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January 4, 2005

Commander
NAVFAC, Atlantic Division
6506 Hampton Blvd., Bldg. A, Room 1306
Norfolk, VA 23508

Attention: Mr. David T. Cleland, P.G. – Code EV23DC

Re: **FINAL Soil Assessment Report**
Building TC-912
Marine Corps Base
Camp Lejeune, North Carolina
Navy Contract No. N62470-01-D-3009
Delivery Order No. 0118
CATLIN Project No. 204-038

Dear Mr. Cleland:

CATLIN Engineers and Scientists (CATLIN) is pleased to submit the FINAL Soil Assessment Report for the above referenced site. There were no comments to the referenced draft report.

CATLIN appreciates the opportunity to continue to provide services to NAVFAC Atlantic and the MCB on your environmental projects.

Sincerely,

Michael E. Mason, P.E.
CATLIN Program Manager

Shane A. Chasteen
Project Scientist

Attachments: Final Report

cc: Ms. Rochelle M. Lee - Contracts, correspondence only
Commanding General, Attn: Director I&E, EMD, EQB (w/ attachment – 2 copies)

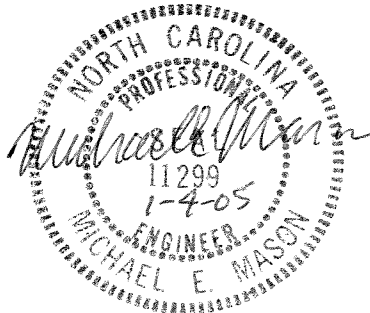
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SOIL ASSESSMENT REPORT
FOR
BUILDING TC-912
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

NCDENR UST INCIDENT NO. 15198
RICK CLASSIFICATION: Low
LAND USE CLASSIFICATION: Residential

JANUARY 4, 2005

CONTRACT NO. N62470-01-D-3009
DELIVERY ORDER NO. 0118
CATLIN PROJECT NO. 204-038



PREPARED BY:
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TABLE OF CONTENTS

	<u>PAGE</u>
LIST OF ACRONYMS	i
A. TITLE PAGE	1
B. EXECUTIVE SUMMARY	2
C. SITE HISTORY	4
D. RECEPTOR INFORMATION	5
1. WATER SUPPLY WELLS	5
2. PUBLIC WATER SUPPLIES	5
3. SURFACE WATER	6
4. WELLHEAD PROTECTION AREAS	6
5. DEEP AQUIFERS IN THE COASTAL PLAIN PHYSIOGRAPHIC REGION	6
6. SUBSURFACE STRUCTURES	6
7. PROPERTY OWNERS AND OCCUPANTS	7
E. SITE GEOLOGY	7
F. SOIL INVESTIGATION	7
G. CONCLUSIONS AND RECOMMENDATIONS	9
H. PROPOSED REMEDY FOR SOIL CONTAMINATION	10
1. EVALUATION OF REMEDIATION ALTERNATIVES	10
2. PROPOSED REMEDIATION	10
3. POST REMEDIATION SAMPLING	10
4. SCHEDULE	10
5. PUBLIC NOTICE	10
I. LIMITATIONS	10
J. REFERENCES	11

TABLES

TABLE 1	SITE HISTORY - UST SYSTEM INFORMATION
TABLE 2	SITE HISTORY - UST OWNER/OPERATOR INFORMATION
TABLE 3A	SUMMARY OF SOIL LABORATORY RESULTS – EPA METHOD 8260B/5035
TABLE 3B	SUMMARY OF SOIL LABORATORY RESULTS – EPA METHOD 8270
TABLE 3C	SUMMARY OF SOIL LABORATORY RESULTS – MADEP VPH/EPH
TABLE 3D	SUMMARY OF SOIL LABORATORY RESULTS – MADEP VPH/EPH AS COMPARED TO NCDENR MSCCs
TABLE 4	WATER SUPPLY WELL INFORMATION
TABLE 5	PROPERTY OWNERS/OCCUPANTS

FIGURES

FIGURE 1	SITE LOCATION AND WATER SURVEY
FIGURE 2	SITE LOCATION WITH PLACES OF PUBLIC ASSEMBLY
FIGURE 3	SITE PLAN WITH UTILITIES
FIGURE 4A	SITE PLAN WITH SOIL LABORATORY RESULTS – EPA METHOD 8260B/5035
FIGURE 4B	SITE PLAN WITH SOIL LABORATORY RESULTS – EPA METHOD 8270
FIGURE 4C	SITE PLAN WITH SOIL LABORATORY RESULTS – MADEP VPH/EPH AS COMPARED TO NCDENR MSCCs

APPENDICES

APPENDIX A	BORING LOGS
APPENDIX B	HISTORICAL DATA FROM UST SITE CHECK
APPENDIX C	HISTORICAL DATA FROM UST CLOSURE REPORT
APPENDIX D	HISTORICAL DATA FROM UST SITE ASSESSMENT
APPENDIX E	HISTORICAL DATA FROM ADDENDUM UST SITE ASSESSMENT
APPENDIX F	HISTORICAL DATA FROM 2003 ANNUAL MONITORING REPORT
APPENDIX G	STANDARD PROCEDURES
APPENDIX H	LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

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
ARO	Asheville Regional Office
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
CATLIN	CATLIN Engineers and Scientists (Formerly RC&A)
CFR	Code of Federal Regulations
Cr	Chromium
CSA	Comprehensive Site Assessment
CNP	Carbon Nitrogen Phosphorous
CPT	Cone Penetrometer Test
DEM	Division of Environmental Management
DIPE	Diisopropyl 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
EAD	Environmental Affairs Department
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
FOD	Foreign Object Debris
FRO	Fayetteville Regional Office
FT	Feet
GCL	Gross Contaminant Level
GIS	Geographic Information System
GPS	Global Positioning System

Guidelines Vol. I	Groundwater Section Guidelines for Investigation and Remediation of Soil and Groundwater, Volume I, Sources Other Than Petroleum Underground Storage Tanks (May 1998)
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
LANTDIV	Atlantic Division
LSA	Limited Site Assessment
LUST	Leaking Underground Storage Tank
m-	meta
m	meter
MADEP	Massachusetts Department of Environmental Protection
MCALF	Marine Corps Auxiliary Landing Field
MCAS	Marine Corps Air Station
MCB	Marine Corps Base
MCOLF	Marine Corps Outlying Landing Field
MDL	Method Detection Limit
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Litre
MRO	Mooresville Regional Office
MSCC	Maximum Soil Contaminant Concentration
MSL	Mean Sea Level
MTBE	Methyl tertiary butyl ether
µg/Kg	Micrograms per Kilogram
µg/L	Micrograms per Litre
NA	Not Analyzed
N/A	Not Applicable
NC	North Carolina
NCAC	North Carolina Administrative Code
NCDENR	North Carolina Department of Environment and Natural Resources
NCDOC	North Carolina Department of Corrections
NCDOT	North Carolina Department of Transportation
NCSP	North Carolina State Plane
NCSPA	North Carolina State Ports Authority
NE	None Established
NM	Not Measured
NMT	No Measurable Thickness
NS	Not Sampled
o-	ortho
OVA	Organic Vapor Analyzer
p-	para
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
ROI	Radius of Influence
RRO	Raleigh Regional Office
SOW	Scope of Work
STGW	Soil-to-Groundwater
SVE	Soil Vapor Extraction
SVOC	Semi Volatile Organic Compound
TDHF	Toxicologically Defined Hydrocarbons Fractions
TCLP	Toxicity Characteristic Leaching Procedure
TIC	Tentatively Identified Compound
TKN	Total Kjeldahl Nitrogen
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
WaRO	Washington Regional Office
WiRO	Wilmington Regional Office
WSRO	Winston-Salem Regional Office

SOIL ASSESSMENT REPORT

A. TITLE PAGE

DATE OF REPORT: January 4, 2005
Facility ID: N/A UST Incident Number (if known): 15198
Site Name: Building TC-912
Site Location: Marine Corps Base, Camp Lejeune
Nearest City/Town: Jacksonville County: Onslow
Risk Classification: Low Land Use Classification: Residential

UST Owner: Commanding General – MCB Camp Lejeune
I&E/EMD/EQB
Address: PSC 20004
MCB Camp Lejeune, NC 28542 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: None
Address: Along "A" Street, MCB Camp Lejeune, NC 28542 Phone: None
Consultant/Contractor: CATLIN Engineers and Scientists
Address: 220 Old Dairy Road, Wilmington, North Carolina 28405 Phone: (910) 452-5861

Release Information

Date Discovered: June 28, 1990
Longitude: 77° 27' 28" W Latitude: 34° 43' 47" N
Estimated Quantity of Release: Unknown
Cause of Release: Possible leaking UST(s) and/or associated piping
Source of Release (e.g. Piping/UST):
Possible leaking UST(s) and/or associated piping
Sizes and contents of UST system(s) from which the release occurred:
One 6,000-gallon Regular Gasoline UST; One 6,000-gallon Unleaded Gasoline UST; One 4,000 gallon Unleaded Gasoline UST; One 550-gallon Diesel UST; and One 550 gallon Heating Oil UST

I, Michael E. Mason a Professional Engineer Licensed Geologist (circle one) for CATLIN Engineers and Scientists, do certify that the information contained in this report is correct and accurate to the best of my knowledge.

(Please Affix Seal and Signature)



SOIL ASSESSMENT REPORT
FOR
BUILDING TC-912
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

JANUARY 4, 2005

B. EXECUTIVE SUMMARY

This report documents soil assessment activities conducted at the Building TC-912 Underground Storage Tank (UST) Site per the request of the North Carolina Department of Environment and Natural Resources - Wilmington Regional Office (NCDENR – WiRO). Building TC-912 was located in the Camp Geiger area of Marine Corps Base (MCB), Camp Lejeune in Onslow County, North Carolina. The site previously contained one 6,000-gallon capacity regular gasoline UST, one 6,000-gallon capacity unleaded gasoline UST, one 4,000-gallon unleaded gasoline UST, one 550-gallon diesel UST and one 550-gallon heating oil UST. The USTs and associated piping were installed in 1964. The USTs were deactivated in 1990 and removed in June 1992. It is unknown if the 550-gallon heating oil UST was removed from the site. Building TC-912 has been demolished and the site is now covered with grass.

In June of 1990, UST TC-912-1 failed a tank system check which, prompted the UST system at the subject site to be deactivated. A site investigation was conducted by ATEC Environmental Consultants (ATEC) in August 1991 which indicated soil and groundwater at the subject site had been impacted by petroleum constituents. In June 1992, Environmental and Regulatory Consultants, Inc. (ERC) removed two 6,000-gallon USTs, one 4,000-gallon UST and one 550-gallon UST. Two soil samples collected beneath UST TC-912-2 indicated petroleum-impacted soil. Subsequently, site assessment activities were performed in 1993 and 1994 by Law Engineering, Inc. (LAW) to define the extent of soil and dissolved-phase groundwater contamination. Upon completion of the site assessment, LAW developed a Corrective Action Plan (CAP) in 1996 which estimated the horizontal and vertical extent of soil and groundwater petroleum contamination and recommended an air sparge/soil vapor extraction (AS/SVE) remediation system.

Construction of the recommended AS/SVE system was completed by J.A. Jones Environmental Services Company (J.A. Jones) in 1998. The soil and groundwater treatment system operated from April 20, 1998 to April 5, 2001. Subsequent to system shutdown, post-operation monitoring was initiated to facilitate site closure.

A request for No Further Action (NFA) was submitted to the NCDENR – WiRO in March of 2004. This request was denied due to the lack of soil data in the vicinity of the former dispenser area at the subject site. The assessment activities conducted during the current investigation fulfilled this gap in soil data.

The remedial goals set forth in the CAP for the site were based on the regulations that were enforced at the time. The cleanup goals for groundwater were the 2L Groundwater Quality Standards (GWQS) and for soils were 10 mg/kg Total Petroleum Hydrocarbons (TPH) – Gasoline Range Organics (GRO) and 40 mg/kg TPH – Diesel Range Organics (DRO). Since submittal of the CAP the State regulations have changed. The current applicable remedial requirements for this site are the Risk Based Corrective Action (RBCA) rules for Petroleum Underground Storage Tanks per 15A NCAC 2L .0115 effective date January 2, 1998 and document entitled "*Guidelines for Assessment and Corrective Action*" (2001 Guidelines) as released by the NCDENR Division of Waste Management, UST Section, effective July 1, 2001. The current "clean up" goals for this site are the Gross Contamination Levels (GCLs) for groundwater and the Residential Maximum Soil Contaminant Concentrations (MSCCs) for soil.

Based on data collected during this current Soil Assessment Investigation, no soil contaminants were identified at concentrations above any of the established Residential or Industrial/Commercial MSCCs. Additionally, evaluation of site conditions indicates that a Residential Classification should be applicable for the subject site. Therefore, based on the absence of soil contamination above the Residential MSCCs it appears that no further assessment or remediation of soil is necessary at the subject site.

C. SITE HISTORY

(Refer to Tables 1 and 2 and Figures 1 and 2)

Building TC-912 was located in the Camp Geiger area of MCB, Camp Lejeune in Onslow County, North Carolina. The site location is shown on Figures 1 and 2. The site previously contained one 6,000-gallon capacity regular gasoline UST, one 6,000-gallon capacity unleaded gasoline UST, one 4,000-gallon unleaded gasoline UST, one 550-gallon diesel UST and one 550-gallon heating oil UST. The USTs and associated piping were installed in 1964. The USTs were deactivated in 1990 and removed in June 1992. It is unknown if the 550-gallon heating oil UST was removed from the site. Building TC-912 has been demolished and the site is generally now covered with grass. UST history and owner information is included on Tables 1 and 2.

Previous investigations at the site are documented in the following reports:

REPORT TITLE	DATE	AUTHOR
<i>Underground Storage Tank (UST) Site Check, Camp Geiger Mini C Store Service Station, Camp Lejeune, Onslow County, NC</i>	February 18, 1992	ATEC Environmental Consultants
<i>Underground Storage Tank Removal Report, Camp Geiger Mini C Store Service Station, Camp Lejeune, Onslow County, NC</i>	September 15, 1992	Environmental & Regulatory Consultants, Inc.
<i>Leaking Underground Storage Tank (LUST) Site Assessment Report, Building Mini C Store Service Station, MCAS, Camp Geiger, NC</i>	June 7, 1994	Law Engineering, Inc.
<i>Addendum to Leaking Underground Storage Tank Site Assessment Report, Building TC-912, Mini C Service Station, MCAS, Camp Geiger, NC</i>	June 7, 1994	Law Engineering, Inc.
<i>Corrective Action Plan for the Restoration of Petroleum Contaminated Soil and Groundwater, Building TC-912, Mini C Service Station, MCAS, Camp Geiger, NC</i>	February 23, 1996	Law Engineering, Inc.
<i>Annual Monitoring Report, Request for No Further Action Status, Soil and Groundwater Remediation, Building TC-912, Camp Geiger, NC</i>	January 2003	J.A. Jones Environmental Services Company

The results of these investigations are summarized as follows:

UST TC-912-1 failed a tank system check in June of 1990, which prompted the UST system at the subject site to be deactivated. A site investigation was conducted by ATEC in August 1991 which indicated soil and groundwater at the subject site had been impacted by petroleum constituents. In June 1992, ERC removed two 6,000-gallon USTs, one 4,000-

gallon UST and one 550-gallon UST. Two soil samples collected beneath UST TC-912-2 indicated petroleum-impacted soil. Subsequently, site assessment activities were performed in 1993 and 1994 by LAW to define the extent of soil and dissolved-phase groundwater contamination. Upon completion of the site assessment, LAW developed a CAP in 1996, which estimated the horizontal and vertical extent of soil and groundwater petroleum contamination and recommended an AS/SVE remediation system.

Construction of the recommended AS/SVE system was completed by J.A. Jones in 1998. The soil and groundwater treatment system operated from April 20, 1998 to April 5, 2001. Subsequent to system shutdown, post-operation monitoring was initiated to facilitate site closure.

A request for NFA was submitted to the NCDENR – WiRO in March of 2004. This request was denied due to the lack of soil data in the vicinity of the former dispenser area at the subject site. The assessment activities conducted during the current investigation fulfilled this gap in soil data.

The remedial goals set forth in the CAP for the site were based on the regulations that were enforced at the time. The cleanup goals for groundwater were the 2L GWQS and for soils were 10 mg/kg TPH - GRO and 40 mg/kg TPH – DRO. Since submittal of the CAP the State regulations have changed. The current applicable remedial requirements for this site are the RBCA rules for Petroleum Underground Storage Tanks per 15A NCAC 2L .0115 effective date January 2, 1998 and document entitled "*Guidelines for Assessment and Corrective Action*" as released by the NCDENR Division of Waste Management, UST Section, effective July 1, 2001. The current "clean up" goals for this site are the GCLs for groundwater and the Residential MSCCs for soil.

D. RECEPTOR INFORMATION

1. Water Supply Wells

(Refer to Table 4 and Figure 1)

As shown on Figure 1, there is one water supply well located within 1,500 feet of subject site. Potable supply well TC-1253 is located approximately 1,250 feet to the south of the subject site. Table 4 includes the construction data for this potable well.

2. Public Water Supplies

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. Groundwater obtained from the Castle Hayne Aquifer beneath the MCB is the raw water source for the treatment facility.

3. Surface Water
(Refer to Figure 1)

As shown on Figure 1, based on the MCB Camp Lejeune GIS data there are no natural surface water bodies within 1,500 feet of the subject site. However, the USGS Jacksonville South Quadrangle (1952, Photoinspected 1988), shows a tributary of Edwards Creek approximately 1,000 feet north of the subject site.

4. Wellhead Protection Areas

As documented in the 2002 Wellhead Protection Plan Update by AH Environmental Consultants, the site is located in a Zone 3 wellhead protection area. This zone is an estimate of the 10-year zone of transport if maximum pumping of supply wells were occurring. Maximum pumping is not currently being conducted and is not recommended or planned in the future. Therefore, Zone 3 is only used for long-term planning and land use considerations.

5. Deep Aquifers in the Coastal Plain Physiographic Region

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, Pee Dee, Black Creek, and upper and lower Cape Fear aquifers.

Aquifers below the surficial aquifer in the Camp Geiger area typically include the Castle Hayne Aquifer, the Beaufort Aquifer, and the Pee Dee Aquifer, in order of increasing depth. Both the Beaufort and Pee Dee 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
(Refer to Figure 3)

An underground power line lies in an east-west orientation across the subject site, which supplies power to the on-site remediation system. An underground water line and sanitary sewer line lies in a northwest-southeast orientation at the southern portion of the site. In addition, an underground water line runs along "A" street east of the subject site. Overhead power lines supported by power poles run along "A" street and in the middle of the subject site. Additionally, underground lines associated with the on-site remediation system are found at various locations across the subject site. Known utilities are illustrated on Figure 3.

7. Property Owners and Occupants
(Refer to Table 5)

Refer to Table 5 for a list of property owners/occupants.

E. SITE GEOLOGY
(Refer to Appendix A)

According to the Geologic Map of North Carolina (North Carolina Department of Natural Resources and Community Development, 1985) the site lies within the Coastal Plain Physiographic Province. As stated in the 1994 Site Assessment Report by LAW, the elevation of the site is roughly 20-25 feet above mean sea level (MSL) and the topography is relatively flat, but slopes gently towards the east to northeast towards Edwards Creek which drains into the New River. The majority of the land surface in the vicinity of subject site is covered by grass.

Soil borings for this investigation indicate dark brown to black, very fine to fine, silty sand from zero to three feet BLS. Groundwater was encountered in three of the five borings installed during this investigation. Depth to groundwater measurements observed during this investigation were estimated at approximately three feet below land surface (BLS). Boring logs for borings USTTC912-SB01 through USTTC912-SB05 are included in Appendix A.

F. SOIL INVESTIGATION
(Refer to Tables 3A-3D, Figures 4A-4C, and Appendices B through H)

Historical Soil Sampling – UST Site Check

In June of 1990, UST TC-912-1 failed a tank system check, which prompted the UST system at the subject site to be deactivated. A site investigation consisting of the installation of five soil borings was conducted by ATEC in August 1991. One soil sample for off-site laboratory analysis was collected from each boring location and one duplicate sample was collected. These soil samples were analyzed per Environmental Protection Agency (EPA) Method 8015B/5030 for TPH-Gasoline and Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8240. Analytical results revealed contamination above NCDENR Action Levels. Refer to Appendix B for historical soil sampling results from the UST Site Check.

Historical Soil Sampling – UST Closure Report

In June 1992, ERC removed two 6,000-gallon USTs, one 4,000-gallon UST and one 550-gallon UST. ERC collected two soil samples from beneath UST TC-912-2 during closure activities for off-site laboratory analysis per EPA Method 8015B/5030 for TPH-Gasoline. Analytical results revealed both of the samples contained TPH-Gasoline contamination above the NCDENR Action Levels. Refer to Appendix C for historical soil sampling results from the UST Removal.

Historical Soil Sampling – UST Site Assessment

Evaluation of the data collected during the UST removal triggered additional site assessment activities by LAW. In 1993, eleven soil borings were advanced and two soil samples for off-site laboratory analysis were collected from each boring. All soil samples were analyzed per EPA Methods 5030 (TPH-Gasoline) and 3550 (TPH-Diesel). Analytical results revealed two soil samples (B-1A and B-1B) above the NCDENR Action Level for TPH-Gasoline. These samples were collected from the same boring, the B-1A sample was collected from a depth of 3.0 – 4.5 feet BLS and the B-1B sample was collected from a depth of 4.5 – 6.0 feet BLS. Refer to Appendix D for historical soil sampling results from the LAW Site Assessment.

Historical Soil Sampling – Addendum UST Site Assessment

An addendum to the Site Assessment was conducted by LAW in 1994, which consisted of additional soil sampling to delineate the extent of vadose zone soil contamination. Five additional soil borings were installed and soil samples were collected from each boring for analysis per EPA Methods 5030 and 3550. Analytical results revealed no detections of TPH-Gasoline or TPH-Diesel above the laboratory detection limits in any of the five samples analyzed. This addendum investigation was successful in delineating the extent of vadose zone soil contamination. Refer to Appendix E for historical soil sampling results from the LAW Addendum Site Assessment.

Historical Soil Sampling – 2003 Annual Monitoring Report

The on-site remediation system was shutdown in April 2001. Three confirmatory soil samples were collected in March 2002 and analyzed per EPA Methods 5030 and 3550 within the boundaries of the vadose zone soil contamination plume. Analytical results indicated no exceedances of the NCDENR Action Levels for either TPH-Gasoline or TPH-Diesel. Refer to Appendix F for historical soil sampling results from the 2003 Annual Monitoring Report.

Current Soil Sampling – Soil Assessment Report

Soil sampling completed during this current investigation was conducted in one phase. On September 16, 2004 CATLIN personnel conducted a soil sampling event at the site as requested by the NCDENR - WiRO. It was intended that the collected soil samples confirm the absence of residual vadose zone soil contamination above the applicable MSCCs existed in the vicinity of the former UST dispensers. Five soil borings (USTTC912-SB01 through USTTC912-SB05) were advanced utilizing hand auger techniques at the locations indicated on Figures 4A through 4C. Observations during this investigation noted the water table at approximately three feet BLS. The soil samples collected during this sampling event were taken from one to two and two to three feet BLS, therefore these samples were believed to be representative of vadose zone soils.

All sampling was conducted in accordance with CATLIN's Standard Procedures included in Appendix G. The soil borings were immediately abandoned with cuttings following the collection of the samples. The soil samples were placed in laboratory glassware, labeled,

placed immediately on ice in a cooler, and transported under proper chain of custody protocol to Paradigm Analytical Laboratories, Inc. in Wilmington, North Carolina. Analytical results are included in Appendix H and are summarized as follows:

EPA Method 8260B/5035 (includes DIPE +MTBE)

As indicated in Table 3A and illustrated on Figure 4A, eleven EPA Method 8260B compounds were detected at concentrations above the laboratory Practical Quantitation Limits (PQLs). However, only Benzene, Ethylbenzene, and Total Xylenes were detected at concentrations above the established Soil-to-Groundwater (STGW) MSCCs. Additionally, no compounds were detected at concentrations above the Residential or Industrial/Commercial MSCCs.

