Fluorobiphenyl	96%		40-140%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB5	Date Sampled:	04/22/05
Lab Sample ID:	F31365-5	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	83.8
Method:	SW846 8260B		
Project:	Camp Lejeune-BM 820		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H030509.D	1	05/02/05	NAF	n/a	n/a	VH1154
Run #2							

	Initial Weight
Run #1	6.21 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	48	24	ug/kg	
71-43-2	Benzene	ND	4.8	1.9	ug/kg	
75-27-4	Bromodichloromethane	ND	4.8	1.9	ug/kg	
75-25-2	Bromoform	ND	4.8	1.9	ug/kg	
108-90-7	Chlorobenzene	ND	4.8	1.9	ug/kg	
75-00-3	Chloroethane	ND	4.8	1.9	ug/kg	
67-66-3	Chloroform	ND	4.8	1.9	ug/kg	
75-15-0	Carbon disulfide	ND	4.8	1.9	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.8	1.9	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.8	1.9	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.8	2.9	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.8	1.9	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.8	1.9	ug/kg	
124-48-1	Dibromochloromethane	ND	4.8	1.9	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.8	1.9	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.8	1.9	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	4.8	1.9	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.8	1.9	ug/kg	
100-41-4	Ethylbenzene	ND	4.8	1.9	ug/kg	
591-78-6	2-Hexanone	ND	24	9.6	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	24	9.6	ug/kg	
74-83-9	Methyl bromide	ND	4.8	1.9	ug/kg	
74-87-3	Methyl chloride	ND	4.8	1.9	ug/kg	
75-09-2	Methylene chloride	ND	9.6	9.6	ug/kg	
78-93-3	Methyl ethyl ketone	ND	24	9.6	ug/kg	
100-42-5	Styrene	ND	4.8	1.9	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.8	1.9	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.8	1.9	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.8	1.9	ug/kg	
127-18-4	Tetrachloroethylene	ND	4.8	1.9	ug/kg	
108-88-3	Toluene	ND	4.8	1.9	ug/kg	
79-01-6	Trichloroethylene	ND	4.8	1.9	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB5	Date Sampled:	04/22/05
Lab Sample ID:	F31365-5	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	83.8
Method:	SW846 8260B		
Project:	Camp Lejeune-BM 820		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	4.8	2.4	ug/kg	
1330-20-7	Xylene (total)	ND	14	4.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		78-123%
2037-26-5	Toluene-D8	97%		71-137%
460-00-4	4-Bromofluorobenzene	96%		61-157%
17060-07-0	1,2-Dichloroethane-D4	101%		74-125%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-SB5
 Lab Sample ID: F31365-5
 Matrix: SO - Soil
 Method: SW846 8270C SW846 3550B
 Project: Camp Lejeune-BM 820

Date Sampled: 04/22/05
 Date Received: 04/23/05
 Percent Solids: 83.8

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L025793.D	1	04/30/05	ME	04/27/05	OP13125	SL1360
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	990	400	ug/kg	
95-57-8	2-Chlorophenol	ND	200	40	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	200	40	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	200	40	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	200	40	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	990	400	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	400	80	ug/kg	
95-48-7	2-Methylphenol	ND	200	40	ug/kg	
	3&4-Methylphenol	ND	200	40	ug/kg	
88-75-5	2-Nitrophenol	ND	200	40	ug/kg	
100-02-7	4-Nitrophenol	ND	990	400	ug/kg	
87-86-5	Pentachlorophenol	ND	990	400	ug/kg	
108-95-2	Phenol	ND	200	40	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	200	40	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	200	40	ug/kg	
83-32-9	Acenaphthene	ND	200	40	ug/kg	
208-96-8	Acenaphthylene	ND	200	40	ug/kg	
120-12-7	Anthracene	ND	200	40	ug/kg	
56-55-3	Benzo(a)anthracene	ND	200	40	ug/kg	
50-32-8	Benzo(a)pyrene	ND	200	40	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	200	40	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	200	80	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	200	40	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	200	40	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	400	99	ug/kg	
100-51-6	Benzyl Alcohol	ND	200	40	ug/kg	
91-58-7	2-Chloronaphthalene	ND	200	40	ug/kg	
106-47-8	4-Chloroaniline	ND	400	160	ug/kg	
86-74-8	Carbazole	ND	200	40	ug/kg	
218-01-9	Chrysene	ND	200	40	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	200	40	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	200	80	ug/kg	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB5		Date Sampled:	04/22/05
Lab Sample ID:	F31365-5		Date Received:	04/23/05
Matrix:	SO - Soil		Percent Solids:	83.8
Method:	SW846 8270C SW846 3550B			
Project:	Camp Lejeune-BM 820			

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	200	40	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	200	40	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	200	40	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	200	40	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	200	40	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	200	80	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	200	80	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	400	200	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	200	80	ug/kg	
132-64-9	Dibenzofuran	ND	200	40	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	400	99	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	400	200	ug/kg	
84-66-2	Diethyl phthalate	ND	400	99	ug/kg	
131-11-3	Dimethyl phthalate	ND	400	99	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	400	200	ug/kg	
206-44-0	Fluoranthene	ND	200	40	ug/kg	
86-73-7	Fluorene	ND	200	40	ug/kg	
118-74-1	Hexachlorobenzene	ND	200	40	ug/kg	
87-68-3	Hexachlorobutadiene	ND	200	80	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	200	80	ug/kg	
67-72-1	Hexachloroethane	ND	200	80	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	200	80	ug/kg	
78-59-1	Isophorone	ND	200	40	ug/kg	
91-57-6	2-Methylnaphthalene	ND	200	40	ug/kg	
88-74-4	2-Nitroaniline	ND	400	99	ug/kg	
99-09-2	3-Nitroaniline	ND	400	99	ug/kg	
100-01-6	4-Nitroaniline	ND	400	140	ug/kg	
91-20-3	Naphthalene	ND	200	40	ug/kg	
98-95-3	Nitrobenzene	ND	200	40	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	200	80	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	200	40	ug/kg	
85-01-8	Phenanthrene	ND	200	40	ug/kg	
129-00-0	Pyrene	ND	200	80	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	200	40	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	85%		45-114%
4165-62-2	Phenol-d5	87%		44-124%
118-79-6	2,4,6-Tribromophenol	88%		50-128%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB5	Date Sampled:	04/22/05
Lab Sample ID:	F31365-5	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	83.8
Method:	SW846 8270C SW846 3550B		
Project:	Camp Lejeune-BM 820		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		41-123%
321-60-8	2-Fluorobiphenyl	83%		46-122%
1718-51-0	Terphenyl-d14	91%		45-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

