MONITORING REPORT AND REQUEST
FOR
NO FURTHER ACTION
Building H-19

NCDENR Incident Number: 17633
Marine Corps Base
Camp Lejeune, North Carolina

January 16, 2006

Prepared for:

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Navy Contract Number: N62470-04-D-1753
Task Order: 0002

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LIST OF ACRONYMS

2000 Guidelines	Groundwater Section Guidelines for Investigation and Remediation of Soil and Groundwater
2001 Guidelines	Guidelines for Assessment and Corrective Action, North Carolina Underground Storage Tank Section (Effective July 1, 2001)
2L GWQS	NCAC T15A:02L Groundwater Quality Standards
AS	Air Sparge
AST	Aboveground Storage Tank
BDL	Below Detection Limit
BN	Base/Neutral (extractables)
BNA	Base/Neutral/Acid (extractables)
BQL	Below Quantitation Limit
BLS	Below Land Surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAP	Corrective Action Plan
CFR	Code of Federal Regulations
Cr	Chromium
CSA	Comprehensive Site Assessment
DIPE	Di-isopropyl Ether
DO	Dissolved Oxygen
DOD	Department of Defense
DPT	Direct Push Technology
DWQ	Division of Water Quality
DWM	Division of Waste Management
DTW	Depth to Water
EDB	Ethylene di-bromide
EMD	Environmental Management Division
EPA	Environmental Protection Agency
EPH	Extractable Petroleum Hydrocarbons
EQB	Environmental Quality Branch
Fe	Iron
FID	Flame Ionization Detector
FT	Feet
GCL	Gross Contaminant Level
GIS	Geographic Information System
GPS	Global Positioning System
Guidelines Vol. II	Groundwater Section Guidelines for Investigation and Remediation of Soil and Groundwater, Volume II, Petroleum Underground Storage Tanks (January 2, 1998)
HDPE	High Density Polyethylene
I/C	Industrial/Commercial
ID	Identification
I&E	Installations and Environment Department
IGWQS	Interim Groundwater Quality Standards
IPE	Isopropyl Ether
LSA	Limited Site Assessment
LUST	Leaking Underground Storage Tank
m	Meter
MADEP	Massachusetts Department of Environmental Protection
MCAS	Marine Corps Air Station

MCB	Marine Corps Base
MDL	Method Detection Limit
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
MSCC	Maximum Soil Contaminant Concentration
MSL	Mean Sea Level
MTBE	Methyl tertiary butyl ether
µg/Kg	Micrograms per Kilogram
µg/L	Micrograms per Litre
NC	North Carolina
NCAC	North Carolina Administrative Code
NCDENR	North Carolina Department of Environment and Natural Resources
NE	None Established
NM	Not Measured
NMT	No Measurable Thickness
NS	Not Sampled
OVA	Organic Vapor Analyzer
PAH	Polynuclear Aromatic Hydrocarbons
Pb	Lead
PPB	Parts Per Billion
PPM	Parts Per Million
PID	Photo Ionization Detector
PQL	Practical Quantitation Limit
PVC	Polyvinyl chloride
RBCA	Risk-Based Corrective Action
RCRA	Resource Conservation and Recovery Act
Res	Residential
SOW	Scope of Work
STGW	Soil-to-Groundwater
SVE	Soil Vapor Extraction
SVOC	Semi Volatile Organic Compound
TCLP	Toxicity Characteristic Leaching Procedure
TIC	Tentatively Identified Compound
TOC	Top of Casing
TPH	Total Petroleum Hydrocarbons
US	United States
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
VPH	Volatile Petroleum Hydrocarbons
WiRO	NCDENR Wilmington Regional Office

EXECUTIVE SUMMARY

The Building H-19 project site is located in the Hospital Point area of MCB Camp Lejeune, North Carolina. The building is currently used as office space, but was previously used as a paint shop. The area of the Base where Building H-19 is located is highly developed and surrounded by both industrial and residential use areas. In the past, there were three (3) underground storage tanks (H-19-1, H-19-2, and H-19-3) that operated in support of the former Building H-20 boiler plant. Tanks H-19-1 and H-19-2 were 15,000-gallon heating oil tanks, and H-19-3 was a 5,000-gallon waste oil tank. All three (3) tanks were closed by removal in May and June 1993.

Various site assessments and monitoring events were completed between 1997 and 2005. LAW Engineering and Environmental Services, Inc. (LAW, also known as MACTEC) conducted the majority of these investigations and sampling events. In an April 2005 Additional Sampling Report, CATLIN Engineers and Scientists (CATLIN) evaluated the site's historical data to determine if the site qualified for closure. As a result of the evaluation, CATLIN identified two areas with benzo[a]pyrene in the soil at levels above the residential MSCC. They also identified three groundwater contaminants - Bis(2-ethylhexyl)phthalate, C_9-C_{22} Aromatics, and Lead – in the site's monitoring wells at concentrations exceeding the North Carolina 2L Groundwater Quality Standards (GWQS).

CATLIN made the following recommendations in their April 2005 Additional Sampling Report:

1. Monitor soil conditions every other year to assess the natural attenuation of the contaminant, benzo[a]pyrene, in locations of USTH19-SB01(3-4) and USTH19-SB02(3-4) as shown on Figure 3. Analyze via EPA Method 8270.

2. Monitor groundwater every other year to assess the natural attenuation of three contaminants. Sample wells USTH19-MW02, USTH19-MW03, USTH19-MW04, USTH19-MW05, USTH19-MW06, USTH19-MW07, USTH19-MW09, USTH19-MW10, and USTH19-MW14 using low-flow sampling techniques and analyze for bis (2-ethylhexyl)phthalate, C_9-C_{22} Aromatics, and lead via EPA Method 625, MADEP EPH/VPH, and EPA Method 3030C, respectively.

3. After each sampling event, submit a monitoring report to include a description of the sampling techniques utilized, a comparison of the sampling results to the applicable standards, and recommendations for future activities.

The above recommendations were approved by NCDENR in a Review of Report letter to EMD dated June 7, 2005. Osage of Virginia Inc. (Osage) and Sovereign Consulting Inc. (Sovereign) partnered to complete the first monitoring event at the site in December 2005. This event implemented the above recommendations. Two soil samples were collected in the specified areas and analyzed for benzo[a]pyrene using EPA Method 8270. Laboratory results came back below quantitation limits for this contaminant. Osage and Sovereign also obtained groundwater samples from the recommended nine monitoring wells. No free product was identified during the event.

Laboratory analysis detected lead in only one well, USTH19-MW09, at a concentration of 6.40 µg/L, which is below the North Carolina 2L GWQS of 15 µg/L. No other groundwater contaminants requested for laboratory analytical testing were detected during this sampling event.

The results of this monitoring event demonstrate that previously detected soil contaminants are no longer present, and groundwater contaminant levels have naturally attenuated to below the applicable North Carolina 2L GWQS. Based on an evaluation of previous reports and given the absence of soil and/or groundwater contaminants above the applicable standards (December 2005 monitoring/sampling event) a No Further Action (NFA) for the Building H-19 leaking underground storage tank site is appropriate and therefore is being requested by this report.

1.0 TITLE PAGE

DATE OF REPORT: January 16, 2005
Facility I.D.: N/A UST Incident Number: 17633
Site Name: Building H-19
Site Location: Marine Corps Base Camp Lejeune, North Carolina
Nearest City/Town: Camp Lejeune County: Onslow
Risk Classification: Low Risk Land Use Classification: Industrial/Commercial

UST Owner: Commanding General – MCB Camp Lejeune
I&E/EMD/EQB
PSC Box 20004
Address: MCB Camp Lejeune, NC 28542-0004 Phone: (910) 451-5068

UST Operator: Same as above
Address: Same as above Phone: Same as above

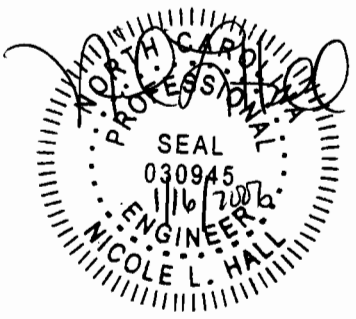
Property Owner: Same as above
Address: Same as above Phone: Same as above

Property Occupant: Same as above
Address: MCB Camp Lejeune, NC Phone: None

Consultant/Contractor:
Osage of Virginia Inc.
4800A Colley Avenue
Norfolk, VA 23508
Phone: (757) 440-0400

Sovereign Consulting Inc.
606 A-1 Thimble Shoals Blvd.
Newport News, VA 23606
(757) 594-0980

Release Information
Date Discovered: May/June 1993
Latitude: 34° 40' 36" N **Longitude:** 77° 22' 13" W
Estimated Quantity of Release: Unknown
Cause of Release: Leaking underground storage tank system
Source of Release (Piping/UST): UST and piping
Sizes and contents of UST system(s) from which the release occurred: Two 15,000 gallon diesel tanks and one 5,000 gallon waste oil tank.



*I, **Nicole L. Hall** a Professional Engineer for Sovereign Consulting Inc., do certify that the information contained in this report is correct and accurate to the best of my knowledge.*

2.0 INTRODUCTION

The purpose of this report is to summarize data from a recent groundwater sampling event at Building H-19 aboard MCB Camp Lejeune, as well as perform an evaluation for site closure in accordance with the 2001 NCDENR DWM UST Guidelines.

The project's scope of work entailed soil and groundwater sampling at various locations at the site. Osage and Sovereign partnered to carry out the recommendations made in the Catlin Engineers and Scientists (CATLIN) April 2005 Additional Sampling report. The report called for sampling to be conducted every other year to assess the natural attenuation of the contaminated soil and groundwater. As recommended, two soil samples were obtained and analyzed for benzo[a]pyrene. Nine monitoring wells were also gauged, sampled, and analyzed for bis(2-ethylhexyl)phthalate, C_9-C_{22} Aromatics, and lead per the recommendations. Results of the December 2005 sampling activities are presented in this report.

3.0 SITE HISTORY

The Building H-19 project site is actually located in the Hospital Point area of the MCB Camp LeJeune, as opposed to the Hadnot Point area as previously reported in CATLIN's April 2005 report. Building H-19 is currently an Engineers Office, but was formerly a paint shop. It is located north of Cutler Street within a highly developed area adjacent to Building H-21 and former Building H-39. Figure 1 details the project site.

The former USTs (H-19-1, H-19-2, and H-19-3) were situated in a basin located next to former Building H-20. The tanks supported operations in Former Building H-20, which was a boiler plant for the old Naval Hospital. It was located approximately 100 feet northeast of Building H-19. Tanks H-19-1 and H-19-2 were 15,000-gallon heating oil tanks, and tank H-19-3 was a 5,000-gallon waste oil tank. All three (3) tanks were closed by removal in May and June 1993.

Site assessments of the project site were conducted by several companies between 1993 and 1998. Table 1 in Appendix A shows the known list of reports for the site. CATLIN also prepared a CAP dated July 22, 1998, which recommended soil excavation and groundwater natural attenuation to remedy contamination at the site. The Base did not excavate contaminated soils at the site, however, they initiated groundwater monitoring to determine and demonstrate the effects of natural attenuation to remediate contaminated soils at the site.

Groundwater monitoring of the site was done between 1998 and 2001 by LAW Engineering and Environmental Services, Inc. (also known as MACTEC). In addition, they completed a Draft Site Assessment Report in 2003, which indicated soil contamination above applicable MSCCs and groundwater contamination in excess of applicable 2L GWQS.

In early 2005, NAVFAC contracted CATLIN to evaluate the Building H-19 site for site closure in accordance with the 2001 Guidelines. To do the evaluation, CATLIN performed a complete review of historical sampling results to determine which areas of the site, if any, required additional investigation. They also updated the site's receptor survey and collected both soil and groundwater samples from the offending locations identified during their review.

CATLIN collected soil samples in November 2004 from two contaminated areas and obtained groundwater samples all site monitoring wells. Soils were analyzed using Risk Based analyses – EPA Methods 8260, 8270, MADEP VPH, and MADEP EPH. Benzo[a]pyrene was identified in borings USTH19-SB01(3-4) and USTH19-SB02(3-4), as shown on Figure 3, and was the only contaminant of concern identified above the residential MSCC.

The site's groundwater monitoring wells were also gauged and sampled during the November 2004 sampling event. No product was detected. Groundwater samples were analyzed via EPA Methods 625, 6210D, 6010B (chromium and lead only), MADEP VPH, and MADEP EPH. Bis(2-ethylhexyl)phthalate, C_9-C_{22} Aromatics, and Lead were the only three contaminants identified at the site that exceeded the 2L GWQS.

CATLIN issued an additional sampling report summarizing findings of their November 2004 sampling event on April 27, 2005. In this report, they recommended resampling only the locations that exceeded the applicable standards, then reporting the findings in a natural attenuation monitoring report. NCDENR approved the recommendations via correspondence to EMD dated June 7, 2005. NAVFAC contracted Osage and Sovereign to conduct the first natural attenuation monitoring event and provide a report summarizing the sampling techniques, sampling results, and recommendations for future events. This report is the first monitoring report for the site.

4.0 SITE REMEDIATION

This section presents a summary of the monitoring performed to assess the effects of natural attenuation of impacted soil and groundwater at the site.

4.1 Soil

4.1.1 Remedial Overview

The CAP dated July 22, 1998, recommended soil excavation and groundwater natural attenuation to remedy contamination at the site. The Base did not excavate contaminated soils at the site. However, they initiated groundwater monitoring to determine and demonstrate the effects of natural attenuation to remediate contaminated soils at the site.

4.1.2 Monitoring Data

There have been numerous soil sampling events at the site. The April 2005 CATLIN report summarizes all the sampling events through April 2005. This report discusses the December 2005 sampling event, in which Osage and Sovereign carried out the recommendations that were made in the April 2005 report as approved by NCDENR. In accordance with the approved plan, two (2) soil samples were obtained from locations shown in Figure 3. Soil samples USTH19-SB01 and USTH19-SB02 were obtained using direct push technology from the 3.0 – 4.0 ft interval. In accordance with the April 2005 Additional Sampling Report, soil samples were tested for only benzo[a]pyrene using EPA Method 8270.

Once collected, the soil samples were placed in laboratory glassware, labeled, placed immediately on ice in a cooler. They were transported under chain of custody to Paradigm Analytical Laboratories, Inc. in Wilmington, North Carolina (N.C. Certification #481) for analysis. Laboratory reports and chain of custody documentation are included in Appendix B.

Benzo[a]pyrene was not detected above the laboratory quantitation limit in either soil sample taken during the December 2005 event. Table 1 in the Tables section summarizes the soil analytical results.

4.2 Groundwater

4.2.1 Remedial Overview

Natural attenuation was used as the implemented corrective action for the site's groundwater contamination. Groundwater monitoring began in January 1998.

4.2.2 Monitoring Data

LAW conducted the majority of groundwater gauging and sampling events throughout the site's history. Sampling occurred in 1997, 1998, 2000, 2001, 2002, and 2004. Free product has not been detected in any well since January 2001, at which time there was 0.01ft of free phase product in monitoring well USTH19-MW03. Again, CATLIN's April 2005 report summarizes the findings of each gauging and sampling event conducted at the site.

Osage and Sovereign conducted groundwater sampling of nine (9) groundwater wells during the December 2005 sampling event. The wells were USTH19-MW02, USTH19-MW03, USTH19-MW04, USTH19-MW05, USTH19-MW06, USTH19-MW07, USTH19-MW09, USTH19-MW10, and USTH19-MW14. In accordance with the approved plan (Catlin April 2005 Additional Sampling Report) each well was sampled using low-flow sampling techniques and analyzed for bis(2-ethylhexyl)phthalate, C_9-C_{22} Aromatics, and lead via EPA Method 625, MADEP EPH/VPH, and EPA Method 3030C, respectively.

Once collected, the groundwater samples were placed in laboratory glassware, labeled, and placed immediately on ice in a cooler. They were transported under chain of custody to Paradigm Analytical Laboratories, Inc. in Wilmington, North Carolina for analysis. Laboratory reports and chain of custody documentation are included in Appendix B.

Results for all contaminants were BQL, with the exception of one well. The sample from monitoring well USTH19-MW09 contained lead at a concentration of 6.40µg/L. This concentration is less than the 2L GWQS of 15 µg/L. The December 2005 sampling results show there is no groundwater contamination greater than the established North Carolina 2L GWQS. Tables 2-5 in the Tables section summarize the groundwater analytical results. Other field data, included in Appendix D, obtained during the December 2005 sampling event include temperature, specific conductivity, dissolved oxygen, pH, oxidation reduction potential, and turbidity.

5.0 RECEPTOR SURVEY

Osage and Sovereign reassessed site conditions and concluded that the receptor survey previously completed in the CATLIN April 2005 report still applies. There has been no change in receptor impact, and there have been no changes to land use of the site or the surrounding areas. The previous risk classification and land use form completed by CATLIN is located in Appendix A.

6.0 CONCLUSIONS AND PETITION FOR SITE CLOSURE

The results of the fieldwork and laboratory analytical data gathered during the December 2005 soil and groundwater sampling event are:

1. Soil samples USTH19-SB01(3-4) and USTH19-SB02(3-4) were BQL for the contaminant of concern, benzo[a]pyrene, and therefore not present above the residential MSCC.

2. As of the December 2005 gauging and sampling event, there is no free phase product present in the monitoring wells sampled.

3. All groundwater laboratory results were BQL, with the exception of lead in one well (USTH19-MW09). Lead was detected at 6.40 µg/L, which is below the 2L GWQS of 15 µg/L.

The results of this monitoring event demonstrate that previously detected soil contaminants are no longer present, and groundwater contaminant levels have naturally attenuated to below the applicable North Carolina 2L GWQS. Based on an evaluation of previous reports and given the absence of soil and groundwater contaminant levels above the applicable standards (December 2005 monitoring/sampling event) a No Further Action (NFA) for the Building H-19 leaking underground storage tank site is appropriate and therefore is being requested by this report.