EPA Method 8270

As indicated in Table 3B and illustrated on Figure 4B, only Benzoic Acid was detected in sample USTTC912-SB04(1-2) at a concentration of 2.70 mg/kg which is well below the most stringent MSCC of 112 mg/kg. There were no other EPA Method 8270 compounds detected at concentrations above the laboratory PQLs.

MADEP VPH/EPH

As indicated in Tables 3C and 3D and illustrated on Figure 4C, in sample USTTC912-SB02(1-2) the C₅-C₈ Aliphatics, C₉-C₁₈ Aliphatics and the C₉-C₂₂ Aromatics hydrocarbon fractions were detected at concentrations of 18 mg/kg, 76 mg/kg, and <44 mg/kg, respectively. The C₉-C₂₂ Aromatic result is the sum of the reported quantitation limit of one fraction (<10 mg/kg) and the detected concentration of the other fraction (34 mg/kg). The C₉-C₁₈ Aliphatics and the C₉-C₂₂ Aromatics hydrocarbon fractions were detected at concentrations of <45 mg/kg and <28 mg/kg, respectively in sample USTTC912-SB04(1-2). The detections in sample USTTC912-SB04(1-2) are the sum of the reported quantitation limit of one fraction and the detected concentration of the other fraction. Only the detection of the C₉-C₂₂ Aromatics in sample USTTC912-SB02(1-2) was above the most stringent MSCCs. No MADEP VPH/EPH hydrocarbon fractions were detected at concentrations above the laboratory PQLs in samples USTTC912-SB01(1-2), USTTC912-SB03(2-3) and USTTC912-SB05. No MADEP VPH/EPH hydrocarbon fractions were detected in any sample in excess of the Residential MSCCs.

G. CONCLUSIONS AND RECOMMENDATIONS

The soil sampling performed during this current investigation was conducted per the request of the NCDENR - WiRO. Results from this sampling event indicate concentrations of only four compounds (Benzene, Ethylbenzene, Total Xylenes, and the C₉-C₂₂ Aromatic hydrocarbon fractions) above the STGW MSCCs. All other compounds were either below the laboratory PQLs or below any established MSCCs.

Evaluation of site conditions indicates that a Residential Classification should be applicable for the subject site. Therefore, based on the absence of soil contamination above the

Residential MSCCs it appears that no further assessment or remediation of soil is necessary at the subject site.

H. PROPOSED REMEDY FOR SOIL CONTAMINATION

1. Evaluation of Remediation Alternatives

Based on the analytical results from this current investigation, additional soil remediation is not deemed necessary.

2. Proposed Remediation

Additional soil remediation is not proposed.

3. Post Remediation Sampling

Not Applicable

4. Schedule

Not Applicable

5. Public Notice

Public notice is required by the NCDENR if the responsible party proposes cleanup of soil contamination to other than the lower of the Residential or Soil-to-Groundwater MSCCs. There is soil contamination remaining on-site in excess of the Soil-to-Groundwater MSCCs, therefore public notice is required. The following parties are required to be notified:

- the local health director;
- the chief administrative officer of each political jurisdiction in which the contamination occurs; and
- all property owners and occupants contiguous to the area containing the contamination.

Public notification will be provided by the MCB, Camp Lejeune, Installations and Environment Department, Environmental Management Division, Environmental Quality Branch.

I. LIMITATIONS

The soil samples analyzed as part of this investigation only provide isolated data points and may not represent conditions at every location in the project area. Analyses and conclusions of this report, being based on interpolation between data points at the project area, may not be completely representative of all site conditions. Conclusions and recommendations of this investigation and report are based on the best available data in an effort to comply with current regulatory requirements.

J. REFERENCES

- AH Environmental Consultants, *Wellhead Protection Plan – 2002 Update, Marines Corps Base, Camp Lejeune*, August 2002.
- ATEC Environmental Consultants, *Underground Storage Tank (UST) Site Check, Camp Geiger Mini C Store Service Station, Camp Lejeune, Onslow County, NC*, February 18, 1992.
- CATLIN Engineers and Scientists, *Workplan – Soil Assessment Report Building TC-912, Marine Corps Base, Camp Lejeune, North Carolina*, August 19, 2004.
- Environmental & Regulatory Consultants, Inc., *Underground Storage Tank Removal Report, Camp Geiger Mini C Store Service Station, Camp Lejeune, Onslow County, NC*, September 15, 1992.
- J.A. Jones Environmental Services Company, *Annual Monitoring Report, Request for No Further Action Status, Soil and Groundwater Remediation, Building TC-912, Camp Geiger, NC*, January 2003.
- LAW Engineering, Inc., *Leaking Underground Storage Tank (LUST) Site Assessment Report, Building Mini C Store Service Station, MCAS, Camp Geiger, NC*. June 7, 1994.
- LAW Engineering, Inc., *Addendum Leaking Underground Storage Tank Site Assessment Report, Building TC-912, Mini C Store Service Station, MCAS, Camp Geiger, NC*. June 7, 1994.
- LAW Engineering, Inc., *Corrective Action Plan for the Restoration of Petroleum Contaminated Soil and Groundwater, Building TC-912, Mini C Store Service Station, MCAS, Camp Geiger, NC*. February 23, 1996.
- North Carolina Department of Environment and Natural Resources, *Guidelines for Assessment and Corrective Action, North Carolina Underground Storage Tank Section* (Effective July 1, 2001).
- Winner, M.D., Jr., and Coble, R.W., 1989, Hydrogeologic Framework of the North Carolina Coastal Plain Aquifer System: U.S. Geological Survey Open-File Report 87-690, 155 p.

TABLES

TABLE 1
SITE HISTORY
UST SYSTEM INFORMATION
BUILDING TC-912

UST ID Number	Product (gasoline, diesel, jet fuel, etc.)	Capacity (gallons)	Date Installed (yyyy)	Date Permanently Closed (P), or Still in Use* (C) (month yyyy)	Was Release Associated With UST System? (Yes / No)
UST TC-912-1	Unleaded Gasoline	6,000	1964	June 1992 (P)	Yes
UST TC-912-2	Regular Gasoline	6,000	1964	June 1992 (P)	Yes
UST TC-912-3	Unleaded Gasoline	4,000	1964	June 1992 (P)	Yes
UST TC-912-4	Diesel	550	1964	June 1992 (P)	Yes
UST TC-912-5	Heating Oil	550	1964	Unknown	Yes

* Still in use means not permanently closed.

TABLE 2
SITE HISTORY
UST OWNER/OPERATOR INFORMATION
BUILDING TC-912

UST ID Number	Name of Owner or Operator	Dates of Ownership/Operation	Owner or Operator?
UST TC-912-1 through TC-912-4	Commanding General Marine Corps Base Camp Lejeune, NC	1964 to June 1992	Owner and Operator
Address		Telephone Number	
I&E/EMD/EQB PSC 20004 Marine Corps Base, Camp Lejeune, NC 28542		910-451-5068	

TABLE 3A SUMMARY OF SOIL LABORATORY RESULTS

Date: September 2004

Incident Number and Name: 15198 - Building TC-912

Facility ID#: N/A

Analytical Method: EPA Method 8260B/5035

Sample ID	Contaminant of Concern →		Acetone	Benzene	Carbon disulfide	Ethylbenzene	Isopropylbenzene	4-Isopropyltoluene	n-Propyl benzene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Total Xylenes	All Other Target Analytes
	Date Collected	Sample Depth (ft. BLS)												
Residential MSCC (mg/kg)			1564	22	1564	1560	1564	NE	156	3200	782	782	32,000	Varies
Industrial/Commercial MSCC (mg/kg)			40,880	200	40,880	40,000	40,880	NE	4088	82000	20,440	20,440	200,000	Varies
Soil to Groundwater MSCC (mg/kg)			3	0.0056	4	0.24	2	NE	2	7	8	7	5	Varies
USTTC912-SB01(1-2)	9/16/2004	1-2	0.0615	<0.00593	<0.00593	<0.00593	<0.00593	<0.00593	<0.00593	<0.00593	0.0283	<0.00593	<0.01783	BQL
USTTC912-SB01(1-2)Dup.	9/16/2004	1-2	0.0651	<0.00603	<0.00603	<0.00603	<0.00603	<0.00603	<0.00603	<0.00603	0.0352	<0.00603	<0.01813	BQL
USTTC912-SB02(1-2)	9/16/2004	1-2	<5.78	0.245	<0.231	1.92	0.531	2.7	0.915	0.411	3.79	1.68	16.81	BQL
USTTC912-SB03(2-3)	9/16/2004	2-3	<0.0471	<0.00471	0.00721	<0.00471	<0.00471	<0.00471	<0.00471	<0.00471	<0.00471	<0.00471	<0.01412	BQL
USTTC912-SB04(1-2)	9/16/2004	1-2	<0.077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0231	BQL
USTTC912-SB05	9/16/2004	1-2	<0.0476	0.00858	<0.00476	<0.00476	<0.00476	<0.00476	<0.00476	<0.00476	<0.00476	<0.00476	<0.01429	BQL

All results in mg/kg.

ft. BLS = feet below land surface

NE = none established

BQL = below quantitation limit

Based on site conditions the Residential MSCCs are most likely applicable at the subject site

TABLE 3B SUMMARY OF SOIL LABORATORY RESULTS

Date: September 2004

Incident Number and Name: 15198 - Building TC-912

Facility ID#: N/A

Analytical Method: EPA Method 8270

Sample ID	Contaminant of Concern →		Benzoic Acid	All Other Target Analytes
	Date Collected	Sample Depth (ft. BLS)		
Residential MSCC (mg/kg) Industrial/Commercial MSCC (mg/kg) Soil to Groundwater MSCC (mg/kg)			62571 1,635,200 112	Varies Varies Varies
USTTC912-SB01(1-2)	9/16/2004	1-2	<0.725	BQL
USTTC912-SB02(1-2)	9/16/2004	1-2	<0.694	BQL
USTTC912-SB03(2-3)	9/16/2004	2-3	<0.661	BQL
USTTC912-SB04(1-2)	9/16/2004	1-2	2.70	BQL
USTTC912-SB05	9/16/2004	1-2	<0.642	BQL

All results in mg/kg.

ft. BLS = feet below land surface

BQL = below quantitation limit

Based on site conditions the Residential MSCCs are most likely applicable at the subject site

TABLE 3C SUMMARY OF SOIL LABORATORY RESULTS

Date: September 2004

Incident Number and Name: 15198 - Building TC-912

Facility ID#: N/A

Analytical Method: MADEP VPH/EPH

Sample ID	Contaminant of Concern →		C5-C8 Aliphatics	C9-C12 Aliphatics	C9-C10 Aromatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C11-C22 Aromatics
	Date Collected	Sample Depth (ft. BLS)						
USTTC912-SB01(1-2)	9/16/2004	1-2	<10	<10	<10	<10	<10	<10
USTTC912-SB02(1-2)	9/16/2004	1-2	18	59	34	17	<10	<10
USTTC912-SB03(2-3)	9/16/2004	2-3	<10	<10	<10	<10	<10	<10
USTTC912-SB04(1-2)	9/16/2004	1-2	<10	<10	<10	35	<10	18
USTTC912-SB05	9/16/2004	1-2	<10	<10	<10	<10	<10	<10

All results in mg/kg.

ft. BLS = feet below land surface

TABLE 3D SUMMARY OF SOIL LABORATORY RESULTS

Date: September 2004

Incident Number and Name: 15198 - Building TC-912

Facility ID#: N/A

Analytical Method: MADEP VPH/EPH As Compared To NCDENR MSCCs

Sample ID	Contaminant of Concern →		C5-C8 Aliphatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C9-C22 Aromatics
	Date Collected	Sample Depth (ft. BLS)				
Residential MSCC (mg/kg)			939	9386	93,860	469
Industrial/Commercial MSCC (mg/kg)			24,528	245,280	#	12,264
Soil to Groundwater MSCC (mg/kg)			72	3255	##	34
USTTC912-SB01(1-2)	9/16/2004	1-2	<10	<20	<10	<20
USTTC912-SB02(1-2)	9/16/2004	1-2	18	76	<10	<44*
USTTC912-SB03(2-3)	9/16/2004	2-3	<10	<20	<10	<20
USTTC912-SB04(1-2)	9/16/2004	1-2	<10	<45*	<10	<28*
USTTC912-SB05	9/16/2004	1-2	<10	<20	<10	<20

All results in mg/kg.

ft. BLS = feet below land surface

= Health based level > 100%

= Considered immobile

Based on site conditions the Residential MSCCs are most likely applicable at the subject site

* The value represents the sum of the reported practical quantitation limit of one fraction and the detected concentration of the other fraction.

TABLE 4**WATER SUPPLY WELL INFORMATION**Date: Sep-04 Incident Number and Name: 15198 - Building TC-912 Facility ID#: N/A

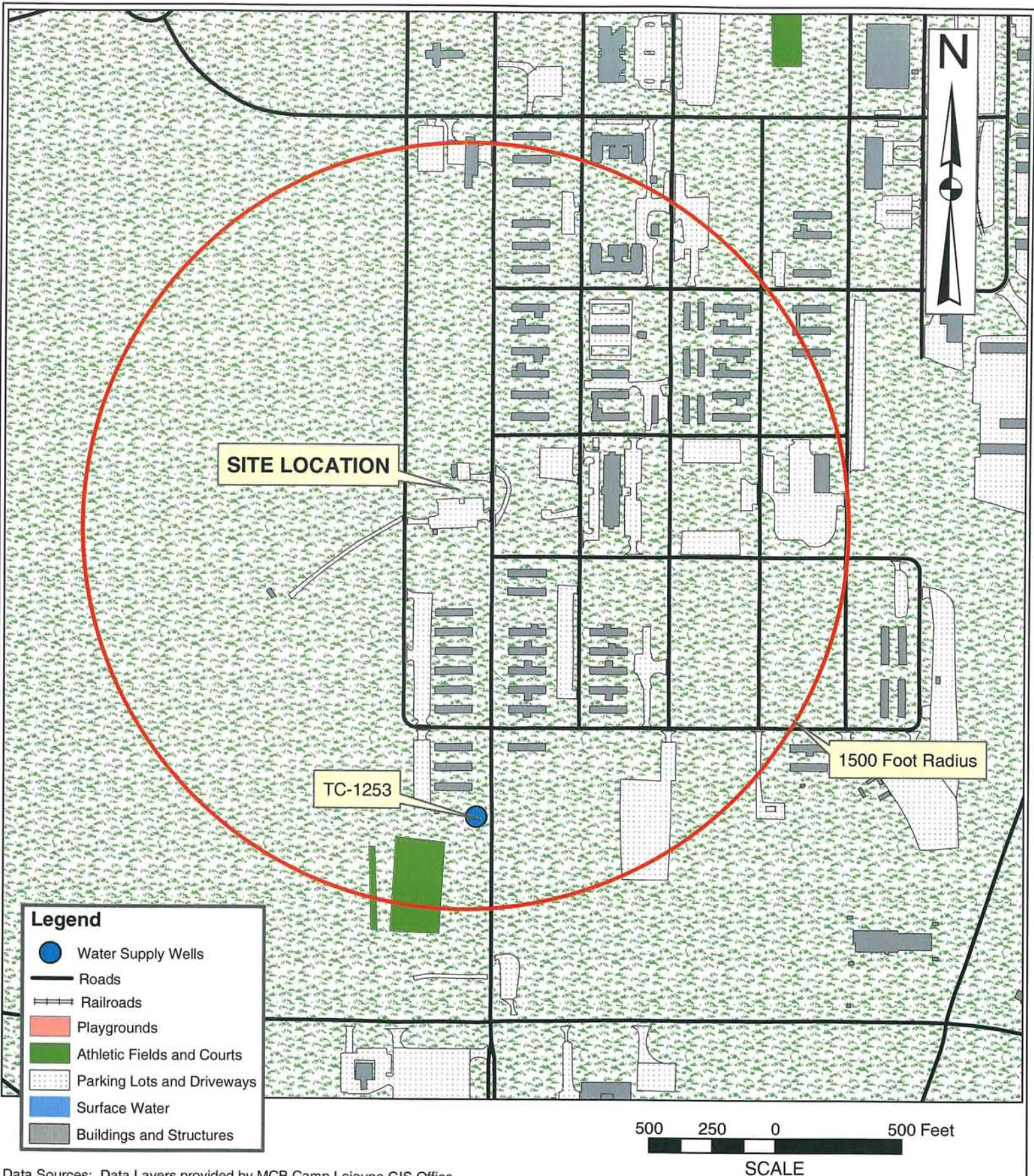
Well ID#	Well Owner/User (indicate which)	Address	Phone Number	Well Use	Well Depth (ft. BLS)	Type of Well	Well Casing Depth (ft. BLS)	Well Screen Interval (x to y ft. BLS)	Distance from source area of release (ft.)
TC-1253	MCB Camp Lejeune	Along "A" Street Camp Geiger Area	Unknown	Potable Well	250	Potable Well	120	120 to 170	1,250

ft. BLS = feet below land surface

TABLE 5**PROPERTY OWNERS/OCCUPANTS**Date: Sept 2004Incident No. and Name: 15198 - Building TC-912 Facility ID#: N/A

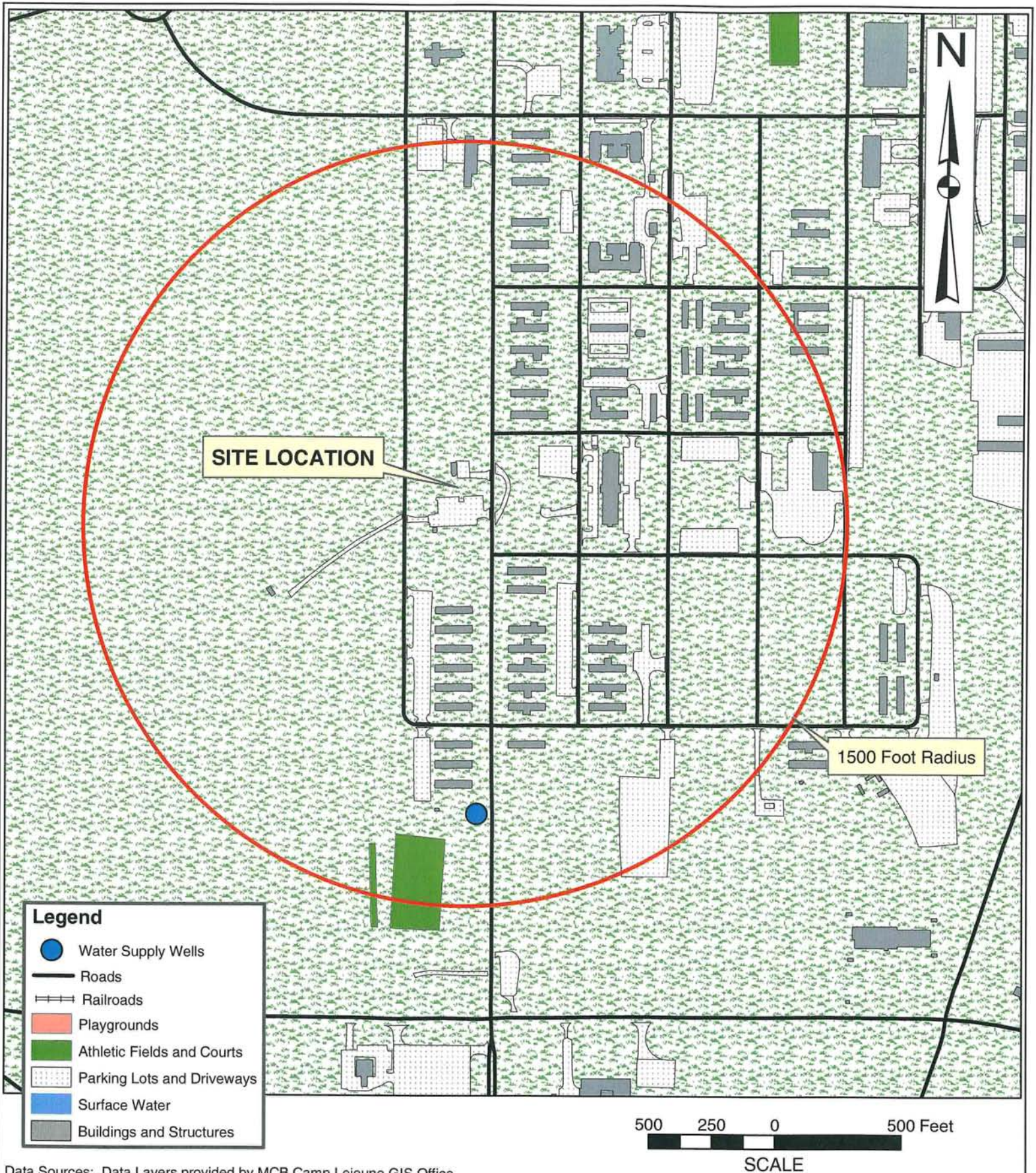
Tax Parcel Number/Map ID	Owner/Occupant Name (Last, First MI)	Address
N/A	Owner: Commanding General, MCB Camp Lejeune	I&E/EMD/EQB PSC 20004 Marine Corps Base, Camp Lejeune, NC 28542
N/A	Occupant: None	Off "A" Street, Camp Geiger Area Marine Corps Base, Camp Lejeune, NC 28542

FIGURES



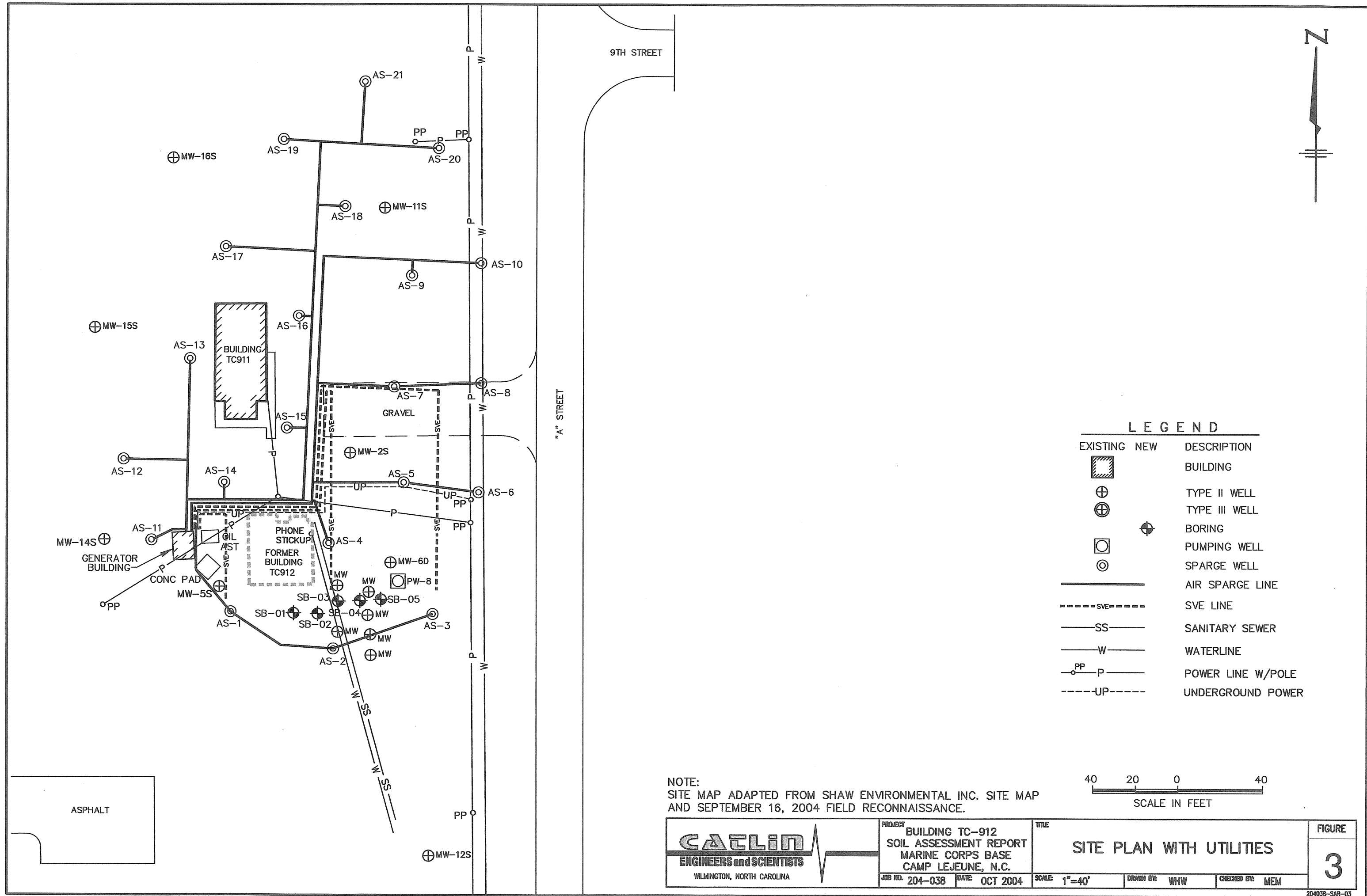
Data Sources: Data Layers provided by MCB Camp Lejeune GIS Office.