2.5

2

Client Sample ID:	UST820-SB5	Date Sampled:	04/22/05
Lab Sample ID:	F31365-5	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	83.8
Method:	MADEP VPH		
Project:	Camp Lejeune-BM 820		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV016892.D	1	05/03/05	RAW	n/a	n/a	GUV992
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.42 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	3600	1900	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	2600	1400	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	950	470	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	75%		70-130%
460-00-4	BFB	74%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Page 1 of 1

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF16745.D	1	05/03/05	SM	04/27/05	OP13122	GZF787
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	7900	7900	ug/kg	
	C9-C18 Aliphatics	ND	7900	7900	ug/kg	
	C19-C36 Aliphatics	ND	7900	7900	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	60%		40-140%
580-13-2	2-Bromonaphthalene	85%		40-140%
84-15-1	o-Terphenyl	87%		40-140%
321-60-8	2-Fluorobiphenyl	98%		40-140%

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-SB6
 Lab Sample ID: F31365-6
 Matrix: SO - Soil
 Method: SW846 8260B
 Project: Camp Lejeune-BM 820

Date Sampled: 04/22/05
 Date Received: 04/23/05
 Percent Solids: 84.7

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H030510.D	1	05/02/05	NAF	n/a	n/a	VH1154
Run #2							

Run #	Initial Weight
Run #1	5.36 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	55	28	ug/kg	
71-43-2	Benzene	ND	5.5	2.2	ug/kg	
75-27-4	Bromodichloromethane	ND	5.5	2.2	ug/kg	
75-25-2	Bromoform	ND	5.5	2.2	ug/kg	
108-90-7	Chlorobenzene	ND	5.5	2.2	ug/kg	
75-00-3	Chloroethane	ND	5.5	2.2	ug/kg	
67-66-3	Chloroform	ND	5.5	2.2	ug/kg	
75-15-0	Carbon disulfide	ND	5.5	2.2	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.5	2.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.5	2.2	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.5	3.3	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.5	2.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.5	2.2	ug/kg	
124-48-1	Dibromochloromethane	ND	5.5	2.2	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.5	2.2	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.5	2.2	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.5	2.2	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.5	2.2	ug/kg	
100-41-4	Ethylbenzene	ND	5.5	2.2	ug/kg	
591-78-6	2-Hexanone	ND	28	11	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	28	11	ug/kg	
74-83-9	Methyl bromide	ND	5.5	2.2	ug/kg	
74-87-3	Methyl chloride	ND	5.5	2.2	ug/kg	
75-09-2	Methylene chloride	ND	11	11	ug/kg	
78-93-3	Methyl ethyl ketone	ND	28	11	ug/kg	
100-42-5	Styrene	ND	5.5	2.2	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.5	2.2	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.5	2.2	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.5	2.2	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.5	2.2	ug/kg	
108-88-3	Toluene	ND	5.5	2.2	ug/kg	
79-01-6	Trichloroethylene	ND	5.5	2.2	ug/kg	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB6	Date Sampled:	04/22/05
Lab Sample ID:	F31365-6	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	84.7
Method:	SW846 8260B		
Project:	Camp Lejeune-BM 820		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	5.5	2.8	ug/kg	
1330-20-7	Xylene (total)	ND	17	5.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		78-123%
2037-26-5	Toluene-D8	98%		71-137%
460-00-4	4-Bromofluorobenzene	97%		61-157%
17060-07-0	1,2-Dichloroethane-D4	101%		74-125%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-SB6

Lab Sample ID: F31365-6

Date Sampled: 04/22/05

Matrix: SO - Soil

Date Received: 04/23/05

Method: SW846 8270C SW846 3550B

Percent Solids: 84.7

Project: Camp Lejeune-BM 820

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L025794.D	1	04/30/05	ME	04/27/05	OP13125	SL1360
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	970	390	ug/kg	
95-57-8	2-Chlorophenol	ND	190	39	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	39	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	39	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	39	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	970	390	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	390	77	ug/kg	
95-48-7	2-Methylphenol	ND	190	39	ug/kg	
	3&4-Methylphenol	ND	190	39	ug/kg	
88-75-5	2-Nitrophenol	ND	190	39	ug/kg	
100-02-7	4-Nitrophenol	ND	970	390	ug/kg	
87-86-5	Pentachlorophenol	ND	970	390	ug/kg	
108-95-2	Phenol	ND	190	39	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	39	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	39	ug/kg	
83-32-9	Acenaphthene	ND	190	39	ug/kg	
208-96-8	Acenaphthylene	ND	190	39	ug/kg	
120-12-7	Anthracene	ND	190	39	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	39	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	39	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	39	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	77	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	39	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	39	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	390	97	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	39	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	39	ug/kg	
106-47-8	4-Chloroaniline	ND	390	150	ug/kg	
86-74-8	Carbazole	ND	190	39	ug/kg	
218-01-9	Chrysene	ND	190	39	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	39	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	77	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-SB6		Date Sampled:	04/22/05
Lab Sample ID:	F31365-6		Date Received:	04/23/05
Matrix:	SO - Soil		Percent Solids:	84.7
Method:	SW846 8270C SW846 3550B			
Project:	Camp Lejeune-BM 820			

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	190	39	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	39	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	39	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	39	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	39	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	77	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	77	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	390	190	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	77	ug/kg	
132-64-9	Dibenzofuran	ND	190	39	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	390	97	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	390	190	ug/kg	
84-66-2	Diethyl phthalate	ND	390	97	ug/kg	
131-11-3	Dimethyl phthalate	ND	390	97	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	390	190	ug/kg	
206-44-0	Fluoranthene	ND	190	39	ug/kg	
86-73-7	Fluorene	ND	190	39	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	39	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	77	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	77	ug/kg	
67-72-1	Hexachloroethane	ND	190	77	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	77	ug/kg	
78-59-1	Isophorone	ND	190	39	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	39	ug/kg	
88-74-4	2-Nitroaniline	ND	390	97	ug/kg	
99-09-2	3-Nitroaniline	ND	390	97	ug/kg	
100-01-6	4-Nitroaniline	ND	390	140	ug/kg	
91-20-3	Naphthalene	ND	190	39	ug/kg	
98-95-3	Nitrobenzene	ND	190	39	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	77	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	39	ug/kg	
85-01-8	Phenanthrene	ND	190	39	ug/kg	
129-00-0	Pyrene	ND	190	77	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	39	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	83%		45-114%
4165-62-2	Phenol-d5	85%		44-124%
118-79-6	2,4,6-Tribromophenol	84%		50-128%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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2.6

2

Client Sample ID:	UST820-SB6	Date Sampled:	04/22/05
Lab Sample ID:	F31365-6	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	84.7
Method:	SW846 8270C SW846 3550B		
Project:	Camp Lejeune-BM 820		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%		41-123%
321-60-8	2-Fluorobiphenyl	85%		46-122%
1718-51-0	Terphenyl-d14	95%		45-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