7.0 REFERENCES

AH Environmental Consultants, *Final Report, Wellhead Protection Plan – 2002 Update, Marine Corps Base, Camp Lejeune,* August 2002.

CATLIN Engineers and Scientists, *Leaking Underground Storage Tank Corrective Action Plan for Soil Remediation via Soil Excavation and Natural Attenuation of Dissolved Phase Groundwater Contamination at Building H-19, Marine Corps Base, Camp Lejeune, North Carolina*, July 22, 1998.

LAW Engineering and Environmental Services, Inc., *Draft Leaking Underground Storage Tank Site Assessment Report, UST H-19, Marine Corp Base Camp Lejeune, North Carolina*, May 1997.

LAW Engineering and Environmental Services, Inc., *Report of Natural Attenuation Monitoring, Building H-19, Marine Corp Base Camp Lejeune, North Carolina*, February 1998.

LAW Engineering and Environmental Services, Inc., *Second Natural Attenuation Monitoring Report, Building H-19, Hadnot Point, Marine Corp Base Camp Lejeune, North Carolina*, September 1998.

LAW Engineering and Environmental Services, Inc., *First Semi-Annual Groundwater MonitoringReport, Building H-19-1, H-19-2, and H-19-3, Marine Corp Base Camp Lejeune, North Carolina*, December 12, 2000.

LAW Engineering and Environmental Services, Inc., *Second Semi-Annual Groundwater Monitoring Report, Building H-19-1, H-19-2, and H-19-3, Marine Corp Base Camp Lejeune, North Carolina*, May 23, 2001.

MACTEC Engineering and Consulting, Inc., *DRAFT Site Assessment Report Former Underground Storage Tanks H-19-1, H-19-2, and H-19-3, Building H-19, Marine Corp Base Camp Lejeune, North Carolina*, December 23, 2003.

North Carolina Department of Environment and Natural Resources, Division of Waste Management, Underground Storage Tank Section, *Guidelines for Assessment and Corrective Action*, April 2001.

Peele's Pump and Tank Company, *Initial Site Assessment Report, UST Closure by Removal, (2) 15,000-gallon heating oil, Building H-19, Camp Lejeune, Jacksonville, North Carolina*, 1993.

Peele's Pump and Tank Company, *Initial Site Assessment Report, UST Closure by Removal, (1) 5,000-gallon waste oil, Building H-19, Camp Lejeune, Jacksonville, North Carolina*, 1993.

TABLES

TABLE 1
SUMMARY OF SOIL SAMPLING RESULTS

Date: December 2005
Incident Number and Name: 17633 H-19
Facility ID#: N/A
Analytical Method: EPA Method 8270

Sample ID	Contaminant of Concern →		Benzo[a]pyrene
	Date Collected	Sample Depth (ft BGS)	
USTH19SB01	12/1/2005	3-4	BQL
USTH19SB02	12/1/2005	3-4	BQL
Soil to groundwater MSCC (mg/kg)			0.091
Residential MSCC (mg/kg)			0.088
Industrial/Commercial MSCC (mg/kg)			0.78

- Quantitation limit for benzo[a]pyrene per laboratory data = 0.332 mg/kg
- MSCC = maximum soil contamination concentration
- ft. BGS = feet below ground surface
- All results in mg/kg
- mg/kg =milligrams per kilogram

TABLE 2
SUMMARY OF GROUNDWATER SAMPLING RESULTS

Date Date: December 2005
Incident Number and Name: 17633 H-19
Facility ID#: N/A

Analytical Method: EPA Method 625

Contaminant of Concern			All Compounds
Well ID	**Sample ID**	**Date Collected**	
USTH19-MW2	USTH19-MW2	11/30/2005	BQL
USTH19-MW3	USTH19-MW3	11/30/2005	BQL
USTH19-MW4	USTH19-MW4	11/30/2005	BQL
USTH19-MW5	USTH19-MW5	11/30/2005	BQL
USTH19-MW6	USTH19-MW6	11/30/2005	BQL
USTH19-MW7	USTH19-MW7	11/30/2005	BQL
USTH19-MW9	USTH19-MW9	11/30/2005	BQL
USTH19-MW10	USTH19-MW10	11/30/2005	BQL
USTH19-MW14	USTH19-MW14	11/30/2005	BQL
2L Standard (ug/l)			Varies
GCL (ug/l)			Varies

- See Quantitation Limits in laboratory reports Appendix B
- Results reported in ug/l
- ug/L =micrograms per liter
- GCL = gross contamination level

TABLE 3
SUMMARY OF GROUNDWATER SAMPLING RESULTS

Date Date: December 2005
Incident Number and Name: 17633 H-19
Facility ID#: N/A

Analytical Method: MADEP Method VPH/EPH

Contaminant of Concern →			C_5-C_8 Aliphatics	C_9-C_{12} Aliphatics	C_9-C_{10} Aromatics	C_9-C_{18} Aliphatics	C_{19}-C_{36} Aliphatics	C_{11}-C_{22} Aromatics
Well ID	**Sample ID**	**Date Collected**						
USTH19-MW2	USTH19-MW2	11/30/2005	<100	<100	<100	<100	<100	<100
USTH19-MW3	USTH19-MW3	11/30/2005	<100	<100	<100	<100	<100	<100
USTH19-MW4	USTH19-MW4	11/30/2005	<100	<100	<100	<100	<100	<100
USTH19-MW5	USTH19-MW5	11/30/2005	<100	<100	<100	<100	<100	<100
USTH19-MW6	USTH19-MW6	11/30/2005	<100	<100	<100	<100	<100	<100
USTH19-MW7	USTH19-MW7	11/30/2005	<100	<100	<100	<100	<100	<100
USTH19-MW9	USTH19-MW9	11/30/2005	<100	<100	<100	<100	<100	<100
USTH19-MW10	USTH19-MW10	11/30/2005	<100	<100	<100	<100	<100	<100
USTH19-MW14	USTH19-MW14	11/30/2005	<100	<100	<100	<100	<100	<100

- Method Detection limits shown in laboratory data in Appendix B
- Results reported in ug/l
- ug/L =micrograms per liter
- GCL = gross contamination level

TABLE 4
SUMMARY OF GROUNDWATER SAMPLING RESULTS

Date Date: December 2005
Incident Number and Name: 17633 H-19
Facility ID#: N/A

Analytical Method: MADEP Method VPH/EPH as compared to NCDENR 2L GWQS

Contaminant of Concern →			C_5-C_8 Aliphatics	C_9-C_{18} Aliphatics	C_9-C_{22} Aromatics	C_{19}-C_{36} Aliphatics
Well ID	**Sample ID**	**Date Collected**				
USTH19-MW2	USTH19-MW2	11/30/2005	<100	<200	<200	<100
USTH19-MW3	USTH19-MW3	11/30/2005	<100	<200	<200	<100
USTH19-MW4	USTH19-MW4	11/30/2005	<100	<200	<200	<100
USTH19-MW5	USTH19-MW5	11/30/2005	<100	<200	<200	<100
USTH19-MW6	USTH19-MW6	11/30/2005	<100	<200	<200	<100
USTH19-MW7	USTH19-MW7	11/30/2005	<100	<200	<200	<100
USTH19-MW9	USTH19-MW9	11/30/2005	<100	<200	<200	<100
USTH19-MW10	USTH19-MW10	11/30/2005	<100	<200	<200	<100
USTH19-MW14	USTH19-MW14	11/30/2005	<100	<200	<200	<100
2L Standard (ug/l)			420	4,200	210	1,000
GCL (ug/l)			NE	NE	NE	NE

- Method Detection limits shown in laboratory data in Appendix B
- Results reported in ug/l
- ug/L =micrograms per liter
- GCL = gross contamination level

TABLE 5
SUMMARY OF GROUNDWATER SAMPLING RESULTS

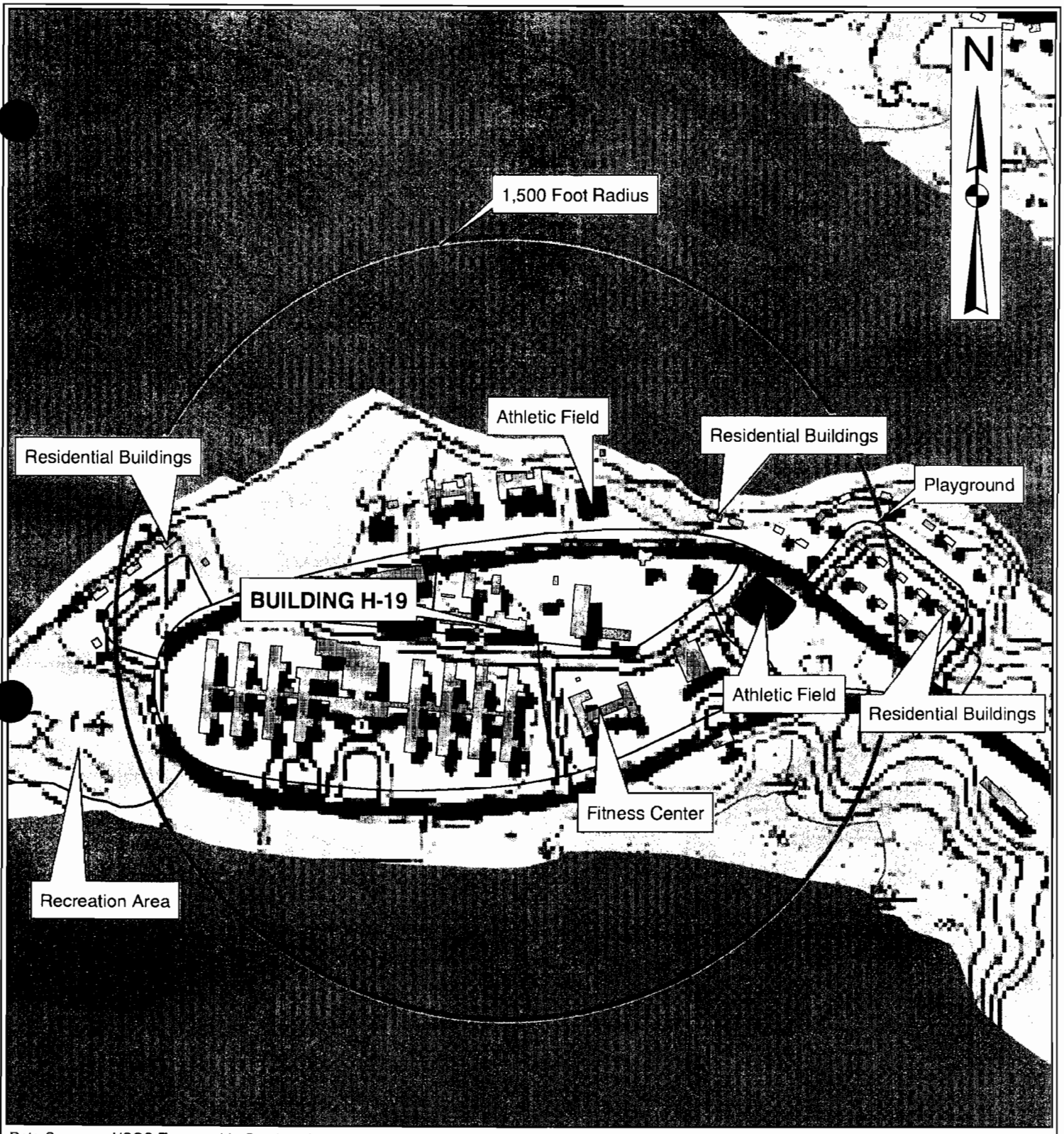
Date Date: December 2005
Incident Number and Name: 17633 H-19
Facility ID#: N/A

Analytical Method: EPA Method Metals by 3030C Prep

Contaminant of Concern →			Lead
Well ID	**Sample ID**	**Date Collected**	
USTH19-MW2	USTH19-MW2	11/30/2005	BQL
USTH19-MW3	USTH19-MW3	11/30/2005	BQL
USTH19-MW4	USTH19-MW4	11/30/2005	BQL
USTH19-MW5	USTH19-MW5	11/30/2005	BQL
USTH19-MW6	USTH19-MW6	11/30/2005	BQL
USTH19-MW7	USTH19-MW7	11/30/2005	BQL
USTH19-MW9	USTH19-MW9	11/30/2005	6.40
USTH19-MW10	USTH19-MW10	11/30/2005	BQL
USTH19-MW14	USTH19-MW14	11/30/2005	BQL
2L Standard (ug/l)			15
GCL (ug/l)			15,000

- Reporting limit of 5µg/l per laboratory data in Appendix B
- Results reported in ug/l
- ug/L =micrograms per liter
- GCL = gross contamination level

FIGURES



Data Sources: USGS Topographic Quadrangles, Jacksonville South (1952, Photorevised 1988) and Camp Lejeune (1952, Photorevised 1971). All GIS Data Supplied by MCB Camp Lejeune, Business and Logistics Support Department.