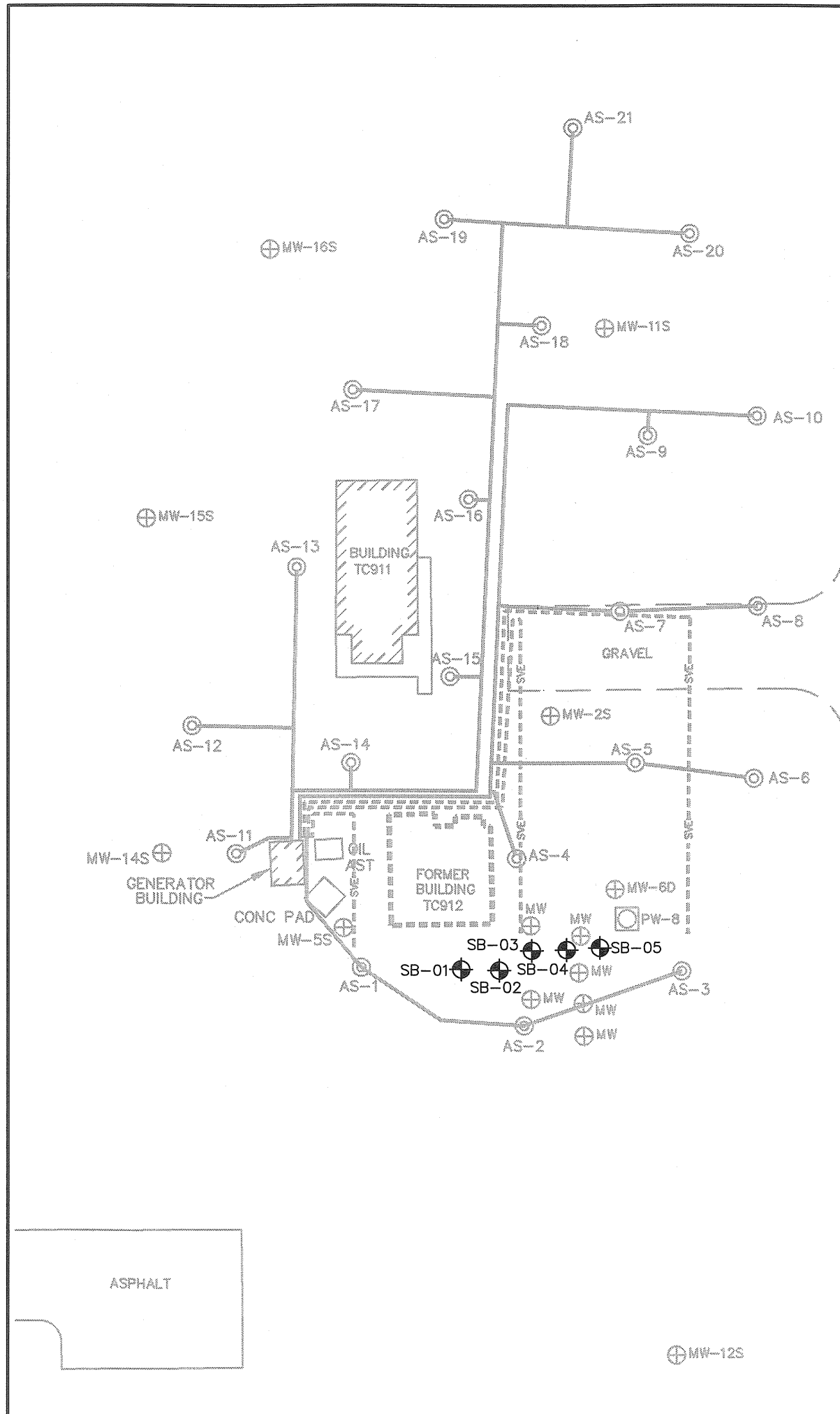
 ENGINEERS and SCIENTISTS WILMINGTON, NORTH CAROLINA	PROJECT BUILDING TC-912 SOIL ASSESSMENT REPORT MARINE CORPS BASE CAMP LEJEUNE, NC		TITLE SITE LOCATION AND WATER SURVEY			FIGURE
	JOB NO. 204-038	DATE OCT 2004	SCALE AS SHOWN	DRAWN BY SAC	CHECKED BY MEM	1



Data Sources: Data Layers provided by MCB Camp Lejeune GIS Office.

 CAELIN ENGINEERS and SCIENTISTS WILMINGTON, NORTH CAROLINA	PROJECT BUILDING TC-912 SOIL ASSESSMENT REPORT MARINE CORPS BASE CAMP LEJEUNE, NC		TITLE SITE LOCATION WITH PLACES OF PUBLIC ASSEMBLY		FIGURE 2
	JOB NO. 204-038	DATE OCT 2004	SCALE AS SHOWN	DRAWN BY SAC	CHECKED BY MEM





9TH STREET

"A" STREET

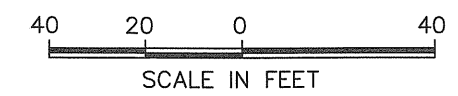
Analytical Method: EPA Method 8260B/5035

Sample ID	Contaminant of Concern →		Acetone	Benzene	Carbon disulfide	Ethylbenzene	Isopropylbenzene	4-Isopropyltoluene	n-Propyl benzene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Total Xylenes	All Other Target Analytes
	Date Collected	Sample Depth (ft. BLS)												
Residential MSCC (mg/kg)			1564	22	1564	1560	1564	NE	156	3200	782	782	32,000	Varies
Industrial/Commercial MSCC (mg/kg)			40,880	200	40,880	40,000	40,880	NE	4088	82000	20,440	20,440	200,000	Varies
Soil to Groundwater MSCC (mg/kg)			3	0.0056	4	0.24	2	NE	2	7	8	7	5	Varies
USTTC912-SB01(1-2)	9/16/2004	1-2	0.0615	<0.00593	<0.00593	<0.00593	<0.00593	<0.00593	<0.00593	<0.00593	0.0283	<0.00593	<0.01783	BQL
USTTC912-SB01(1-2)Dup.	9/16/2004	1-2	0.0651	<0.00603	<0.00603	<0.00603	<0.00603	<0.00603	<0.00603	<0.00603	0.0352	<0.00603	<0.01813	BQL
USTTC912-SB02(1-2)	9/16/2004	1-2	<5.78	0.245	<0.231	1.92	0.531	2.7	0.915	0.411	3.79	1.68	16.81	BQL
USTTC912-SB03(2-3)	9/16/2004	2-3	<0.0471	<0.00471	0.00721	<0.00471	<0.00471	<0.00471	<0.00471	<0.00471	<0.00471	<0.00471	<0.01412	BQL
USTTC912-SB04(1-2)	9/16/2004	1-2	<0.077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0231	BQL
USTTC912-SB05	9/16/2004	1-2	<0.0476	0.00858	<0.00476	<0.00476	<0.00476	<0.00476	<0.00476	<0.00476	<0.00476	<0.00476	<0.01429	BQL

All results in mg/kg.
ft. BLS = feet below land surface
NE = none established
BQL = below quantitation limit
Based on site conditions the Residential MSCCs are most likely applicable at the subject site

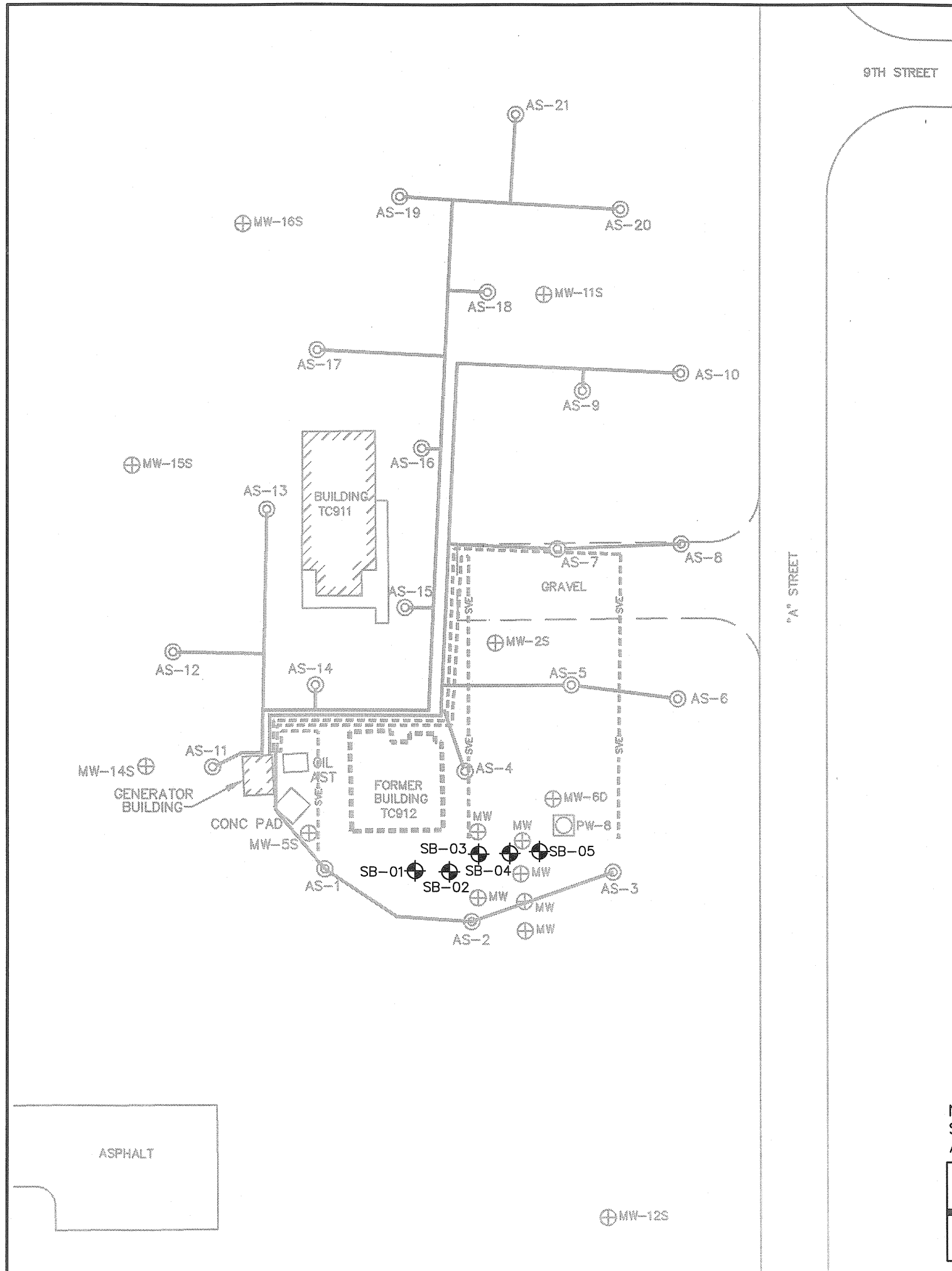
LEGEND

EXISTING	NEW	DESCRIPTION
		BUILDING
		TYPE II WELL
		TYPE III WELL
		BORING
		PUMPING WELL
		SPARGE WELL
		AIR SPARGE LINE
		SVE LINE



NOTE:
SITE MAP ADAPTED FROM SHAW ENVIRONMENTAL INC. SITE MAP
AND SEPTEMBER 16, 2004 FIELD RECONNAISSANCE.

 ENGINEERS and SCIENTISTS WILMINGTON, NORTH CAROLINA	PROJECT BUILDING TC-912 SOIL ASSESSMENT REPORT MARINE CORPS BASE CAMP LEJEUNE, N.C.	TITLE SITE PLAN WITH SOIL LABORATORY RESULTS EPA METHOD 8260B/5035		FIGURE 4A
	JOB NO. 204-038	DATE OCT 2004	SCALE: 1"=40'	



Analytical Method: EPA Method 8270

Sample ID	Contaminant of Concern →		Benzoic Acid	All Other Target Analytes
	Date Collected	Sample Depth (ft. BLS)		
Residential MSCC (mg/kg) Industrial/Commercial MSCC (mg/kg) Soil to Groundwater MSCC (mg/kg)			62571 1,635,200 112	Varies Varies Varies
USTTC912-SB01(1-2)	9/16/2004	1-2	<0.725	BQL
USTTC912-SB02(1-2)	9/16/2004	1-2	<0.694	BQL
USTTC912-SB03(2-3)	9/16/2004	2-3	<0.661	BQL
USTTC912-SB04(1-2)	9/16/2004	1-2	2.70	BQL
USTTC912-SB05	9/16/2004	1-2	<0.642	BQL

All results in mg/kg.

ft. BLS = feet below land surface

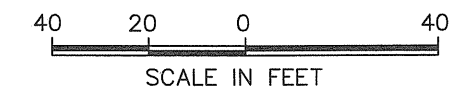
BQL = below quantitation limit

Based on site conditions the Residential MSCCs are most likely applicable at the subject site

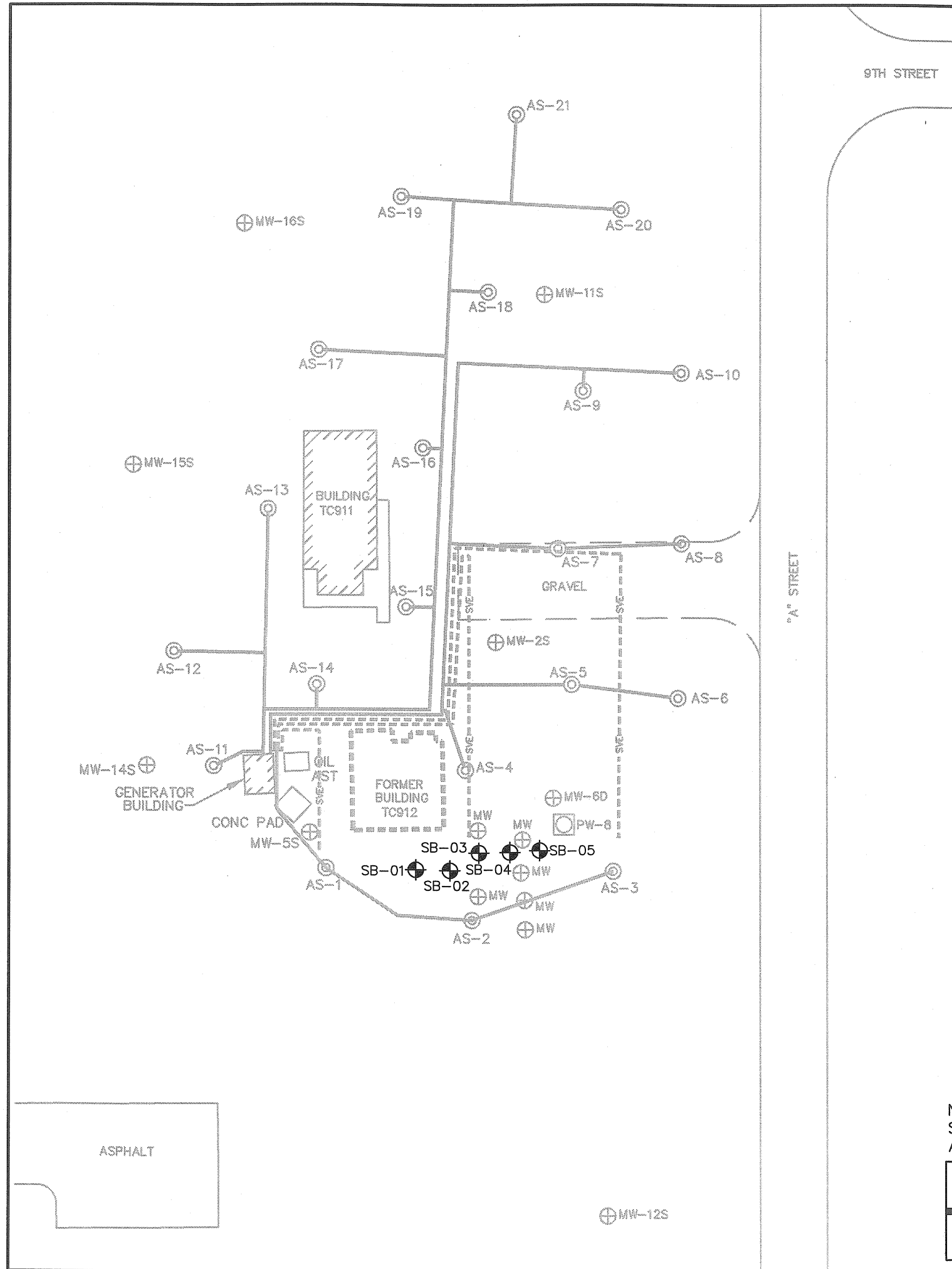
LEGEND

EXISTING	NEW	DESCRIPTION
		BUILDING
		TYPE II WELL
		TYPE III WELL
		BORING
		PUMPING WELL
		SPARGE WELL
		AIR SPARGE LINE
		SVE LINE

NOTE:
SITE MAP ADAPTED FROM SHAW ENVIRONMENTAL INC. SITE MAP
AND SEPTEMBER 16, 2004 FIELD RECONNAISSANCE.



CATLIN ENGINEERS and SCIENTISTS WILMINGTON, NORTH CAROLINA	PROJECT BUILDING TC-912 SOIL ASSESSMENT REPORT MARINE CORPS BASE CAMP LEJEUNE, N.C.		TITLE SITE PLAN WITH SOIL LABORATORY RESULTS EPA METHOD 8270		FIGURE 4B
	JOB NO. 204-038	DATE OCT 2004	SCALE: 1"=40'	DRAWN BY: WHW CHECKED BY: MEM	



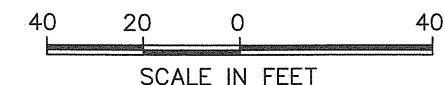
Analytical Method: MADEP VPH/EPH As Compared To NCDENR MSCCs

Sample ID	Contaminant of Concern →		C5-C8 Aliphatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C9-C22 Aromatics
	Date Collected	Sample Depth (ft. BLS)				
Residential MSCC (mg/kg)			939	9386	93,860	469
Industrial/Commercial MSCC (mg/kg)			24,528	245,280	#	12,264
Soil to Groundwater MSCC (mg/kg)			72	3255	##	34
USTTC912-SB01(1-2)	9/16/2004	1-2	<10	<20	<10	<20
USTTC912-SB02(1-2)	9/16/2004	1-2	18	76	<10	<44*
USTTC912-SB03(2-3)	9/16/2004	2-3	<10	<20	<10	<20
USTTC912-SB04(1-2)	9/16/2004	1-2	<10	<45*	<10	<28*
USTTC912-SB05	9/16/2004	1-2	<10	<20	<10	<20

All results in mg/kg.
ft. BLS = feet below land surface
= Health based level > 100%
= Considered immobile
Based on site conditions the Residential MSCCs are most likely applicable at the subject site
* The value represents the sum of the reported practical quantitation limit of one fraction and the detected concentration of the other fraction.

LEGEND		
EXISTING	NEW	DESCRIPTION
		BUILDING
		TYPE II WELL
		TYPE III WELL
		BORING
		PUMPING WELL
		SPARGE WELL
		AIR SPARGE LINE
		SVE LINE

NOTE:
SITE MAP ADAPTED FROM SHAW ENVIRONMENTAL INC. SITE MAP AND SEPTEMBER 16, 2004 FIELD RECONNAISSANCE.



 ENGINEERS and SCIENTISTS WILMINGTON, NORTH CAROLINA	PROJECT BUILDING TC-912 SOIL ASSESSMENT REPORT MARINE CORPS BASE CAMP LEJEUNE, N.C.		TITLE SITE PLAN WITH SOIL LABORATORY RESULTS MADEP VPH/EPH AS COMPARED TO NCDENR MSCC's		FIGURE 4C
	JOB NO. 204-038	DATE OCT 2004	SCALE: 1"=40'	DRAWN BY: WHW CHECKED BY: MEM	

APPENDIX A
BORING LOGS

BORING LOG

CATLIN
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SHEET 1 OF 1

PROJECT NO.: 204-038	STATE: NC	COUNTY: Onslow	LOCATION: Camp Lejeune
PROJECT NAME: Building TC-912		LOGGED BY: Tom Stetler	BORING ID: USTTC912-SB01
		DRILLER:	
LATITUDE: 3,602,264.6	LONGITUDE: 2,463,449.9	CREW:	
SYSTEM: NCSP NAD 83 (ft)	BORING LOCATION: 29' Off sparge cover toward A St.		LAND ELEV.: NM
DRILL MACHINE: Hand Auger	METHOD: Hand Auger	0 HOUR DTW: 3.4	BORING DEPTH: 3.5
START DATE: 09/16/04	FINISH DATE: 09/16/04	24 HOUR DTW: NM	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	SAMP. TYPE	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	U S C S	L O G	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0							0.0	TOPSOIL. Sandy topsoil.	
			▲41.4				0.5		
							0.8	ASPHALT. ~3" in thickness.	
1.0		HA	▲87.1	UST TC912-SB01 (1-2) +DUP	SM			Dark brown to black, silty, f. to vf. SAND. Slight hydrocarbon odor. Moist.	
2.0					SM		2.0	Dark reddish-brown, silty, f. to vf. SAND. Moist. Slight HCO.	
			▲17.2				3.0		
					SM			Dark reddish-brown, silty, f. to vf. SAND. Becomes increasingly light-brown in color with depth. Saturated at ~ 3.5' BLS.	
3.5							3.5	Boring Terminated at Depth 3.5 ft	

BORING LOG

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ENGLISH
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 204-038	STATE: NC	COUNTY: Onslow	LOCATION: Camp Lejeune
PROJECT NAME: Building TC-912		LOGGED BY: Tom Stetler	BORING ID: USTTC912-SB02
LATITUDE: 360,264.1		LONGITUDE: 2,463,461.8	CREW:
SYSTEM: NCSP NAD 83 (ft)		BORING LOCATION: 41' Off sparge cover, toward A St.	LAND ELEV.: NM
DRILL MACHINE: Hand Auger	METHOD: Hand Auger	0 HOUR DTW: 2.9	BORING DEPTH: 3.0
START DATE: 09/16/04	FINISH DATE: 09/16/04	24 HOUR DTW: NM	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	SAMP. TYPE	OVA RESULTS (ppm)	LAB.	U S C S	L O G	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
			0 1000 2000 3000 4000				0.0	LAND SURFACE	
0.0			▲2				0.0	TOPSOIL. Brown, vf. sandy soil. Trace limestone road gravel.	
1.0		HA	▲291.5	UST TC912-SB02 (1-2)	SM		0.8	Dark brown to black, silty, f. to vf. SAND. Moist. Slight HCO. Trace wood fragments (roots).	
2.0			▲188.3		SM		2.0	S. A. A. Dark brown to black, silty, f. to vf. SAND. Matrix appears to contain a tar-like substance, possibly due to high organic content (?). Strong HCO. Moist to wet @ 3' BLS.	
3.0							3.0	Boring Terminated at Depth 3.0 ft	