2.6

2

Client Sample ID: UST820-SB6
 Lab Sample ID: F31365-6
 Matrix: SO - Soil
 Method: MADEP VPH
 Project: Camp Lejeune-BM 820

Date Sampled: 04/22/05
 Date Received: 04/23/05
 Percent Solids: 84.7

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV016893.D	1	05/03/05	RAW	n/a	n/a	GUV992
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.01 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	3800	2000	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	2800	1500	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	1000	500	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	74%		70-130%
460-00-4	BFB	73%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

2.6

2

Client Sample ID:	UST820-SB6	Date Sampled:	04/22/05
Lab Sample ID:	F31365-6	Date Received:	04/23/05
Matrix:	SO - Soil	Percent Solids:	84.7
Method:	MADEP-EPH-98-1 SW846 3550B		
Project:	Camp Lejeune-BM 820		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF16746.D	1	05/03/05	SM	04/27/05	OP13122	GZF787
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.1 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	7800	7800	ug/kg	
	C9-C18 Aliphatics	ND	7800	7800	ug/kg	
	C19-C36 Aliphatics	ND	7800	7800	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	63%		40-140%
580-13-2	2-Bromonaphthalene	84%		40-140%
84-15-1	o-Terphenyl	85%		40-140%
321-60-8	2-Fluorobiphenyl	88%		40-140%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-TRIP BLANK
 Lab Sample ID: F31365-7
 Matrix: AQ - Trip Blank Soil
 Method: SW846 8260B
 Project: Camp Lejeune-BM 820

Date Sampled: 04/22/05
 Date Received: 04/23/05
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B030026.D	1	05/04/05	KW	n/a	n/a	VB1262
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	5.0	ug/l	
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
75-15-0	Carbon disulfide	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.5	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.5	ug/l	
74-83-9	Methyl bromide	ND	2.0	1.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.5	ug/l	
100-42-5	Styrene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-TRIP BLANK
Lab Sample ID: F31365-7
Matrix: AQ - Trip Blank Soil
Method: SW846 8260B
Project: Camp Lejeune-BM 820

Date Sampled: 04/22/05
Date Received: 04/23/05
Percent Solids: n/a

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		86-115%
17060-07-0	1,2-Dichloroethane-D4	97%		73-126%
2037-26-5	Toluene-D8	98%		86-112%
460-00-4	4-Bromofluorobenzene	105%		83-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

F31365

COC Number:
112768-820-042205

Shaw Environmental & Infrastructure, Inc.

CHAIN-OF-CUSTODY RECORD

Shaw E & I - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390										Receiving LAB: Accutest										
Project Name				Project Location						Analysis Desired										
CAMP LEJEUNE - BM 820				CAMP LEJEUNE, NC																
Project Number		Contact		P.O. Number		Reviewed by														
112768		Mark Martin																		
Client Rep				Project Manager																
US NAVY - LANTDIV				Ron Kenyon																
Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description		Number of Containers	8260	8270	MADEP VPH	MADEP VPH								
①	UST820-SB1	4/22/05	15:45		X	UST820-SB1 8 - 10'		8	X	X	X	X								
②	UST820-SB2	4/22/05	16:25		X	UST820-SB2 8 - 10'		8	X	X	X	X								
③	UST820-SB3	4/22/05	14:50		X	UST820-SB3 8 - 10'		8	X	X	X	X								
④	UST820-SB4	4/22/05	15:10		X	UST820-SB4 8 - 10'		8	X	X	X	X								
⑤	UST820-SB5	4/22/05	16:00		X	UST820-SB5 8 - 10'		8	X	X	X	X								
⑥	UST820-SB6	4/22/05	16:15		X	UST820-SB6 8 - 10'		8	X	X	X	X								
⑦	UST820-Trip Blank	4/22/05			X	Trip Blank		2	X											
8																				
9																				
10																				

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 -- 7	<i>[Signature]</i>	FedEx8508 6149 4196	4/22/05	16:00	14 Day TAT
2		<i>FX</i>	<i>[Signature]</i>	4-23-05	9:00	
3						

F31365: Chain of Custody

Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: **F31365** CLIENT: Shaw E&E PROJECT: Comp LeJecune
 DATE/TIME RECEIVED: 4-28-05 9:00 # OF COOLERS RECEIVED: 1 COOLER TEMPS: 1.0
 METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER
 AIRBILL NUMBERS: 650861494196

COOLER INFORMATION

- ☐ CUSTODY SEAL NOT PRESENT/INTACT
- ☐ NO COC RECEIVED
- ☐ ANALYSES NOT MARKED ON COC
- ☐ ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- ☐ SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- ☐ TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- ☐ TRIP BLANK NOT PROVIDED
- ☐ TRIP BLANK NOT ON COC
- ☒ TRIP BLANK INTACT
- ☒ TRIP BLANK NOT INTACT
- ☐ RECEIVED WATER TRIP BLANK
- ☐ RECEIVED SOIL TRIP BLANK

SOIL INFORMATION

NUMBER OF ENCORES ? 36
 NUMBER OF 5035 FIELD KITS ? 1

SUMMARY OF COMMENTS: Received a water trip blank.

SAMPLE INFORMATION

- ☐ SAMPLE LABELS PRESENT ON ALL BOTTLES
- ☐ CORRECT NUMBER OF CONTAINERS USED
- ☐ SAMPLE RECEIVED IMPROPERLY PRESERVED
- ☐ INSUFFICIENT VOLUME FOR ANALYSIS
- ☐ SAMPLE RECEIVED PAST HOLD TIME
- ☐ TIMES ON COC DON'T MATCH LABEL
- ☐ ID'S ON COC DON'T MATCH LABEL
- ☐ VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- ☐ BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- ☐ NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- ☐ UNCLEAR FILTERING INSTRUCTIONS
- ☐ UNCLEAR COMPOSITING INSTRUCTIONS
- ☐ SAMPLE(S) RECEIVED BROKEN
- ☐ % SOLIDS JAR NOT RECEIVED

TECHNICIAN SIGNATURE/DATE Steven Enora 4-28-05 TECHNICIAN SIGNATURE/DATE CH

ASBD02/04/05

F31365: Chain of Custody

Page 2 of 2

APPENDIX D

GROUNDWATER SAMPLE ANALYTICAL RESULTS

Building 820, Berkely Manor
MADEP-EPH/VPH Summary Groundwater Sample Analytical Results

Groundwater Analytical Results Building 820, Berkely Manor					
Method for Ranges:	MADEP-EPH/VPH	Sample Identification		UST820- MW28	UST820- MW29
Hydrocarbon Ranges		Units of Measure	2L GWQS		
C9-C18 Aliphatics		mg/l	4.2	<0.19	<0.19
C19-C36 Aliphatics		mg/l	42	<0.19	<0.19
C9-C22 Aromatics (Unadj.)		mg/l	0.21	<0.19	<0.19
C5-C8 Aliphatics		mg/l	0.42	3.28	<0.19
Shaded indicates detectable concentration exceeds 2L GWQS					