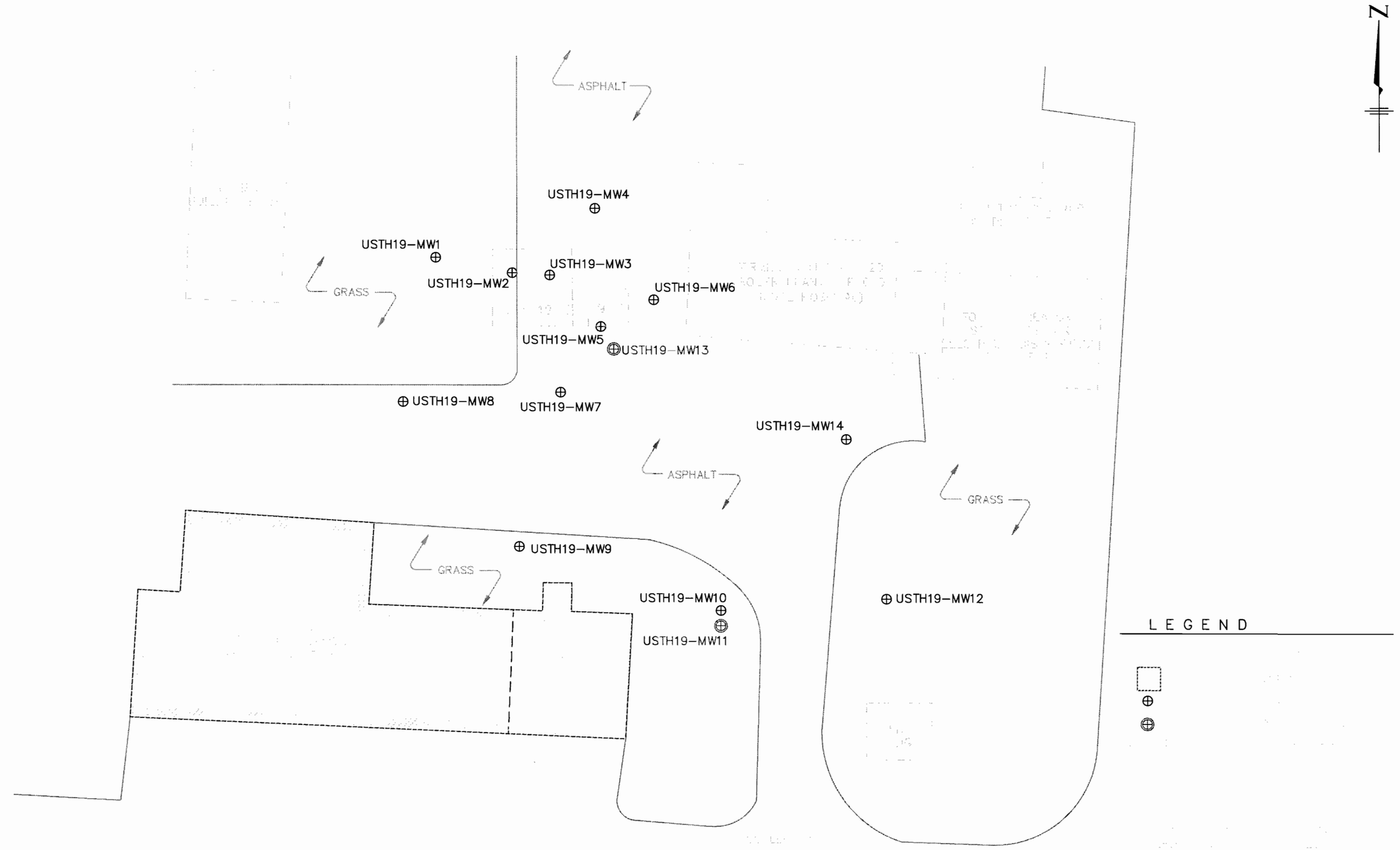
500 250 0 500 Feet

SCALE

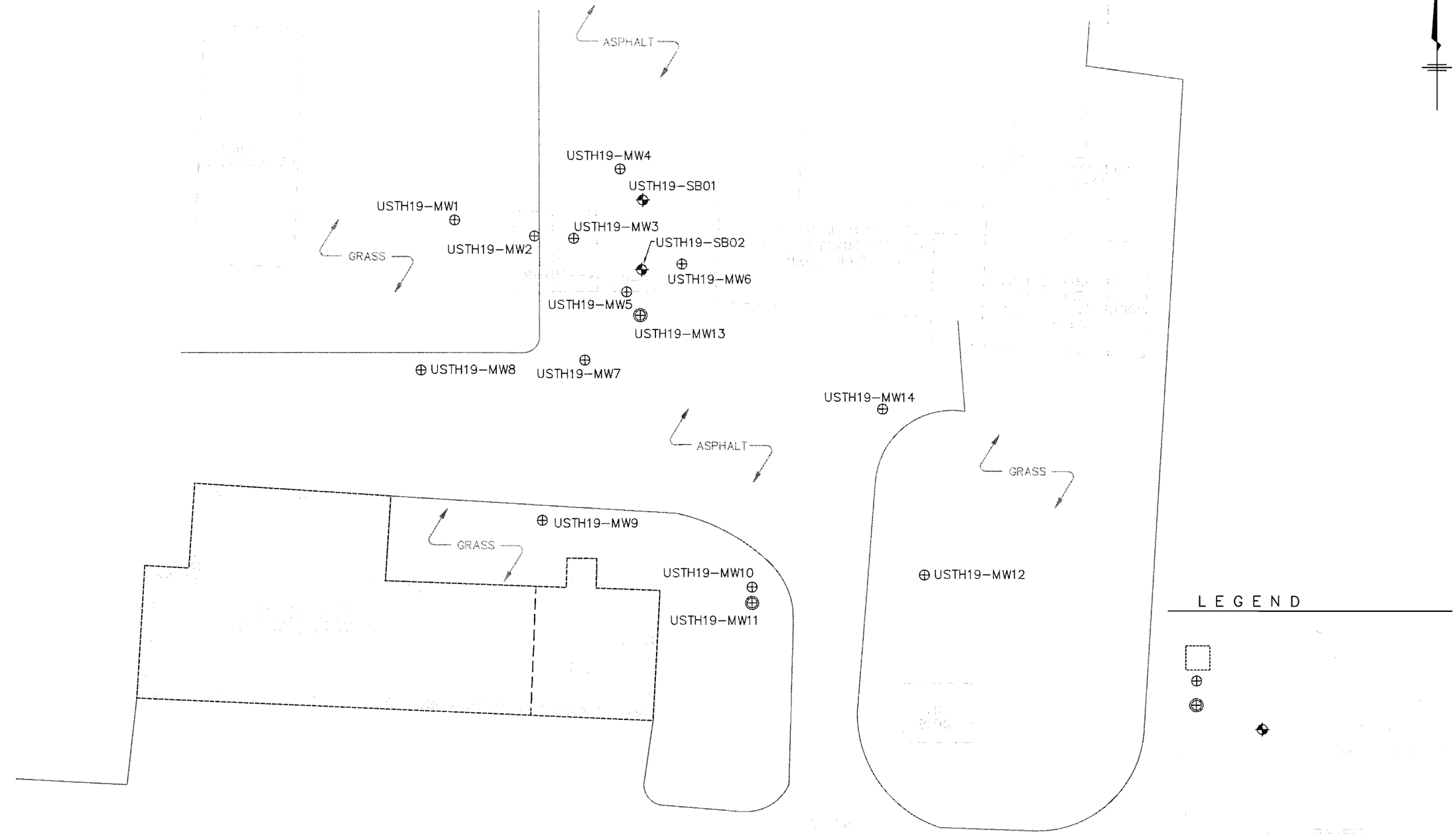
CATLIN ENGINEERS and SCIENTISTS

PROJECT	TITLE	FIGURE
ADDITIONAL SAMPLING REPORT BUILDING H-19 MARINE CORPS BASE CAMP LEJEUNE, NC	SITE VICINITY MAP WITH POTENTIAL RECEPTORS	1

JOB NO	DATE	SCALE	DRAWN BY	CHECKED BY
204-055	APR 2005	AS SHOWN	SAC	JKB



CATLIN	PROJECT: BUILDING H–19 ADDITIONAL SAMPLING REPORT MARINE CORPS BASE CAMP LEJEUNE, N.C.	TITLE: SITE MAP WITH MONITORING WELL LOCATIONS		FIGURE 2
	JOB NO.	DATE:	SCALE:	DRAWN BY: / CHECKED BY:



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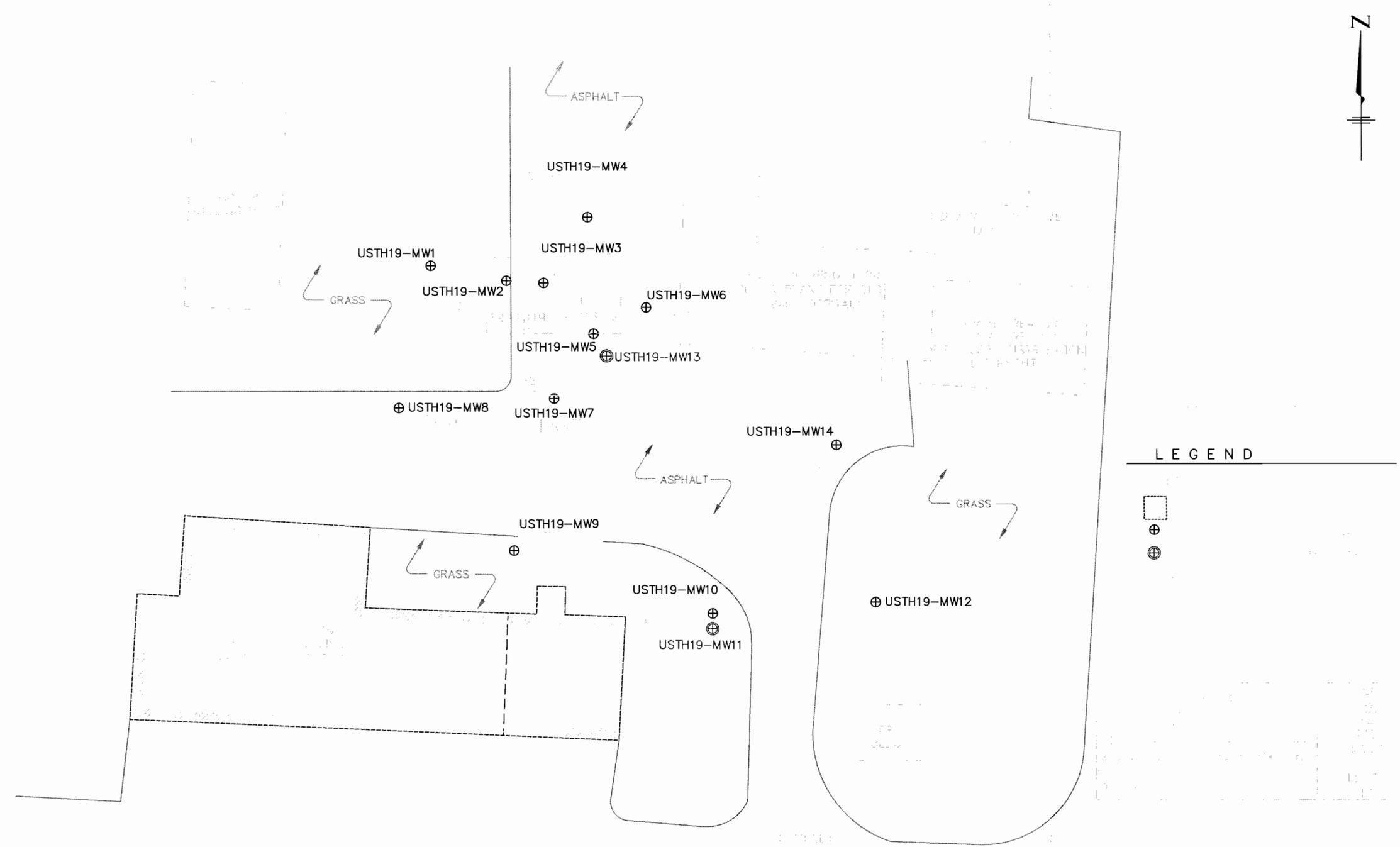
PROJECT: BUILDING H–19 ADDITIONAL SAMPLING REPORT MARINE CORPS BASE CAMP LEJEUNE, N.C.		TITLE: SITE MAP WITH DECEMBER 2005 SOIL SAMPLING LOCATIONS			FIGURE 3
JOB NO.	DATE:	SCALE:	DRAWN BY:	CHECKED BY:	



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PROJECT: BUILDING H–19 ADDITIONAL SAMPLING REPORT MARINE CORPS BASE CAMP LEJEUNE, N.C.		TITLE: SITE MAP WITH DECEMBER 2005 GROUNDWATER SAMPLING RESULTS		FIGURE 4
JOB NO.	DATE:	SCALE:	DRAWN BY:	CHECKED BY:

APPENDIX A

APRIL 2005 ADDITIONAL SAMPLING REPORT INFORMATION

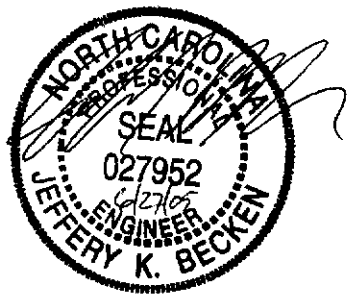
ADDITIONAL SAMPLING REPORT

BUILDING H-19

MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

APRIL 27, 2005

NCDENR Incident No.: 17633
Navy Contract No.: N62470-01-D-3009
Delivery Order No.: 0124
CATLIN Project No.: 204-055



Prepared by:

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TABLES

TABLE 1

SUMMARY OF KNOWN PREVIOUSLY SUBMITTED ENVIRONMENTAL REPORTS

BUILDING H-19
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

REPORT TITLE	REPORT AUTHOR	REPORT DATE
Initail Site Assessment Report, UST Closure by Removal, (2) 15,000-gallon heating oil, Building H-19	Peele's Pump and Tank Company	1993
Initail Site Assessment Report, UST Closure by Removal, (2) 5,000-gallon waste oil, Building H-19	Peele's Pump and Tank Company	1993
Five Plus Two Additional Wells Site Check, UST H-19	R.E. Wright	June 1995
Leaking UST Site Assessment Report (Draft), UST H-19	LAW	May 1, 1997
Report of Natural Attenuation Monitoring, Building H-19	LAW	February 1998
LUST Corrective Action Plan for Soil remediation via Soil excavation and Natural Attenuation of Dissolved Phase Groundwater Contamination, Building H-19	CATLIN	July 22, 1998
Second Natural Attenuation Monitoring Report, Building H-19, Hadnot Point	LAW	September 1998
First Semi-Annual Groundwater Monitoring Report, Building H-19-1, H-19-2, and H-19-3	LAW	December 12, 2002
Second Natural Semi-Annual Monitoring Report, Building H-19-1, H-19-2, and H-19-3	LAW	May 23, 2001
Site Assessment Report, Former USTs H-19-1, H-19-2, and H-19-3	MACTEC	December 23, 2003

TABLE 2 SUMMARY OF SOIL LABORATORY RESULTS

Date: November 2004 Incident Number and Name: 17633 - H-19 Facility ID#: N/A

Analytical Method: EPA Method 8270

Sample ID	Date Collected	Sample Depth (ft. BGS)	Benzo[a]pyrene	Benzo[b]fluoranthene	All Other Target Analytes
Contaminant of Concern →					
Residential MSCC (mg/kg)			0.088	0.88	Varies
Industrial/Commercial MSCC (mg/kg)			0.78	8	Varies
Soil to Groundwater MSCC (mg/kg)			0.091	1	Varies
USTH19-SB01(3-4)	11/29/2004	3-4	0.469	0.539	BQL
USTH19-SB02(3-4)	11/29/2004	3-4	0.488	0.588	BQL

All results in mg/kg.

ft. BGS = feet below ground surface

BQL = Below Quantitation Limit. Refer to laboratory report for a complete list of analytical and quantitation limits.

MSCC = Maximum Soil Contaminant Concentration

Shaded concentrations exceed lowest corresponding MSCC.

TABLE 3 SUMMARY OF SOIL LABORATORY RESULTS

Date: November 2004 Incident Number and Name: 17633 - H-19 Facility ID#: N/A

Analytical Method: EPA Method 8260

Sample ID	Date Collected	Sample Depth (ft. BGS)	All Target Analytes
Contaminant of Concern →			
Residential MSCC (mg/kg)			Varies
Industrial/Commercial MSCC (mg/kg)			Varies
Soil to Groundwater MSCC (mg/kg)			Varies
USTH19-SB01(3-4)	11/29/2004	3-4	BQL
USTH19-SB02(3-4)	11/29/2004	3-4	BQL

All results in mg/kg.

ft. BGS = feet below ground surface

BQL = Below Quantitation Limit. Refer to laboratory report for a complete list of analytes and quantitation limits.

MSCC = Maximum Soil Contaminant Concentration

TABLE 4 SUMMARY OF SOIL LABORATORY RESULTS

Date: November 2004 Incident Number and Name: 17633 - H-19 Facility ID#: N/A

Analytical Method: MADEP Method VPH/EPH

Sample ID	Contaminant of Concern → Date Collected	Sample Depth (ft. BGS)	C5-C8 Aliphatics	C9-C12 Aliphatics	C9-C10 Aromatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C11-C22 Aromatics
USTH19-SB01(3-4)	11/29/2004	3-4	<10	<10	<10	18	22	<10
USTH19-SB02(3-4)	11/29/2004	3-4	<10	<10	<10	<10	<10	<10
USTH19-SB02(3-4)Dup	11/29/2004	3-4	<10	<10	<10	NA	NA	NA

All results in mg/kg.
ft. BGS = feet below ground surface
NA = Not Analyzed
DUP = Duplicate Sample

TABLE 5 SUMMARY OF SOIL LABORATORY RESULTS

Date: November 2004 Incident Number and Name: 17633 - H-19 Facility ID#: N/A

Analytical Method: MADEP Method VPH/EPH AS COMPARED TO NCDENR MSCCs

Sample ID	Date Collected	Sample Depth (ft. BGS)	C5-C8 Aliphatics	C9-C18 Aliphatics	C9-C22 Aromatics	C19-C36 Aliphatics
Contaminant of Concern →						
Residential MSCC (mg/kg)			939	9,386	469	93,860
Industrial/Commercial MSCC (mg/kg)			24,528	245,280	12,264	#
Soil to Groundwater MSCC (mg/kg)			72	3,255	34	##
USTH19-SB01(3-4)	11/29/2004	3-4	<10	<28	<20	22
USTH19-SB02(3-4)	11/29/2004	3-4	<10	<20	<20	<10

All results in mg/kg.
ft. BGS = feet below ground surface
= Health-Based Level (>100%)
= Considered Immobile
MSCC = Maximum Soil Contaminant Concentration

TABLE 6 SUMMARY OF GROUNDWATER LABORATORY RESULTS

Date: November 2004 Incident Number and Name: 17633 - H-19 Facility ID#: N/A

Analytical Method: EPA Method 625

Well ID	Contaminant of Concern → Sample ID	Date Collected	Bis(2-ethylhexyl)phthalate	Fluoranthene	Fluorene	Naphthalene
GCL (ug/L)			3,000	280	950	15,500
2L GWQS (ug/L)			3	280	280	21
USTH19-MW01	USTH19-MW01	11/24/2004	<10	<10	<10	<10
USTH19-MW02	USTH19-MW02	11/24/2004	<10	<10	<10	<10
USTH19-MW03	USTH19-MW03	11/24/2004	<10	<10	<10	<10
USTH19-MW04	USTH19-MW04	11/24/2004	<10	<10	<10	<10
USTH19-MW05	USTH19-MW05	11/24/2004	4.40J	<10	<10	<10
USTH19-MW06	USTH19-MW06	11/24/2004	1.40J	<10	<10	<10
USTH19-MW07	USTH19-MW07	11/24/2004	<10	<10	<10	<10
USTH19-MW09	USTH19-MW09	11/24/2004	24.8	1.60J	<10	<10
USTH19-MW10	USTH19-MW10	11/24/2004	2.40J	<10	1.90J	3.20J
USTH19-MW11	USTH19-MW11	11/24/2004	2.10J	<10	<10	<10
USTH19-MW12	USTH19-MW12	11/24/2004	2.00J	<10	<10	<10
USTH19-MW13	USTH19-MW13	11/24/2004	7.10J	<10	<10	<10
USTH19-MW14	USTH19-MW14	11/24/2004	2.20J	<10	<10	<10

J = Estimated concentration, below calibration range and above MDL.

NE = None Esteblished

All results in µg/L

GCL = Gross Contaminant Level

2LGWQS = 2L Groundwater Quality Standards

Shaded concentrations exceeded the corresponding 2LGWQS.