BORING LOG

CATLIN

ENGINEERS and SCIENTISTS
ENGLISH
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 204-038	STATE: NC	COUNTY: Onslow	LOCATION: Camp Lejeune
PROJECT NAME: Building TC-912		LOGGED BY: Tom Stetler	BORING ID: USTTC912-SB03
		DRILLER:	
LATITUDE: 360,269.4	LONGITUDE: 2,463,470.8	CREW:	
SYSTEM: NCSP NAD 83 (ft)		BORING LOCATION: 23' Off sparge cover, parallel to A St.	LAND ELEV.: NM
DRILL MACHINE: Hand Auger	METHOD: Hand Auger	0 HOUR DTW: NE	BORING DEPTH: 3.0
START DATE: 09/16/04	FINISH DATE: 09/16/04	24 HOUR DTW: NM	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	SAMP. TYPE	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	U S C S	L O G	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
0.0							0.0	LAND SURFACE	
							0.0	TOPSOIL. Black plastic sheeting @ .4' BLS.	
			▲0		GP		0.3		
							0.8	GRAVEL, ~6" in thickness below plastic. Dark brown to black, silty vf. SAND matrix. Poorly sorted. Moist. No HCO.	
1.0			▲0		SM			Orange to dark brown, silty f. to vf. SAND. Moist. Slight HCO?	
2.0							2.0		
		HA	▲1.5	UST TC912-SB03 (2-3)	SM			S. A. A. Dark brown to orange-brown, silty, f. to vf. SAND. Moist. No HCO.	
3.0							3.0	Boring Terminated at Depth 3.0 ft	

BORING LOG

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SHEET 1 OF 1

PROJECT NO.: 204-038	STATE: NC	COUNTY: Onslow	LOCATION: Camp Lejeune
PROJECT NAME: Building TC-912		LOGGED BY: Tom Stetler	BORING ID: USTTC912-SB04
		DRILLER:	
LATITUDE: 360,270.0	LONGITUDE: 2,463,482.3	CREW:	
SYSTEM: NCSP NAD 83 (ft)	BORING LOCATION: TC-912		LAND ELEV.: NM
DRILL MACHINE: Hand Auger	METHOD: Hand Auger	0 HOUR DTW: NE	BORING DEPTH: 3.0
START DATE: 09/16/04	FINISH DATE: 09/16/04	24 HOUR DTW: NM	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	SAMP. TYPE	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	U S C S	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0					GW		0.0	GRAVEL. Well graded road gravel with silty, f. to vf. SAND matrix. Moist. No HCO.	
							0.6		
1.0		HA	▲0.8	UST TC912-SB04 (1-2)	SM			Dark brown to black, silty, f. to vf. SAND. Moist. Very organic-rich (wood fragments). Slight HCO?	
							2.0		
2.0			▲0		SM			S. A. A. Dark reddish-brown in color. Silty, f. to vf. SAND. Moist. No HCO.	
							2.5		
					SM			S. A. A. Light brown in color. Silty, f. to vf. SAND. Moist to wet. No HCO. In gradational contact with above.	
							3.0		
3.0								Boring Terminated at Depth 3.0 ft	

BORING LOG

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SHEET 1 OF 1

PROJECT NO.: 204-038	STATE: NC	COUNTY: Onslow	LOCATION: Camp Lejeune
PROJECT NAME: Building TC-912		LOGGED BY: Tom Stetler	BORING ID: USTTC912-SB05
LATITUDE: 360,270.1		LONGITUDE: 2,463,490.7	CREW:
SYSTEM: NCSP NAD 83 (ft)		BORING LOCATION: ~10' Off PW-8	LAND ELEV.: NM
DRILL MACHINE: Hand Auger	METHOD: Hand Auger	0 HOUR DTW: 2.9	BORING DEPTH: 3.0
START DATE: 09/16/04	FINISH DATE: 09/16/04	24 HOUR DTW: NM	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	SAMP. TYPE	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	U S C S	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
0.0							0.0	LAND SURFACE	
0.0							0.0	TOPSOIL. Brown in color. Sandy. Poorly sorted. Minor road gravels up to 1" in diameter.	
1.0		HA		UST TC912 -SB05 (1-2)	SM		0.5	Dark brown to black, silty, f. to vf. SAND. Very high organic content (rotting wood fragments). Moist. No HCO.	
2.0					SM		2.0	S. A. A., but reddish-brown in color. No wood.	
3.0					SM		2.5	S. A. A., but light gray-brown in color. Silty, f. to vf. SAND. Moist to wet. No HCO.	
3.0							3.0	Boring Terminated at Depth 3.0 ft	

APPENDIX B

HISTORICAL DATA FROM UST SITE CHECK

EPA Method 8240. The limit set by the North Carolina EHNR for TPH in soil is 10.0. As shown in Table 1, the results did not indicate the presence of TPH in the soil samples from the MW3 and MW5 locations. Only a minor amount of Total Xylenes was detected at the MW2 location. TPH and BTEX contamination was detected at the MW1 location but at a TPH level below the 10.0 ppm action level. The TPH level at the MW4 location was found to be well over this TPH action level for soils. The laboratory identified the hydrocarbon contaminant as gasoline.

TABLE 1: Laboratory Results of Soil Analyses

<u>Sample No.</u> <u>(interval feet)</u>	<u>TPH</u> <u>(8015) (ppm)</u>	<u>BTEX (ppb)</u>
MW1 (4 to 6)	1.1	Benzene 40.0 Toluene < 25.0 Ethylbenzene 140.0 Total Xylenes 320.0
MW2 (4 to 6)	< 1.0	Benzene, Toluene, Ethylbenzene all < 5.0 Total Xylenes 7.0
MW3 (4 to 6)	< 1.0	each < 5.0
MW4 (6 to 8)	110.0	Benzene < 250.0 Toluene 410.0 Ethylbenzene 590.0 Total Xylenes 3,000.0
MW5 (4 to 6)	< 1.0	each < 5.0
MW11 (4 to 6)	1.5	Benzene 340.0 Toluene < 5.0 Ethylbenzene 16.0 Total Xylenes 330.0

APPENDIX C

HISTORICAL DATA FROM UST CLOSURE REPORT

in a cooler and delivered to the laboratory along with the appropriate chain of custody documentation. Analytical results for the above samples are discussed in Section 4.0 of this report, and presented as attachments in Appendix I.

The soil samples were collected from the backhoe auger bucket utilizing new latex gloves during each sampling event. Prior to use, all sample containers were washed in conjunction with the procedures set forth by the EPA for quality-controlled sample containers.

The final excavated tank basin measured approximately 30-feet by 27-feet by 14-feet deep. At the direction of NAVFAC, and due to the apparent proximity to groundwater, and safety considerations at the site, the excavation was backfilled pending additional site investigation.

4.0 ANALYTICAL RESULTS

Analytical results for the two soil samples, 1 and 2, collected during the excavation activities indicated the presence of TPH as gasoline above the method detection limit (10 ppm) in both samples. The following table depicts the analytical results for soil samples 1 and 2. Copies of the laboratory results and associated Chain of Custody forms are presented as attachments in Appendix I.

Table 1
Analytical Results - Soil (ppm)

Sample Number	Results: EPA Method 5030 - GASOLINE
1	2,600
2	2,970

Method Detection Limit = 10 ppm

APPENDIX D

HISTORICAL DATA FROM UST SITE ASSESSMENT

TABLE 4.2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
SOIL SAMPLES
LEAKING OF UNDERGROUND STORAGE TANK
SITE ASSESSMENT REPORT
CAMP GEIGER MINI C STORE SERVICE STATION
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA
LAW ENGINEERING JOB NO. 475-08136-01

SAMPLE LOCATION	SAMPLE DEPTH (FT.)	LABORATORY RESULTS					
		TPH-GASOLINE (mg/Kg)	TPH-DIESEL (mg/Kg)	TOTAL LEAD (Mg/Kg)	IGNITABILITY (DEGREES F)	TCLP LEAD (µg/L)	pH
B-1A	3.0 - 4.5	340	19	ND	130	ND	5.3
B-1B	4.5 - 6.0	160	85	---	---	---	---
B-2A	3.0 - 4.5	ND	ND	---	---	---	---
B-2B	4.5 - 6.0	ND	ND	ND	> 200	ND	5.8
B-3A	3.0 - 4.5	ND	ND	ND	> 200	25.0	6.6
B-3B	4.5 - 6.0	ND	ND	---	---	---	---
B-4A	3.0 - 4.5	ND	ND	6.0	> 200	---	4.9
B-4B	4.5 - 6.0	ND	ND	---	---	---	---
MW-6A	3.0 - 4.5	ND	ND	---	---	---	---
MW-6B	4.5 - 6.0	ND	ND	6.0	> 200	---	---
MW-7A	1.5 - 3.0	ND	ND	32.0	---	---	5.8
MW-7B	3.0 - 4.5	ND	ND	---	---	---	---
MW-9A	1.5 - 3.0	ND	ND	---	---	---	---
MW-9B	3.0 - 4.5	ND	ND	---	---	---	---
MW-10A	1.5 - 3.0	ND	4.0	ND	> 200	---	4.12
MW-10B	4.5 - 6.0	ND	ND	---	---	---	---
MW-11A	1.5 - 3.0	ND	ND	4.8	---	---	---
MW-11B	3.0 - 4.5	ND	ND	---	---	---	---
MW-12A	1.5 - 3.0	ND	ND	---	---	---	---
MW-12B	3.0 - 4.5	ND	ND	---	---	---	---
MW-13A	1.5 - 3.0	ND	ND	---	---	---	---
MW-13B	3.0 - 4.5	ND	ND	---	---	---	---

ND = NOT DETECTED; SEE LABORATORY REPORTS FOR APPLICABLE DETECTION LIMIT
 --- = NOT ANALYZED

APPENDIX E

HISTORICAL DATA FROM ADDENDUM UST SITE ASSESSMENT

GeoChem, Incorporated

Environmental Laboratories

Project mobile summary

7

Site Name Mini-C Store

LAB ID.	0145	0146	0152
DATE SAMPLED	02/09/94	02/09/94	02/09/94
DATE ANALYZED	02/10/94	02/10/94	02/10/94
FIELD ID.	B-5	B-5 Dup	B-7

METHOD

ANALYTE	mg/kg	pql	mg/kg	pql	mg/kg	pql
TPH/gas	BDL	1.0	BDL	1.0	BDL	1.0

LAB ID.	0153
DATE SAMPLED	02/09/94
DATE ANALYZED	02/10/94
FIELD ID.	B-9

METHOD

ANALYTE	mg/kg	pql
TPH/gas	BDL	1.0

soil water
parts per million = mg/kg mg/l
parts per billion = ug/kg ug/l
pql = practical quantitation limit due to matrix effects.
bdl = below method detection limit.
bql = below quantitation limit.

GeoChem, Incorporated

Environmental Laboratories

Project mobile summary

8

Site Name Mini-C Store

LAB ID.	0145	0146	0152
DATE SAMPLED	02/09/94	02/09/94	02/09/94
DATE EXTRACTED	02/09/94	02/09/94	02/10/94
FIELD ID.	B-5	B-5 Dup	B-7

METHOD

ANALYTE	<u>mg/kg</u>	<u>pql</u>	<u>mg/kg</u>	<u>pql</u>	<u>mg/kg</u>	<u>pql</u>
TPH/diesel	BDL	5.0	BDL	5.0	BDL	5.0

LAB ID.	0153
DATE SAMPLED	02/09/94
DATE EXTRACTED	02/10/94
FIELD ID.	B-9

METHOD

ANALYTE	<u>mg/kg</u>	<u>pql</u>
TPH/diesel	BDL	5.0

soil water
parts per million = mg/kg mg/l
parts per billion = ug/kg ug/l
pql = practical quantitation limit due to matrix effects.
bdl = below method detection limit.
bql = below quantitation limit.

GeoChem, Incorporated

Environmental Laboratories

Project mobile summary 1 Site Name Mini "C" Store

LAB ID.	0162	0163
DATE SAMPLED	02/14/94	02/14/94
DATE ANALYZED	02/15/94	02/15/94
FIELD ID.	MW 15S	MW 17S

METHOD

ANALYTE	<u>mg/kg</u>	<u>pql</u>	<u>mg/kg</u>	<u>pql</u>
TPH/gas	BDL	1.0	BDL	1.0

LAB ID.	0162	0163
DATE SAMPLED	02/14/94	02/14/94
DATE EXTRACTED	02/15/94	02/15/94
FIELD ID.	MW 15S	MW 17S

METHOD

ANALYTE	<u>mg/kg</u>	<u>pql</u>	<u>mg/kg</u>	<u>pql</u>
TPH/diesel	BDL	5.0	BDL	5.0

soil water
parts per million = mg/kg mg/l
parts per billion = ug/kg ug/l
pql = practical quantitation limit due to matrix effects.
bdl = below method detection limit.
bql = below quantitation limit.

Law Environmental, Inc.
Pensacola Branch
7215 Pine Forest Road
Pensacola, Florida 32526



February 23, 1994

Mr. Tim LaBounty - 475
Law Engineering, Inc.
3301 Atlantic Avenue
Raleigh, NC 27604
Clt. #12024 Proj. #475-08136-01

RECEIVED BY

FEB 24 1994

LAW ENGINEERING
RALEIGH

Dear: Mr. LaBounty:

Below are the results of analysis of 10 samples received for examination from February 16, 1994 to February 17, 1994:

Sample I.D. AA50347 Location code: MINIC2
Purchase order number: 47508136 Project account code: 12024
Location Description: MW-14S Sample collector: LABOUNTY
Sample collection date: 02/14/94 Time: 14:05
Lab submittal date: 02/16/94 Time: 13:55

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
-------------------	-------	----------------	--------------------

Multicomponent analysis: 2321-VOA S. by GC EPA 8021

Benzene	ug/Kg	Not detected	0.5
Bromobenzene	ug/Kg	Not detected	0.4
Bromochloromethane	ug/Kg	Not detected	0.5
Bromodichloromethane	ug/Kg	Not detected	0.5
Bromoform	ug/Kg	Not detected	0.5
Bromoethane	ug/Kg	Not detected	0.9
n-Butylbenzene	ug/Kg	Not detected	0.7
sec-Butylbenzene	ug/Kg	3.1	0.6
tert-Butylbenzene	ug/Kg	Not detected	0.6
Carbon tetrachloride	ug/Kg	Not detected	1.0
Chlorobenzene	ug/Kg	Not detected	0.4
Chloroethane	ug/Kg	Not detected	0.7
Chloroform	ug/Kg	Not detected	0.8
Chloromethane	ug/Kg	Not detected	0.8
2-Chlorotoluene	ug/Kg	Not detected	0.6
4-Chlorotoluene	ug/Kg	5.6	0.9
1,2-Dibromo-3-chloropropane (DBCP)	ug/Kg	Not detected	0.6
Dibromochloromethane	ug/Kg	Not detected	0.5
1,2-Dibromoethane (EDB)	ug/Kg	Not detected	0.5
Dibromomethane	ug/Kg	Not detected	0.5
1,2-Dichlorobenzene	ug/Kg	Not detected	0.3
1,3-Dichlorobenzene	ug/Kg	Not detected	0.3
1,4-Dichlorobenzene	ug/Kg	Not detected	0.4
Dichlorodifluoromethane	ug/Kg	Not detected	0.5
1,1-Dichloroethane	ug/Kg	Not detected	0.7
1,2-Dichloroethane	ug/Kg	Not detected	0.7
1,1-Dichloroethene	ug/Kg	Not detected	0.7

Page: 2

February 23, 1994

Mr. Tim LaBounty - 475 Sample I.D. AA50347 (continued)

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
Multicomponent analysis: 2321-VOA S. by GC EPA 8021 (continued)			
cis-1,2-Dichloroethene	ug/Kg	Not detected	0.8
trans-1,3-Dichloroethene	ug/Kg	Not detected	0.7
1,2-Dichloropropane	ug/Kg	Not detected	0.5
1,3-Dichloropropane	ug/Kg	Not detected	0.4
2,2-Dichloropropane	ug/Kg	Not detected	1.0
1,1-Dichloropropene	ug/Kg	Not detected	0.9
cis-1,2-Dichloropropene	ug/Kg	Not detected	0.7
trans-1,3-Dichloropropene	ug/Kg	Not detected	0.5
Ethylbenzene	ug/Kg	Not detected	0.5
Hexachlorobutadiene	ug/Kg	Not detected	1.0
Isopropylbenzene	ug/Kg	Not detected	0.6
p-Isopropyltoluene	ug/Kg	0.8	0.6
Methylene chloride	ug/Kg	Not detected	5.0
Naphthalene	ug/Kg	Not detected	0.7
n-Propylbenzene	ug/Kg	Not detected	0.5
Styrene	ug/Kg	Not detected	0.5
1,1,1,2-Tetrachloroethane	ug/Kg	Not detected	0.6
1,1,2,2-Tetrachloroethane	ug/Kg	Not detected	0.8
Tetrachloroethene	ug/Kg	Not detected	0.4
Toluene	ug/Kg	0.5	0.5
1,2,3-Trichlorobenzene	ug/Kg	Not detected	0.9
1,2,4-Trichlorobenzene	ug/Kg	Not detected	1.0
1,1,1-Trichloroethane	ug/Kg	Not detected	1.0
1,1,2-Trichloroethane	ug/Kg	Not detected	0.8
Trichloroethene	ug/Kg	Not detected	0.9
Trichlorofluoromethane	ug/Kg	Not detected	0.8
1,2,3-Trichloropropane	ug/Kg	Not detected	0.6
1,2,4-Trimethylbenzene	ug/Kg	0.8	0.4
1,3,5-Trimethylbenzene	ug/Kg	Not detected	0.4
Vinyl Chloride	ug/Kg	Not detected	0.9
o-Xylene	ug/Kg	82	0.5
m-Xylene	ug/Kg	Not detected	0.5
p-Xylene	ug/Kg	Not detected	0.5
2323-Tot. Pet. Hydro. Prep. Soil		Done	
Multicomponent analysis: 2321-TPHXS Cal-DHS			
Diesel	mg/Kg	Not detected	2.8
Multicomponent analysis: 2321-TPHVS Cal-DHS			
Gasoline	mg/Kg	Not detected	.22

Sample I.D. AA50348

Purchase order number: 47508136

Location Description: MW-15S

Sample collection date: 02/14/94

Lab submittal date: 02/16/94

Location code: MINIC2

Project account code: 12024

Sample collector: LABOUNTY

Time: 15:10

Time: 13:55

February 23, 1994

Mr. Tim LaBounty Sample I.D. AA50348 (continued)

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
Multicomponent analysis: 2321-VOA S. by GC EPA 8021			
Benzene	ug/Kg	Not detected	0.5
Bromobenzene	ug/Kg	0.5	0.4
Bromochloromethane	ug/Kg	Not detected	0.5
Bromodichloromethane	ug/Kg	Not detected	0.5
Bromoform	ug/Kg	Not detected	0.5
Bromoethane	ug/Kg	Not detected	0.9
n-Butylbenzene	ug/Kg	Not detected	0.7
sec-Butylbenzene	ug/Kg	1.3	0.6
tert-Butylbenzene	ug/Kg	Not detected	0.6
Carbon tetrachloride	ug/Kg	Not detected	1.0
Chlorobenzene	ug/Kg	Not detected	0.4
Chloroethane	ug/Kg	Not detected	0.7
Chloroform	ug/Kg	Not detected	0.8
Chloromethane	ug/Kg	Not detected	0.8
2-Chlorotoluene	ug/Kg	Not detected	0.6
4-Chlorotoluene	ug/Kg	9.1	0.9
1,2-Dibromo-3-chloropropane (DBCP)	ug/Kg	Not detected	0.6
Dibromochloromethane	ug/Kg	Not detected	0.5
1,2-Dibromoethane (EDB)	ug/Kg	Not detected	0.5
Dibromomethane	ug/Kg	Not detected	0.5
1,2-Dichlorobenzene	ug/Kg	Not detected	0.3
1,3-Dichlorobenzene	ug/Kg	Not detected	0.3
1,4-Dichlorobenzene	ug/Kg	Not detected	0.4
Dichlorodifluoromethane	ug/Kg	Not detected	0.5
1,1-Dichloroethane	ug/Kg	Not detected	0.7
1,2-Dichloroethane	ug/Kg	Not detected	0.7
1,1-Dichloroethene	ug/Kg	Not detected	0.7
cis-1,2-Dichloroethene	ug/Kg	Not detected	0.8
trans-1,3-Dichloroethene	ug/Kg	Not detected	0.7
1,2-Dichloropropane	ug/Kg	Not detected	0.5
1,3-Dichloropropane	ug/Kg	Not detected	0.4
2,2-Dichloropropane	ug/Kg	Not detected	1.0
1,1-Dichloropropene	ug/Kg	Not detected	0.9
cis-1,2-Dichloropropene	ug/Kg	Not detected	0.7
trans-1,3-Dichloropropene	ug/Kg	Not detected	0.5
Ethylbenzene	ug/Kg	Not detected	0.5
Hexachlorobutadiene	ug/Kg	1.0	1.0
Isopropylbenzene	ug/Kg	Not detected	0.6
p-Isopropyltoluene	ug/Kg	Not detected	0.6
Methylene chloride	ug/Kg	Not detected	5.0
Naphthalene	ug/Kg	Not detected	0.7
n-Propylbenzene	ug/Kg	0.5	0.5
Styrene	ug/Kg	Not detected	0.5
1,1,1,2-Tetrachloroethane	ug/Kg	Not detected	0.6
1,1,2,2-Tetrachloroethane	ug/Kg	Not detected	0.8
Tetrachloroethene	ug/Kg	Not detected	0.4
Toluene	ug/Kg	Not detected	0.5
1,2,3-Trichlorobenzene	ug/Kg	Not detected	0.9

Page: 4
 February 23, 1994
 Mr. Tim LaBounty Sample I.D. AA50348 (continued)

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
Multicomponent analysis: 2321-VOA S. by GC EPA 8021 (continued)			
1,2,4-Trichlorobenzene	ug/Kg	Not detected	1.0
1,1,1-Trichloroethane	ug/Kg	Not detected	1.0
1,1,2-Trichloroethane	ug/Kg	Not detected	0.8
Trichloroethene	ug/Kg	Not detected	0.9
Trichlorofluoromethane	ug/Kg	Not detected	0.8
1,2,3-Trichloropropane	ug/Kg	Not detected	0.6
1,2,4-Trimethylbenzene	ug/Kg	Not detected	0.4
1,3,5-Trimethylbenzene	ug/Kg	Not detected	0.4
Vinyl Chloride	ug/Kg	Not detected	0.9
o-Xylene	ug/Kg	Not detected	0.5
m-Xylene	ug/Kg	Not detected	0.5
p-Xylene	ug/Kg	Not detected	0.5

Sample I.D. AA50349 Location code: MINIC2
 Purchase order number: 47508136 Project account code: 12024
 Location Description: MW-16S Sample collector: LABOUNTY
 Sample collection date: 02/14/94 Time: 16:10
 Lab submittal date: 02/16/94 Time: 13:55

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
Multicomponent analysis: 2321-VOA S. by GC EPA 8021			
Benzene	ug/Kg	Not detected	0.5
Bromobenzene	ug/Kg	Not detected	0.4
Bromochloromethane	ug/Kg	Not detected	0.5
Bromodichloromethane	ug/Kg	Not detected	0.5
Bromoform	ug/Kg	Not detected	0.5
Bromoethane	ug/Kg	Not detected	0.9
n-Butylbenzene	ug/Kg	Not detected	0.7
sec-Butylbenzene	ug/Kg	Not detected	0.6
tert-Butylbenzene	ug/Kg	Not detected	0.6
Carbon tetrachloride	ug/Kg	Not detected	1.0
Chlorobenzene	ug/Kg	Not detected	0.4
Chloroethane	ug/Kg	Not detected	0.7
Chloroform	ug/Kg	Not detected	0.8
Chloromethane	ug/Kg	Not detected	0.8
2-Chlorotoluene	ug/Kg	Not detected	0.6
4-Chlorotoluene	ug/Kg	1.1	0.9
1,2-Dibromo-3-chloropropane (DBCP)	ug/Kg	Not detected	0.6
Dibromochloromethane	ug/Kg	Not detected	0.5
1,2-Dibromoethane (EDB)	ug/Kg	Not detected	0.5
Dibromomethane	ug/Kg	Not detected	0.5
1,2-Dichlorobenzene	ug/Kg	Not detected	0.3
1,3-Dichlorobenzene	ug/Kg	Not detected	0.3
1,4-Dichlorobenzene	ug/Kg	Not detected	0.4