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____

Laboratory Name: Accutest Southeast
 NC Certification # (Lab):
 Sample Matrix : Ground Water

Sample Information and Analytical Results									
Method for Ranges:		MADEP-EPH-98-1		Sample Identification		US1820-			
EPH Surrogate Standards				Date Collected		MW28			
Aliphatic:		1-Chlorooctadecane		Date Received		05/25/2005			
Aromatic:		o-Terphenyl		Date Extracted		06/02/2005			
EPH Fractionation Surrogates				Date Analyzed		06/04/2005			
#1:		2-Fluorobiphenyl		% Dry Solids		N/A			
#2:		2-Bromonaphthalene		Dilution Factor		1			
Hydrocarbon Ranges		Units of Measure		MDL		RL		BLANK	
C9-C18 Aliphatics		ug/l		190		190		ND	
C19-C36 Aliphatics		ug/l		190		190		ND	
C11-C22 Aromatics (Unadj.)		ug/l		150		190		ND	
Sample Surrogate Acceptance Range								40-140	
Aliphatic Surrogate % Recovery								72	
Aromatic Surrogate % Recovery								97	
Fractionation Surrogate Acceptance Range									
Fractionation Surrogate #1 % Recovery								96	
Fractionation Surrogate #2 % Recovery								90	
* Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.									
MDL = Method Detection Limit RL = Reporting Limit									

EPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved? Yes
 Was blank correction applied as a significant modification of the method? Yes
 Were any significant modifications to the eph method made? No

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____

Laboratory Name: Accutest Southeast
 NC Certification # (Lab): 573
 Sample Matrix : Ground Water

Sample Information and Analytical Results									
Method for Ranges: MADEP VPH		Sample Identification		Collection Option (for soil)*		UST820- MW28		UST820- MW28	
VPH Surrogate Standards Aliphatic: BFB Aromatic: BFB		Date Collected		05/25/2005		05/25/2005		05/25/2005	
		Date Received		05/26/2005		05/26/2005		05/26/2005	
		Date Extracted		05/26/2005		05/26/2005		05/26/2005	
		Date Analyzed		05/31/2005		06/01/2005		06/01/2005	
		% Dry Solids		N/A		N/A		N/A	
		Dilution Factor		1		5			
Hydrocarbon Ranges		Units of Measure		MDL		RL		BLANK	
C5- C8 Aliphatics (Unadj.)		ug/l		250		380		ND	
C9- C12 Aliphatics (Unadj.)		ug/l		30		55		ND	
C9- C10 Aromatics (Unadj.)		ug/l		10		20		ND	
Sample Surrogate Acceptance Range						70-130%		70-130%	
Aliphatic Surrogate % Recovery - FID						79		86	
Aromatic Surrogate % Recovery - PID						84		89	
* Option 1 = Established fill line on vial Option 2 = Sampling Device (indicate brand, e.g. EnCore™) Option 3 = Field weight of soil									
** Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.									
MDL = Method Detection Limit RL = Reporting Limit									

VPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved? Yes
 Were any significant modifications to the VPH method made? No

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____

Laboratory Name: Accutest Southeast
 NC Certification # (Lab):
 Sample Matrix : Ground Water

Sample Information and Analytical Results									
Method for Ranges: MADEP-EPH-98-1				Sample Identification		US1820-			
EPH Surrogate Standards				Date Collected		MW29			
Aliphatic: 1-Chlorooctadecane				Date Received		05/25/2005			
Aromatic: o-Terphenyl				Date Extracted		05/26/2005			
EPH Fractionation Surrogates				Date Analyzed		06/02/2005			
#1: 2-Fluorobiphenyl				% Dry Solids		N/A			
#2: 2-Bromonaphthalene				Dilution Factor		1			
Hydrocarbon Ranges		Units of Measure		MDL		RL		BLANK	
C9-C18 Aliphatics		ug/l		190		190		ND	
C19-C36 Aliphatics		ug/l		190		190		ND	
C11-C22 Aromatics (Unadj.)		ug/l		140		190		ND	
Sample Surrogate Acceptance Range						40-140		40-140	
Aliphatic Surrogate % Recovery						72		54	
Aromatic Surrogate % Recovery						97		92	
Fractionation Surrogate Acceptance Range									
Fractionation Surrogate #1 % Recovery						96		99	
Fractionation Surrogate #2 % Recovery						90		66	
* Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.									
MDL = Method Detection Limit				RL = Reporting Limit					

EPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved? Yes

Was blank correction applied as a significant modification of the method? Yes

Were any significant modifications to the eph method made? No

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Shaw E & I, Inc.
 Project Name: Camp Lejeune-BM 820
 Site Location: _____
 Laboratory Name: Accutest Southeast
 NC Certification # (Lab): 573
 Sample Matrix : Ground Water

Sample Information and Analytical Results									
Method for Ranges: MADEP VPH		Sample Identification		US1820-MW29					
VPH Surrogate Standards		Collection Option (for soil)*		1					
Aliphatic: BFB		Date Collected		05/25/2005					
Aromatic: BFB		Date Received		05/26/2005					
		Date Extracted		05/26/2005					
		Date Analyzed		06/01/2005					
		% Dry Solids		N/A					
		Dilution Factor		1					
Hydrocarbon Ranges		Units of Measure		MDL		RL		BLANK	
C5- C8 Aliphatics (Unadj.)		ug/l		50		75		ND	
C9- C12 Aliphatics (Unadj.)		ug/l		30		55		ND	
C9- C10 Aromatics (Unadj.)		ug/l		10		20		ND	
Sample Surrogate Acceptance Range						70-130%		70-130%	
Aliphatic Surrogate % Recovery - FID								79	
Aromatic Surrogate % Recovery - PID								84	
								86	

* Option 1 = Established fill line on vial Option 2 = Sampling Device (indicate brand, e.g. EnCore™) Option 3 = Field weight of soil
 ** Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.
 MDL = Method Detection Limit RL = Reporting Limit

VPH rev. 11/00
 Were all performance/acceptance standards for required QA/QC procedures achieved? **Yes**
 Were any significant modifications to the VPH method made? **No**

Table B-4
Building 820 UST
VOC and SVOC Groundwater Sample Analytical Results

Date: 6/7/2005			Incident Number and Name: 112768 Building 820 UST													
Analytical Method:			8260B													
Sample ID	Contaminant of Concern		Sample Depth (ft bgs)													
	Date Collected			Acetone	Benzene	Bromodichloromethane	Bromoform	Chlorobenzene	Chloroethane	Chloroform	Carbon disulfide	Carbon tetrachloride	1,1-Dichloroethane	1,1,2-Dichloroethane	1,2-Dichloropropane	1,2-Dichloroethane
UST820-MW28	5/25/2005		N/A	<1300	1110	<50	<50	<50	<100	<50	<100	<50	<50	<50	<50	<50
UST820-MW29	5/25/2005		N/A	<25	29.6	<1	<1	<1	<2	2.6	<2	<1	<1	<1	<1	<1
			GWQS (ug/L)	700	1	NS	NS	NS	NS	0.00019	700	NS	700	7	0.56	68
			GCL (ug/L)	700000	5000	NS	NS	NS	NS	190	700000	NS	700000	70000	560	70000
																200