TABLE 7 SUMMARY OF GROUNDWATER LABORATORY RESULTS

Date: November 2004 Incident Number and Name:17633 - H-19 Facility ID#: N/A

Analytical Method: EPA Method 6210D

Well ID	Contaminant of Concern → Sample ID	Date Collected	n-Butylbenzene	sec-Butylbenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	Isopropylbenzene	Naphthalene	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Total Xylene	All Other Analytes
GCL (ug/L)			6,900	8,500	39,500	NE	25,000	15,500	NE	28,500	25,000	87,500	Varies
2L GWQS (ug/L)			70	70	75	1,400	70	21	2,100	350	350	530	Varies
USTH19-MW01	USTH19-MW01	11/24/2004	<0.5	<0.5	<0.5	5.25	<0.5	<0.5	10.6	<0.5	<0.5	<1.5	BQL
USTH19-MW02	USTH19-MW02	11/24/2004	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.5	BQL
USTH19-MW03	USTH19-MW03	11/24/2004	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.5	BQL
USTH19-MW04	USTH19-MW04	11/24/2004	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.5	BQL
USTH19-MW05	USTH19-MW05	11/24/2004	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.5	BQL
USTH19-MW06	USTH19-MW06	11/24/2004	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.5	BQL
USTH19-MW07	USTH19-MW07	11/24/2004	0.580	1.69	<0.5	<5	1.04	<0.5	<0.5	<0.5	<0.5	<1.5	BQL
USTH19-MW09	USTH19-MW09	11/24/2004	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.5	BQL
USTH19-MW10	USTH19-MW10	11/24/2004	<0.5	0.940	<0.5	<5	<0.5	4.98	<0.5	0.770	0.670	<1.650	BQL
USTH19-MW11	USTH19-MW11	11/24/2004	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.5	BQL
USTH19-MW12	USTH19-MW12	11/24/2004	<0.5	<0.5	<0.5	<5	<0.5	<0.5	2.53	<0.5	<0.5	<1.5	BQL
USTH19-MW13	USTH19-MW13	11/24/2004	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.5	BQL
USTH19-MW14	USTH19-MW14	11/24/2004	<0.5	<0.5	0.710	<5	<0.5	<0.5	3.79	<0.5	<0.5	<1.5	BQL

BQL = Below Quatitation Limit

NE = None Established

GCL = Gross Contaminant Level

2LGWQS = 2L Groundwater Quality Standards

All results in µg/L

TABLE 8 SUMMARY OF GROUNDWATER LABORATORY RESULTS

Date: November 2004 Incident Number and Name: 17633 - H-19 Facility ID#: N/A

Analytical Method: MADEP Method VPH/EPH

Well ID	Contaminant of Concern → Sample ID	Date Collected	C5-C8 Aliphatics	C9-C12 Aliphatics	C9-C10 Aromatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C11-C22 Aromatics
USTH19-MW01	USTH19-MW01	11/24/2004	<100	<100	<100	<100	<100	<100
USTH19-MW02	USTH19-MW02	11/24/2004	<100	<100	<100	<100	<100	<100
USTH19-MW03	USTH19-MW03	11/24/2004	<100	<100	<100	<100	<100	<100
USTH19-MW04	USTH19-MW04	11/24/2004	<100	<100	<100	<100	<100	<100
USTH19-MW05	USTH19-MW05	11/24/2004	<100	<100	<100	<100	<100	<100
USTH19-MW06	USTH19-MW06	11/24/2004	<100	<100	<100	920	110	240
USTH19-MW07	USTH19-MW07	11/24/2004	<100	<100	<100	<100	<100	<100
USTH19-MW09	USTH19-MW09	11/24/2004	<100	<100	<100	<100	<100	<100
USTH19-MW10	USTH19-MW10	11/24/2004	<100	<100	<100	170	<100	120
USTH19-MW11	USTH19-MW11	11/24/2004	<100	<100	<100	<100	<100	<100
USTH19-MW12	USTH19-MW12	11/24/2004	<100	<100	<100	<100	<100	<100
USTH19-MW13	USTH19-MW13	11/24/2004	<100	<100	<100	<100	<100	<100
USTH19-MW14	USTH19-MW14	11/24/2004	<100	<100	<100	<100	<100	<100
USTH19-MW14 DUP	USTH19-MW14 DUP	11/24/2004	<100	<100	<100	NA	NA	NA

NA = Not Analyzed

All results in µg/L

TABLE 9 SUMMARY OF GROUNDWATER LABORATORY RESULTS

Date: November 2004 Incident Number and Name: 17633 - H-19 Facility ID#: N/A

Analytical Method: MADEP Method VPH/EPH AS COMPARED TO NCDENR 2L GWQS

Well ID	Contaminant of Concern → Sample ID	Date Collected	C5-C8 Aliphatics	C9-C18 Aliphatics	C9-C22 Aromatics	C19-C36 Aliphatics
GCL (ug/L) 2L GWQS (ug/L)			NE 420	NE 4,200	NE 210	NE 42,000
USTH19-MW01	USTH19-MW01	11/24/2004	<100	<200	<200	<100
USTH19-MW02	USTH19-MW02	11/24/2004	<100	<200	<200	<100
USTH19-MW03	USTH19-MW03	11/24/2004	<100	<200	<200	<100
USTH19-MW04	USTH19-MW04	11/24/2004	<100	<200	<200	<100
USTH19-MW05	USTH19-MW05	11/24/2004	<100	<200	<200	<100
USTH19-MW06	USTH19-MW06	11/24/2004	<100	<1020	<340	110
USTH19-MW07	USTH19-MW07	11/24/2004	<100	<200	<200	<100
USTH19-MW09	USTH19-MW09	11/24/2004	<100	<200	<200	<100
USTH19-MW10	USTH19-MW10	11/24/2004	<100	<270	<220	<100
USTH19-MW11	USTH19-MW11	11/24/2004	<100	<200	<200	<100
USTH19-MW12	USTH19-MW12	11/24/2004	<100	<200	<200	<100
USTH19-MW13	USTH19-MW13	11/24/2004	<100	<200	<200	<100
USTH19-MW14	USTH19-MW14	11/24/2004	<100	<200	<200	<100

NE = None Established

All results in µg/L

GCL = Gross Contaminant Level

2LGWQS = 2L Groundwater Quality Standards

Shaded concentrations exceeded the corresponding 2LGWQS.

TABLE 10 SUMMARY OF GROUNDWATER LABORATORY RESULTS

Date: November 2004 Incident Number and Name: 17633 - Building H-19 Facility ID#: N/A

Analytical Method: EPA Method METALs by 3030C prep

Well ID	Contaminant of Concern → Sample ID	Date Collected	Chromium	Lead
GCL (ug/L)			50,000	15,000
2L GWQS (ug/L)			50	15
USTH19-MW01	USTH19-MW01	11/24/2004	<10.0	<10.0
USTH19-MW02	USTH19-MW02	11/24/2004	19.1	64.4
USTH19-MW03	USTH19-MW03	11/24/2004	<10.0	32.6
USTH19-MW04	USTH19-MW04	11/24/2004	<10.0	22.8
USTH19-MW05	USTH19-MW05	11/24/2004	14.4	31.2
USTH19-MW06	USTH19-MW06	11/24/2004	<10.0	<10.0
USTH19-MW07	USTH19-MW07	11/24/2004	23.4	22.1
USTH19-MW09	USTH19-MW09	11/24/2004	14.1	53.0
USTH19-MW10	USTH19-MW10	11/24/2004	<10.0	<10.0
USTH19-MW11	USTH19-MW11	11/24/2004	<10.0	<10.0
USTH19-MW12	USTH19-MW12	11/24/2004	<10.0	10.1
USTH19-MW13	USTH19-MW13	11/24/2004	34.4	<10.0
USTH19-MW14	USTH19-MW14	11/24/2004	23.7	21.3

All results in µg/L

GCL = Gross Contaminant Level

2LGWQS = 2L Groundwater Quality Standards

Shaded concentrations exceeded the corresponding 2LGWQS.

Note: Samples were not collected with low flow sampling techniques, and thus may have been influenced by suspended solids within the samples.

APPENDIX D

RISK CLASSIFICATION AND LAND USE FORM

A. RISK CHARACTERIZATION

Submit the following questionnaire in its entirety. Answer all questions completely. Attach additional pages as needed to fully explain answers. Base answers/explanations on information known or required to be obtained during the Limited Site Assessment.

NOTE: *Source area means point of release from a UST system.*

Limited Site Assessment Risk Classification and Land Use Form

Part I - Groundwater/Surface Water/Vapor Impacts
High Risk

1. *Has the release contaminated any water supply well including any used for non-drinking purposes?* YES **NO**

   No, according to water supply well data provided by MCB Camp Lejeune, there are no water supply wells located within the 1,500 feet of the subject site.

2. *Is a water supply well used for drinking water located within 1,000 feet of the source area of the discharge or release?* YES **NO**

   According to water supply well data provided by MCB Camp Lejeune, there are no water supply wells located within 1,000 feet of the subject site.

3. *Is a water supply well not used for drinking water (e.g., irrigation, washing cars, industrial cooling water, filling swimming pools) located within 250 feet of the source area of the release?* YES **NO**

   No wells were located within 250 feet of the source area of the release.

4. *Does groundwater within 500 feet of the source area of the release have the potential for future use (there is no other source of water supply other than the groundwater)?* YES **NO**

   No, there are an adequate number of locations for additional water supply wells to be installed on other portions of the base, which are used for water supply.

5. *Do vapors from the release pose a threat of explosion because of accumulation of the vapors in a confined space or pose any other serious threat to public health, public safety or the environment?* YES **NO**
If YES describe.

There is no evidence to suggest an accumulation of vapors and no evidence of accumulation has been reported. The Building H-19 project area is currently a parking lot and/or grass area. Manholes were observed around the general vicinity of the project site, however no manholes were observed in the immediate area of the plume.

6. *Are there any other factors that would cause the discharge or release to pose an imminent danger to public health, public safety, or the environment?* YES **NO**
If YES describe.

No. Data collected during this investigation does not provide evidence to suggest other factors that would cause an imminent danger to public health, public safety or the environment.

Intermediate Risk

7. *Is a surface water body located within 500 feet of the source area of the discharge or release?* YES **NO**
*If **YES**, does the maximum groundwater contaminant concentration exceed the surface water quality standards and criteria found in 15A NCAC 2B.0200 by a factor of 10?* YES **NO**

No. No surface water bodies have been located within 500 feet of the subject site. The closest surface water body is the New River, located around the subject site (site is on a peninsula). The closest distance is approximately 625 feet north of the site.

8. *Is the source area of the discharge or release located within an approved or planned wellhead protection area as defined in 42 USC 300h-7(e)?* YES **NO**
If YES describe.

Wellhead protection areas defined by 42 USC 300h-7(e) have not, as of this report, been designed by NCDENR for MCB, Camp Lejeune. However, MCB Camp Lejeune has identified well protection areas on the base. Based on the most recent Wellhead Protection Plan Update (2002) performed for MCB Camp Lejeune, the site is not located within a potential wellhead protection area.

9. *Is the release located in the Coastal Plain physiographic region as designated on a map entitled "Geology of North Carolina" published by the Department in 1985?* **YES** NO

If YES, is the source area of the release located in an area in which there is recharge to an unconfined or semi-confined deeper aquifer that is being used or may be used as a source of drinking water? YES **NO**
If YES describe.

No, recharge to the lower portions of the aquifer does not appear to be significant in the area. The November 2004 groundwater samples collected from 40 feet deep Type III monitoring wells at the site were below the laboratory quantitation limits for all parameters analyzed.

10. *Do the levels of groundwater contamination for any contaminant exceed the gross contamination levels established by the Department?* YES **NO**

Contaminant levels from the November 2004 sampling event are below the currently established Gross Contaminant Levels (GCLs). However, a GCL for hydrocarbon fraction C_9-C_{22} Aromatics has not been established, which was observed in groundwater samples obtained in November 2004 from monitoring wells USTH19-MW06 and USTH19-MW10.

Part II - Land Use

Property Containing Source Area of Release

The questions below pertain to the property containing the source area of the release.

1. *Does the property contain one or more primary or secondary residences (permanent or temporary)?* YES **NO**
Describe.

No. The subject site does not contain any residences.

2. *Does the property contain a school, daycare center, hospital, playground, park, recreation area, church, nursing home, or other place of public assembly?* YES **NO**
Describe.
No. The property does not contain any of the above referenced public assembly places.

3. *Does the property contain a commercial (e.g., retail, warehouse, office/business space, etc.) or industrial (e.g., manufacturing, utilities, industrial research and development, chemical/petroleum bulk storage, etc.) enterprise, an inactive commercial or industrial enterprise, or is the land undeveloped?* **YES** NO
Describe.

Yes, the property contains a warehouse and military support building.

4. *Do children visit the property?* **YES** NO
Explain.

Yes, the site is accessible to the public and is not restricted by fences or security personnel.

Is access to the property reliably restricted consistent with its use (e.g., by fences, security personnel or both)? YES **NO**
Explain.

No, as mentioned above, the site is accessible to the public.

5. *Do pavement, buildings, or other structures cap the contaminated soil?* **YES** NO
Describe.

The areas of the release are covered with asphalt and localized grass areas. However, contaminated soil does not appear to remain on-site based on the November 2004 sampling event.

If YES, what mechanisms are in place or can be put into place to ensure that the contaminated soil will remain capped in the foreseeable future?

As necessary, appropriate land use restrictions will insure that any potentially impacted soils will remain capped in place. However, no evidence suggests the continued presence of petroleum impacted soils.

6. *What is the zoning status of the property?*

The MCB Camp Lejeune is not subject to local or county zoning requirements. The surrounding properties have been developed for military support purposes.

7. *Is the use of the property likely to change in the next 20 years?* YES **NO**
Explain.

No, the designated use of military property is not likely to change within the foreseeable future.

Property Surrounding Source Area of Release
The questions below pertain to the area within 1500 feet of the source area of the release (excludes property containing source area of the release):

1. *What is the distance from the source area of the release to the **nearest** primary or secondary residence (permanent or temporary)?*

   The closest residence is approximately 825 feet from the subject site.

2. *What is the distance from the source area of the release to the **nearest** school, daycare center, hospital, playground, park, recreation area, church, nursing home or other place of public assembly?*

   The Fitness Center is located approximately 400 feet from the subject site.

3. *What is the zoning status of properties in the surrounding area?*

   As previously mentioned, the MCB Camp Lejeune is not subject to local or county zoning requirements.

4. *Briefly characterize the use and activities of the land in the surrounding area.*

   The land surrounding the subject site is primarily used for military support and a residential area for officers.

B. RECEPTOR INFORMATION

1. Water Supply Wells
(See Figure 1)

Physical reconnaissance and review of the Wellhead Protection Plan – 2002 Update prepared by AH Environmental indicated that there is no water supply well located within 1,500 feet of the subject site.

2. Public Water Supplies

Are public water supplies available within 1,500 feet of the source area of the release? **YES** NO

If YES, where is the location of the nearest public water lines and the source(s) of the public water supply (indicate on map). Describe.

Public water is provided to buildings within 1,500 feet of the subject site by water mains which carry treated potable water. Potable water is supplied to the site and surrounding areas by the MCB water supply system. Potable water for Camp Lejeune is obtained from various water treatment facilities throughout the base. Groundwater obtained from the Castle Hayne Aquifer is the raw water source for the treatment facilities.

3. Surface Water

Identify all surface water bodies (e.g., ditch, pond, stream, lake, river) within 1,500 feet of the source area of the release. This information must be shown on the USGS topographic map.

As previously noted, the subject site is located on a peninsula within the New River which is located, at the closest point, at a distance of approximately 625 feet North of the site.

4. Wellhead Protection Areas

Identify all planned or approved wellhead protection areas (e.g., ditch, pond, stream, lake, river) within 1,500 feet of the source area of the release. This information must be shown on the USGS topographic map. Wellhead protection areas are defined in 42 USC 300h-7(e).

According to the Wellhead Protection Plan – 2002 Update prepared by AH Environmental Consultants; the site is not located within a wellhead protection area.

5. Deep Aquifers in the Coastal Plain Physiographic Region

(refer to page 19 of the guidelines) NOTE: This requirement only pertains to releases in the Coastal Plain physiographic region as designated on a map entitled "Geology of North Carolina" published by the Department in 1985.

As identified in the Geologic Map of North Carolina (North Carolina Department of Natural Resources and Community Development 1985), the subject site lies within the Coastal Plain physiographic province.

To some degree seven of the ten aquifers identified to date in the North Carolina Coastal Plain are typically present beneath portions of the MCB. In order of

increasing depth, these aquifers include the Surficial, Castle Hayne, Beaufort, Peedee, Black Creek, and upper and lower Cape Fear aquifers.

Aquifers below the surficial aquifer in the area typically include the Castle Hayne Aquifer, the Beaufort Aquifer, and the Peedee Aquifer, in order of increasing depth. Both the Beaufort and Peedee Aquifers contain saltwater in portions of the MCB and are not generally used for water supply. The Castle Hayne Aquifer contains freshwater and is the principal aquifer used in the area for water supply.

6. Subsurface Structures

Numerous underground utilities are present throughout the site. These utilities are believed to be located above the shallow groundwater table and are not considered potential receptors.

7. Property Owners and Occupants

The subject site is owned and operated by the Commanding General – Marine Corps Base, Camp Lejeune.

APPENDIX B

LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTATION FROM DECEMBER 2005 SAMPLING EVENT

Mr. Mike Cree
Osage of Virginia
4800A Colley Avenue
Norfolk VA 23508-2037

Report Number: G649-4

Client Project: H-19

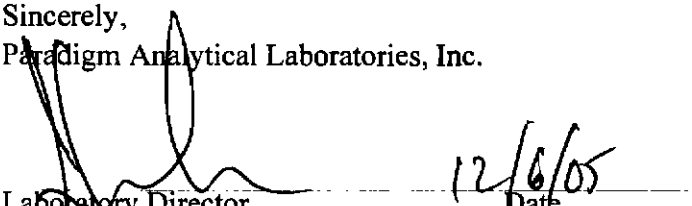
Dear Mr. Cree:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requcsted.

If there are any questions about the report or the services performed during this project, please call Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
Paradigm Analytical Laboratories, Inc.