February 23, 1994

Mr. Tim LaBounty Sample I.D. AA50349 (continued)

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT

Multicomponent analysis: 2321-VOA S. by GC EPA 8021 (continued)			
Dichlorodifluoromethane	ug/Kg	Not detected	0.5
1,1-Dichloroethane	ug/Kg	Not detected	0.7
1,2-Dichloroethane	ug/Kg	Not detected	0.7
1,1-Dichloroethene	ug/Kg	Not detected	0.7
cis-1,2-Dichloroethene	ug/Kg	Not detected	0.8
trans-1,3-Dichloroethene	ug/Kg	Not detected	0.7
1,2-Dichloropropane	ug/Kg	Not detected	0.5
1,3-Dichloropropane	ug/Kg	Not detected	0.4
2,2-Dichloropropane	ug/Kg	Not detected	1.0
1,1-Dichloropropene	ug/Kg	Not detected	0.9
cis-1,2-Dichloropropene	ug/Kg	Not detected	0.7
trans-1,3-Dichloropropene	ug/Kg	Not detected	0.5
Ethylbenzene	ug/Kg	Not detected	0.5
Hexachlorobutadiene	ug/Kg	Not detected	1.0
Isopropylbenzene	ug/Kg	Not detected	0.6
p-Isopropyltoluene	ug/Kg	Not detected	0.6
Methylene chloride	ug/Kg	Not detected	5.0
Naphthalene	ug/Kg	Not detected	0.7
n-Propylbenzene	ug/Kg	Not detected	0.5
Styrene	ug/Kg	1.1	0.5
1,1,1,2-Tetrachloroethane	ug/Kg	Not detected	0.6
1,1,2,2-Tetrachloroethane	ug/Kg	Not detected	0.8
Tetrachloroethene	ug/Kg	Not detected	0.4
Toluene	ug/Kg	Not detected	0.5
1,2,3-Trichlorobenzene	ug/Kg	Not detected	0.9
1,2,4-Trichlorobenzene	ug/Kg	Not detected	1.0
1,1,1-Trichloroethane	ug/Kg	Not detected	1.0
1,1,2-Trichloroethane	ug/Kg	Not detected	0.8
Trichloroethene	ug/Kg	Not detected	0.9
Trichlorofluoromethane	ug/Kg	Not detected	0.8
1,2,3-Trichloropropane	ug/Kg	Not detected	0.6
1,2,4-Trimethylbenzene	ug/Kg	Not detected	0.4
1,3,5-Trimethylbenzene	ug/Kg	Not detected	0.4
Vinyl Chloride	ug/Kg	Not detected	0.9
o-Xylene	ug/Kg	Not detected	0.5
m-Xylene	ug/Kg	Not detected	0.5
p-Xylene	ug/Kg	Not detected	0.5
2323-Tot. Pet. Hydro. Prep. Soil		Done	
Multicomponent analysis: 2321-TPHXS Cal-DHS			
Diesel	mg/Kg	Not detected	3.1
Multicomponent analysis: 2321-TPHVS Cal-DHS			
Gasoline	mg/Kg	Not detected	.25

Sample I.D. AA50350

Purchase order number: 47508136
Location Description: MW-17S
Sample collection date: 02/14/94
Lab submittal date: 02/16/94

Location code: MINIC2

Project account code: 12024
Sample collector: LABOUNTY
Time: 17:10
Time: 13:55

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
-------------------	-------	----------------	--------------------

Multicomponent analysis: 2321-VOA S. by GC EPA 8021

Benzene	ug/Kg	Not detected	0.5
Bromobenzene	ug/Kg	Not detected	0.4
Bromochloromethane	ug/Kg	Not detected	0.5
Bromodichloromethane	ug/Kg	Not detected	0.5
Bromoform	ug/Kg	Not detected	0.5
Bromoethane	ug/Kg	Not detected	0.9
n-Butylbenzene	ug/Kg	Not detected	0.7
sec-Butylbenzene	ug/Kg	Not detected	0.6
tert-Butylbenzene	ug/Kg	Not detected	0.6
Carbon tetrachloride	ug/Kg	Not detected	1.0
Chlorobenzene	ug/Kg	Not detected	0.4
Chloroethane	ug/Kg	Not detected	0.7
Chloroform	ug/Kg	Not detected	0.8
Chloromethane	ug/Kg	Not detected	0.8
2-Chlorotoluene	ug/Kg	Not detected	0.6
4-Chlorotoluene	ug/Kg	Not detected	0.9
1,2-Dibromo-3-chloropropane (DBCP)	ug/Kg	Not detected	0.6
Dibromochloromethane	ug/Kg	Not detected	0.5
1,2-Dibromoethane (EDB)	ug/Kg	Not detected	0.5
Dibromomethane	ug/Kg	Not detected	0.5
1,2-Dichlorobenzene	ug/Kg	Not detected	0.3
1,3-Dichlorobenzene	ug/Kg	Not detected	0.3
1,4-Dichlorobenzene	ug/Kg	Not detected	0.4
Dichlorodifluoromethane	ug/Kg	Not detected	0.5
1,1-Dichloroethane	ug/Kg	Not detected	0.7
1,2-Dichloroethane	ug/Kg	Not detected	0.7
1,1-Dichloroethene	ug/Kg	Not detected	0.7
cis-1,2-Dichloroethene	ug/Kg	Not detected	0.8
trans-1,3-Dichloroethene	ug/Kg	Not detected	0.7
1,2-Dichloropropane	ug/Kg	Not detected	0.5
1,3-Dichloropropane	ug/Kg	Not detected	0.4
2,2-Dichloropropane	ug/Kg	Not detected	1.0
1,1-Dichloropropene	ug/Kg	Not detected	0.9
cis-1,2-Dichloropropene	ug/Kg	Not detected	0.7
trans-1,3-Dichloropropene	ug/Kg	Not detected	0.5
Ethylbenzene	ug/Kg	Not detected	0.5
Hexachlorobutadiene	ug/Kg	Not detected	1.0
Isopropylbenzene	ug/Kg	Not detected	0.6
p-Isopropyltoluene	ug/Kg	Not detected	0.6
Methylene chloride	ug/Kg	Not detected	5.0
Naphthalene	ug/Kg	Not detected	0.7
n-Propylbenzene	ug/Kg	Not detected	0.5
Styrene	ug/Kg	Not detected	0.5
1,1,1,2-Tetrachloroethane	ug/Kg	Not detected	0.6

Page: 7

February 23, 1994

Mr. Tim LaBounty Sample I.D. AA50350 (continued)

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
Multicomponent analysis: 2321-VOA S. by GC EPA 8021 (continued)			
1,1,2,2-Tetrachloroethane	ug/Kg	Not detected	0.8
Tetrachloroethene	ug/Kg	Not detected	0.4
Toluene	ug/Kg	Not detected	0.5
1,2,3-Trichlorobenzene	ug/Kg	Not detected	0.9
1,2,4-Trichlorobenzene	ug/Kg	Not detected	1.0
1,1,1-Trichloroethane	ug/Kg	Not detected	1.0
1,1,2-Trichloroethane	ug/Kg	Not detected	0.8
Trichloroethene	ug/Kg	Not detected	0.9
Trichlorofluoromethane	ug/Kg	Not detected	0.8
1,2,3-Trichloropropane	ug/Kg	Not detected	0.6
1,2,4-Trimethylbenzene	ug/Kg	Not detected	0.4
1,3,5-Trimethylbenzene	ug/Kg	Not detected	0.4
Vinyl Chloride	ug/Kg	Not detected	0.9
o-Xylene	ug/Kg	Not detected	0.5
m-Xylene	ug/Kg	Not detected	0.5
p-Xylene	ug/Kg	Not detected	0.5

Sample I.D. AA50351

Purchase order number: 47508136

Location Description: MW-14S

Sample collection date: 02/15/94

Lab submittal date: 02/16/94

Location code: MINIC2

Project account code: 12024

Sample collector: LABOUNTY

Time: 11:50

Time: 13:55

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
Multicomponent analysis: 2321-VOA W. by GC EPA 602			
Benzene	ug/L	Not detected	0.5
Chlorobenzene	ug/L	Not detected	0.4
1,2-Dichlorobenzene	ug/L	Not detected	0.3
1,3-Dichlorobenzene	ug/L	Not detected	0.3
1,4-Dichlorobenzene	ug/L	Not detected	0.4
Ethylbenzene	ug/L	Not detected	0.5
Toluene	ug/L	0.6	0.5
Xylenes (total)	ug/L	1.1	1.0
Methyl tert-butyl ether	ug/L	Not detected	1.0
Multicomponent analysis: 2321-Drinking W. VOA EPA 502.2			
Benzene	ug/L	Not detected	0.5
Bromobenzene	ug/L	Not detected	0.4
Bromochloromethane	ug/L	Not detected	0.5
Bromodichloromethane	ug/L	2.9	0.5
Bromoform	ug/L	5.7	0.5
Bromoethane	ug/L	Not detected	0.9
n-Butylbenzene	ug/L	Not detected	0.7
sec-Butylbenzene	ug/L	Not detected	0.6

Law Environmental, Inc.
Pensacola Branch
7215 Pine Forest Road
Pensacola, Florida 32526



March 1, 1994

RECEIVED BY

Mr. Tim LaBounty - 475
Law Engineering, Inc.
3301 Atlantic Avenue
Raleigh, NC 27604
Clt. #12024 Proj. #475-08136-01

MAR 02 1994

LAW ENGINEERING
RALEIGH

Dear: Mr. LaBounty:

Below are the results of analysis of 4 samples received for examination on February 14, 1994:

Sample I.D. AA50285	Location code: MINIC
Purchase order number: 47508136	Project account code: 12024
Location Description: B-6	Sample collector: TIM LABOUNTY
Sample collection date: 02/09/94	Time: 11:25
Lab submittal date: 02/14/94	Time: 17:16

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
-------------------	-------	----------------	--------------------

Multicomponent analysis: 2321-TPHVS Cal-DHS			
Gasoline	mg/Kg	Not detected	.22

Multicomponent analysis: 2321-TPHXS Cal-DHS			
Diesel	mg/Kg	Not detected	2.8
2323-Tot. Pet. Hydro. Prep. Soil		Done	

Sample I.D. AA50286	Location code: MINIC
Purchase order number: 47508136	Project account code: 12024
Location Description: B-6 DUP	Sample collector: TIM LABOUNTY
Sample collection date: 02/09/94	Time: 11:25
Lab submittal date: 02/14/94	Time: 17:16

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
-------------------	-------	----------------	--------------------

Multicomponent analysis: 2321-TPHVS Cal-DHS			
Gasoline	mg/Kg	Not detected	.24

Multicomponent analysis: 2321-TPHXS Cal-DHS			
Diesel	mg/Kg	Not detected	3.0
2323-Tot. Pet. Hydro. Prep. Soil		Done	

Page: 2
March 1, 1994

Sample I.D. AA50287 Location code: MINIC
Purchase order number: 47508136 Project account code: 12024
Location Description: B-8 Sample collector: TIM LABOUNTY
Sample collection date: 02/09/94 Time: 14:40
Lab submittal date: 02/14/94 Time: 17:16

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
-------------------	-------	----------------	--------------------

Multicomponent analysis: 2321-TPHVS Cal-DHS			
Gasoline	mg/Kg	Not detected	.23

Multicomponent analysis: 2321-TPHXS Cal-DHS			
Diesel	mg/Kg	Not detected	2.8
2323-Tot. Pet. Hydro. Prep. Soil		Done	

Sample I.D. AA50288 Location code: MINIC
Project account code: 12024 Location Description: B-9
Sample collector: TIM LABOUNTY
Sample collection date: 02/10/94 Time: 10:15
Lab submittal date: 02/14/94 Time: 17:16

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
-------------------	-------	----------------	--------------------

Multicomponent analysis: 2322-TCLP Semi-VOA EPA 8270			
Cresol (total)	ug/L	Not detected	5.5
1,4-Dichlorobenzene	ug/L	Not detected	4.4
2,4-Dinitrotoluene	ug/L	Not detected	4.4
Hexachlorobenzene	ug/L	Not detected	3.3
Hexachlorobutadiene	ug/L	Not detected	4.4
Hexachloroethane	ug/L	Not detected	5.5
Nitrobenzene	ug/L	Not detected	5.5
Pentachlorophenol	ug/L	Not detected	11
Pyridine	ug/L	Not detected	22
2,4,5-Trichlorophenol	ug/L	Not detected	5.5
2,4,6-Trichlorophenol	ug/L	Not detected	4.4

Multicomponent analysis: 2310-TCLP Mercury EPA 7470			
Mercury	ug/L	Not detected	.20

Multicomponent analysis: 2310-TCLP Metals EPA 6010			
Arsenic	ug/L	Not detected	42
Barium	ug/L	980	30
Cadmium	ug/L	Not detected	4.0
Chromium	ug/L	10	8.0
Lead	ug/L	Not detected	37
Selenium	ug/L	Not detected	79
Silver	ug/L	Not detected	8.0

Page: 3

March 1, 1994

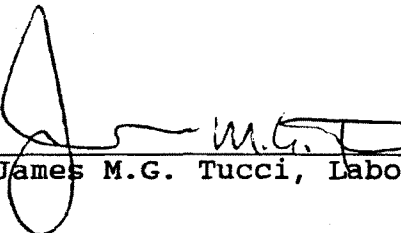
Mr. Tim LaBounty Sample I.D. AA50288 (continued)

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT

Multicomponent analysis: 2322-TCLP Volatiles EPA 8240			
Benzene	ug/L	Not detected	2.0
Carbon tetrachloride	ug/L	Not detected	3.0
Chlorobenzene	ug/L	Not detected	3.0
Chloroform	ug/L	Not detected	3.0
1,2-Dichloroethane	ug/L	Not detected	5.0
1,1-Dichloroethylene	ug/L	Not detected	5.0
Methyl ethyl ketone	ug/L	Not detected	10.0
Tetrachloroethylene	ug/L	Not detected	5.0
Trichloroethylene	ug/L	Not detected	3.0
Vinyl chloride	ug/L	Not detected	10.0
2323-Zero Head Space Ext. Soil		Done	
2310-TCLP Ext. Met. S. EPA 1311		Done	
2323-TCLP Ext. Semi S. EPA 1311		Done	

Please advise should you have questions concerning these data.

Respectfully submitted,

 1 MAR 1994
James M.G. Tucci, Laboratory Manager

Report To:

Time taken

AW ENGLISCH

2301 ATLANTIC AVE

SALE 1164 NC 276A

GeoChem, Incorporated

Environmental Laboratories

2500 Gate Way Centre Blvd., Suite 300

Morrisville, NC 27560

Bill To:

Chain of Custody Record

[illegible]

Time Spent

3301 A72407K A/K

BAILEY NC 27604

Environmental Laboratories

**2500 Gate Way Centre Blvd., Suite 300
Morrisville, NC 27560**

Bill To:

Chain of Custody Record

[illegible]

Tom Abbott

LAW ENFORCEMENT

3301 ADVANCE AVE

~~STUEBEL D/C 27604~~

Environmental Laboratories

2500 Gate Way Centre Blvd., Suite 300

Morrisville, NC 27560

Beitrag

Chain of Custody Record

[illegible]

This Chain of Custody is considered a written contract to perform the services requested in the analyses section of this document.



CHAIN OF CUSTODY RECORD

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[illegible]

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RUN T/H 3550/5030 ON B-6 T/HK4 B-8
RUN T/H WITH ORGANIC METALS ON B-9.

REMARKS

***SOURCE CODES**

RECOVERY WELL - RW	NPDES DISCHARGE - ND
RCRA MONITORING WELL - MW	DRINKING WATER - DW
SOIL / SEDIMENT - SO	HAZARDOUS WASTE - HW
SLUDGE - SL	SURFACE WATER - SW
	NON-AQUEOUS - NA



LAW ENVIRONMENTAL, INC.
NATIONAL LABORATORIES
7215 PINE FOREST ROAD
PENSACOLA, FLORIDA 32526
(904) 944-9772

CHAIN OF CUSTODY RECORD

9672

SAMPLING
INFORMATION

NAME OF FACILITY:

STREET ADDRESS:

NPDES NUMBER

PROJECT NAME		JOB NO.		TOTAL NO. OF CONTAINERS		CONTAINER TYPE										LEN LAB NO.
MINI C STORE LOFFER		08136-01														
SAMPLERS (SIGNATURE)																
SAMPLING DATE		2-14-94														
TIME	GR	SOURCE CODE	SAMPLE STATION DESCRIPTION	DATE / TIME	RECEIVED BY	DATE / TIME	RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME	RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME		
2-14-94	✓	50	MW-145	8:30/5:30												
2-14-94	✓	50	MW-155	8:02												
2-14-94	✓	50	MW-165	8:02												
2-14-94	✓	50	MW-175	8:02												
2-15-94	✓	MW	MW-145	6:02												
2-15-94	✓	MW	MW-155	5:02.2												
2-15-94	✓	MW	MW-165	6:02												
2-15-94	✓	MW	MW-175	5:02.2												
2-15-94	✓		TRIP BLANK	6:02												
2-15-94	✓		MW-175a	5:02.2												

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REMARKS

*SOURCE CODES

RECOVERY WELL - RW
RCRA MONITORING WELL - MW
SOIL / SEDIMENT - SO
SLUDGE - SL
NPDES DISCHARGE - ND
DRINKING WATER - DW
HAZARDOUS WASTE - HW
SURFACE WATER - SW
NON-AQUEOUS - NA

APPENDIX F

HISTORICAL DATA FROM 2003 ANNUAL MONITORING REPORT

Lab Report

RECEIVED

APR - 1 2002



PRISM
LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

J. A. JONES ENVIRONMENTAL
JACKSONVILLE, FL

3/25/02

Page 1 of 3

JA Jones Management Services
Tracey Thrift
8936 Western Way St. 10
Jacksonville, FL 32256

Customer Project ID: USTCC912
Customer Sample ID: USTTC912-SB10
Prism Sample ID: AC37359
Login Group: AO322H3
Sample Collection Date/Time: 3/13/02 12:35
Lab Submittal Date/Time: 3/15/02 10:00

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
TPH - DIESEL RANGE	15	mg/kg	10	8015MOD/3550	3/22/02 07:51	GRR
TPH-GASOLINE RANGE / PREP. 5030	Less than	mg/kg	1.0	8015MOD/5030	3/20/02 14:46	KC
CALCULATIONS BASED ON DRY WT.	87	% DRY WT.	0.01	SM 2540 G	3/20/02 17:40	CWA
PREP. METHOD 3545 FOR DIESEL	Completed			SW846-3545	3/20/02 14:30	JMV

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

Lab Report



Full Service Analytical & Environmental Solutions

3/25/02

Page 2 of 3

JA Jones Management Services
Tracey Thrift
8936 Western Way St. 10
Jacksonville, FL 32256

Customer Project ID: USTCC912
Customer Sample ID: USTTC912-SB11
Prism Sample ID: AC37360
Login Group: AO322H3
Sample Collection Date/Time: 3/13/02 12:50
Lab Submittal Date/Time: 3/15/02 10:00

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
TPH - DIESEL RANGE	17	mg/kg	10	8015MOD/3550	3/22/02 08:32	GRR
TPH-GASOLINE RANGE / PREP. 5030	Less than	mg/kg	1.0	8015MOD/5030	3/20/02 15:24	KC
CALCULATIONS BASED ON DRY WT.	84	% DRY WT.	0.01	SM 2540 G	3/20/02 17:40	CWA
PREP. METHOD 3545 FOR DIESEL	Completed			SW846-3545	3/20/02 14:30	JMV

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

Lab Report



Full Service Analytical & Environmental Solutions

3/25/02

Page 3 of 3

JA Jones Management Services
Tracey Thrift
8936 Western Way St. 10
Jacksonville, FL 32256

Customer Project ID: USTCC912
Customer Sample ID: USTTC912-SB12
Prism Sample ID: AC37361
Login Group: AO322H3
Sample Collection Date/Time: 3/13/02 13:05
Lab Submittal Date/Time: 3/15/02 10:00

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory

TEST PARAMETER	TEST RESULT	UNITS	REPORTING LIMIT	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
TPH - DIESEL RANGE	19	mg/kg	10	8015MOD/3550	3/22/02 09:12	GRR
TPH-GASOLINE RANGE / PREP. 5030	Less than	mg/kg	1.0	8015MOD/5030	3/20/02 16:02	KC
CALCULATIONS BASED ON DRY WT.	81	% DRY WT.	0.01	SM 2540 G	3/20/02 17:40	CWA
PREP. METHOD 3545 FOR DIESEL	Completed			SW846-3545	3/20/02 14:30	JMV

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

APPENDIX G

STANDARD PROCEDURES

CATLIN STANDARD METHODS OF INVESTIGATION

(REVISED APRIL 2002)

1.0 DATA COLLECTION

1.1 BACKGROUND DATA

Background data and history information relevant to the site investigation is generated through numerous sources. These sources may include, but are not limited to, the following:

- Conversations with the client and regulatory officials involved with the incident.
- Review of pertinent regulatory correspondence.
- Review of previous and existing reports and other technical data.
- Review of available historical records.

1.2 SURVEYS AND POTENTIAL RECEPTOR DATA

Physical survey and potential receptor data are collected in accordance with the intended level of investigation. In general, the purpose is to collect sufficient information for site assessment and corrective action planning.

Individual receptors are identified and evaluated in the context of their potential for contaminant impact. Potential receptors of contamination can include surface water bodies, groundwater supply wells, wellhead protection areas, and subsurface building structures.

1.2.1 Horizontal Survey

Horizontal survey data are generated using either accepted general field surveying techniques, or existing survey maps; or by using a combination of existing data and field generated information. The survey area generally extends to a point at least 50 feet beyond suspected plume boundaries. A receptor scale survey of a larger area surrounding a site will be made if appropriate and necessary.

1.2.2 Vertical Survey

A vertical survey is conducted at the site typically within an accuracy of 0.01 foot. The datum plane is generally assumed unless otherwise noted. Assumed temporary benchmarks (TBM) are selected near ground level. The vertical survey includes such points as top of all well casings, selected ground shots, important utility inverts, utility fluid levels, important surface water levels, and other items determined to be significant.

1.3 DRILLING AND MONITORING WELL/PIEZOMETER INSTALLATION

Necessary permits are applied for and obtained in accordance with federal, state, and local requirements prior to drilling or well construction activities. Additionally, the well locations are scanned for underground utilities prior to conducting intrusive subsurface activities. Wells are installed under applicable licensing requirements, and are designed and constructed in accordance with accepted standards and practices. Any wells purposely installed at off-site locations are permitted through appropriate right-of-entry agreements with all necessary property owners and/or their agents.

1.3.1 Drilling Methods and Subsurface Data Collection

Drilling is accomplished utilizing one or more of the following methods:

Auger Drilling

Auger drilling is the preferred, most often used method of subsurface investigation and is accomplished using a vehicle or trailer mounted drill rig. Continuous flight auger types used vary upon the site and situation; ranging from the 4-inch outside diameter solid stem to the 12-inch outside diameter hollow stem. Auger type is selected based upon appropriateness and/or site-specific requirements.

Hand Augering

Hand augering is utilized when economically and scientifically feasible, or when no other method is suitable. Hand augers typically produce three-inch diameter holes and are generally limited to depths of less than 15 feet.

Direct Push

Direct push methods of subsurface investigation are used generally for soil screening purposes or collection of groundwater samples where permanent wells are not viable.

Other Methods

Other drilling methods, such as mud and air rotary, rock coring, cable tool, and large bucket augering are used when site conditions or project requirements dictate.