Date: 6/7/2005		Incident Number and Name: 112768 Building 820 UST																				
Analytical Method:			8260B																			
Contaminant of Concern			Sample ID	Date Collected	Sample Depth (ft bgs)	Ethylbenzene	2-Hexanone	4-Methyl-2-pentanone	Methyl bromide	Methyl chloride	Methylene chloride	Methyl ethyl ketone	Methyl-tert-butyl ether	Styrene	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	Tetrachloroethene	Toluene	Trichloroethene	Vinyl chloride	Xylenes (total)
			UST820-MW28	5/25/2005	N/A	<50	<250	<250	<100	<100	<250	<250	3350	<50	<50	<50	<50	<50	<50	<50	<50	<150
			UST820-MW29	5/25/2005	N/A	<1	<5	<5	<2	<2	<5	<5	31.8	<1	<1	<1	<1	<1	<1	<1	<1	<3
						29	280	NS	NS	2.6	5	170	200	0.1	NS	0.17	NS	0.7	1000	2.8	0.015	530
						29000	280000	NS	NS	2600	5000	170000	200000	100000	NS	170	NS	700	257500	2800	15	87500

Indicate method detection limit for contaminants when analyzed but not detected (i.e., <1.0)
List any contaminant detected above the method detection limit
GWQS = Groundwater Quality Standard
GCL = Groundwater Contamination Level
Results must be reported in ug/L
ug/L = micrograms per liter
NA = not applicable
NS = no standard

Table B-4
Building 820 UST
VOC and SVOC Groundwater Sample Analytical Results

Date: 6/7/2005		Incident Number and Name: 112768 Building 820 UST																	8270C			
Analytical Method:																						
Sample ID	Contaminant of Concern		Date Collected	Sample Depth (ft bgs)																		
					Benzoic acid	2-Chlorophenol	4-Chloro-3-methylphenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-o-cresol	2-Methylphenol	3&4-Methylphenol	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	Acenaphthene	Acenaphthylene	
UST820-MW28			5/25/2005	N/A	<24	<4.8	<4.8	<4.8	<4.8	<24	<9.5	<4.8	<4.8	<4.8	<24	<24	<24	<4.8	<4.8	<4.8	<4.8	
UST820-MW29			5/25/2005	N/A	<24	<4.8	<4.8	<4.8	<4.8	<24	<9.5	<4.8	<4.8	<4.8	<24	<24	<24	<4.8	<4.8	<4.8	<4.8	
				GWQS (ug/L)	28000	NS	NS	NS	140	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	80	210
				GCL (ug/L)	1450000	NS	NS	NS	140000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2120	1965

Date: 6/7/2005			Incident Number and Name: 112768 Building 820 UST														8270C				
Analytical Method:																					
Sample ID	Contaminant of Concern		Date Collected	Sample Depth (ft bgs)	4-Chlorophenyl phenyl eth	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,4-Dinitrotoluene	2,6-Dinitrotoluene	3,3'-Dichlorobenzidine	Dibenzo(a,h)anthracene	Dibenzofuran	Di-n-butyl phthalate	Di-n-octyl phthalate	Diethyl phthalate	Dimethyl phthalate	Bis(2-ethylhexyl)phthalate	Fluoranthene	Fluorene	Hexachlorobenzene
	UST820-MW28		5/25/2005	N/A	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<9.5	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
UST820-MW29		5/25/2005	N/A	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<9.5	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
				GWQS (ug/L)	NS	620	620	75	NS	NS	NS	0.0047	28	NS	NS	NS	NS	3	280	280	NS
				GCL (ug/L)	NS	72500	61500	38500	NS	NS	NS	0.25	2800	NS	NS	NS	NS	3000	280	950	NS

Indicate method detection limit for contaminants when analyzed but not detected (i.e., <1.0)
 List any contaminant detected above the method detection limit
 Detectable concentration exceeds GWQS
 GWQS = Groundwater Quality Standard
 GCL = Groundwater Contamination Level
 Results must be reported in ug/L
 ug/L = micrograms per liter
 NA = not applicable
 NS = no standard

Table B-4
Building 820 UST
VOC and SVOC Groundwater Sample Analytical Results

Date: 6/7/2005			Incident Number and Name: 112768 Building 820 UST																	
Analytical Method:			8270C																	
Sample ID	Contaminant of Concern		Date Collected	Sample Depth (ft bgs)	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	4-Bromophenyl phenyl ether	Butyl benzyl phthalate	Benzyl alcohol	2-Chloronaphthalene	4-Chloroaniline	Carbazole	Chrysene	Bis(2-chloroethoxy)meth	Bis(2-chloroethyl)ether	Bis(2-chloroisopropyl)et
UST820-MW28	N/A		5/25/2005	N/A	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<9.5	<4.8	<4.8	<4.8	<4.8	<4.8
UST820-MW29	N/A		5/25/2005	N/A	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<9.5	<4.8	<4.8	<4.8	<4.8	<4.8
			GWQS (ug/L)		2100	0.05	0.0047	0.047	210	0.47	NS	NS	NS	NS	NS	NS	5	NS	NS	NS
			GCL (ug/L)		2100	22	1.5	0.6	210	0.47	NS	NS	NS	NS	NS	NS	5	NS	NS	NS

Date: 6/7/2005			Incident Number and Name: 112768 Building 820 UST																	
Analytical Method:			8270C																	
Sample ID	Contaminant of Concern		Sample Depth (ft bgs)	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-cd)pyrene	Isophorone	2-Methylnaphthalene	2-Nitroaniline	3-Nitroaniline	4-Nitroaniline	Naphthalene	Nitrobenzene	N-Nitroso-di-n-propylamine	N-Nitrosodiphenylamine	Phenanthrene	Pyrene	1,2,4-Trichlorobenzene	
	UST820-MW28	N/A	N/A	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<9.5	<9.5	<9.5	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	
	UST820-MW29	N/A	N/A	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<9.5	<9.5	<9.5	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	
			GWQS (ug/L)	44	NS	NS	0.047	NS	28	NS	NS	NS	21	NS	NS	NS	210	210	70	
			GCL (ug/L)	440	NS	NS	31	NS	12500	NS	NS	NS	15500	NS	NS	NS	410	210	8500	