12/6/05

Laboratory Director — Date
J. Patrick Weaver

Results for Semivolatiles by GCMS 625

Client Sample ID: USTH19-MW2
Client Project ID: H-19
Lab Sample ID: G649-4-1F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 13:55
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Acenaphthene	BQL	10.0	1	12/3/2005
Acenaphthylene	BQL	10.0	1	12/3/2005
Anthracene	BQL	10.0	1	12/3/2005
Benzo[a]anthracene	BQL	10.0	1	12/3/2005
Benzo[a]pyrene	BQL	10.0	1	12/3/2005
Benzo[b]fluoranthene	BQL	10.0	1	12/3/2005
Benzo[g,h,i]perylene	BQL	10.0	1	12/3/2005
Benzo[k]fluoranthene	BQL	10.0	1	12/3/2005
Bis(2-chloroethoxy)methane	BQL	10.0	1	12/3/2005
Bis(2-chloroethyl)ether	BQL	10.0	1	12/3/2005
Bis(2-chloroisopropyl)ether	BQL	10.0	1	12/3/2005
Bis(2-ethylhexyl)phthalate	BQL	10.0	1	12/3/2005
4-bromophenyl phenyl ether	BQL	10.0	1	12/3/2005
Butylbenzylphthalate	BQL	10.0	1	12/3/2005
2-Chloronaphthalene	BQL	10.0	1	12/3/2005
2-Chlorophenol	BQL	10.0	1	12/3/2005
4-Chloro-3-methylphenol	BQL	10.0	1	12/3/2005
4-Chlorophenyl phenyl ether	BQL	10.0	1	12/3/2005
Chrysene	BQL	10.0	1	12/3/2005
Dibenzo[a,h]anthracene	BQL	10.0	1	12/3/2005
Di-n-Butylphthalate	BQL	10.0	1	12/3/2005
1,2-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,3-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,4-Dichlorobenzene	BQL	10.0	1	12/3/2005
3,3'-Dichlorobenzidine	BQL	20.0	1	12/3/2005
2,4-Dichlorophenol	BQL	10.0	1	12/3/2005
Diethylphthalate	BQL	10.0	1	12/3/2005
Dimethylphthalate	BQL	10.0	1	12/3/2005
2,4-Dimethylphenol	BQL	10.0	1	12/3/2005
Di-n-octylphthalate	BQL	10.0	1	12/3/2005
4,6-Dinitro-2-methylphenol	BQL	50.0	1	12/3/2005
2,4-Dinitrophenol	BQL	50.0	1	12/3/2005
2,4-Dinitrotoluene	BQL	10.0	1	12/3/2005
2,6-Dinitrotoluene	BQL	10.0	1	12/3/2005
Diphenylamine *	BQL	10.0	1	12/3/2005
Fluoranthene	BQL	10.0	1	12/3/2005
Fluorene	BQL	10.0	1	12/3/2005
Hexachlorobenzene	BQL	10.0	1	12/3/2005
Hexachlorobutadiene	BQL	10.0	1	12/3/2005
Hexachlorocyclopentadiene	BQL	20.0	1	12/3/2005
Hexachloroethane	BQL	10.0	1	12/3/2005
Indeno(1,2,3-c,d)pyrene	BQL	10.0	1	12/3/2005

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW2
Client Project ID: H-19
Lab Sample ID: G649-4-1F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 13:55
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Isophorone	BQL	10.0	1	12/3/2005
Naphthalene	BQL	10.0	1	12/3/2005
Nitrobenzene	BQL	10.0	1	12/3/2005
2-Nitrophenol	BQL	10.0	1	12/3/2005
4-Nitrophenol	BQL	50.0	1	12/3/2005
N-Nitrosodi-n-propylamine	BQL	10.0	1	12/3/2005
Pentachlorophenol	BQL	50.0	1	12/3/2005
Phenanthrene	BQL	10.0	1	12/3/2005
Phenol	BQL	10.0	1	12/3/2005
Pyrene	BQL	10.0	1	12/3/2005
1,2,4-Trichlorobenzene	BQL	10.0	1	12/3/2005
2,4,6-Trichlorophenol	BQL	10.0	1	12/3/2005

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.4	74
2-Fluorophenol	10	7.4	74
Nitrobenzene-d5	10	7.4	74
Phenol-d6	10	7.6	76
2,4,6-Tribromophenol	10	7.4	74
4-Terphenyl-d14	10	10.1	101

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: _____

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW3
Client Project ID: H-19
Lab Sample ID: G649-4-2F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 14:50
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Acenaphthene	BQL	10.0	1	12/3/2005
Acenaphthylene	BQL	10.0	1	12/3/2005
Anthracene	BQL	10.0	1	12/3/2005
Benzo[a]anthracene	BQL	10.0	1	12/3/2005
Benzo[a]pyrene	BQL	10.0	1	12/3/2005
Benzo[b]fluoranthene	BQL	10.0	1	12/3/2005
Benzo[g,h,i]perylene	BQL	10.0	1	12/3/2005
Benzo[k]fluoranthene	BQL	10.0	1	12/3/2005
Bis(2-chloroethoxy)methane	BQL	10.0	1	12/3/2005
Bis(2-chloroethyl)ether	BQL	10.0	1	12/3/2005
Bis(2-chloroisopropyl)ether	BQL	10.0	1	12/3/2005
Bis(2-ethylhexyl)phthalate	BQL	10.0	1	12/3/2005
4-bromophenyl phenyl ether	BQL	10.0	1	12/3/2005
Butylbenzylphthalate	BQL	10.0	1	12/3/2005
2-Chloronaphthalene	BQL	10.0	1	12/3/2005
2-Chlorophenol	BQL	10.0	1	12/3/2005
4-Chloro-3-methylphenol	BQL	10.0	1	12/3/2005
4-Chlorophenyl phenyl ether	BQL	10.0	1	12/3/2005
Chrysene	BQL	10.0	1	12/3/2005
Dibenzo[a,h]anthracene	BQL	10.0	1	12/3/2005
Di-n-Butylphthalate	BQL	10.0	1	12/3/2005
1,2-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,3-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,4-Dichlorobenzene	BQL	10.0	1	12/3/2005
3,3'-Dichlorobenzidine	BQL	20.0	1	12/3/2005
2,4-Dichlorophenol	BQL	10.0	1	12/3/2005
Diethylphthalate	BQL	10.0	1	12/3/2005
Dimethylphthalate	BQL	10.0	1	12/3/2005
2,4-Dimethylphenol	BQL	10.0	1	12/3/2005
Di-n-octylphthalate	BQL	10.0	1	12/3/2005
4,6-Dinitro-2-methylphenol	BQL	50.0	1	12/3/2005
2,4-Dinitrophenol	BQL	50.0	1	12/3/2005
2,4-Dinitrotoluene	BQL	10.0	1	12/3/2005
2,6-Dinitrotoluene	BQL	10.0	1	12/3/2005
Diphenylamine *	BQL	10.0	1	12/3/2005
Fluoranthene	BQL	10.0	1	12/3/2005
Fluorene	BQL	10.0	1	12/3/2005
Hexachlorobenzene	BQL	10.0	1	12/3/2005
Hexachlorobutadiene	BQL	10.0	1	12/3/2005
Hexachlorocyclopentadiene	BQL	20.0	1	12/3/2005
Hexachloroethane	BQL	10.0	1	12/3/2005
Indeno(1,2,3-c,d)pyrene	BQL	10.0	1	12/3/2005

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW3
Client Project ID: H-19
Lab Sample ID: G649-4-2F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 14:50
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Isophorone	BQL	10.0	1	12/3/2005
Naphthalene	BQL	10.0	1	12/3/2005
Nitrobenzene	BQL	10.0	1	12/3/2005
2-Nitrophenol	BQL	10.0	1	12/3/2005
4-Nitrophenol	BQL	50.0	1	12/3/2005
N-Nitrosodi-n-propylamine	BQL	10.0	1	12/3/2005
Pentachlorophenol	BQL	50.0	1	12/3/2005
Phenanthrene	BQL	10.0	1	12/3/2005
Phenol	BQL	10.0	1	12/3/2005
Pyrene	BQL	10.0	1	12/3/2005
1,2,4-Trichlorobenzene	BQL	10.0	1	12/3/2005
2,4,6-Trichlorophenol	BQL	10.0	1	12/3/2005

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.5	75
2-Fluorophenol	10	7.1	71
Nitrobenzene-d5	10	7.2	73
Phenol-d6	10	7.4	74
2,4,6-Tribromophenol	10	7.7	78
4-Terphenyl-d14	10	10.1	101

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: mc

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW7
Client Project ID: H-19
Lab Sample ID: G649-4-3F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 15:50
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Acenaphthene	BQL	10.0	1	12/3/2005
Acenaphthylene	BQL	10.0	1	12/3/2005
Anthracene	BQL	10.0	1	12/3/2005
Benzo[a]anthracene	BQL	10.0	1	12/3/2005
Benzo[a]pyrene	BQL	10.0	1	12/3/2005
Benzo[b]fluoranthene	BQL	10.0	1	12/3/2005
Benzo[g,h,i]perylene	BQL	10.0	1	12/3/2005
Benzo[k]fluoranthene	BQL	10.0	1	12/3/2005
Bis(2-chloroethoxy)methane	BQL	10.0	1	12/3/2005
Bis(2-chloroethyl)ether	BQL	10.0	1	12/3/2005
Bis(2-chloroisopropyl)ether	BQL	10.0	1	12/3/2005
Bis(2-ethylhexyl)phthalate	BQL	10.0	1	12/3/2005
4-bromophenyl phenyl ether	BQL	10.0	1	12/3/2005
Butylbenzylphthalate	BQL	10.0	1	12/3/2005
2-Chloronaphthalene	BQL	10.0	1	12/3/2005
2-Chlorophenol	BQL	10.0	1	12/3/2005
4-Chloro-3-methylphenol	BQL	10.0	1	12/3/2005
4-Chlorophenyl phenyl ether	BQL	10.0	1	12/3/2005
Chrysene	BQL	10.0	1	12/3/2005
Dibenzo[a,h]anthracene	BQL	10.0	1	12/3/2005
Di-n-Butylphthalate	BQL	10.0	1	12/3/2005
1,2-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,3-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,4-Dichlorobenzene	BQL	10.0	1	12/3/2005
3,3'-Dichlorobenzidine	BQL	20.0	1	12/3/2005
2,4-Dichlorophenol	BQL	10.0	1	12/3/2005
Diethylphthalate	BQL	10.0	1	12/3/2005
Dimethylphthalate	BQL	10.0	1	12/3/2005
2,4-Dimethylphenol	BQL	10.0	1	12/3/2005
Di-n-octylphthalate	BQL	10.0	1	12/3/2005
4,6-Dinitro-2-methylphenol	BQL	50.0	1	12/3/2005
2,4-Dinitrophenol	BQL	50.0	1	12/3/2005
2,4-Dinitrotoluene	BQL	10.0	1	12/3/2005
2,6-Dinitrotoluene	BQL	10.0	1	12/3/2005
Diphenylamine *	BQL	10.0	1	12/3/2005
Fluoranthene	BQL	10.0	1	12/3/2005
Fluorene	BQL	10.0	1	12/3/2005
Hexachlorobenzene	BQL	10.0	1	12/3/2005
Hexachlorobutadiene	BQL	10.0	1	12/3/2005
Hexachlorocyclopentadiene	BQL	20.0	1	12/3/2005
Hexachloroethane	BQL	10.0	1	12/3/2005
Indeno(1,2,3-c,d)pyrene	BQL	10.0	1	12/3/2005

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW7
Client Project ID: H-19
Lab Sample ID: G649-4-3F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 15:50
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Isophorone	BQL	10.0	1	12/3/2005
Naphthalene	BQL	10.0	1	12/3/2005
Nitrobenzene	BQL	10.0	1	12/3/2005
2-Nitrophenol	BQL	10.0	1	12/3/2005
4-Nitrophenol	BQL	50.0	1	12/3/2005
N-Nitrosodi-n-propylamine	BQL	10.0	1	12/3/2005
Pentachlorophenol	BQL	50.0	1	12/3/2005
Phenanthrene	BQL	10.0	1	12/3/2005
Phenol	BQL	10.0	1	12/3/2005
Pyrene	BQL	10.0	1	12/3/2005
1,2,4-Trichlorobenzene	BQL	10.0	1	12/3/2005
2,4,6-Trichlorophenol	BQL	10.0	1	12/3/2005

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.7	77
2-Fluorophenol	10	7.2	72
Nitrobenzene-d5	10	7.4	74
Phenol-d6	10	7.6	76
2,4,6-Tribromophenol	10	7.2	72
4-Terphenyl-d14	10	10.5	105

Comments:
* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:
BQL = Below Quantitation Limits.

Reviewed By: mc

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW9
Client Project ID: H-19
Lab Sample ID: G649-4-4F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 16:25
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Acenaphthene	BQL	10.0	1	12/3/2005
Acenaphthylene	BQL	10.0	1	12/3/2005
Anthracene	BQL	10.0	1	12/3/2005
Benzo[a]anthracene	BQL	10.0	1	12/3/2005
Benzo[a]pyrene	BQL	10.0	1	12/3/2005
Benzo[b]fluoranthene	BQL	10.0	1	12/3/2005
Benzo[g,h,i]perylene	BQL	10.0	1	12/3/2005
Benzo[k]fluoranthene	BQL	10.0	1	12/3/2005
Bis(2-chloroethoxy)methane	BQL	10.0	1	12/3/2005
Bis(2-chloroethyl)ether	BQL	10.0	1	12/3/2005
Bis(2-chloroisopropyl)ether	BQL	10.0	1	12/3/2005
Bis(2-ethylhexyl)phthalate	BQL	10.0	1	12/3/2005
4-bromophenyl phenyl ether	BQL	10.0	1	12/3/2005
Butylbenzylphthalate	BQL	10.0	1	12/3/2005
2-Chloronaphthalene	BQL	10.0	1	12/3/2005
2-Chlorophenol	BQL	10.0	1	12/3/2005
4-Chloro-3-methylphenol	BQL	10.0	1	12/3/2005
4-Chlorophenyl phenyl ether	BQL	10.0	1	12/3/2005
Chrysene	BQL	10.0	1	12/3/2005
Dibenzo[a,h]anthracene	BQL	10.0	1	12/3/2005
Di-n-Butylphthalate	BQL	10.0	1	12/3/2005
1,2-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,3-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,4-Dichlorobenzene	BQL	10.0	1	12/3/2005
3,3'-Dichlorobenzidine	BQL	20.0	1	12/3/2005
2,4-Dichlorophenol	BQL	10.0	1	12/3/2005
Diethylphthalate	BQL	10.0	1	12/3/2005
Dimethylphthalate	BQL	10.0	1	12/3/2005
2,4-Dimethylphenol	BQL	10.0	1	12/3/2005
Di-n-octylphthalate	BQL	10.0	1	12/3/2005
4,6-Dinitro-2-methylphenol	BQL	50.0	1	12/3/2005
2,4-Dinitrophenol	BQL	50.0	1	12/3/2005
2,4-Dinitrotoluene	BQL	10.0	1	12/3/2005
2,6-Dinitrotoluene	BQL	10.0	1	12/3/2005
Diphenylamine *	BQL	10.0	1	12/3/2005
Fluoranthene	BQL	10.0	1	12/3/2005
Fluorene	BQL	10.0	1	12/3/2005
Hexachlorobenzene	BQL	10.0	1	12/3/2005
Hexachlorobutadiene	BQL	10.0	1	12/3/2005
Hexachlorocyclopentadiene	BQL	20.0	1	12/3/2005
Hexachloroethane	BQL	10.0	1	12/3/2005
Indeno(1,2,3-c,d)pyrene	BQL	10.0	1	12/3/2005

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW9
Client Project ID: H-19
Lab Sample ID: G649-4-4F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 16:25
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Isophorone	BQL	10.0	1	12/3/2005
Naphthalene	BQL	10.0	1	12/3/2005
Nitrobenzene	BQL	10.0	1	12/3/2005
2-Nitrophenol	BQL	10.0	1	12/3/2005
4-Nitrophenol	BQL	50.0	1	12/3/2005
N-Nitrosodi-n-propylamine	BQL	10.0	1	12/3/2005
Pentachlorophenol	BQL	50.0	1	12/3/2005
Phenanthrene	BQL	10.0	1	12/3/2005
Phenol	BQL	10.0	1	12/3/2005
Pyrene	BQL	10.0	1	12/3/2005
1,2,4-Trichlorobenzene	BQL	10.0	1	12/3/2005
2,4,6-Trichlorophenol	BQL	10.0	1	12/3/2005

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.3	73
2-Fluorophenol	10	6.8	68
Nitrobenzene-d5	10	7	70
Phenol-d6	10	7.2	72
2,4,6-Tribromophenol	10	6.7	67
4-Terphenyl-d14	10	9.9	99

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: _____

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW10
Client Project ID: H-19
Lab Sample ID: G649-4-5F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 17:00
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Acenaphthene	BQL	10.0	1	12/3/2005
Acenaphthylene	BQL	10.0	1	12/3/2005
Anthracene	BQL	10.0	1	12/3/2005
Benzo[a]anthracene	BQL	10.0	1	12/3/2005
Benzo[a]pyrene	BQL	10.0	1	12/3/2005
Benzo[b]fluoranthene	BQL	10.0	1	12/3/2005
Benzo[g,h,i]perylene	BQL	10.0	1	12/3/2005
Benzo[k]fluoranthene	BQL	10.0	1	12/3/2005
Bis(2-chloroethoxy)methane	BQL	10.0	1	12/3/2005
Bis(2-chloroethyl)ether	BQL	10.0	1	12/3/2005
Bis(2-chloroisopropyl)ether	BQL	10.0	1	12/3/2005
Bis(2-ethylhexyl)phthalate	BQL	10.0	1	12/3/2005
4-bromophenyl phenyl ether	BQL	10.0	1	12/3/2005
Butylbenzylphthalate	BQL	10.0	1	12/3/2005
2-Chloronaphthalene	BQL	10.0	1	12/3/2005
2-Chlorophanol	BQL	10.0	1	12/3/2005
4-Chloro-3-methylphenol	BQL	10.0	1	12/3/2005
4-Chlorophenyl phenyl ether	BQL	10.0	1	12/3/2005
Chrysene	BQL	10.0	1	12/3/2005
Dibenzo[a,h]anthracene	BQL	10.0	1	12/3/2005
Di-n-Butylphthalate	BQL	10.0	1	12/3/2005
1,2-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,3-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,4-Dichlorobenzene	BQL	10.0	1	12/3/2005
3,3'-Dichlorobenzidine	BQL	20.0	1	12/3/2005
2,4-Dichlorophenol	BQL	10.0	1	12/3/2005
Diethylphthalate	BQL	10.0	1	12/3/2005
Dimethylphthalate	BQL	10.0	1	12/3/2005
2,4-Dimethylphenol	BQL	10.0	1	12/3/2005
Di-n-octylphthalate	BQL	10.0	1	12/3/2005
4,6-Dinitro-2-methylphenol	BQL	50.0	1	12/3/2005
2,4-Dinitrophenol	BQL	50.0	1	12/3/2005
2,4-Dinitrotoluene	BQL	10.0	1	12/3/2005
2,6-Dinitrotoluene	BQL	10.0	1	12/3/2005
Diphenylamine *	BQL	10.0	1	12/3/2005
Fluoranthene	BQL	10.0	1	12/3/2005
Fluorene	BQL	10.0	1	12/3/2005
Hexachlorobenzene	BQL	10.0	1	12/3/2005
Hexachlorobutadiene	BQL	10.0	1	12/3/2005
Hexachlorocyclopentadiene	BQL	20.0	1	12/3/2005
Hexachloroethane	BQL	10.0	1	12/3/2005
Indeno(1,2,3-c,d)pyrene	BQL	10.0	1	12/3/2005