Regardless of the drilling method used, the drill rig(s) and all drilling tools are thoroughly cleaned between boreholes to prevent cross introduction of contaminants. Split spoon samples are collected and field-described at intervals of five feet or less, and cuttings are continuously monitored for organic vapors. Drill cuttings are containerized for off-site disposal or are spread on the ground surface in proximity to the well or boring in accordance with North Carolina Department of Environment and Natural Resources (NCDENR) requirements. A geologist or engineer, trained in using visual/manual techniques, is always present during drilling and is responsible for subsurface contaminant and geologic data collection. Soils are classified in general agreement with the Unified Soils Classification System (USCS).

1.3.2 Hydropunch Installation

Hydropunch penetrometers (Hydropunches) are used to delineate the spatial extent of dissolved and free phase plumes. Soil borings are advanced to the appropriate depth and then the Hydropunch is advanced through the soil boring into undisturbed material. Groundwater samples are collected by pulling back on the body of the Hydropunch and allowing the groundwater to enter the screened portion of the sample chamber. Samples are retrieved using a decontaminated Teflon bailer or peristaltic pump.

1.3.3 Well Installation

Wells are typically constructed of threaded PVC casing and screen. No glues or cements are used in joining PVC components. Well diameter, slot sizes, and protective covers vary depending upon site-specific conditions or situation-specific requirements.

1.3.4 Well Development

Wells are developed by over-pumping or surging using appropriate pumps, blocks, or bailers. Through development, unwanted fine materials are removed from the natural formation surrounding the well. Well development will be performed no sooner than 24-hours after grouting is completed for the Type III wells. Water generated during development is containerized and properly disposed or is discharged onto the ground in proximity of the well in accordance with NCDENR requirements.

1.4 HYDROGEOLOGIC DATA COLLECTION

Data used to help characterize hydrogeologic conditions at a site are obtained through various procedures including, but not necessarily limited to, those described below:

1.4.1 Regional Geology

Information pertaining to the regional geologic framework is compiled from existing publications, maps, and scientific papers.

1.4.2 Site Geology

Shallow site geology is generally determined from field descriptions and borehole samples. Interpretations with regard to hydrogeologically important contacts, zones, fractures, faults, cleavage, and facies changes are made when possible.

1.4.3 Groundwater Occurrence and Characteristics

Groundwater data is obtained utilizing a number of methods and procedures, not limited to the general list below:

Well Water Levels

After well development, wells are allowed to stabilize for a minimum of 24 hours prior to measuring. Water level and free product thickness (where applicable) measurements are performed using an electronic interface probe or steel tape with water/product finding pastes.

The specific gravity of any accumulated product is determined and used to calculate true hydraulic grade from measured water levels. This information is combined with vertical survey data to determine relative potentiometric surface elevations for all wells.

Aquifer Testing

Various aquifer tests may be used to make determinations of hydraulic conductivity. Slug or pumping tests are often used to characterize site hydrogeologic conditions and to develop remedial action alternatives utilizing appropriate pumping technologies.

Other Methods

Other methods may be deemed appropriate for determining various groundwater characteristics. These other methods may include nested well configurations and/or clustered piezometer installations; sieve or pipette analysis; fracture trace analysis; computer modeling; and geophysical logging.

1.5 PETROLEUM HYDROCARBON DATA COLLECTION

1.5.1 Collection Methods

Petroleum hydrocarbon data is obtained through various methods including, but not limited to, the following:

Field Analysis

- Direct thickness measurement of phase separated components using tapes and/or probes.
- Manual vapor analysis using a photoionization detector (PID) or flame ionization detector (FIS).
- Detectable odor and visual observation.

Laboratory Analysis

- Laboratory analysis of phase-separated products.
- Laboratory vapor, soil, and groundwater analysis using appropriate EPA Methods.

1.5.2 Field Sampling

Field sampling procedures are performed in accordance with recommended protocol, accepted industry standards, and under appropriate chain-of-custody procedures. Generally, sampling procedures are as follows:

Product Samples

Product samples are obtained using clean equipment and containers. Each is shipped to the analytical laboratory in protective containers.

Vapor Samples

PID/FID readings are measured from soil sample headspace using containerized samples that have been brought to ambient temperature.

Carbon tubes are utilized in conjunction with a laboratory-calibrated vacuum pump to obtain vapor samples. The carbon tubes are sealed and refrigerated for shipment to the analytical laboratory (This method is known as the Carbon Adsorption Method).

Soil Samples

Soil samples are immediately packed into clean containers, and refrigerated for shipment to the analytical laboratory.

Groundwater Samples

Groundwater samples are collected in accordance with the following procedures:

- Creeks/Lakes/Etc.

Grab samples are obtained.

- Domestic Wells

Wells are pumped for a time sufficient to completely purge the well and any pressure or holding tanks prior to sampling.

- Monitoring Wells

Water level measurements are made and well volumes calculated for each well.

Three well volumes are removed from each well using a thoroughly cleaned Teflon bailer or appropriate purging pump. If it is not possible to remove three volumes, due to very low yields, a minimum of one volume is removed prior to obtaining a sample.

Where analysis for metals is required, wells are typically sampled utilizing low flow techniques, which reduce turbidity and the potential for matrix interference.

Samples are collected and containerized in a manner that minimizes agitation and contact with the air.

Sampling records are field prepared.

Samples are labeled and proper chain of custody documents are maintained.

Samples are promptly protectively packed, refrigerated, and shipped to the analytical laboratory for analysis.

2.0 DATA EVALUATION

Data obtained as a result of the site investigation is compiled and evaluated and a report is prepared for client review and distribution to the appropriate agencies. Generally, specific data are evaluated as follows:

- Background data are evaluated in context with the suspected or confirmed problem.
- Survey data are utilized to develop site maps and to evaluate contaminant receptors.
- Well construction records are compiled and presented as part of the report. As-built information is used in combination with other data to evaluate subsurface conditions and monitoring well screen settings as they relate to the investigation.
- Subsurface drilling logs are used to develop geologic cross-sections, fence diagrams, isopachs, structure contours, or other constructions. Regional geologic data are used to obtain an overall framework.
- Hydrogeologic data are used to develop contour maps, flow nets and other constructions. The data is also used to calculate various hydrogeologic parameters that describe aquifer characteristics.
- Hydrocarbon data are utilized to develop various plume geometry and isoconcentration maps.
- All data are compiled and utilized for making specific recommendations with regard to remedial action alternatives.

APPENDIX H

LABORATORY REPORTS
AND
CHAIN-OF-CUSTODY DOCUMENTATION

PARADIGM ANALYTICAL LABORATORIES, INC.

Mr. Mike E. Mason
Richard Catlin & Associates
P.O. Box 10279
Wilmington NC 28404-0279

Report Number: G128-1382

Client Project: Building TC-912

Dear Mr. Mason:

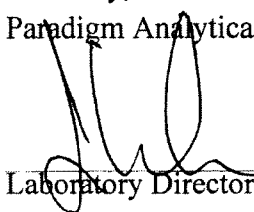
Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period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


Laboratory Director
J. Patrick Weaver

10/7/04
Date

PARADIGM ANALYTICAL LABORATORIES, INC.

**Results for Volatiles
by GCMS 8260-5035**

Client Sample ID: USTTC912-SB01(1-2)
Client Project ID: Building TC-912
Lab Sample ID G128-1382-1A
Lab Project ID: G128-1382
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 09-16-2004 13:00
Date Received: 09/17/2004
Matrix: Soil
%Solids: 82.4

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	Dilution Factor	Date Analyzed
Acetone	0.0615	0.0593	1	09/22/2004
Benzene	BQL	0.00593	1	09/22/2004
Bromobenzene	BQL	0.00593	1	09/22/2004
Bromochloromethane	BQL	0.00593	1	09/22/2004
Bromodichloromethane	BQL	0.00593	1	09/22/2004
Bromoform	BQL	0.00593	1	09/22/2004
Bromomethane	BQL	0.00593	1	09/22/2004
2-Butanone	BQL	0.0296	1	09/22/2004
n-Butylbenzene	BQL	0.00593	1	09/22/2004
sec-Butylbenzene	BQL	0.00593	1	09/22/2004
tert-Butylbenzene	BQL	0.00593	1	09/22/2004
Carbon disulfide	BQL	0.00593	1	09/22/2004
Carbon tetrachloride	BQL	0.00593	1	09/22/2004
Chlorobenzene	BQL	0.00593	1	09/22/2004
Chloroethane	BQL	0.00593	1	09/22/2004
Chloroform	BQL	0.00593	1	09/22/2004
Chloromethane	BQL	0.00593	1	09/22/2004
2-Chlorotoluene	BQL	0.00593	1	09/22/2004
4-Chlorotoluene	BQL	0.00593	1	09/22/2004
Dibromochloromethane	BQL	0.00593	1	09/22/2004
1,2-Dibromo-3-chloropropane	BQL	0.00593	1	09/22/2004
Dibromomethane	BQL	0.00593	1	09/22/2004
1,2-Dibromoethane (EDB)	BQL	0.00593	1	09/22/2004
1,2-Dichlorobenzene	BQL	0.00593	1	09/22/2004
1,3-Dichlorobenzene	BQL	0.00593	1	09/22/2004
1,4-Dichlorobenzene	BQL	0.00593	1	09/22/2004
trans-1,4-Dichloro-2-butene	BQL	0.00593	1	09/22/2004
1,1-Dichloroethane	BQL	0.00593	1	09/22/2004
1,1-Dichloroethene	BQL	0.00593	1	09/22/2004
1,2-Dichloroethane	BQL	0.00593	1	09/22/2004
cis-1,2-Dichloroethene	BQL	0.00593	1	09/22/2004
trans-1,2-dichloroethene	BQL	0.00593	1	09/22/2004
1,2-Dichloropropane	BQL	0.00593	1	09/22/2004
1,3-Dichloropropane	BQL	0.00593	1	09/22/2004
2,2-Dichloropropane	BQL	0.00593	1	09/22/2004
1,1-Dichloropropene	BQL	0.00593	1	09/22/2004
cis-1,3-Dichloropropene	BQL	0.00593	1	09/22/2004
trans-1,3-Dichloropropene	BQL	0.00593	1	09/22/2004
Dichlorodifluoromethane	BQL	0.00593	1	09/22/2004
Diisopropyl ether (DIPE)	BQL	0.00593	1	09/22/2004
Ethylbenzene	BQL	0.00593	1	09/22/2004
Hexachlorobutadiene	BQL	0.00593	1	09/22/2004
2-Hexanone	BQL	0.00593	1	09/22/2004
Iodomethane	BQL	0.00593	1	09/22/2004

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles by GCMS 8260-5035

Client Sample ID: USTTC912-SB01(1-2)
Client Project ID: Building TC-912
Lab Sample ID G128-1382-1A
Lab Project ID: G128-1382
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 09-16-2004 13:00
Date Received: 09/17/2004
Matrix: Soil
%Solids: 82.4

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	0.00593	1	09/22/2004
4-Isopropyltoluene	BQL	0.00593	1	09/22/2004
Methylene chloride	BQL	0.0237	1	09/22/2004
4-Methyl-2-pentanone	BQL	0.00593	1	09/22/2004
Methyl-tert-butyl ether (MTBE)	BQL	0.00593	1	09/22/2004
Naphthalene	BQL	0.00593	1	09/22/2004
n-Propyl benzene	BQL	0.00593	1	09/22/2004
Styrene	BQL	0.00593	1	09/22/2004
1,1,1,2-Tetrachloroethane	BQL	0.00593	1	09/22/2004
1,1,2,2-Tetrachloroethane	BQL	0.00593	1	09/22/2004
Tetrachloroethene	BQL	0.00593	1	09/22/2004
Toluene	BQL	0.00593	1	09/22/2004
1,2,3-Trichlorobenzene	BQL	0.00593	1	09/22/2004
1,2,4-Trichlorobenzene	BQL	0.00593	1	09/22/2004
Trichloroethene	BQL	0.00593	1	09/22/2004
1,1,1-Trichloroethane	BQL	0.00593	1	09/22/2004
1,1,2-Trichloroethane	BQL	0.00593	1	09/22/2004
Trichlorofluoromethane	BQL	0.00593	1	09/22/2004
1,2,3-Trichloropropane	BQL	0.00593	1	09/22/2004
1,2,4-Trimethylbenzene	0.0283	0.00593	1	09/22/2004
1,3,5-Trimethylbenzene	BQL	0.00593	1	09/22/2004
Vinyl chloride	BQL	0.00593	1	09/22/2004
m-,p-Xylene	BQL	0.0119	1	09/22/2004
o-Xylene	BQL	0.00593	1	09/22/2004

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.047	94
1,2-Dichloroethane-d4	0.05	0.0654	131
Toluene-d8	0.05	0.0517	103

Comments:

Flags:

BQL = Below Quantitation Limits.

Reviewed By: RVP

PARADIGM ANALYTICAL LABORATORIES, INC.

**Results for Volatiles
by GCMS 8260-5035**

Client Sample ID: USTTC912-SB01(1-2)Dup.
Client Project ID: Building TC-912
Lab Sample ID G128-1382-2A
Lab Project ID: G128-1382
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 09-16-2004 13:00
Date Received: 09/17/2004
Matrix: Soil
%Solids: 83.5

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	Dilution Factor	Date Analyzed
Acetone	0.0651	0.0603	1	09/22/2004
Benzene	BQL	0.00603	1	09/22/2004
Bromobenzene	BQL	0.00603	1	09/22/2004
Bromochloromethane	BQL	0.00603	1	09/22/2004
Bromodichloromethane	BQL	0.00603	1	09/22/2004
Bromoform	BQL	0.00603	1	09/22/2004
Bromomethane	BQL	0.00603	1	09/22/2004
2-Butanone	BQL	0.0301	1	09/22/2004
n-Butylbenzene	BQL	0.00603	1	09/22/2004
sec-Butylbenzene	BQL	0.00603	1	09/22/2004
tert-Butylbenzene	BQL	0.00603	1	09/22/2004
Carbon disulfide	BQL	0.00603	1	09/22/2004
Carbon tetrachloride	BQL	0.00603	1	09/22/2004
Chlorobenzene	BQL	0.00603	1	09/22/2004
Chloroethane	BQL	0.00603	1	09/22/2004
Chloroform	BQL	0.00603	1	09/22/2004
Chloromethane	BQL	0.00603	1	09/22/2004
2-Chlorotoluene	BQL	0.00603	1	09/22/2004
4-Chlorotoluene	BQL	0.00603	1	09/22/2004
Dibromochloromethane	BQL	0.00603	1	09/22/2004
1,2-Dibromo-3-chloropropane	BQL	0.00603	1	09/22/2004
Dibromomethane	BQL	0.00603	1	09/22/2004
1,2-Dibromoethane (EDB)	BQL	0.00603	1	09/22/2004
1,2-Dichlorobenzene	BQL	0.00603	1	09/22/2004
1,3-Dichlorobenzene	BQL	0.00603	1	09/22/2004
1,4-Dichlorobenzene	BQL	0.00603	1	09/22/2004
trans-1,4-Dichloro-2-butene	BQL	0.00603	1	09/22/2004
1,1-Dichloroethane	BQL	0.00603	1	09/22/2004
1,1-Dichloroethene	BQL	0.00603	1	09/22/2004
1,2-Dichloroethane	BQL	0.00603	1	09/22/2004
cis-1,2-Dichloroethene	BQL	0.00603	1	09/22/2004
trans-1,2-dichloroethene	BQL	0.00603	1	09/22/2004
1,2-Dichloropropane	BQL	0.00603	1	09/22/2004
1,3-Dichloropropane	BQL	0.00603	1	09/22/2004
2,2-Dichloropropane	BQL	0.00603	1	09/22/2004
1,1-Dichloropropene	BQL	0.00603	1	09/22/2004
cis-1,3-Dichloropropene	BQL	0.00603	1	09/22/2004
trans-1,3-Dichloropropene	BQL	0.00603	1	09/22/2004
Dichlorodifluoromethane	BQL	0.00603	1	09/22/2004
Diisopropyl ether (DIPE)	BQL	0.00603	1	09/22/2004
Ethylbenzene	BQL	0.00603	1	09/22/2004
Hexachlorobutadiene	BQL	0.00603	1	09/22/2004
2-Hexanone	BQL	0.00603	1	09/22/2004
Iodomethane	BQL	0.00603	1	09/22/2004

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles by GCMS 8260-5035

Client Sample ID: USTTC912-SB01(1-2)Dup.
Client Project ID: Building TC-912
Lab Sample ID G128-1382-2A
Lab Project ID: G128-1382
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 09-16-2004 13:00
Date Received: 09/17/2004
Matrix: Soil
%Solids: 83.5

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	0.00603	1	09/22/2004
4-Isopropyltoluene	BQL	0.00603	1	09/22/2004
Methylene chloride	BQL	0.0241	1	09/22/2004
4-Methyl-2-pentanone	BQL	0.00603	1	09/22/2004
Methyl-tert-butyl ether (MTBE)	BQL	0.00603	1	09/22/2004
Naphthalene	BQL	0.00603	1	09/22/2004
n-Propyl benzene	BQL	0.00603	1	09/22/2004
Styrene	BQL	0.00603	1	09/22/2004
1,1,1,2-Tetrachloroethane	BQL	0.00603	1	09/22/2004
1,1,2,2-Tetrachloroethane	BQL	0.00603	1	09/22/2004
Tetrachloroethene	BQL	0.00603	1	09/22/2004
Toluene	BQL	0.00603	1	09/22/2004
1,2,3-Trichlorobenzene	BQL	0.00603	1	09/22/2004
1,2,4-Trichlorobenzene	BQL	0.00603	1	09/22/2004
Trichloroethene	BQL	0.00603	1	09/22/2004
1,1,1-Trichloroethane	BQL	0.00603	1	09/22/2004
1,1,2-Trichloroethane	BQL	0.00603	1	09/22/2004
Trichlorofluoromethane	BQL	0.00603	1	09/22/2004
1,2,3-Trichloropropane	BQL	0.00603	1	09/22/2004
1,2,4-Trimethylbenzene	0.0352	0.00603	1	09/22/2004
1,3,5-Trimethylbenzene	BQL	0.00603	1	09/22/2004
Vinyl chloride	BQL	0.00603	1	09/22/2004
m-,p-Xylene	BQL	0.0121	1	09/22/2004
o-Xylene	BQL	0.00603	1	09/22/2004

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0476	95
1,2-Dichloroethane-d4	0.05	0.0656	131
Toluene-d8	0.05	0.0519	104

Comments:

Flags:

BQL = Below Quantitation Limits.

Reviewed By: BNP

PARADIGM ANALYTICAL LABORATORIES, INC.

**Results for Volatiles
by GCMS 8260B/5035**

Client Sample ID: USTTC912-SB02(1-2)
Client Project ID: Building TC-912
Lab Sample ID: G128-1382-3D
Lab Project ID: G128-1382
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 09/16/2004 13:25
Date Received: 09/17/2004
Matrix: Soil
%Solids: 86.4

Compound	Result MG/KG	Quantitation Limit MG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	5.78	200	09/22/2004
Benzene	0.245	0.231	200	09/22/2004
Bromobenzene	BQL	0.231	200	09/22/2004
Bromochloromethane	BQL	0.231	200	09/22/2004
Bromodichloromethane	BQL	0.231	200	09/22/2004
Bromoform	BQL	0.231	200	09/22/2004
Bromomethane	BQL	0.231	200	09/22/2004
2-Butanone	BQL	5.78	200	09/22/2004
n-Butylbenzene	BQL	0.231	200	09/22/2004
sec-Butylbenzene	BQL	0.231	200	09/22/2004
tert-Butylbenzene	BQL	0.231	200	09/22/2004
Carbon disulfide	BQL	0.231	200	09/22/2004
Carbon tetrachloride	BQL	0.231	200	09/22/2004
Chlorobenzene	BQL	0.231	200	09/22/2004
Chloroethane	BQL	0.231	200	09/22/2004
Chloroform	BQL	0.231	200	09/22/2004
Chloromethane	BQL	0.231	200	09/22/2004
2-Chlorotoluene	BQL	0.231	200	09/22/2004
4-Chlorotoluene	BQL	0.231	200	09/22/2004
Dibromochloromethane	BQL	0.231	200	09/22/2004
1,2-Dibromo-3-chloropropane	BQL	1.16	200	09/22/2004
Dibromomethane	BQL	0.231	200	09/22/2004
1,2-Dibromoethane (EDB)	BQL	0.231	200	09/22/2004
1,2-Dichlorobenzene	BQL	0.231	200	09/22/2004
1,3-Dichlorobenzene	BQL	0.231	200	09/22/2004
1,4-Dichlorobenzene	BQL	0.231	200	09/22/2004
trans-1,4-Dichloro-2-butene	BQL	1.16	200	09/22/2004
1,1-Dichloroethane	BQL	0.231	200	09/22/2004
1,1-Dichloroethene	BQL	0.231	200	09/22/2004
1,2-Dichloroethane	BQL	0.231	200	09/22/2004
cis-1,2-Dichloroethene	BQL	0.231	200	09/22/2004
trans-1,2-dichloroethene	BQL	0.231	200	09/22/2004
1,2-Dichloropropane	BQL	0.231	200	09/22/2004
1,3-Dichloropropane	BQL	0.231	200	09/22/2004
2,2-Dichloropropane	BQL	0.231	200	09/22/2004
1,1-Dichloropropene	BQL	0.231	200	09/22/2004
cis-1,3-Dichloropropene	BQL	0.231	200	09/22/2004
trans-1,3-Dichloropropene	BQL	0.231	200	09/22/2004
Dichlorodifluoromethane	BQL	1.16	200	09/22/2004
Diisopropyl ether (DIPE)	BQL	0.231	200	09/22/2004
Ethylbenzene	1.92	0.231	200	09/22/2004
Hexachlorobutadiene	BQL	0.231	200	09/22/2004
2-Hexanone	BQL	1.16	200	09/22/2004
Iodomethane	BQL	0.231	200	09/22/2004
Isopropylbenzene	0.531	0.231	200	09/22/2004

PARADIGM ANALYTICAL LABORATORIES, INC.

**Results for Volatiles
by GCMS 8260B/5035**

Client Sample ID: USTTC912-SB02(1-2)
Client Project ID: Building TC-912
Lab Sample ID: G128-1382-3D
Lab Project ID: G128-1382
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 09/16/2004 13:25
Date Received: 09/17/2004
Matrix: Soil
%Solids: 86.4

Compound	Result MG/KG	Quantitation Limit MG/KG	Dilution Factor	Date Analyzed
4-Isopropyltoluene	2.70	0.231	200	09/22/2004
Methylene chloride	BQL	1.16	200	09/22/2004
4-Methyl-2-pentanone	BQL	1.16	200	09/22/2004
Methyl-tert-butyl ether (MTBE)	BQL	0.231	200	09/22/2004
Naphthalene	BQL	0.231	200	09/22/2004
n-Propyl benzene	0.915	0.231	200	09/22/2004
Styrene	BQL	0.231	200	09/22/2004
1,1,1,2-Tetrachloroethane	BQL	0.231	200	09/22/2004
1,1,2,2-Tetrachloroethane	BQL	0.231	200	09/22/2004
Tetrachloroethene	BQL	0.231	200	09/22/2004
Toluene	0.411	0.231	200	09/22/2004
1,2,3-Trichlorobenzene	BQL	0.231	200	09/22/2004
1,2,4-Trichlorobenzene	BQL	0.231	200	09/22/2004
Trichloroethene	BQL	0.231	200	09/22/2004
1,1,1-Trichloroethane	BQL	0.231	200	09/22/2004
1,1,2-Trichloroethane	BQL	0.231	200	09/22/2004
Trichlorofluoromethane	BQL	0.231	200	09/22/2004
1,2,3-Trichloropropane	BQL	0.231	200	09/22/2004
1,2,4-Trimethylbenzene	3.79	0.231	200	09/22/2004
1,3,5-Trimethylbenzene	1.68	0.231	200	09/22/2004
Vinyl chloride	BQL	0.231	200	09/22/2004
m-,p-Xylene	11.0	0.462	200	09/22/2004
o-Xylene	5.81	0.231	200	09/22/2004

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.01	0.0101	101
1,2-Dichloroethane-d4	0.01	0.00912	91
Toluene-d8	0.01	0.0104	104

Comments:

Flags:

BQL = Below Quantitation Limits.

Reviewed By: JTF

PARADIGM ANALYTICAL LABORATORIES, INC.