Indicate method detection limit for contaminants when analyzed but not detected (i.e., <1.0)

List any contaminant detected above the method detection limit

GWQS = Groundwater Quality Standard

GCL = Groundwater Contamination Level

Results must be reported in ug/L

ug/L = micrograms per liter

NA = not applicable

NS = no standard

 Shaw Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 110768
			PROJECT NAME: BM 820
			WELL NO.
			SAMPLE NO. UST820-MW27
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 5/25/05
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 1445
PHONE: 910-451-2390		WEATHER:	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailer	No

FIELD MEASUREMENTS							
	1	2	3	4			
PH	7.85	3.74	3.63	3.62			(STD)
Specific Conductivity	11307	3079	3397	3412			(m S/cm)
Turbidity (Turb.)	2.1	218.7	41.0	84.0			(NTU)
Dissolved Oxygen (DO)	1.55	0.26	0.24	0.07			(g/l)
Temperature (Temp)	20.91	21.44	21.35	21.35			(°C)
ORP	129.7	412.5	427.0	229.4			

Depth to Bottom	577.60	(In) (Minus)	Depth to Water	167.16	(In)	=	430.44	HT (in)
Depth to Bottom	49.8	(Ft) (Minus)	Depth to Water	13.73	(Ft)	=	35.87	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)											
r = 1 Multiply Together						Vol.					
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS			
TOP			430.44	1	3.14	1352	.0043	5.8	Purge Vol.	Vol. Purged	
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
COMMENTS: Extrem silty when first purged then cleaned up			
PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 110768
			PROJECT NAME: BM 820
			WELL NO.
			SAMPLE NO. UST820-110768
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 5/25/05
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 1330
PHONE: 910-451-2390		WEATHER:	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailer	No

FIELD MEASUREMENTS						
	1	2	3	4		
PH	11.68	11.57	11.31	11.07		(STD)
Specific Conductivity	3.555	2.856	1.552	0.957		(m S/cm ²)
Turbidity (Turb.)	5.2	44.4	38.5	30.5		(NTU)
Dissolved Oxygen (DO)	1.79	0.17	0.07	0.08		(g/l)
Temperature (Temp)	20.15	20.51	20.46	20.46		(°C)
ORP	150.3	91.1	90.1	96.3		

Depth to Bottom	548.28	(In) (Minus)	Depth to Water	184.92	(In) =	363.36	HT (in)
Depth to Bottom	45.69	(Ft) (Minus)	Depth to Water	15.41	(Ft) =	30.28	HT (ft)

d = 2 MEASUREMENTS (IN INCHES)											
r = 1 Multiply Together						Vol.					
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			363.36	1	3.14	1141	.0043	4.9		14.7	20
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
COMMENTS: Beginning Purge water extremely silty. Then cleared.			
PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

APPENDIX E

GROUNDWATER SAMPLE LABORATORY ANALYTICAL REPORTS



06/06/05

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-BM 820

112768

Accutest Job Number: F32144

Sampling Date: 05/25/05

Report to:

Shaw E & I, Inc.

natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 59



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Harry Behzadi, Ph.D.
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK
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Sample Summary

Shaw E & I, Inc.

Job No: F32144

Camp Lejeune-BM 820
Project No: 112768

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F32144-1	05/25/05	13:30 MM	05/26/05	AQ	Ground Water	UST820-MW28
F32144-2	05/25/05	14:45 MM	05/26/05	AQ	Ground Water	UST820-MW29
F32144-3	05/25/05	00:00 MM	05/26/05	AQ	Trip Blank Water	TRIP BLANK

Report of Analysis

Client Sample ID: UST820-MW28
 Lab Sample ID: F32144-1
 Matrix: AQ - Ground Water
 Method: SW846 8260B
 Project: Camp Lejeune-BM 820

Date Sampled: 05/25/05
 Date Received: 05/26/05
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N0004551.D	50	06/01/05	CV	n/a	n/a	VN198
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	1300	250	ug/l	
71-43-2	Benzene	1110	50	25	ug/l	
75-27-4	Bromodichloromethane	ND	50	25	ug/l	
75-25-2	Bromoform	ND	50	25	ug/l	
108-90-7	Chlorobenzene	ND	50	25	ug/l	
75-00-3	Chloroethane	ND	100	50	ug/l	
67-66-3	Chloroform	ND	50	25	ug/l	
75-15-0	Carbon disulfide	ND	100	50	ug/l	
56-23-5	Carbon tetrachloride	ND	50	25	ug/l	
75-34-3	1,1-Dichloroethane	ND	50	25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	50	25	ug/l	
107-06-2	1,2-Dichloroethane	ND	50	25	ug/l	
78-87-5	1,2-Dichloropropane	ND	50	25	ug/l	
124-48-1	Dibromochloromethane	ND	50	20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	50	25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	50	15	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	50	25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	50	15	ug/l	
100-41-4	Ethylbenzene	ND	50	25	ug/l	
591-78-6	2-Hexanone	ND	250	130	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	250	130	ug/l	
74-83-9	Methyl bromide	ND	100	50	ug/l	
74-87-3	Methyl chloride	ND	100	50	ug/l	
75-09-2	Methylene chloride	ND	250	50	ug/l	
78-93-3	Methyl ethyl ketone	ND	250	130	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3350	50	25	ug/l	
100-42-5	Styrene	ND	50	25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	50	25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	15	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	50	25	ug/l	
127-18-4	Tetrachloroethylene	ND	50	25	ug/l	
108-88-3	Toluene	ND	50	25	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW28	Date Sampled:	05/25/05
Lab Sample ID:	F32144-1	Date Received:	05/26/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Camp Lejeune-BM 820		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	50	25	ug/l	
75-01-4	Vinyl chloride	ND	50	25	ug/l	
1330-20-7	Xylene (total)	ND	150	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		86-115%
17060-07-0	1,2-Dichloroethane-D4	104%		73-126%
2037-26-5	Toluene-D8	104%		86-112%
460-00-4	4-Bromofluorobenzene	101%		83-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW28

Lab Sample ID: F32144-1

Matrix: AQ - Ground Water

Method: SW846 8270C SW846 3510C

Project: Camp Lejeune-BM 820

Date Sampled: 05/25/05

Date Received: 05/26/05

Percent Solids: n/a

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	L026206.D	1	05/27/05	ME	05/27/05	OP13435	SL1381