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW10
Client Project ID: H-19
Lab Sample ID: G649-4-5F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 17:00
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Isophorone	BQL	10.0	1	12/3/2005
Naphthalene	BQL	10.0	1	12/3/2005
Nitrobenzene	BQL	10.0	1	12/3/2005
2-Nitrophenol	BQL	10.0	1	12/3/2005
4-Nitrophenol	BQL	50.0	1	12/3/2005
N-Nitrosodi-n-propylamine	BQL	10.0	1	12/3/2005
Pentachlorophenol	BQL	50.0	1	12/3/2005
Phenanthrene	BQL	10.0	1	12/3/2005
Phenol	BQL	10.0	1	12/3/2005
Pyrene	BQL	10.0	1	12/3/2005
1,2,4-Trichlorobenzene	BQL	10.0	1	12/3/2005
2,4,6-Trichlorophenol	BQL	10.0	1	12/3/2005

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8	80
2-Fluorophenol	10	7.8	78
Nitrobenzene-d5	10	8	80
Phenol-d6	10	8	80
2,4,6-Tribromophenol	10	7.6	76
4-Terphenyl-d14	10	11.3	113

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: _____

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW5
Client Project ID: H-19
Lab Sample ID: G649-4-6F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 17:45
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Acenaphthene	BQL	10.0	1	12/3/2005
Acenaphthylene	BQL	10.0	1	12/3/2005
Anthracene	BQL	10.0	1	12/3/2005
Benzo[a]anthracene	BQL	10.0	1	12/3/2005
Benzo[a]pyrene	BQL	10.0	1	12/3/2005
Benzo[b]fluoranthene	BQL	10.0	1	12/3/2005
Benzo[g,h,i]perylene	BQL	10.0	1	12/3/2005
Benzo[k]fluoranthene	BQL	10.0	1	12/3/2005
Bis(2-chloroethoxy)methane	BQL	10.0	1	12/3/2005
Bis(2-chloroethyl)ether	BQL	10.0	1	12/3/2005
Bis(2-chloroisopropyl)ether	BQL	10.0	1	12/3/2005
Bis(2-ethylhexyl)phthalate	BQL	10.0	1	12/3/2005
4-bromophenyl phenyl ether	BQL	10.0	1	12/3/2005
Butylbenzylphthalate	BQL	10.0	1	12/3/2005
2-Chloronaphthalene	BQL	10.0	1	12/3/2005
2-Chlorophenol	BQL	10.0	1	12/3/2005
4-Chloro-3-methylphenol	BQL	10.0	1	12/3/2005
4-Chlorophenyl phenyl ether	BQL	10.0	1	12/3/2005
Chrysene	BQL	10.0	1	12/3/2005
Dibenzo[a,h]anthracene	BQL	10.0	1	12/3/2005
Di-n-Butylphthalate	BQL	10.0	1	12/3/2005
1,2-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,3-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,4-Dichlorobenzene	BQL	10.0	1	12/3/2005
3,3'-Dichlorobenzidine	BQL	20.0	1	12/3/2005
2,4-Dichlorophenol	BQL	10.0	1	12/3/2005
Diethylphthalate	BQL	10.0	1	12/3/2005
Dimethylphthalate	BQL	10.0	1	12/3/2005
2,4-Dimethylphenol	BQL	10.0	1	12/3/2005
Di-n-octylphthalate	BQL	10.0	1	12/3/2005
4,6-Dinitro-2-methylphenol	BQL	50.0	1	12/3/2005
2,4-Dinitrophenol	BQL	50.0	1	12/3/2005
2,4-Dinitrotoluene	BQL	10.0	1	12/3/2005
2,6-Dinitrotoluene	BQL	10.0	1	12/3/2005
Diphenylamine *	BQL	10.0	1	12/3/2005
Fluoranthene	BQL	10.0	1	12/3/2005
Fluorene	BQL	10.0	1	12/3/2005
Hexachlorobenzene	BQL	10.0	1	12/3/2005
Hexachlorobutadiene	BQL	10.0	1	12/3/2005
Hexachlorocyclopentadiene	BQL	20.0	1	12/3/2005
Hexachloroethane	BQL	10.0	1	12/3/2005
Indeno(1,2,3-c,d)pyrene	BQL	10.0	1	12/3/2005

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW5
Client Project ID: H-19
Lab Sample ID: G649-4-6F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 17:45
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Isophorone	BQL	10.0	1	12/3/2005
Naphthalene	BQL	10.0	1	12/3/2005
Nitrobenzene	BQL	10.0	1	12/3/2005
2-Nitrophenol	BQL	10.0	1	12/3/2005
4-Nitrophenol	BQL	50.0	1	12/3/2005
N-Nitrosodi-n-propylamine	BQL	10.0	1	12/3/2005
Pentachlorophenol	BQL	50.0	1	12/3/2005
Phenanthrene	BQL	10.0	1	12/3/2005
Phenol	BQL	10.0	1	12/3/2005
Pyrene	BQL	10.0	1	12/3/2005
1,2,4-Trichlorobenzene	BQL	10.0	1	12/3/2005
2,4,6-Trichlorophenol	BQL	10.0	1	12/3/2005

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	9	90
2-Fluorophenol	10	8.6	86
Nitrobenzene-d5	10	8.7	87
Phenol-d6	10	8.6	86
2,4,6-Tribromophenol	10	8.5	85
4-Terphenyl-d14	10	11.4	114

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: _____

Results for Semivolatiles by GCMS 625

Client Sample ID: USTH19-MW4
Client Project ID: H-19
Lab Sample ID: G649-4-7F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 18:30
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Acenaphthene	BQL	10.0	1	12/3/2005
Acenaphthylene	BQL	10.0	1	12/3/2005
Anthracene	BQL	10.0	1	12/3/2005
Benzo[a]anthracene	BQL	10.0	1	12/3/2005
Benzo[a]pyrene	BQL	10.0	1	12/3/2005
Benzo[b]fluoranthene	BQL	10.0	1	12/3/2005
Benzo[g,h,i]perylene	BQL	10.0	1	12/3/2005
Benzo[k]fluoranthene	BQL	10.0	1	12/3/2005
Bis(2-chloroethoxy)methane	BQL	10.0	1	12/3/2005
Bis(2-chloroethyl)ether	BQL	10.0	1	12/3/2005
Bis(2-chloroisopropyl)ether	BQL	10.0	1	12/3/2005
Bis(2-ethylhexyl)phthalate	BQL	10.0	1	12/3/2005
4-bromophenyl phenyl ether	BQL	10.0	1	12/3/2005
Butylbenzylphthalate	BQL	10.0	1	12/3/2005
2-Chloronaphthalene	BQL	10.0	1	12/3/2005
2-Chlorophenol	BQL	10.0	1	12/3/2005
4-Chloro-3-methylphenol	BQL	10.0	1	12/3/2005
4-Chlorophenyl phenyl ether	BQL	10.0	1	12/3/2005
Chrysene	BQL	10.0	1	12/3/2005
Dibenzo[a,h]anthracene	BQL	10.0	1	12/3/2005
Di-n-Butylphthalate	BQL	10.0	1	12/3/2005
1,2-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,3-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,4-Dichlorobenzene	BQL	10.0	1	12/3/2005
3,3'-Dichlorobenzidine	BQL	20.0	1	12/3/2005
2,4-Dichlorophenol	BQL	10.0	1	12/3/2005
Diethylphthalate	BQL	10.0	1	12/3/2005
Dimethylphthalate	BQL	10.0	1	12/3/2005
2,4-Dimethylphenol	BQL	10.0	1	12/3/2005
Di-n-octylphthalate	BQL	10.0	1	12/3/2005
4,6-Dinitro-2-methylphenol	BQL	50.0	1	12/3/2005
2,4-Dinitrophenol	BQL	50.0	1	12/3/2005
2,4-Dinitrotoluene	BQL	10.0	1	12/3/2005
2,6-Dinitrotoluene	BQL	10.0	1	12/3/2005
Diphenylamine *	BQL	10.0	1	12/3/2005
Fluoranthene	BQL	10.0	1	12/3/2005
Fluorene	BQL	10.0	1	12/3/2005
Hexachlorobenzene	BQL	10.0	1	12/3/2005
Hexachlorobutadiene	BQL	10.0	1	12/3/2005
Hexachlorocyclopentadiene	BQL	20.0	1	12/3/2005
Hexachloroethane	BQL	10.0	1	12/3/2005
Indeno(1,2,3-c,d)pyrene	BQL	10.0	1	12/3/2005

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW4
Client Project ID: H-19
Lab Sample ID: G649-4-7F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 18:30
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Isophorone	BQL	10.0	1	12/3/2005
Naphthalene	BQL	10.0	1	12/3/2005
Nitrobenzene	BQL	10.0	1	12/3/2005
2-Nitrophenol	BQL	10.0	1	12/3/2005
4-Nitrophenol	BQL	50.0	1	12/3/2005
N-Nitrosodi-n-propylamine	BQL	10.0	1	12/3/2005
Pentachlorophenol	BQL	50.0	1	12/3/2005
Phenanthrene	BQL	10.0	1	12/3/2005
Phenol	BQL	10.0	1	12/3/2005
Pyrene	BQL	10.0	1	12/3/2005
1,2,4-Trichlorobenzene	BQL	10.0	1	12/3/2005
2,4,6-Trichlorophenol	BQL	10.0	1	12/3/2005

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.3	83
2-Fluorophenol	10	8.1	81
Nitrobenzene-d5	10	8.2	82
Phenol-d6	10	8.2	82
2,4,6-Tribromophenol	10	7.8	78
4-Terphenyl-d14	10	11.8	118

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: mc

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW6
Client Project ID: H-19
Lab Sample ID: G649-4-8F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 19:10
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Acenaphthene	BQL	10.0	1	12/3/2005
Acenaphthylene	BQL	10.0	1	12/3/2005
Anthracene	BQL	10.0	1	12/3/2005
Benzo[a]anthracene	BQL	10.0	1	12/3/2005
Benzo[a]pyrene	BQL	10.0	1	12/3/2005
Benzo[b]fluoranthene	BQL	10.0	1	12/3/2005
Benzo[g,h,i]perylene	BQL	10.0	1	12/3/2005
Benzo[k]fluoranthene	BQL	10.0	1	12/3/2005
Bis(2-chloroethoxy)methane	BQL	10.0	1	12/3/2005
Bis(2-chloroethyl)ether	BQL	10.0	1	12/3/2005
Bis(2-chloroisopropyl)ether	BQL	10.0	1	12/3/2005
Bis(2-ethylhexyl)phthalate	BQL	10.0	1	12/3/2005
4-bromophenyl phenyl ether	BQL	10.0	1	12/3/2005
Butylbenzylphthalate	BQL	10.0	1	12/3/2005
2-Chloronaphthalene	BQL	10.0	1	12/3/2005
2-Chlorophenol	BQL	10.0	1	12/3/2005
4-Chloro-3-methylphenol	BQL	10.0	1	12/3/2005
4-Chlorophenyl phenyl ether	BQL	10.0	1	12/3/2005
Chrysene	BQL	10.0	1	12/3/2005
Dibenzo[a,h]anthracene	BQL	10.0	1	12/3/2005
Di-n-Butylphthalate	BQL	10.0	1	12/3/2005
1,2-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,3-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,4-Dichlorobenzene	BQL	10.0	1	12/3/2005
3,3'-Dichlorobenzidine	BQL	20.0	1	12/3/2005
2,4-Dichlorophenol	BQL	10.0	1	12/3/2005
Diethylphthalate	BQL	10.0	1	12/3/2005
Dimethylphthalate	BQL	10.0	1	12/3/2005
2,4-Dimethylphenol	BQL	10.0	1	12/3/2005
Di-n-octylphthalate	BQL	10.0	1	12/3/2005
4,6-Dinitro-2-methylphenol	BQL	50.0	1	12/3/2005
2,4-Dinitrophenol	BQL	50.0	1	12/3/2005
2,4-Dinitrotoluene	BQL	10.0	1	12/3/2005
2,6-Dinitrotoluene	BQL	10.0	1	12/3/2005
Diphenylamine *	BQL	10.0	1	12/3/2005
Fluoranthene	BQL	10.0	1	12/3/2005
Fluorene	BQL	10.0	1	12/3/2005
Hexachlorobenzene	BQL	10.0	1	12/3/2005
Hexachlorobutadiene	BQL	10.0	1	12/3/2005
Hexachlorocyclopentadiene	BQL	20.0	1	12/3/2005
Hexachloroethane	BQL	10.0	1	12/3/2005
Indeno(1,2,3-c,d)pyrene	BQL	10.0	1	12/3/2005

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW6
Client Project ID: H-19
Lab Sample ID: G649-4-8F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 19:10
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Isophorone	BQL	10.0	1	12/3/2005
Naphthalene	BQL	10.0	1	12/3/2005
Nitrobenzene	BQL	10.0	1	12/3/2005
2-Nitrophenol	BQL	10.0	1	12/3/2005
4-Nitrophenol	BQL	50.0	1	12/3/2005
N-Nitrosodi-n-propylamine	BQL	10.0	1	12/3/2005
Pentachlorophenol	BQL	50.0	1	12/3/2005
Phenanthrene	BQL	10.0	1	12/3/2005
Phenol	BQL	10.0	1	12/3/2005
Pyrene	BQL	10.0	1	12/3/2005
1,2,4-Trichlorobenzene	BQL	10.0	1	12/3/2005
2,4,6-Trichlorophenol	BQL	10.0	1	12/3/2005

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.7	77
2-Fluorophenol	10	7.1	71
Nitrobenzene-d5	10	7.3	74
Phenol-d6	10	7.4	74
2,4,6-Tribromophenol	10	7.3	73
4-Terphenyl-d14	10	11.1	111

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: _____

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW14
Client Project ID: H-19
Lab Sample ID: G649-4-9F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 19:50
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Acenaphthene	BQL	10.0	1	12/3/2005
Acenaphthylene	BQL	10.0	1	12/3/2005
Anthracene	BQL	10.0	1	12/3/2005
Benzo[a]anthracene	BQL	10.0	1	12/3/2005
Benzo[a]pyrene	BQL	10.0	1	12/3/2005
Benzo[b]fluoranthene	BQL	10.0	1	12/3/2005
Benzo[g,h,i]perylene	BQL	10.0	1	12/3/2005
Benzo[k]fluoranthene	BQL	10.0	1	12/3/2005
Bis(2-chloroethoxy)methane	BQL	10.0	1	12/3/2005
Bis(2-chloroethyl)ether	BQL	10.0	1	12/3/2005
Bis(2-chloroisopropyl)ether	BQL	10.0	1	12/3/2005
Bis(2-ethylhexyl)phthalate	BQL	10.0	1	12/3/2005
4-bromophenyl phenyl ether	BQL	10.0	1	12/3/2005
Butylbenzylphthalate	BQL	10.0	1	12/3/2005
2-Chloronaphthalene	BQL	10.0	1	12/3/2005
2-Chlorophenol	BQL	10.0	1	12/3/2005
4-Chloro-3-methylphenol	BQL	10.0	1	12/3/2005
4-Chlorophenyl phenyl ether	BQL	10.0	1	12/3/2005
Chrysene	BQL	10.0	1	12/3/2005
Dibenzo[a,h]anthracene	BQL	10.0	1	12/3/2005
Di-n-Butylphthalate	BQL	10.0	1	12/3/2005
1,2-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,3-Dichlorobenzene	BQL	10.0	1	12/3/2005
1,4-Dichlorobenzene	BQL	10.0	1	12/3/2005
3,3'-Dichlorobenzidine	BQL	20.0	1	12/3/2005
2,4-Dichlorophenol	BQL	10.0	1	12/3/2005
Diethylphthalate	BQL	10.0	1	12/3/2005
Dimethylphthalate	BQL	10.0	1	12/3/2005
2,4-Dimethylphenol	BQL	10.0	1	12/3/2005
Di-n-octylphthalate	BQL	10.0	1	12/3/2005
4,6-Dinitro-2-methylphenol	BQL	50.0	1	12/3/2005
2,4-Dinitrophenol	BQL	50.0	1	12/3/2005
2,4-Dinitrotoluene	BQL	10.0	1	12/3/2005
2,6-Dinitrotoluene	BQL	10.0	1	12/3/2005
Diphenylamine *	BQL	10.0	1	12/3/2005
Fluoranthene	BQL	10.0	1	12/3/2005
Fluorene	BQL	10.0	1	12/3/2005
Hexachlorobenzene	BQL	10.0	1	12/3/2005
Hexachlorobutadiene	BQL	10.0	1	12/3/2005
Hexachlorocyclopentadiene	BQL	20.0	1	12/3/2005
Hexachloroethane	BQL	10.0	1	12/3/2005
Indeno(1,2,3-c,d)pyrene	BQL	10.0	1	12/3/2005

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTH19-MW14
Client Project ID: H-19
Lab Sample ID: G649-4-9F
Lab Project ID: G649-4

Analyzed By: MRC
Date Collected: 11/30/2005 19:50
Date Received: 12/1/2005
Date Extracted: 12/1/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	Dilution Factor	Date Analyzed
Isophorone	BQL	10.0	1	12/3/2005
Naphthalene	BQL	10.0	1	12/3/2005
Nitrobenzene	BQL	10.0	1	12/3/2005
2-Nitrophenol	BQL	10.0	1	12/3/2005
4-Nitrophenol	BQL	50.0	1	12/3/2005
N-Nitrosodi-n-propylamine	BQL	10.0	1	12/3/2005
Pentachlorophenol	BQL	50.0	1	12/3/2005
Phenanthrene	BQL	10.0	1	12/3/2005
Phenol	BQL	10.0	1	12/3/2005
Pyrene	BQL	10.0	1	12/3/2005
1,2,4-Trichlorobenzene	BQL	10.0	1	12/3/2005
2,4,6-Trichlorophenol	BQL	10.0	1	12/3/2005

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.9	79
2-Fluorophenol	10	7.5	75
Nitrobenzene-d5	10	7.7	77
Phenol-d6	10	7.7	77
2,4,6-Tribromophenol	10	7.1	71
4-Terphenyl-d14	10	11.9	119

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: _____

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW2
Sample Matrix	Water
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/03/05
Dry Weight	
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 100 (ug/L)
C_{19}-C_{36} Aliphatics*	< 100 (ug/L)
C_{11}-C_{22} Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	73
Aromatic Surrogate % Recovery	79

Comments:

* = Excludes any surrogates or internal standards.
Sample did not require fractionation.