**Results for Volatiles
by GCMS 8260-5035**

Client Sample ID: USTTC912-SB03(2-3)
Client Project ID: Building TC-912
Lab Sample ID G128-1382-4A
Lab Project ID: G128-1382
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 09-16-2004 14:25
Date Received: 09/17/2004
Matrix: Soil
%Solids: 88.1

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	0.0471	1	09/22/2004
Benzene	BQL	0.00471	1	09/22/2004
Bromobenzene	BQL	0.00471	1	09/22/2004
Bromochloromethane	BQL	0.00471	1	09/22/2004
Bromodichloromethane	BQL	0.00471	1	09/22/2004
Bromoform	BQL	0.00471	1	09/22/2004
Bromomethane	BQL	0.00471	1	09/22/2004
2-Butanone	BQL	0.0235	1	09/22/2004
n-Butylbenzene	BQL	0.00471	1	09/22/2004
sec-Butylbenzene	BQL	0.00471	1	09/22/2004
tert-Butylbenzene	BQL	0.00471	1	09/22/2004
Carbon disulfide	0.00721	0.00471	1	09/22/2004
Carbon tetrachloride	BQL	0.00471	1	09/22/2004
Chlorobenzene	BQL	0.00471	1	09/22/2004
Chloroethane	BQL	0.00471	1	09/22/2004
Chloroform	BQL	0.00471	1	09/22/2004
Chloromethane	BQL	0.00471	1	09/22/2004
2-Chlorotoluene	BQL	0.00471	1	09/22/2004
4-Chlorotoluene	BQL	0.00471	1	09/22/2004
Dibromochloromethane	BQL	0.00471	1	09/22/2004
1,2-Dibromo-3-chloropropane	BQL	0.00471	1	09/22/2004
Dibromomethane	BQL	0.00471	1	09/22/2004
1,2-Dibromoethane (EDB)	BQL	0.00471	1	09/22/2004
1,2-Dichlorobenzene	BQL	0.00471	1	09/22/2004
1,3-Dichlorobenzene	BQL	0.00471	1	09/22/2004
1,4-Dichlorobenzene	BQL	0.00471	1	09/22/2004
trans-1,4-Dichloro-2-butene	BQL	0.00471	1	09/22/2004
1,1-Dichloroethane	BQL	0.00471	1	09/22/2004
1,1-Dichloroethene	BQL	0.00471	1	09/22/2004
1,2-Dichloroethane	BQL	0.00471	1	09/22/2004
cis-1,2-Dichloroethene	BQL	0.00471	1	09/22/2004
trans-1,2-dichloroethene	BQL	0.00471	1	09/22/2004
1,2-Dichloropropane	BQL	0.00471	1	09/22/2004
1,3-Dichloropropane	BQL	0.00471	1	09/22/2004
2,2-Dichloropropane	BQL	0.00471	1	09/22/2004
1,1-Dichloropropene	BQL	0.00471	1	09/22/2004
cis-1,3-Dichloropropene	BQL	0.00471	1	09/22/2004
trans-1,3-Dichloropropene	BQL	0.00471	1	09/22/2004
Dichlorodifluoromethane	BQL	0.00471	1	09/22/2004
Diisopropyl ether (DIPE)	BQL	0.00471	1	09/22/2004
Ethylbenzene	BQL	0.00471	1	09/22/2004
Hexachlorobutadiene	BQL	0.00471	1	09/22/2004
2-Hexanone	BQL	0.00471	1	09/22/2004
Iodomethane	BQL	0.00471	1	09/22/2004

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTTC912-SB03(2-3)
Client Project ID: Building TC-912
Lab Sample ID G128-1382-4A
Lab Project ID: G128-1382
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 09-16-2004 14:25
Date Received: 09/17/2004
Matrix: Soil
%Solids: 88.1

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	0.00471	1	09/22/2004
4-Isopropyltoluene	BQL	0.00471	1	09/22/2004
Methylene chloride	BQL	0.0188	1	09/22/2004
4-Methyl-2-pentanone	BQL	0.00471	1	09/22/2004
Methyl-tert-butyl ether (MTBE)	BQL	0.00471	1	09/22/2004
Naphthalene	BQL	0.00471	1	09/22/2004
n-Propyl benzene	BQL	0.00471	1	09/22/2004
Styrene	BQL	0.00471	1	09/22/2004
1,1,1,2-Tetrachloroethane	BQL	0.00471	1	09/22/2004
1,1,2,2-Tetrachloroethane	BQL	0.00471	1	09/22/2004
Tetrachloroethene	BQL	0.00471	1	09/22/2004
Toluene	BQL	0.00471	1	09/22/2004
1,2,3-Trichlorobenzene	BQL	0.00471	1	09/22/2004
1,2,4-Trichlorobenzene	BQL	0.00471	1	09/22/2004
Trichloroethene	BQL	0.00471	1	09/22/2004
1,1,1-Trichloroethane	BQL	0.00471	1	09/22/2004
1,1,2-Trichloroethane	BQL	0.00471	1	09/22/2004
Trichlorofluoromethane	BQL	0.00471	1	09/22/2004
1,2,3-Trichloropropane	BQL	0.00471	1	09/22/2004
1,2,4-Trimethylbenzene	BQL	0.00471	1	09/22/2004
1,3,5-Trimethylbenzene	BQL	0.00471	1	09/22/2004
Vinyl chloride	BQL	0.00471	1	09/22/2004
m-,p-Xylene	BQL	0.00941	1	09/22/2004
o-Xylene	BQL	0.00471	1	09/22/2004

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0481	96
1,2-Dichloroethane-d4	0.05	0.0706	141
Toluene-d8	0.05	0.0515	103

Comments:

Flags:

BQL = Below Quantitation Limits.

Reviewed By: RNP

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles by GCMS 8260-5035

Client Sample ID: USTTC912-SB04(1-2)
 Client Project ID: Building TC-912
 Lab Sample ID G128-1382-5A
 Lab Project ID: G128-1382
 Report Basis: Dry Weight

Analyzed By: JTF
 Date Collected: 09-16-2004 14:45
 Date Received: 09/17/2004
 Matrix: Soil
 %Solids: 69.4

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	0.0770	1	09/22/2004
Benzene	BQL	0.00770	1	09/22/2004
Bromobenzene	BQL	0.00770	1	09/22/2004
Bromochloromethane	BQL	0.00770	1	09/22/2004
Bromodichloromethane	BQL	0.00770	1	09/22/2004
Bromoform	BQL	0.00770	1	09/22/2004
Bromomethane	BQL	0.00770	1	09/22/2004
2-Butanone	BQL	0.0385	1	09/22/2004
n-Butylbenzene	BQL	0.00770	1	09/22/2004
sec-Butylbenzene	BQL	0.00770	1	09/22/2004
tert-Butylbenzene	BQL	0.00770	1	09/22/2004
Carbon disulfide	BQL	0.00770	1	09/22/2004
Carbon tetrachloride	BQL	0.00770	1	09/22/2004
Chlorobenzene	BQL	0.00770	1	09/22/2004
Chloroethane	BQL	0.00770	1	09/22/2004
Chloroform	BQL	0.00770	1	09/22/2004
Chloromethane	BQL	0.00770	1	09/22/2004
2-Chlorotoluene	BQL	0.00770	1	09/22/2004
4-Chlorotoluene	BQL	0.00770	1	09/22/2004
Dibromochloromethane	BQL	0.00770	1	09/22/2004
1,2-Dibromo-3-chloropropane	BQL	0.00770	1	09/22/2004
Dibromomethane	BQL	0.00770	1	09/22/2004
1,2-Dibromoethane (EDB)	BQL	0.00770	1	09/22/2004
1,2-Dichlorobenzene	BQL	0.00770	1	09/22/2004
1,3-Dichlorobenzene	BQL	0.00770	1	09/22/2004
1,4-Dichlorobenzene	BQL	0.00770	1	09/22/2004
trans-1,4-Dichloro-2-butene	BQL	0.00770	1	09/22/2004
1,1-Dichloroethane	BQL	0.00770	1	09/22/2004
1,1-Dichloroethene	BQL	0.00770	1	09/22/2004
1,2-Dichloroethane	BQL	0.00770	1	09/22/2004
cis-1,2-Dichloroethene	BQL	0.00770	1	09/22/2004
trans-1,2-dichloroethene	BQL	0.00770	1	09/22/2004
1,2-Dichloropropane	BQL	0.00770	1	09/22/2004
1,3-Dichloropropane	BQL	0.00770	1	09/22/2004
2,2-Dichloropropane	BQL	0.00770	1	09/22/2004
1,1-Dichloropropene	BQL	0.00770	1	09/22/2004
cis-1,3-Dichloropropene	BQL	0.00770	1	09/22/2004
trans-1,3-Dichloropropene	BQL	0.00770	1	09/22/2004
Dichlorodifluoromethane	BQL	0.00770	1	09/22/2004
Diisopropyl ether (DIPE)	BQL	0.00770	1	09/22/2004
Ethylbenzene	BQL	0.00770	1	09/22/2004
Hexachlorobutadiene	BQL	0.00770	1	09/22/2004
2-Hexanone	BQL	0.00770	1	09/22/2004
Iodomethane	BQL	0.00770	1	09/22/2004

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles by GCMS 8260-5035

Client Sample ID: USTTC912-SB04(1-2)
Client Project ID: Building TC-912
Lab Sample ID G128-1382-5A
Lab Project ID: G128-1382
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 09-16-2004 14:45
Date Received: 09/17/2004
Matrix: Soil
%Solids: 69.4

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	0.00770	1	09/22/2004
4-Isopropyltoluene	BQL	0.00770	1	09/22/2004
Methylene chloride	BQL	0.0308	1	09/22/2004
4-Methyl-2-pentanone	BQL	0.00770	1	09/22/2004
Methyl-tert-butyl ether (MTBE)	BQL	0.00770	1	09/22/2004
Naphthalene	BQL	0.00770	1	09/22/2004
n-Propyl benzene	BQL	0.00770	1	09/22/2004
Styrene	BQL	0.00770	1	09/22/2004
1,1,1,2-Tetrachloroethane	BQL	0.00770	1	09/22/2004
1,1,2,2-Tetrachloroethane	BQL	0.00770	1	09/22/2004
Tetrachloroethene	BQL	0.00770	1	09/22/2004
Toluene	BQL	0.00770	1	09/22/2004
1,2,3-Trichlorobenzene	BQL	0.00770	1	09/22/2004
1,2,4-Trichlorobenzene	BQL	0.00770	1	09/22/2004
Trichloroethene	BQL	0.00770	1	09/22/2004
1,1,1-Trichloroethane	BQL	0.00770	1	09/22/2004
1,1,2-Trichloroethane	BQL	0.00770	1	09/22/2004
Trichlorofluoromethane	BQL	0.00770	1	09/22/2004
1,2,3-Trichloropropane	BQL	0.00770	1	09/22/2004
1,2,4-Trimethylbenzene	BQL	0.00770	1	09/22/2004
1,3,5-Trimethylbenzene	BQL	0.00770	1	09/22/2004
Vinyl chloride	BQL	0.00770	1	09/22/2004
m-,p-Xylene	BQL	0.0154	1	09/22/2004
o-Xylene	BQL	0.00770	1	09/22/2004

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0457	91
1,2-Dichloroethane-d4	0.05	0.068	136
Toluene-d8	0.05	0.0503	101

Comments:

Flags:

BQL = Below Quantitation Limits.

Reviewed By: RNP

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles by GCMS 8260-5035

Client Sample ID: USTTC912-SB05
Client Project ID: Building TC-912
Lab Sample ID G128-1382-6A
Lab Project ID: G128-1382
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 09-16-2004 15:10
Date Received: 09/17/2004
Matrix: Soil
%Solids: 90.2

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	0.0476	1	09/22/2004
Benzene	0.00858	0.00476	1	09/22/2004
Bromobenzene	BQL	0.00476	1	09/22/2004
Bromochloromethane	BQL	0.00476	1	09/22/2004
Bromodichloromethane	BQL	0.00476	1	09/22/2004
Bromoform	BQL	0.00476	1	09/22/2004
Bromomethane	BQL	0.00476	1	09/22/2004
2-Butanone	BQL	0.0238	1	09/22/2004
n-Butylbenzene	BQL	0.00476	1	09/22/2004
sec-Butylbenzene	BQL	0.00476	1	09/22/2004
tert-Butylbenzene	BQL	0.00476	1	09/22/2004
Carbon disulfide	BQL	0.00476	1	09/22/2004
Carbon tetrachloride	BQL	0.00476	1	09/22/2004
Chlorobenzene	BQL	0.00476	1	09/22/2004
Chloroethane	BQL	0.00476	1	09/22/2004
Chloroform	BQL	0.00476	1	09/22/2004
Chloromethane	BQL	0.00476	1	09/22/2004
2-Chlorotoluene	BQL	0.00476	1	09/22/2004
4-Chlorotoluene	BQL	0.00476	1	09/22/2004
Dibromochloromethane	BQL	0.00476	1	09/22/2004
1,2-Dibromo-3-chloropropane	BQL	0.00476	1	09/22/2004
Dibromomethane	BQL	0.00476	1	09/22/2004
1,2-Dibromoethane (EDB)	BQL	0.00476	1	09/22/2004
1,2-Dichlorobenzene	BQL	0.00476	1	09/22/2004
1,3-Dichlorobenzene	BQL	0.00476	1	09/22/2004
1,4-Dichlorobenzene	BQL	0.00476	1	09/22/2004
trans-1,4-Dichloro-2-butene	BQL	0.00476	1	09/22/2004
1,1-Dichloroethane	BQL	0.00476	1	09/22/2004
1,1-Dichloroethene	BQL	0.00476	1	09/22/2004
1,2-Dichloroethane	BQL	0.00476	1	09/22/2004
cis-1,2-Dichloroethene	BQL	0.00476	1	09/22/2004
trans-1,2-dichloroethene	BQL	0.00476	1	09/22/2004
1,2-Dichloropropane	BQL	0.00476	1	09/22/2004
1,3-Dichloropropane	BQL	0.00476	1	09/22/2004
2,2-Dichloropropane	BQL	0.00476	1	09/22/2004
1,1-Dichloropropene	BQL	0.00476	1	09/22/2004
cis-1,3-Dichloropropene	BQL	0.00476	1	09/22/2004
trans-1,3-Dichloropropene	BQL	0.00476	1	09/22/2004
Dichlorodifluoromethane	BQL	0.00476	1	09/22/2004
Diisopropyl ether (DIPE)	BQL	0.00476	1	09/22/2004
Ethylbenzene	BQL	0.00476	1	09/22/2004
Hexachlorobutadiene	BQL	0.00476	1	09/22/2004
2-Hexanone	BQL	0.00476	1	09/22/2004
Iodomethane	BQL	0.00476	1	09/22/2004

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTTC912-SB05
Client Project ID: Building TC-912
Lab Sample ID G128-1382-6A
Lab Project ID: G128-1382
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 09-16-2004 15:10
Date Received: 09/17/2004
Matrix: Soil
%Solids: 90.2

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	0.00476	1	09/22/2004
4-Isopropyltoluene	BQL	0.00476	1	09/22/2004
Methylene chloride	BQL	0.0191	1	09/22/2004
4-Methyl-2-pentanone	BQL	0.00476	1	09/22/2004
Methyl-tert-butyl ether (MTBE)	BQL	0.00476	1	09/22/2004
Naphthalene	BQL	0.00476	1	09/22/2004
n-Propyl benzene	BQL	0.00476	1	09/22/2004
Styrene	BQL	0.00476	1	09/22/2004
1,1,1,2-Tetrachloroethane	BQL	0.00476	1	09/22/2004
1,1,2,2-Tetrachloroethane	BQL	0.00476	1	09/22/2004
Tetrachloroethene	BQL	0.00476	1	09/22/2004
Toluene	BQL	0.00476	1	09/22/2004
1,2,3-Trichlorobenzene	BQL	0.00476	1	09/22/2004
1,2,4-Trichlorobenzene	BQL	0.00476	1	09/22/2004
Trichloroethene	BQL	0.00476	1	09/22/2004
1,1,1-Trichloroethane	BQL	0.00476	1	09/22/2004
1,1,2-Trichloroethane	BQL	0.00476	1	09/22/2004
Trichlorofluoromethane	BQL	0.00476	1	09/22/2004
1,2,3-Trichloropropane	BQL	0.00476	1	09/22/2004
1,2,4-Trimethylbenzene	BQL	0.00476	1	09/22/2004
1,3,5-Trimethylbenzene	BQL	0.00476	1	09/22/2004
Vinyl chloride	BQL	0.00476	1	09/22/2004
m-,p-Xylene	BQL	0.00953	1	09/22/2004
o-Xylene	BQL	0.00476	1	09/22/2004

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0486	97
1,2-Dichloroethane-d4	0.05	0.0646	129
Toluene-d8	0.05	0.0506	101

Comments:

Flags:

BQL = Below Quantitation Limits.

Reviewed By: RNP

PARADIGM ANALYTICAL LABORATORIES, INC.

**Results for Volatiles
by GCMS 8260-5035**

Client Sample ID: Trip Blank
 Client Project ID: Building TC-912
 Lab Sample ID G128-1382-7A
 Lab Project ID: G128-1382
 Report Basis: 0.0

Analyzed By: JTF
 Date Collected: 09-16-2004 00:00
 Date Received: 09/17/2004
 Matrix: Soil
 %Solids: 100.0

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	0.0500	1	09/22/2004
Benzene	BQL	0.00500	1	09/22/2004
Bromobenzene	BQL	0.00500	1	09/22/2004
Bromochloromethane	BQL	0.00500	1	09/22/2004
Bromodichloromethane	BQL	0.00500	1	09/22/2004
Bromoform	BQL	0.00500	1	09/22/2004
Bromomethane	BQL	0.00500	1	09/22/2004
2-Butanone	BQL	0.0250	1	09/22/2004
n-Butylbenzene	BQL	0.00500	1	09/22/2004
sec-Butylbenzene	BQL	0.00500	1	09/22/2004
tert-Butylbenzene	BQL	0.00500	1	09/22/2004
Carbon disulfide	BQL	0.00500	1	09/22/2004
Carbon tetrachloride	BQL	0.00500	1	09/22/2004
Chlorobenzene	BQL	0.00500	1	09/22/2004
Chloroethane	BQL	0.00500	1	09/22/2004
Chloroform	BQL	0.00500	1	09/22/2004
Chloromethane	BQL	0.00500	1	09/22/2004
2-Chlorotoluene	BQL	0.00500	1	09/22/2004
4-Chlorotoluene	BQL	0.00500	1	09/22/2004
Dibromochloromethane	BQL	0.00500	1	09/22/2004
1,2-Dibromo-3-chloropropane	BQL	0.00500	1	09/22/2004
Dibromomethane	BQL	0.00500	1	09/22/2004
1,2-Dibromoethane (EDB)	BQL	0.00500	1	09/22/2004
1,2-Dichlorobenzene	BQL	0.00500	1	09/22/2004
1,3-Dichlorobenzene	BQL	0.00500	1	09/22/2004
1,4-Dichlorobenzene	BQL	0.00500	1	09/22/2004
trans-1,4-Dichloro-2-butene	BQL	0.00500	1	09/22/2004
1,1-Dichloroethane	BQL	0.00500	1	09/22/2004
1,1-Dichloroethene	BQL	0.00500	1	09/22/2004
1,2-Dichloroethane	BQL	0.00500	1	09/22/2004
cis-1,2-Dichloroethene	BQL	0.00500	1	09/22/2004
trans-1,2-dichloroethene	BQL	0.00500	1	09/22/2004
1,2-Dichloropropane	BQL	0.00500	1	09/22/2004
1,3-Dichloropropane	BQL	0.00500	1	09/22/2004
2,2-Dichloropropane	BQL	0.00500	1	09/22/2004
1,1-Dichloropropene	BQL	0.00500	1	09/22/2004
cis-1,3-Dichloropropene	BQL	0.00500	1	09/22/2004
trans-1,3-Dichloropropene	BQL	0.00500	1	09/22/2004
Dichlorodifluoromethane	BQL	0.00500	1	09/22/2004
Diisopropyl ether (DIPE)	BQL	0.00500	1	09/22/2004
Ethylbenzene	BQL	0.00500	1	09/22/2004
Hexachlorobutadiene	BQL	0.00500	1	09/22/2004
2-Hexanone	BQL	0.00500	1	09/22/2004
Iodomethane	BQL	0.00500	1	09/22/2004

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: Trip Blank
Client Project ID: Building TC-912
Lab Sample ID G128-1382-7A
Lab Project ID: G128-1382
Report Basis: 0.0

Analyzed By: JTF
Date Collected: 09-16-2004 00:00
Date Received: 09/17/2004
Matrix: Soil
%Solids: 100.0

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	0.00500	1	09/22/2004
4-Isopropyltoluene	BQL	0.00500	1	09/22/2004
Methylene chloride	BQL	0.0200	1	09/22/2004
4-Methyl-2-pentanone	BQL	0.00500	1	09/22/2004
Methyl-tert-butyl ether (MTBE)	BQL	0.00500	1	09/22/2004
Naphthalene	BQL	0.00500	1	09/22/2004
n-Propyl benzene	BQL	0.00500	1	09/22/2004
Styrene	BQL	0.00500	1	09/22/2004
1,1,1,2-Tetrachloroethane	BQL	0.00500	1	09/22/2004
1,1,2,2-Tetrachloroethane	BQL	0.00500	1	09/22/2004
Tetrachloroethene	BQL	0.00500	1	09/22/2004
Toluene	BQL	0.00500	1	09/22/2004
1,2,3-Trichlorobenzene	BQL	0.00500	1	09/22/2004
1,2,4-Trichlorobenzene	BQL	0.00500	1	09/22/2004
Trichloroethene	BQL	0.00500	1	09/22/2004
1,1,1-Trichloroethane	BQL	0.00500	1	09/22/2004
1,1,2-Trichloroethane	BQL	0.00500	1	09/22/2004
Trichlorofluoromethane	BQL	0.00500	1	09/22/2004
1,2,3-Trichloropropane	BQL	0.00500	1	09/22/2004
1,2,4-Trimethylbenzene	BQL	0.00500	1	09/22/2004
1,3,5-Trimethylbenzene	BQL	0.00500	1	09/22/2004
Vinyl chloride	BQL	0.00500	1	09/22/2004
m-,p-Xylene	BQL	0.0100	1	09/22/2004
o-Xylene	BQL	0.00500	1	09/22/2004

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0483	97
1,2-Dichloroethane-d4	0.05	0.0694	139
Toluene-d8	0.05	0.0505	101

Comments:

Flags:

BQL = Below Quantitation Limits.