Run #1	Initial Volume	Final Volume
Run #2	1050 ml	1.0 ml

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	24	9.5	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	1.9	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	1.9	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	1.9	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	1.9	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	9.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.5	4.8	ug/l	
95-48-7	2-Methylphenol	ND	4.8	1.9	ug/l	
	3&4-Methylphenol	ND	4.8	1.9	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	1.9	ug/l	
100-02-7	4-Nitrophenol	ND	24	9.5	ug/l	
87-86-5	Pentachlorophenol	ND	24	9.5	ug/l	
108-95-2	Phenol	ND	4.8	1.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	1.9	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	1.9	ug/l	
83-32-9	Acenaphthene	ND	4.8	0.95	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.95	ug/l	
120-12-7	Anthracene	ND	4.8	0.95	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.95	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.95	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.95	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	1.9	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.95	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.8	0.95	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.8	1.9	ug/l	
100-51-6	Benzyl Alcohol	ND	4.8	0.95	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.95	ug/l	
106-47-8	4-Chloroaniline	ND	9.5	3.8	ug/l	
86-74-8	Carbazole	ND	4.8	0.95	ug/l	
218-01-9	Chrysene	ND	4.8	0.95	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.95	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	1.9	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW28		Date Sampled:	05/25/05
Lab Sample ID:	F32144-1		Date Received:	05/26/05
Matrix:	AQ - Ground Water		Percent Solids:	n/a
Method:	SW846 8270C SW846 3510C			
Project:	Camp Lejeune-BM 820			

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	4.8	0.95	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.8	0.95	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.95	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.95	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.95	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.8	1.9	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.8	1.9	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.5	4.8	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	1.9	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.95	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.8	1.9	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.8	2.4	ug/l	
84-66-2	Diethyl phthalate	ND	4.8	1.9	ug/l	
131-11-3	Dimethyl phthalate	ND	4.8	1.9	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	2.4	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.95	ug/l	
86-73-7	Fluorene	ND	4.8	0.95	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.95	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	1.9	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.8	1.9	ug/l	
67-72-1	Hexachloroethane	ND	4.8	1.9	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.9	ug/l	
78-59-1	Isophorone	ND	4.8	0.95	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.95	ug/l	
88-74-4	2-Nitroaniline	ND	9.5	3.8	ug/l	
99-09-2	3-Nitroaniline	ND	9.5	3.8	ug/l	
100-01-6	4-Nitroaniline	ND	9.5	3.8	ug/l	
91-20-3	Naphthalene	ND	4.8	0.95	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.95	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	1.9	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	1.9	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.95	ug/l	
129-00-0	Pyrene	ND	4.8	0.95	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.95	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		19-90%
4165-62-2	Phenol-d5	27%		10-68%
118-79-6	2,4,6-Tribromophenol	87%		36-137%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW28	Date Sampled:	05/25/05
Lab Sample ID:	F32144-1	Date Received:	05/26/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C SW846 3510C		
Project:	Camp Lejeune-BM 820		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		49-119%
321-60-8	2-Fluorobiphenyl	78%		45-118%
1718-51-0	Terphenyl-d14	76%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID: UST820-MW28
 Lab Sample ID: F32144-1
 Matrix: AQ - Ground Water
 Method: MADEP VPH
 Project: Camp Lejeune-BM 820

Date Sampled: 05/25/05
 Date Received: 05/26/05
 Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV017203.D	1	05/31/05	RAW	n/a	n/a	GUV1016
Run #2	UV017212.D	5	06/01/05	RAW	n/a	n/a	GUV1017

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

MADEP VPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	3280 ^a	380	250	ug/l	
	C9- C12 Aliphatics (Unadj.)	ND	55	30	ug/l	
	C9- C10 Aromatics (Unadj.)	ND	20	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	89%	88%	70-130%
460-00-4	BFB	86%	83%	70-130%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW28	Date Sampled:	05/25/05
Lab Sample ID:	F32144-1	Date Received:	05/26/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	MADEP-EPH-98-1 SW846 3510C		
Project:	Camp Lejeune-BM 820		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF17032.D	1	06/04/05	SM	06/02/05	OP13491	GZF802
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1030 ml	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	190	150	ug/l	
	C9-C18 Aliphatics	ND	190	190	ug/l	
	C19-C36 Aliphatics	ND	190	190	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	38%		40-140%
580-13-2	2-Bromonaphthalene	66%		40-140%
84-15-1	o-Terphenyl	94%		40-140%
321-60-8	2-Fluorobiphenyl	99%		40-140%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW29
 Lab Sample ID: F32144-2
 Matrix: AQ - Ground Water
 Method: SW846 8260B
 Project: Camp Lejeune-BM 820

Date Sampled: 05/25/05
 Date Received: 05/26/05
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0005170.D	1	05/31/05	CV	n/a	n/a	VM222
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	5.0	ug/l	
71-43-2	Benzene	29.6	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	2.6	1.0	0.50	ug/l	
75-15-0	Carbon disulfide	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.5	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.5	ug/l	
74-83-9	Methyl bromide	ND	2.0	1.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	31.8	1.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW29
Lab Sample ID: F32144-2
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: Camp Lejeune-BM 820

Date Sampled: 05/25/05
Date Received: 05/26/05
Percent Solids: n/a

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		86-115%
17060-07-0	1,2-Dichloroethane-D4	112%		73-126%
2037-26-5	Toluene-D8	106%		86-112%
460-00-4	4-Bromofluorobenzene	103%		83-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW29

Lab Sample ID: F32144-2

Date Sampled: 05/25/05

Matrix: AQ - Ground Water

Date Received: 05/26/05

Method: SW846 8270C SW846 3510C

Percent Solids: n/a

Project: Camp Lejeune-BM 820

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L026207.D	1	05/27/05	ME	05/27/05	OP13435	SL1381
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	24	9.5	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	1.9	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	1.9	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	1.9	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	1.9	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	9.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.5	4.8	ug/l	
95-48-7	2-Methylphenol	ND	4.8	1.9	ug/l	
	3&4-Methylphenol	ND	4.8	1.9	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	1.9	ug/l	
100-02-7	4-Nitrophenol	ND	24	9.5	ug/l	
87-86-5	Pentachlorophenol	ND	24	9.5	ug/l	
108-95-2	Phenol	ND	4.8	1.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	1.9	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	1.9	ug/l	
83-32-9	Acenaphthene	ND	4.8	0.95	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.95	ug/l	
120-12-7	Anthracene	ND	4.8	0.95	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.95	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.95	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.95	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	1.9	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.95	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.8	0.95	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.8	1.9	ug/l	
100-51-6	Benzyl Alcohol	ND	4.8	0.95	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.95	ug/l	
106-47-8	4-Chloroaniline	ND	9.5	3.8	ug/l	
86-74-8	Carbazole	ND	4.8	0.95	ug/l	
218-01-9	Chrysene	ND	4.8	0.95	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.95	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	1.9	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW29	Date Sampled:	05/25/05
Lab Sample ID:	F32144-2	Date Received:	05/26/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C SW846 3510C		
Project:	Camp Lejeune-BM 820		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	4.8	0.95	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.8	0.95	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.95	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.95	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.95	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.8	1.9	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.8	1.9	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	9.5	4.8	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	1.9	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.95	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.8	1.9	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.8	2.4	ug/l	
84-66-2	Diethyl phthalate	ND	4.8	1.9	ug/l	
131-11-3	Dimethyl phthalate	ND	4.8	1.9	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	2.4	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.95	ug/l	
86-73-7	Fluorene	ND	4.8	0.95	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.95	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	1.9	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.8	1.9	ug/l	
67-72-1	Hexachloroethane	ND	4.8	1.9	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.9	ug/l	
78-59-1	Isophorone	ND	4.8	0.95	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.95	ug/l	
88-74-4	2-Nitroaniline	ND	9.5	3.8	ug/l	
99-09-2	3-Nitroaniline	ND	9.5	3.8	ug/l	
100-01-6	4-Nitroaniline	ND	9.5	3.8	ug/l	
91-20-3	Naphthalene	ND	4.8	0.95	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.95	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	1.9	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	1.9	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.95	ug/l	
129-00-0	Pyrene	ND	4.8	0.95	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.95	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%		19-90%
4165-62-2	Phenol-d5	35%		10-68%
118-79-6	2,4,6-Tribromophenol	90%		36-137%