Lab info: G649-4-1G

Reviewed By: MC

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW3
Sample Matrix	Water
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/03/05
Dry Weight	
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 100 (ug/L)
C_{19}-C_{36} Aliphatics*	< 100 (ug/L)
C_{11}-C_{22} Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	78
Aromatic Surrogate % Recovery	73

Comments:

* = Excludes any surrogates or internal standards.
Sample did not require fractionation.

Lab info: G649-4-2G

Reviewed By: ✓

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW7
Sample Matrix	Water
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/03/05
Dry Weight	
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 100 (ug/L)
C_{19}-C_{36} Aliphatics*	< 100 (ug/L)
C_{11}-C_{22} Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	78
Aromatic Surrogate % Recovery	77

Comments:

* = Excludes any surrogates or internal standards.
Sample did not require fractionation.

Lab info: G649-4-3I

Reviewed By: _____

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW9
Sample Matrix	Water
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/03/05
Dry Weight	
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 100 (ug/L)
C_{19}-C_{36} Aliphatics*	< 100 (ug/L)
C_{11}-C_{22} Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	41
Aromatic Surrogate % Recovery	75

Comments:

* = Excludes any surrogates or internal standards.

Sample did not require fractionation.

Lab info: G649-4-4G

Reviewed By: [redacted]

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW10
Sample Matrix	Water
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/03/05
Dry Weight	
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 100 (ug/L)
C_{19}-C_{36} Aliphatics*	< 100 (ug/L)
C_{11}-C_{22} Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	80
Aromatic Surrogate % Recovery	76

Comments:

* = Excludes any surrogates or internal standards.
Sample did not require fractionation.

Lab info: G649-4-5G

Reviewed By:

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW5
Sample Matrix	Water
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/03/05
Dry Weight	
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 100 (ug/L)
C_{19}-C_{36} Aliphatics*	< 100 (ug/L)
C_{11}-C_{22} Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	76
Aromatic Surrogate % Recovery	73

Comments:

* = Excludes any surrogates or internal standards.

Sample did not require fractionation.

Lab info: G649-4-6G

Reviewed By: MC

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW4
Sample Matrix	Water
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/03/05
Dry Weight	
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 100 (ug/L)
C_{19}-C_{36} Aliphatics*	< 100 (ug/L)
C_{11}-C_{22} Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	77
Aromatic Surrogate % Recovery	65

Comments:

* = Excludes any surrogates or internal standards.
Sample did not require fractionation.

Lab info: G649-4-7G

Reviewed By: mc

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW6
Sample Matrix	Water
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/03/05
Dry Weight	
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 100 (ug/L)
C_{19}-C_{36} Aliphatics*	< 100 (ug/L)
C_{11}-C_{22} Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	79
Aromatic Surrogate % Recovery	73

Comments:

* = Excludes any surrogates or internal standards.

Sample did not require fractionation.

Lab info: G649-4-8G

Reviewed By: ✓

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW14
Sample Matrix	Water
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/03/05
Dry Weight	
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 100 (ug/L)
C_{19}-C_{36} Aliphatics*	< 100 (ug/L)
C_{11}-C_{22} Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	68
Aromatic Surrogate % Recovery	62

Comments:

* = Excludes any surrogates or internal standards.

Sample did not require fractionation.

Lab info: G649-4-9G

Reviewed By: MC

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 09/13/05

Calibration Ranges and Limits

Range	MDL (2/2004) (µg/L)	ML (µg/L)	RL (µg/L)	RL (mg/Kg)
C_9-C_{18} Aliphatics	3.84	12.2	100	10
C_{19}-C_{36} Aliphatics	0.57	1.8	100	10
C_{11}-C_{22} Aromatics	4.54	14.4	100	10

Calibration Concentration Levels

Range	Levels (µg/mL)	%RSD or CCC	Method of Quantitation
C_9-C_{18} Aliphatics	6	3.80	Calibration Factor
	30		
	60		
	120		
	240		
C_{19}-C_{36} Aliphatics	8	3.8	Calibration Factor
	40		
	80		
	160		
	320		
C_{11}-C_{22} Aromatics	17	7.9	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 12/02/05

Calibration Check

Range	Levels (µg/mL)	RPD
C_9-C_{18} Aliphatics	120	7.2
C_{19}-C_{36} Aliphatics	160	4.0
C_{11}-C_{22} Aromatics	340	-1.3

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit
RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW2
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/01/05
Dry Weight	
Dilution Factor	1
C_5-C_8 Aliphatics**	< 100 (µg/L)
C_9-C_{12} Aliphatics**	< 100 (µg/L)
C_9-C_{10} Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	96
Surrogate % Recovery - FID	98

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g649-4-1a

Reviewed By: mc

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW3
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/01/05
Dry Weight	
Dilution Factor	1
C_5-C_8 Aliphatics**	< 100 (µg/L)
C_9-C_{12} Aliphatics**	< 100 (µg/L)
C_9-C_{10} Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	96
Surrogate % Recovery - FID	98

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g649-4-2a

Reviewed By: _____

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW7
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/01/05
Dry Weight	
Dilution Factor	1
C_5-C_8 Aliphatics**	< 100 (µg/L)
C_9-C_{12} Aliphatics**	< 100 (µg/L)
C_9-C_{10} Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	96
Surrogate % Recovery - FID	98

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g649-4-3a

Reviewed By: _____

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW9
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/01/05
Dry Weight	
Dilution Factor	1
C_5-C_8 Aliphatics**	< 100 (µg/L)
C_9-C_{12} Aliphatics**	< 100 (µg/L)
C_9-C_{10} Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	97
Surrogate % Recovery - FID	98

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g649-4-4a

Reviewed By: mc

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW10
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/01/05
Dry Weight	
Dilution Factor	1
C_5-C_8 Aliphatics**	< 100 (µg/L)
C_9-C_{12} Aliphatics**	< 100 (µg/L)
C_9-C_{10} Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	98
Surrogate % Recovery - FID	99

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g649-4-5a

Reviewed By: _____

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW5
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/01/05
Dry Weight	
Dilution Factor	1
C_5-C_8 Aliphatics**	< 100 (µg/L)
C_9-C_{12} Aliphatics**	< 100 (µg/L)
C_9-C_{10} Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	98
Surrogate % Recovery - FID	99

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g649-4-6a

Reviewed By: mc

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW4
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/01/05
Dry Weight	
Dilution Factor	1
C_5-C_8 Aliphatics**	< 100 (µg/L)
C_9-C_{12} Aliphatics**	< 100 (µg/L)
C_9-C_{10} Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	97
Surrogate % Recovery - FID	99

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g649-4-7a

Reviewed By: _____

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW6
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/01/05
Dry Weight	
Dilution Factor	1
C_5-C_8 Aliphatics**	< 100 (µg/L)
C_9-C_{12} Aliphatics**	< 100 (µg/L)
C_9-C_{10} Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	97
Surrogate % Recovery - FID	98

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g649-4-8a

Reviewed By: _____

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	USTH19-MW14
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/02/05
Date Analyzed	12/02/05
Dry Weight	
Dilution Factor	1
C_5-C_8 Aliphatics**	< 100 (µg/L)
C_9-C_{12} Aliphatics**	< 100 (µg/L)
C_9-C_{10} Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	97
Surrogate % Recovery - FID	98

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g649-4-9a

Reviewed By: mc

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of Virginia

Project Name: H-19

Sample Information and Analytical Results	
Sample Identification	Trip Blank
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	11/30/05
Date Received	12/01/05
Date Extracted	12/01/05
Date Analyzed	12/01/05
Dry Weight	
Dilution Factor	1
C_5-C_8 Aliphatics**	< 100 (µg/L)
C_9-C_{12} Aliphatics**	< 100 (µg/L)
C_9-C_{10} Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	97
Surrogate % Recovery - FID	99

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g649-4-10a

Reviewed By: [signature]

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 10/31/05 PID Initial Calibration Date: 10/31/05

Calibration Ranges and Limits

Range	MDL (07/15/2004) (µg/L)	ML (µg/L)	RL (µg/L)	RL (mg/Kg)
C_5-C_8 Aliphatics	4.4	14	100	10
C_9-C_{12} Aliphatics	3.4	11	100	10
C_9-C_{10} Aromatics	0.13	0.41	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	%RSD or CCC	Method of Quantitation
C_5-C_8 Aliphatics	40	7.9	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C_9-C_{12} Aliphatics	10	1.00	Linear Regression
	250		
	500		
	750		
	1000		
C_9-C_{10} Aromatics	10	16.20	Calibration Factor
	250		
	500		
	750		
	1000		

Calibration Check Date: 12/01/05

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	RPD
C_5-C_8 Aliphatics	2000	200	-0.1
C_9-C_{12} Aliphatics	500	50	-11.9
C_9-C_{10} Aromatics	500	50	4.1

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit
RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

Results for Metals

Client Sample ID:	USTH19-MW2	Analyzed By:	RML
Solids = 100	H-19	Date Collected:	11/30/2005 13:55
Lab Sample ID:	G649-4-1	Date Received:	12/1/05
Lab Project ID:	G649-4	Matrix:	WATER
Batch ID:	4116		

Metals	Result	RL	DF	Units	Method	Date Analyzed
Lead	BQL	5.00	25	UG/L	6020	12/5/05

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > RL

Reviewed By: _____
MET_LIMS_3.9a

Results for Metals

Client Sample ID:	USTH19-MW3	Analyzed By:	RML
Solids = 100	H-19	Date Collected:	11/30/2005 14:50
Lab Sample ID:	G649-4-2	Date Received:	12/1/05
Lab Project ID:	G649-4	Matrix:	WATER
Batch ID:	4116		

Metals	Result	RL	DF	Units	Method	Date Analyzed
Lead	BQL	5.00	25	UG/L	6020	12/5/05

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > RL

Reviewed By: _____
MET_LIMS_3.8a

Results for Metals

Client Sample ID:	USTH19-MW7	Analyzed By:	RML
Solids = 100	H-19	Date Collected:	11/30/2005 15:50
Lab Sample ID:	G649-4-3	Date Received:	12/1/05
Lab Project ID:	G649-4	Matrix:	WATER
Batch ID:	4116		

Metals	Result	RL	DF	Units	Method	Date Analyzed
Lead	BQL	5.00	25	UG/L	6020	12/5/05

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > RL

Reviewed By: _____
MET_LIMS_3 9a

Results for Metals

Client Sample ID:	USTH19-MW9	Analyzed By:	RML
Solids = 100	H-19	Date Collected:	11/30/2005 16:25
Lab Sample ID:	G649-4-4	Date Received:	12/1/05
Lab Project ID:	G649-4	Matrix:	WATER
Batch ID:	4116		

Metals	Result	RL	DF	Units	Method	Date Analyzed
Lead	**6.40**	5.00	25	UG/L	6020	12/5/05

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > RL

Reviewed By: _____
MET_LIMS_3 9a

Results for Metals

Client Sample ID:	USTH19-MW10	Analyzed By:	RML
Solids = 100	H-19	Date Collected:	11/30/2005 17:00
Lab Sample ID:	G649-4-5	Date Received:	12/1/05
Lab Project ID:	G649-4	Matrix:	WATER
Batch ID:	4116		

Metals	Result	RL	DF	Units	Method	Date Analyzed
Lead	BQL	5.00	25	UG/L	6020	12/5/05

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > RL

Reviewed By: _____
MET_LIMS_3 9a

Results for Metals

Client Sample ID:	USTH19-MW5	Analyzed By:	RML
Solids = 100	H-19	Date Collected:	11/30/2005 17:45
Lab Sample ID:	G649-4-6	Date Received:	12/1/05
Lab Project ID:	G649-4	Matrix:	WATER
Batch ID:	4116		

Metals	Result	RL	DF	Units	Method	Date Analyzed
Lead	BQL	5.00	25	UG/L	6020	12/5/05

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > RL

Reviewed By: _____
MET_LIMS_3.9a

Results for Metals

Client Sample ID:	USTH19-MW4	Analyzed By:	RML
Solids = 100	H-19	Date Collected:	11/30/2005 18:30
Lab Sample ID:	G649-4-7	Date Received:	12/1/05
Lab Project ID:	G649-4	Matrix:	WATER
Batch ID:	4116		

Metals	Result	RL	DF	Units	Method	Date Analyzed
Lead	BQL	5.00	25	UG/L	6020	12/5/05

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > RL

Reviewed By: _____
MET_LIMS_3 9a

Results for Metals

Client Sample ID:	USTH19-MW6	Analyzed By:	RML
Solids = 100	H-19	Date Collected:	11/30/2005 19:10
Lab Sample ID:	G649-4-8	Date Received:	12/1/05
Lab Project ID:	G649-4	Matrix:	WATER
Batch ID:	4116		

Metals	Result	RL	DF	Units	Method	Date Analyzed
Lead	BQL	5.00	25	UG/L	6020	12/5/05

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > RL

Reviewed By:
MET_LIMS_3 9a

Results for Metals

Client Sample ID:	USTH19-MW14	Analyzed By:	RML
Solids = 100	H-19	Date Collected:	11/30/2005 19:50
Lab Sample ID:	G649-4-9	Date Received:	12/1/05
Lab Project ID:	G649-4	Matrix:	WATER
Batch ID:	4116		

Metals	Result	RL	DF	Units	Method	Date Analyzed
Lead	BQL	5.00	25	UG/L	6020	12/5/05

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > RL

Reviewed By: _____
MET_LIMS_3 9a

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% soilds = Percent Solids

Special Notes:

1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.

2) Uncertainty for all reported data is less than or equal to 30 percent.

MI34.092205.2

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 52719

Page _____ **of** _____

Client: OSAGE OF VA
Address: 4800 A COLLEY AVE
Address: NORFOLK, VA 23508
Quote #: _____

Project ID: H-19
Contact: MIKE CREE
Phone: 757 440-0400
Fax: 757 440-0411

Date: 12-1-05
Turnaround: Thru 12/8/05
Job Number: no number given
P.O. Number: _____

Report To: MIKE CREE
Invoice To: MIKE CREE

Sample ID	Date	Time	Matrix	Preservatives: HCl	HNO3	NONE		Analyses: 625	EPH	VPH	3030c/1B							Comments: Please specify any special reporting requirements
USTH19-MW2	11-30-05	1355		3	1	1		✓	✓	✓	✓							G649-4
USTH19-MW3		1450		3	1	1		✓	✓	✓	✓							
USTH19-MW7		1550		3	1	1		✓	✓	✓	✓							
USTH19-MW9		1625		3	1	1		✓	✓	✓	✓							
USTH19-MW10		1700		3	1	1		✓	✓	✓	✓							
USTH19-MW5		1745		3	1	1		✓	✓	✓	✓							
USTH19-MW4		1830		3	1	1		✓	✓	✓	✓							
USTH19-MW6		1910		3	1	1		✓	✓	✓	✓							
USTH19-MW11		1950		3	1	1		✓	✓	✓	✓							
TRIP BLANK	11-30-05																	

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
[signature]	12/1/05	0935	[signature]	12/1/05	0835	on ice 5.8, 4.6, 5.2°C	NC ____ SC ____ Other ____
							SEE REVERSE FOR TERMS AND CONDITIONS

ORIGINAL

PARADIGM ANALYTICAL LABORATORIES, INC.

N.C. CERTIFICATION #481

Mr. Mike Cree
Osage of Virginia
4800A Colley Avenue
Norfolk VA 23508-2037

Report Number: G649-6

Client Project: H-19

Dear Mr. Cree:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
Paradigm Analytical Laboratories, Inc.

12/8/2005

Laboratory Director
J. Patrick Weaver

Date

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTH19SB01
Client Project ID: H-19
Lab Sample ID: G649-6-1B
Lab Project ID: G649-6
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 12/1/2005 11:45
Date Received: 12/2/2005
Date Extracted: 12/5/2005
Matrix: Soil
% Solids: 92.94

Compound	Result ug/Kg	Quantitation Limit ug/Kg	MDL ug/Kg	Dilution Factor	Date Analyzed	Flag
Benzo[a]pyrene	BQL	332	50.8	1	12/6/2005	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	10.4	104
Nitrobenzene-d5	10	9.7	97
4-Terphenyl-d14	10	12.8	128

Comments:

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: mc

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTH19SB02
Client Project ID: H-19
Lab Sample ID: G649-6-2B
Lab Project ID: G649-6
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 12/1/2005 11:40
Date Received: 12/2/2005
Date Extracted: 12/5/2005
Matrix: Soil
% Solids: 89.31

Compound	Result ug/Kg	Quantitation Limit ug/Kg	MDL ug/Kg	Dilution Factor	Date Analyzed	Flag
Benzo[a]pyrene	BQL	340	52.0	1	12/6/2005	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	10.6	106
Nitrobenzene-d5	10	9.8	98
4-Terphenyl-d14	10	11.7	117

Comments:

Flags:

BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% soilds = Percent Solids

Special Notes:

1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.

2) Uncertainty for all reported data is less than or equal to 30 percent.