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 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW29

Lab Sample ID: F32144-2

Matrix: AQ - Ground Water

Method: SW846 8270C SW846 3510C

Project: Camp Lejeune-BM 820

Date Sampled: 05/25/05

Date Received: 05/26/05

Percent Solids: n/a

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	89%		49-119%
321-60-8	2-Fluorobiphenyl	85%		45-118%
1718-51-0	Terphenyl-d14	77%		46-135%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW29	Date Sampled:	05/25/05
Lab Sample ID:	F32144-2	Date Received:	05/26/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	MADEP VPH		
Project:	Camp Lejeune-BM 820		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV017213.D	1	06/01/05	RAW	n/a	n/a	GUV1017
Run #2	UV017205.D	1	05/31/05	RAW	n/a	n/a	GUV1016

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

MADEP VPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	75	50	ug/l	
	C9- C12 Aliphatics (Unadj.)	ND	55	30	ug/l	
	C9- C10 Aromatics (Unadj.)	ND	20	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	86%	86%	70-130%
460-00-4	BFB	84%	85%	70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW29	Date Sampled:	05/25/05
Lab Sample ID:	F32144-2	Date Received:	05/26/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	MADEP-EPH-98-1 SW846 3510C		
Project:	Camp Lejeune-BM 820		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF17035.D	1	06/04/05	SM	06/02/05	OP13491	GZF802
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1040 ml	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	190	140	ug/l	
	C9-C18 Aliphatics	ND	190	190	ug/l	
	C19-C36 Aliphatics	ND	190	190	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	54%		40-140%
580-13-2	2-Bromonaphthalene	66%		40-140%
84-15-1	o-Terphenyl	92%		40-140%
321-60-8	2-Fluorobiphenyl	99%		40-140%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK	Date Sampled:	05/25/05
Lab Sample ID:	F32144-3	Date Received:	05/26/05
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Camp Lejeune-BM 820		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0005154.D	1	05/31/05	CV	n/a	n/a	VM222
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	5.0	ug/l	
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
75-15-0	Carbon disulfide	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.5	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.5	ug/l	
74-83-9	Methyl bromide	ND	2.0	1.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK	Date Sampled:	05/25/05
Lab Sample ID:	F32144-3	Date Received:	05/26/05
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Camp Lejeune-BM 820		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	1.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		86-115%
17060-07-0	1,2-Dichloroethane-D4	106%		73-126%
2037-26-5	Toluene-D8	105%		86-112%
460-00-4	4-Bromofluorobenzene	104%		83-119%

ND = Not detected MDL - Method Detection Limit
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

COC Number:
112768-820-052505



CHAIN-OF-CUSTODY RECORD

F32144

3.1
3

Shaw E & I - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390										Receiving LAB: Accutest										
Project Name				Project Location						Analysis Desired										
CAMP LEJEUNE - BM 820				CAMP LEJEUNE, NC																
Project Number		Contact		P.O. Number		Reviewed by														
112768		Mark Martin																		
Client Rep				Project Manager																
US NAVY - LANTDIV				Ron Kenyon																
Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description		Number of Containers	8260	8270	MADEP EPH	MADEP VPH								
①	UST820-MW28	5/25/05	13:30		X	UST820-MW28		10	X	X	X	X								
②	UST820-MW29	5/25/05	14:45		X	UST820-MW29		10	X	X	X	X								
③	TripBlank-052505	5/25/05	—		X	Trip Blank		2	X											
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1-3		FedEx 8508 6831 4558	5/25/05	16:00	7 Day TAT Due 6/2/05
2		FX		5/26/05	9:00	
3						

3.0

F32144: Chain of Custody

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ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: **F32144** CLIENT: Shaw E&F PROJECT: Camp Lejeune - BM 820
 DATE/TIME RECEIVED: 5/26/05 9:00 # OF COOLERS RECEIVED: 1 COOLER TEMPS: 30
 METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER
 AIRBILL NUMBERS: 8508 6831 4558

COOLER INFORMATION

- ☐ CUSTODY SEAL NOT PRESENT/INTACT
- ☐ NO COC RECEIVED
- ☐ ANALYSES NOT MARKED ON COC
- ☐ ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- ☐ SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- ☐ TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- ☐ TRIP BLANK NOT PROVIDED
- ☐ TRIP BLANK NOT ON COC
- ☐ TRIP BLANK INTACT
- ☐ TRIP BLANK NOT INTACT
- ☒ RECEIVED WATER TRIP BLANK
- ☐ RECEIVED SOIL TRIP BLANK

SOIL INFORMATION

NUMBER OF ENCORES ? 0
 NUMBER OF 5035 FIELD KITS ? 0

SUMMARY OF COMMENTS:

SAMPLE INFORMATION

- ☐ SAMPLE LABELS PRESENT ON ALL BOTTLES
- ☐ CORRECT NUMBER OF CONTAINERS USED
- ☐ SAMPLE RECEIVED IMPROPERLY PRESERVED
- ☐ INSUFFICIENT VOLUME FOR ANALYSIS
- ☐ SAMPLE RECEIVED PAST HOLD TIME
- ☐ TIMES ON COC DON'T MATCH LABEL
- ☐ ID'S ON COC DON'T MATCH LABEL
- ☐ VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- ☐ BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- ☐ NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- ☐ UNCLEAR FILTERING INSTRUCTIONS
- ☐ UNCLEAR COMPOSITING INSTRUCTIONS
- ☐ SAMPLE(S) RECEIVED BROKEN
- ☐ % SOLIDS JAR NOT RECEIVED

TECHNICIAN SIGNATURE/DATE

5/26/05

TECHNICIAN SIGNATURE/DATE

Steven Cherry 5-26-05

ASBD02/04/05

F32144: Chain of Custody

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