MI34.092205.2

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 52711

Page ____ of ____

Client: OSHA OF VA
Address: 4980 A Colley Ave
Address: Norfolk, VA 23508
Quote #: ____

Project ID: H-19
Contact: Mike Cribb
Phone: 757 440-0400
Fax: 757 440-0411

Date: 12-1-05
Turnaround: 12-8-05
Job Number: ____
P.O. Number: ____

Report To: Mike Cribb
Invoice To: Mike Cribb

Sample ID	Date	Time	Matrix	Preservatives	Analyses: benzo(a)pyrene 8270	Comments: Please specify any special reporting requirements
						G649-6
OSTH19SB01	12-1-05	1145	S		✓	
OSTH19SB02	12-1-05	1140	S		✓	

PARADIGM ANALYTICAL LABORATORIES, INC.

N.C. CERTIFICATION #481

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
[signature]	12-1-05	1600	[signature]	12/2/05	0940	5.3°C	NC ____ SC ____ Other ____

SEE REVERSE FOR TERMS AND CONDITIONS

ORIGINAL

APPENDIX C

SOIL BORING LOGS FROM DECEMBER 2005 SAMPLING EVENT

parratt wolff inc

TEST BORING LOG

501 MILLSTONE DRIVE
HILLSBOROUGH, NC 27278

PROJECT UST Site

LOCATION MCB Camp Lejeune

DATE STARTED 12-1-05 DATE COMPLETED 12-1-05

HOLE NO. H-19 SB#1

SURF. EL.

JOB NO.

GROUND WATER DEPTH
WHILE DRILLING None

BEFORE CASING REMOVED —

AFTER CASING REMOVED —

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING
30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE DPT (Large bore Sample)

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
						2" Asphalt	
5	3.0'-4.0'	1				Brown moist loose Fine Sand, trace Silt & Fine Gravel	4' Bgs
						NOTE: Backfill with bentonite chips (4'-1') Asphalt patch	

parratt wolff inc

TEST BORING LOG

501 MILLSTONE DRIVE
HILLSBOROUGH, NC 27278

PROJECT UST Site

LOCATION MCB Camp Lejeune

DATE STARTED 12-1-05 DATE COMPLETED 12-1-05

HOLE NO. H-19 SB#2

SURF. EL.

JOB NO.

GROUND WATER DEPTH
WHILE DRILLING None

BEFORE CASING REMOVED —

AFTER CASING REMOVED —

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE DPT (Large Bore Sample)

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
						3" Asphalt	
	3.0-4.0	1				Brown moist loose Fk Sand	
5						Trace silt & F/Gravel	4'
							BOB
						NOTE: BACKFILL with bentonite chips (4'-1') asphalt patch	

APPENDIX D

DECEMBER 2005 FIELD DATA SHEETS

OSAGE OF VIRGINIA

MONITORING WELL DATA SHEET

SITE NAME		LT-19	
WELL ID		MW-2	
SAMPLE ID		UST H19 - MW2	
DATE	11-30-05	TIME	1355

PROJECT NUMBER	FEI 0404	PROJECT LOCATION	CAMP LEJEUNE, NC
PROJECT MANAGER	MIKE CREE		
PHONE NUMBER	757 440-0400	FAX NUMBER	757 440-0411
FIELD TECHNICIAN	JIM MADSON	PHONE NUMBER	757 576-1066
WEATHER CONDITIONS	SUNNY CLEAR		
SAMPLING METHOD	PERISTALTIC PUMP		

TOTAL WELL DEPTH	DEPTH TO WATER	DEPTH TO PRODUCT
10.75	7.26	—

DIAMETER	WATER COLUMN	VOLUME	VOLUME X 3
2"	3.49	.56	—

PURGE START	PURGE STOP	TOTAL PURGE
1330	1350	1.0L

IDW DISPOSAL METHOD	55GL DRUM
WATER QUALITY EQUIPMENT	YSI
CALIBRATION DATE	

WATER QUALITY FIELD MEASUREMENTS

VOLUME #	1	2	3	4	5	6	
TIME	1335	1340	1345	1350			(24 hr Time)
TEMPERATURE	22.65	22.51	22.54	22.52			(°C)
SPEC COND	.181	.180	.179	.179			(ms/Cm)
DISSOLVED OXYGEN	3.42	3.52	3.49	3.50			(mg/L)
PH	6.44	6.43	6.44	6.44			(std)
ORP	151.6	152.3	153.5	151.7			(mV)
TURBIDIDTY	15.8	16.3	14.8	10.8			(NTU)

COMMENTS

OSAGE OF VIRGINIA

MONITORING WELL DATA SHEET

SITE NAME		17-19	
WELL ID		MW3	
SAMPLE ID		05TH19 MW3	
DATE	11-30-05	TIME	1450

PROJECT NUMBER	EEI 0404	PROJECT LOCATION	CAMP LEJEUNE, NC
PROJECT MANAGER	MIKE CREE		
PHONE NUMBER	757 440-0400	FAX NUMBER	757 440-0411
FIELD TECHNICIAN	JIM MADSON	PHONE NUMBER	757 576-1066
WEATHER CONDITIONS	SUNNY CLEAR		
SAMPLING METHOD	peristaltic pump		

TOTAL WELL DEPTH	DEPTH TO WATER	DEPTH TO PRODUCT
10.70	7.47	N/A

DIAMETER	WATER COLUMN	VOLUME	VOLUME X 3
2"	3.23	.52	~

PURGE START	PURGE STOP	TOTAL PURGE
1425	1445	1.0 ~

IDW DISPOSAL METHOD	
WATER QUALITY EQUIPMENT	YSI
CALIBRATION DATE	

WATER QUALITY FIELD MEASUREMENTS

VOLUME #	1	2	3	4	5	6	
TIME	1430	1435	1440	1445			(24 hr Time)
TEMPERATURE	24.12	24.05	23.80	23.69			(°C)
SPEC COND	1.38	1.39	1.39	1.39			(ms/Cm)
DISSOLVED OXYGEN	1.01	5.6	5.5	5.3			(mg/L)
PH	7.01	6.97	6.93	6.91			(std)
ORP	55.2	-28.9	-26.6	-29.8			(mV)
TURBIDIDTY	5.35	5.57	6.06	2.21			(NTU)

COMMENTS

OSAGE OF VIRGINIA	MONITORING WELL DATA SHEET	SITE NAME		H-19	
		WELL ID		MW4	
		SAMPLE ID		H19-MW4	
		DATE	11-30-05	TIME	1830

PROJECT NUMBER	CE1 0404	PROJECT LOCATION	CAMP LEJEUNE

PROJECT MANAGER	MIKE CREE

PHONE NUMBER	757 440-0400	FAX NUMBER	757 440-0411

FIELD TECHNICIAN	JIM MADSON	PHONE NUMBER	757 576-1066

WEATHER CONDITIONS	CLEAR / COOL

SAMPLING METHOD	PERISTALTIC PUMP

TOTAL WELL DEPTH	DEPTH TO WATER	DEPTH TO PRODUCT
13.55	7.96	—

DIAMETER	WATER COLUMN	VOLUME	VOLUME X 3
2"	5.59	.91	—

PURGE START	PURGE STOP	TOTAL PURGE
1805	1825	1.0 L

IDW DISPOSAL METHOD	DISCHARGED AT WELL HEAD

WATER QUALITY EQUIPMENT	YSI
CALIBRATION DATE	

WATER QUALITY FIELD MEASUREMENTS							
VOLUME #	1	2	3	4	5	6	
TIME	1810	1815	1820	1825			(24 hr Time)
TEMPERATURE	23.89	24.16	24.27	24.26			(°C)
SPEC COND	.466	.463	.453	.448			(ms/Cm)
DISSOLVED OXYGEN	1.73	1.43	1.32	1.24			(mg/L)
PH	5.94	5.94	5.91	5.90			(std)
ORP	287.7	273.6	241.6	239.7			(mV)
TURBIDIDTY	—	—	—	—			(NTU)

COMMENTS

OSAGE OF VIRGINIA

MONITORING WELL DATA SHEET

SITE NAME		H-19	
WELL ID		MW05	
SAMPLE ID		05TH19-MW05	
DATE	1130	TIME	1745

PROJECT NUMBER	E&E 0404	PROJECT LOCATION	CAMP LEJEUNE, NC
PROJECT MANAGER	MIKE CREE		
PHONE NUMBER	757 440-0400	FAX NUMBER	757 440-0411
FIELD TECHNICIAN	JIM MADSON	PHONE NUMBER	757 576-1066
WEATHER CONDITIONS	CLEAR / COOL		
SAMPLING METHOD	PERISTALTIC PUMP		

TOTAL WELL DEPTH	DEPTH TO WATER	DEPTH TO PRODUCT
13.0	7.65	—

DIAMETER	WATER COLUMN	VOLUME	VOLUME X 3
2"	5.45	.88	—

PURGE START	PURGE STOP	TOTAL PURGE
1720	1740	1.0 L

IDW DISPOSAL METHOD	
WATER QUALITY EQUIPMENT	YSI
CALIBRATION DATE	

WATER QUALITY FIELD MEASUREMENTS

VOLUME #	1	2	3	4	5	6	
TIME	1725	1730	1735	1740			(24 hr Time)
TEMPERATURE	24.98	25.24	25.28	25.33			(°C)
SPEC COND	.781	.784	.786	.787			(ms/Cm)
DISSOLVED OXYGEN	2.37	2.28	2.22	2.18			(mg/L)
PH	6.45	6.45	6.45	6.44			(std)
ORP	210.1	212.5	214.3	215.2			(mV)
TURBIDIDTY	—	—	—	—			(NTU)

COMMENTS

OSAGE OF VIRGINIA

MONITORING WELL DATA SHEET

SITE NAME		LH-19	
WELL ID		MW6	
SAMPLE ID		USTH19-MW6	
DATE	11-30-05	TIME	1910

PROJECT NUMBER	GEI 0404	PROJECT LOCATION	CAMP LEJEUNE, NC
PROJECT MANAGER	MIKE CREE		
PHONE NUMBER	757 440-0400	FAX NUMBER	757 440-0411
FIELD TECHNICIAN	JIM MADSON	PHONE NUMBER	757 576-1066
WEATHER CONDITIONS	CLEAR / COOL		
SAMPLING METHOD	PERISTALTIC PUMP		

TOTAL WELL DEPTH	DEPTH TO WATER	DEPTH TO PRODUCT
12.81	4.03	N/A

DIAMETER	WATER COLUMN	VOLUME	VOLUME X 3
2"	4.78	.77	

PURGE START	PURGE STOP	TOTAL PURGE
1845	1904	1.0 ~

IDW DISPOSAL METHOD	DISCHARGED AT WELL HEAD
WATER QUALITY EQUIPMENT	YSI
CALIBRATION DATE	

WATER QUALITY FIELD MEASUREMENTS

VOLUME #	1	2	3	4	5	6	
TIME	1850	1855	1900	1905			(24 hr Time)
TEMPERATURE	24.33	25.01	25.02	24.98			(°C)
SPEC COND	.370	.371	.371	.369			(ms/Cm)
DISSOLVED OXYGEN	1.08	.80	.79	.76			(mg/L)
PH	4.07	4.06	4.05	4.05			(std)
ORP	388.6	418.7	418.1	418.5			(mV)
TURBIDIDTY	—	—	—	—			(NTU)

COMMENTS

100 ml / min APPROX

OSAGE OF VIRGINIA

MONITORING WELL DATA SHEET

SITE NAME		H-19	
WELL ID		MW 7	
SAMPLE ID		UST H19 - MW7	
DATE	11-30-05	TIME	1550

PROJECT NUMBER	FEL 0404	PROJECT LOCATION	CAMP LEJEUNE, NC
PROJECT MANAGER	MIKE CREE		
PHONE NUMBER	757 440-0400	FAX NUMBER	757 440-0411
FIELD TECHNICIAN	JIM MADSON	PHONE NUMBER	757 576-1066
WEATHER CONDITIONS	SUNNY / CLEAR		
SAMPLING METHOD	PERISTALTIC PUMP		

TOTAL WELL DEPTH	DEPTH TO WATER	DEPTH TO PRODUCT
12.35	7.22	—

DIAMETER	WATER COLUMN	VOLUME	VOLUME X 3
2"	5.13	.83	—

PURGE START	PURGE STOP	TOTAL PURGE
1525	1545	1.0 L

IDW DISPOSAL METHOD	DISCHARGED TO WELL HEAD
WATER QUALITY EQUIPMENT	YSI
CALIBRATION DATE	

WATER QUALITY FIELD MEASUREMENTS

VOLUME #	1	2	3	4	5	6	
TIME	1530	1535	1540	1545			(24 hr Time)
TEMPERATURE	26.20	25.97	25.83	25.91			(°C)
SPEC COND	.354	.354	.353	.353			(ms/Cm)
DISSOLVED OXYGEN	5.02	4.98	4.95	4.83			(mg/L)
PH	6.48	6.48	6.47	6.47			(std)
ORP	159.3	160.9	164.0	162.8			(mV)
TURBIDIDTY	11.3	7.94	5.93	3.92			(NTU)

COMMENTS

HACH TURB METER STOPPED WORKING AFTER THIS WELL.

OSAGE OF VIRGINIA

MONITORING WELL DATA SHEET

SITE NAME		LI-19	
WELL ID		MW9	
SAMPLE ID		LI-19-MW9	
DATE	11-30-05	TIME	1625

PROJECT NUMBER	EE1 0404	PROJECT LOCATION	CAMP LEJEUNE
PROJECT MANAGER	MIKE CREE		
PHONE NUMBER	757 440-0400	FAX NUMBER	757 440-0411
FIELD TECHNICIAN	JIM MADSON	PHONE NUMBER	757 576-1066
WEATHER CONDITIONS	SUNNY / CLEAR		
SAMPLING METHOD	PERISTALTIC PUMP		

TOTAL WELL DEPTH	DEPTH TO WATER	DEPTH TO PRODUCT
13.3	6.81	—

DIAMETER	WATER COLUMN	VOLUME	VOLUME X 3
2"	6.49	1.05	—

PURGE START	PURGE STOP	TOTAL PURGE
1600	1620	1.0 L

IDW DISPOSAL METHOD	
WATER QUALITY EQUIPMENT	YSI
CALIBRATION DATE	

WATER QUALITY FIELD MEASUREMENTS

VOLUME #	1	2	3	4	5	6	
TIME	1605	1610	1615	1620			(24 hr Time)
TEMPERATURE	22.88	22.49	22.51	22.53			(°C)
SPEC COND	.330	.329	.325	.324			(ms/Cm)
DISSOLVED OXYGEN	3.41	3.11	2.95	2.99			(mg/L)
PH	6.53	6.49	6.48	6.47			(std)
ORP	181.2	180.6	182.5	183.2			(mV)
TURBIDIDTY	—	—	—	—			(NTU)

COMMENTS

100 mL / min

OSAGE OF VIRGINIA

MONITORING WELL DATA SHEET

SITE NAME	H-19		
WELL ID	MW10		
SAMPLE ID	USTH19 - MW10		
DATE	11-30-05	TIME	1700

PROJECT NUMBER	EEI 0404	PROJECT LOCATION	CAMP LEJEUNE, NC
PROJECT MANAGER	MIKE CREE		
PHONE NUMBER	757 440-0400	FAX NUMBER	757 440-0411
FIELD TECHNICIAN	JIM MADSON	PHONE NUMBER	757 576-1066
WEATHER CONDITIONS	SUNNY / CLEAR		
SAMPLING METHOD	PER-STALTIC PUMP		

TOTAL WELL DEPTH	DEPTH TO WATER	DEPTH TO PRODUCT
13.3	7.21	—

DIAMETER	WATER COLUMN	VOLUME	VOLUME X 3
2"	6.09	.99	—

PURGE START	PURGE STOP	TOTAL PURGE
1635	1655	1.0 —

IDW DISPOSAL METHOD	
WATER QUALITY EQUIPMENT	YSI
CALIBRATION DATE	

WATER QUALITY FIELD MEASUREMENTS							
VOLUME #	1	2	3	4	5	6	
TIME	1640	1645	1650	1655			(24 hr Time)
TEMPERATURE	21.53	22.25	22.31	22.39			(°C)
SPEC COND	.191	.183	.123	.123			(ms/Cm)
DISSOLVED OXYGEN	6.01	3.76	2.43	2.33			(mg/L)
PH	4.39	4.31	4.32	4.32			(std)
ORP	277.1	377.2	378.1	379.2			(mV)
TURBIDIDTY	—	—	—	—			(NTU)

COMMENTS

OSAGE OF VIRGINIA

MONITORING WELL DATA SHEET

SITE NAME	H-19		
WELL ID	MW 14		
SAMPLE ID	UST H19 - MW14		
DATE	11-30-05	TIME	1950

PROJECT NUMBER	FGI 0404	PROJECT LOCATION	CAMP LEJEUNE, NC
PROJECT MANAGER	MIKE CREE		
PHONE NUMBER	757 440-0400	FAX NUMBER	757 440-0411
FIELD TECHNICIAN	JIM MADSON	PHONE NUMBER	757 576-1066
WEATHER CONDITIONS	CLEAR / COOL		
SAMPLING METHOD	PERISTALTIC PUMP		

TOTAL WELL DEPTH	DEPTH TO WATER	DEPTH TO PRODUCT
14.50	8.19	N/A

DIAMETER	WATER COLUMN	VOLUME	VOLUME X 3
2"	6.31	1.02	

PURGE START	PURGE STOP	TOTAL PURGE
1925	1945	1.0 gal

IDW DISPOSAL METHOD	WELL HEAD
WATER QUALITY EQUIPMENT	YSI
CALIBRATION DATE	NA

WATER QUALITY FIELD MEASUREMENTS

VOLUME #	1	2	3	4	5	6	
TIME	1930	1935	1940	1945			(24 hr Time)
TEMPERATURE	25.83	26.15	26.30	26.34			(°C)
SPEC COND	.322	.321	.320	.319			(ms/Cm)
DISSOLVED OXYGEN	1.69	1.49	1.36	1.34			(mg/L)
PH	4.36	4.38	4.40	4.41			(std)
ORP	366.5	379.3	376.9	378.7			(mV)
TURBIDIDTY	—						(NTU)

COMMENTS

FLOW 100 ml/min APPROX