Reviewed By: RNP

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTTC912-SB01(1-2)
Client Project ID: Building TC-912
Lab Sample ID: G128-1382-11
Lab Project ID: G128-1382
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 09/16/2004 13:00
Date Received: 09/17/2004
Matrix: Soil
Solids: 82.4

Compound	Result mg/Kg	Quantitation Limit mg/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	0.362	1	10/03/2004
Acenaphthylene	BQL	0.362	1	10/03/2004
Anthracene	BQL	0.362	1	10/03/2004
Benzo[a]anthracene	BQL	0.362	1	10/03/2004
Benzo[a]pyrene	BQL	0.362	1	10/03/2004
Benzo[b]fluoranthene	BQL	0.362	1	10/03/2004
Benzo[g,h,i]perylene	BQL	0.362	1	10/03/2004
Benzo[k]fluoranthene	BQL	0.362	1	10/03/2004
Benzoic Acid	BQL	0.725	1	10/03/2004
Bis(2-chloroethoxy)methane	BQL	0.362	1	10/03/2004
Bis(2-chloroethyl)ether	BQL	0.362	1	10/03/2004
Bis(2-chloroisopropyl)ether	BQL	0.362	1	10/03/2004
Bis(2-ethylhexyl)phthalate	BQL	0.362	1	10/03/2004
4-bromophenyl phenyl ether	BQL	0.362	1	10/03/2004
Butylbenzylphthalate	BQL	0.362	1	10/03/2004
2-Chloronaphthalene	BQL	0.362	1	10/03/2004
2-Chlorophenol	BQL	0.362	1	10/03/2004
4-Chloro-3-methylphenol	BQL	0.362	1	10/03/2004
4-Chloroaniline	BQL	1.81	1	10/03/2004
4-Chlorophenyl phenyl ether	BQL	0.362	1	10/03/2004
Chrysene	BQL	0.362	1	10/03/2004
Dibenzo[a,h]anthracene	BQL	0.362	1	10/03/2004
Dibenzofuran	BQL	0.362	1	10/03/2004
Di-n-Butylphthalate	BQL	0.362	1	10/03/2004
1,2-Dichlorobenzene	BQL	0.362	1	10/03/2004
1,3-Dichlorobenzene	BQL	0.362	1	10/03/2004
1,4-Dichlorobenzene	BQL	0.362	1	10/03/2004
3,3'-Dichlorobenzidine	BQL	0.725	1	10/03/2004
2,4-Dichlorophenol	BQL	0.362	1	10/03/2004
Diethylphthalate	BQL	0.362	1	10/03/2004
Dimethylphthalate	BQL	0.362	1	10/03/2004
2,4-Dimethylphenol	BQL	0.362	1	10/03/2004
Di-n-octylphthalate	BQL	0.362	1	10/03/2004
4,6-Dinitro-2-methylphenol	BQL	1.81	1	10/03/2004
2,4-Dinitrophenol	BQL	1.81	1	10/03/2004
2,4-Dinitrotoluene	BQL	0.362	1	10/03/2004
2,6-Dinitrotoluene	BQL	0.362	1	10/03/2004
Fluoranthene	BQL	0.362	1	10/03/2004
Fluorene	BQL	0.362	1	10/03/2004
Hexachlorobenzene	BQL	0.362	1	10/03/2004
Hexachlorobutadiene	BQL	0.362	1	10/03/2004
Hexachlorocyclopentadiene	BQL	0.725	1	10/03/2004

PARADIGM ANALYTICAL LABORATORIES, INC.

**Results for Semivolatiles
by GCMS 8270**

Client Sample ID: USTTC912-SB01(1-2)

Client Project ID: Building TC-912

Lab Sample ID: G128-1382-11

Lab Project ID: G128-1382

Report Basis: Dry weight

Analyzed By: MRC

Date Collected: 09/16/2004 13:00

Date Received: 09/17/2004

Matrix: Soil

Solids: 82.4

Compound	Result mg/Kg	Quantitation Limit mg/Kg	Dilution Factor	Date Analyzed
Hexachloroethane	BQL	0.362	1	10/03/2004
Indeno(1,2,3-c,d)pyrene	BQL	0.362	1	10/03/2004
Isophorone	BQL	0.362	1	10/03/2004
2-Methylnaphthalene	BQL	0.362	1	10/03/2004
2-Methylphenol	BQL	0.362	1	10/03/2004
3- & 4-Methylphenol	BQL	0.362	1	10/03/2004
Naphthalene	BQL	0.362	1	10/03/2004
2-Nitroaniline	BQL	0.362	1	10/03/2004
3-Nitroaniline	BQL	1.81	1	10/03/2004
4-Nitroaniline	BQL	1.81	1	10/03/2004
Nitrobenzene	BQL	0.362	1	10/03/2004
2-Nitrophenol	BQL	0.362	1	10/03/2004
4-Nitrophenol	BQL	1.81	1	10/03/2004
N-Nitrosodi-n-propylamine	BQL	0.362	1	10/03/2004
N-Nitrosodiphenylamine	BQL	0.362	1	10/03/2004
Pentachlorophenol	BQL	1.81	1	10/03/2004
Phenanthrene	BQL	0.362	1	10/03/2004
Phenol	BQL	0.362	1	10/03/2004
Pyrene	BQL	0.362	1	10/03/2004
1,2,4-Trichlorobenzene	BQL	0.362	1	10/03/2004
2,4,5-Trichlorophenol	BQL	0.362	1	10/03/2004
2,4,6-Trichlorophenol	BQL	0.362	1	10/03/2004

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	11.5	115
2-Fluorophenol	10	11.3	113
Nitrobenzene-d5	10	11.3	113
Phenol-d6	10	10.8	108
2,4,6-Tribromophenol	10	11.3	113
4-Terphenyl-d14	10	13.6	136

Comments:

Flags:

BQL = Below Quantitation Limits.

Reviewed By: RNP

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTTC912-SB02(1-2)
Client Project ID: Building TC-912
Lab Sample ID: G128-1382-3I
Lab Project ID: G128-1382
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 09/16/2004 13:25
Date Received: 09/17/2004
Matrix: Soil
Solids: 86.4

Compound	Result mg/Kg	Quantitation Limit mg/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	0.347	1	10/03/2004
Acenaphthylene	BQL	0.347	1	10/03/2004
Anthracene	BQL	0.347	1	10/03/2004
Benzo[a]anthracene	BQL	0.347	1	10/03/2004
Benzo[a]pyrene	BQL	0.347	1	10/03/2004
Benzo[b]fluoranthene	BQL	0.347	1	10/03/2004
Benzo[g,h,i]perylene	BQL	0.347	1	10/03/2004
Benzo[k]fluoranthene	BQL	0.347	1	10/03/2004
Benzoic Acid	BQL	0.694	1	10/03/2004
Bis(2-chloroethoxy)methane	BQL	0.347	1	10/03/2004
Bis(2-chloroethyl)ether	BQL	0.347	1	10/03/2004
Bis(2-chloroisopropyl)ether	BQL	0.347	1	10/03/2004
Bis(2-ethylhexyl)phthalate	BQL	0.347	1	10/03/2004
4-bromophenyl phenyl ether	BQL	0.347	1	10/03/2004
Butylbenzylphthalate	BQL	0.347	1	10/03/2004
2-Chloronaphthalene	BQL	0.347	1	10/03/2004
2-Chlorophenol	BQL	0.347	1	10/03/2004
4-Chloro-3-methylphenol	BQL	0.347	1	10/03/2004
4-Chloroaniline	BQL	1.73	1	10/03/2004
4-Chlorophenyl phenyl ether	BQL	0.347	1	10/03/2004
Chrysene	BQL	0.347	1	10/03/2004
Dibenzo[a,h]anthracene	BQL	0.347	1	10/03/2004
Dibenzofuran	BQL	0.347	1	10/03/2004
Di-n-Butylphthalate	BQL	0.347	1	10/03/2004
1,2-Dichlorobenzene	BQL	0.347	1	10/03/2004
1,3-Dichlorobenzene	BQL	0.347	1	10/03/2004
1,4-Dichlorobenzene	BQL	0.347	1	10/03/2004
3,3'-Dichlorobenzidine	BQL	0.694	1	10/03/2004
2,4-Dichlorophenol	BQL	0.347	1	10/03/2004
Diethylphthalate	BQL	0.347	1	10/03/2004
Dimethylphthalate	BQL	0.347	1	10/03/2004
2,4-Dimethylphenol	BQL	0.347	1	10/03/2004
Di-n-octylphthalate	BQL	0.347	1	10/03/2004
4,6-Dinitro-2-methylphenol	BQL	1.73	1	10/03/2004
2,4-Dinitrophenol	BQL	1.73	1	10/03/2004
2,4-Dinitrotoluene	BQL	0.347	1	10/03/2004
2,6-Dinitrotoluene	BQL	0.347	1	10/03/2004
Fluoranthene	BQL	0.347	1	10/03/2004
Fluorene	BQL	0.347	1	10/03/2004
Hexachlorobenzene	BQL	0.347	1	10/03/2004
Hexachlorobutadiene	BQL	0.347	1	10/03/2004
Hexachlorocyclopentadiene	BQL	0.694	1	10/03/2004

PARADIGM ANALYTICAL LABORATORIES, INC.

**Results for Semivolatiles
by GCMS 8270**

Client Sample ID: USTTC912-SB02(1-2)
Client Project ID: Building TC-912
Lab Sample ID: G128-1382-3I
Lab Project ID: G128-1382
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 09/16/2004 13:25
Date Received: 09/17/2004
Matrix: Soil
Solids: 86.4

Compound	Result mg/Kg	Quantitation Limit mg/Kg	Dilution Factor	Date Analyzed
Hexachloroethane	BQL	0.347	1	10/03/2004
Indeno(1,2,3-c,d)pyrene	BQL	0.347	1	10/03/2004
Isophorone	BQL	0.347	1	10/03/2004
2-Methylnaphthalene	BQL	0.347	1	10/03/2004
2-Methylphenol	BQL	0.347	1	10/03/2004
3- & 4-Methylphenol	BQL	0.347	1	10/03/2004
Naphthalene	BQL	0.347	1	10/03/2004
2-Nitroaniline	BQL	0.347	1	10/03/2004
3-Nitroaniline	BQL	1.73	1	10/03/2004
4-Nitroaniline	BQL	1.73	1	10/03/2004
Nitrobenzene	BQL	0.347	1	10/03/2004
2-Nitrophenol	BQL	0.347	1	10/03/2004
4-Nitrophenol	BQL	1.73	1	10/03/2004
N-Nitrosodi-n-propylamine	BQL	0.347	1	10/03/2004
N-Nitrosodiphenylamine	BQL	0.347	1	10/03/2004
Pentachlorophenol	BQL	1.73	1	10/03/2004
Phenanthrene	BQL	0.347	1	10/03/2004
Phenol	BQL	0.347	1	10/03/2004
Pyrene	BQL	0.347	1	10/03/2004
1,2,4-Trichlorobenzene	BQL	0.347	1	10/03/2004
2,4,5-Trichlorophenol	BQL	0.347	1	10/03/2004
2,4,6-Trichlorophenol	BQL	0.347	1	10/03/2004

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	12	120
2-Fluorophenol	10	11.6	116
Nitrobenzene-d5	10	11.6	116
Phenol-d6	10	11.3	114
2,4,6-Tribromophenol	10	12	120
4-Terphenyl-d14	10	13.5	135

Comments:

Flags:

BQL = Below Quantitation Limits.

Reviewed By: REN

PARADIGM ANALYTICAL LABORATORIES, INC.

**Results for Semivolatiles
by GCMS 8270**

Client Sample ID: USTTC912-SB03(2-3)
Client Project ID: Building TC-912
Lab Sample ID: G128-1382-41
Lab Project ID: G128-1382
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 09/16/2004 14:25
Date Received: 09/17/2004
Matrix: Soil
Solids: 88.1

Compound	Result mg/Kg	Quantitation Limit mg/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	0.330	1	10/03/2004
Acenaphthylene	BQL	0.330	1	10/03/2004
Anthracene	BQL	0.330	1	10/03/2004
Benzo[a]anthracene	BQL	0.330	1	10/03/2004
Benzo[a]pyrene	BQL	0.330	1	10/03/2004
Benzo[b]fluoranthene	BQL	0.330	1	10/03/2004
Benzo[g,h,i]perylene	BQL	0.330	1	10/03/2004
Benzo[k]fluoranthene	BQL	0.330	1	10/03/2004
Benzoic Acid	BQL	0.661	1	10/03/2004
Bis(2-chloroethoxy)methane	BQL	0.330	1	10/03/2004
Bis(2-chloroethyl)ether	BQL	0.330	1	10/03/2004
Bis(2-chloroisopropyl)ether	BQL	0.330	1	10/03/2004
Bis(2-ethylhexyl)phthalate	BQL	0.330	1	10/03/2004
4-bromophenyl phenyl ether	BQL	0.330	1	10/03/2004
Butylbenzylphthalate	BQL	0.330	1	10/03/2004
2-Chloronaphthalene	BQL	0.330	1	10/03/2004
2-Chlorophenol	BQL	0.330	1	10/03/2004
4-Chloro-3-methylphenol	BQL	0.330	1	10/03/2004
4-Chloroaniline	BQL	1.65	1	10/03/2004
4-Chlorophenyl phenyl ether	BQL	0.330	1	10/03/2004
Chrysene	BQL	0.330	1	10/03/2004
Dibenzo[a,h]anthracene	BQL	0.330	1	10/03/2004
Dibenzofuran	BQL	0.330	1	10/03/2004
Di-n-Butylphthalate	BQL	0.330	1	10/03/2004
1,2-Dichlorobenzene	BQL	0.330	1	10/03/2004
1,3-Dichlorobenzene	BQL	0.330	1	10/03/2004
1,4-Dichlorobenzene	BQL	0.330	1	10/03/2004
3,3'-Dichlorobenzidine	BQL	0.661	1	10/03/2004
2,4-Dichlorophenol	BQL	0.330	1	10/03/2004
Diethylphthalate	BQL	0.330	1	10/03/2004
Dimethylphthalate	BQL	0.330	1	10/03/2004
2,4-Dimethylphenol	BQL	0.330	1	10/03/2004
Di-n-octylphthalate	BQL	0.330	1	10/03/2004
4,6-Dinitro-2-methylphenol	BQL	1.65	1	10/03/2004
2,4-Dinitrophenol	BQL	1.65	1	10/03/2004
2,4-Dinitrotoluene	BQL	0.330	1	10/03/2004
2,6-Dinitrotoluene	BQL	0.330	1	10/03/2004
Fluoranthene	BQL	0.330	1	10/03/2004
Fluorene	BQL	0.330	1	10/03/2004
Hexachlorobenzene	BQL	0.330	1	10/03/2004
Hexachlorobutadiene	BQL	0.330	1	10/03/2004
Hexachlorocyclopentadiene	BQL	0.661	1	10/03/2004

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTTC912-SB03(2-3)
Client Project ID: Building TC-912
Lab Sample ID: G128-1382-4I
Lab Project ID: G128-1382
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 09/16/2004 14:25
Date Received: 09/17/2004
Matrix: Soil
Solids: 88.1

Compound	Result mg/Kg	Quantitation Limit mg/Kg	Dilution Factor	Date Analyzed
Hexachloroethane	BQL	0.330	1	10/03/2004
Indeno(1,2,3-c,d)pyrene	BQL	0.330	1	10/03/2004
Isophorone	BQL	0.330	1	10/03/2004
2-Methylnaphthalene	BQL	0.330	1	10/03/2004
2-Methylphenol	BQL	0.330	1	10/03/2004
3- & 4-Methylphenol	BQL	0.330	1	10/03/2004
Naphthalene	BQL	0.330	1	10/03/2004
2-Nitroaniline	BQL	0.330	1	10/03/2004
3-Nitroaniline	BQL	1.65	1	10/03/2004
4-Nitroaniline	BQL	1.65	1	10/03/2004
Nitrobenzene	BQL	0.330	1	10/03/2004
2-Nitrophenol	BQL	0.330	1	10/03/2004
4-Nitrophenol	BQL	1.65	1	10/03/2004
N-Nitrosodi-n-propylamine	BQL	0.330	1	10/03/2004
N-Nitrosodiphenylamine	BQL	0.330	1	10/03/2004
Pentachlorophenol	BQL	1.65	1	10/03/2004
Phenanthrene	BQL	0.330	1	10/03/2004
Phenol	BQL	0.330	1	10/03/2004
Pyrene	BQL	0.330	1	10/03/2004
1,2,4-Trichlorobenzene	BQL	0.330	1	10/03/2004
2,4,5-Trichlorophenol	BQL	0.330	1	10/03/2004
2,4,6-Trichlorophenol	BQL	0.330	1	10/03/2004

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	11.2	112
2-Fluorophenol	10	10.5	105
Nitrobenzene-d5	10	10.7	107
Phenol-d6	10	10.4	104
2,4,6-Tribromophenol	10	10.4	104
4-Terphenyl-d14	10	12.8	128

Comments:

Flags:

BQL = Below Quantitation Limits.

Reviewed By: RNP

PARADIGM ANALYTICAL LABORATORIES, INC.

**Results for Semivolatiles
by GCMS 8270**

Client Sample ID: USTTC912-SB04(1-2)
Client Project ID: Building TC-912
Lab Sample ID: G128-1382-51
Lab Project ID: G128-1382
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 09/16/2004 14:45
Date Received: 09/17/2004
Matrix: Soil
Solids: 69.4

Compound	Result mg/Kg	Quantitation Limit mg/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	0.472	1	10/03/2004
Acenaphthylene	BQL	0.472	1	10/03/2004
Anthracene	BQL	0.472	1	10/03/2004
Benzo[a]anthracene	BQL	0.472	1	10/03/2004
Benzo[a]pyrene	BQL	0.472	1	10/03/2004
Benzo[b]fluoranthene	BQL	0.472	1	10/03/2004
Benzo[g,h,i]perylene	BQL	0.472	1	10/03/2004
Benzo[k]fluoranthene	BQL	0.472	1	10/03/2004
Benzoic Acid	2.70	0.943	1	10/03/2004
Bis(2-chloroethoxy)methane	BQL	0.472	1	10/03/2004
Bis(2-chloroethyl)ether	BQL	0.472	1	10/03/2004
Bis(2-chloroisopropyl)ether	BQL	0.472	1	10/03/2004
Bis(2-ethylhexyl)phthalate	BQL	0.472	1	10/03/2004
4-bromophenyl phenyl ether	BQL	0.472	1	10/03/2004
Butylbenzylphthalate	BQL	0.472	1	10/03/2004
2-Chloronaphthalene	BQL	0.472	1	10/03/2004
2-Chlorophenol	BQL	0.472	1	10/03/2004
4-Chloro-3-methylphenol	BQL	0.472	1	10/03/2004
4-Chloroaniline	BQL	2.36	1	10/03/2004
4-Chlorophenyl phenyl ether	BQL	0.472	1	10/03/2004
Chrysene	BQL	0.472	1	10/03/2004
Dibenzo[a,h]anthracene	BQL	0.472	1	10/03/2004
Dibenzofuran	BQL	0.472	1	10/03/2004
Di-n-Butylphthalate	BQL	0.472	1	10/03/2004
1,2-Dichlorobenzene	BQL	0.472	1	10/03/2004
1,3-Dichlorobenzene	BQL	0.472	1	10/03/2004
1,4-Dichlorobenzene	BQL	0.472	1	10/03/2004
3,3'-Dichlorobenzidine	BQL	0.943	1	10/03/2004
2,4-Dichlorophenol	BQL	0.472	1	10/03/2004
Diethylphthalate	BQL	0.472	1	10/03/2004
Dimethylphthalate	BQL	0.472	1	10/03/2004
2,4-Dimethylphenol	BQL	0.472	1	10/03/2004
Di-n-octylphthalate	BQL	0.472	1	10/03/2004
4,6-Dinitro-2-methylphenol	BQL	2.36	1	10/03/2004
2,4-Dinitrophenol	BQL	2.36	1	10/03/2004
2,4-Dinitrotoluene	BQL	0.472	1	10/03/2004
2,6-Dinitrotoluene	BQL	0.472	1	10/03/2004
Fluoranthene	BQL	0.472	1	10/03/2004
Fluorene	BQL	0.472	1	10/03/2004
Hexachlorobenzene	BQL	0.472	1	10/03/2004
Hexachlorobutadiene	BQL	0.472	1	10/03/2004
Hexachlorocyclopentadiene	BQL	0.943	1	10/03/2004

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTTC912-SB04(1-2)
Client Project ID: Building TC-912
Lab Sample ID: G128-1382-5I
Lab Project ID: G128-1382
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 09/16/2004 14:45
Date Received: 09/17/2004
Matrix: Soil
Solids: 69.4

Compound	Result mg/Kg	Quantitation Limit mg/Kg	Dilution Factor	Date Analyzed
Hexachloroethane	BQL	0.472	1	10/03/2004
Indeno(1,2,3-c,d)pyrene	BQL	0.472	1	10/03/2004
Isophorone	BQL	0.472	1	10/03/2004
2-Methylnaphthalene	BQL	0.472	1	10/03/2004
2-Methylphenol	BQL	0.472	1	10/03/2004
3- & 4-Methylphenol	BQL	0.472	1	10/03/2004
Naphthalene	BQL	0.472	1	10/03/2004
2-Nitroaniline	BQL	0.472	1	10/03/2004
3-Nitroaniline	BQL	2.36	1	10/03/2004
4-Nitroaniline	BQL	2.36	1	10/03/2004
Nitrobenzene	BQL	0.472	1	10/03/2004
2-Nitrophenol	BQL	0.472	1	10/03/2004
4-Nitrophenol	BQL	2.36	1	10/03/2004
N-Nitrosodi-n-propylamine	BQL	0.472	1	10/03/2004
N-Nitrosodiphenylamine	BQL	0.472	1	10/03/2004
Pentachlorophenol	BQL	2.36	1	10/03/2004
Phenanthrene	BQL	0.472	1	10/03/2004
Phenol	BQL	0.472	1	10/03/2004
Pyrene	BQL	0.472	1	10/03/2004
1,2,4-Trichlorobenzene	BQL	0.472	1	10/03/2004
2,4,5-Trichlorophenol	BQL	0.472	1	10/03/2004
2,4,6-Trichlorophenol	BQL	0.472	1	10/03/2004

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	10.1	101
2-Fluorophenol	10	10.5	105
Nitrobenzene-d5	10	10.4	104
Phenol-d6	10	10	100
2,4,6-Tribromophenol	10	11	110
4-Terphenyl-d14	10	12.6	126

Comments:

Flags:

BQL = Below Quantitation Limits.

Reviewed By: RNP

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTTC912-SB05
Client Project ID: Building TC-912
Lab Sample ID: G128-1382-6I
Lab Project ID: G128-1382
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 09/16/2004 15:10
Date Received: 09/17/2004
Matrix: Soil
Solids: 90.2

Compound	Result mg/Kg	Quantitation Limit mg/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	0.321	1	10/03/2004
Acenaphthylene	BQL	0.321	1	10/03/2004
Anthracene	BQL	0.321	1	10/03/2004
Benzo[a]anthracene	BQL	0.321	1	10/03/2004
Benzo[a]pyrene	BQL	0.321	1	10/03/2004
Benzo[b]fluoranthene	BQL	0.321	1	10/03/2004
Benzo[g,h,i]perylene	BQL	0.321	1	10/03/2004
Benzo[k]fluoranthene	BQL	0.321	1	10/03/2004
Benzoic Acid	BQL	0.642	1	10/03/2004
Bis(2-chloroethoxy)methane	BQL	0.321	1	10/03/2004
Bis(2-chloroethyl)ether	BQL	0.321	1	10/03/2004
Bis(2-chloroisopropyl)ether	BQL	0.321	1	10/03/2004
Bis(2-ethylhexyl)phthalate	BQL	0.321	1	10/03/2004
4-bromophenyl phenyl ether	BQL	0.321	1	10/03/2004
Butylbenzylphthalate	BQL	0.321	1	10/03/2004
2-Chloronaphthalene	BQL	0.321	1	10/03/2004
2-Chlorophenol	BQL	0.321	1	10/03/2004
4-Chloro-3-methylphenol	BQL	0.321	1	10/03/2004
4-Chloroaniline	BQL	1.61	1	10/03/2004
4-Chlorophenyl phenyl ether	BQL	0.321	1	10/03/2004
Chrysene	BQL	0.321	1	10/03/2004
Dibenzo[a,h]anthracene	BQL	0.321	1	10/03/2004
Dibenzofuran	BQL	0.321	1	10/03/2004
Di-n-Butylphthalate	BQL	0.321	1	10/03/2004
1,2-Dichlorobenzene	BQL	0.321	1	10/03/2004
1,3-Dichlorobenzene	BQL	0.321	1	10/03/2004
1,4-Dichlorobenzene	BQL	0.321	1	10/03/2004
3,3'-Dichlorobenzidine	BQL	0.642	1	10/03/2004
2,4-Dichlorophenol	BQL	0.321	1	10/03/2004
Diethylphthalate	BQL	0.321	1	10/03/2004
Dimethylphthalate	BQL	0.321	1	10/03/2004
2,4-Dimethylphenol	BQL	0.321	1	10/03/2004
Di-n-octylphthalate	BQL	0.321	1	10/03/2004
4,6-Dinitro-2-methylphenol	BQL	1.61	1	10/03/2004
2,4-Dinitrophenol	BQL	1.61	1	10/03/2004
2,4-Dinitrotoluene	BQL	0.321	1	10/03/2004
2,6-Dinitrotoluene	BQL	0.321	1	10/03/2004
Fluoranthene	BQL	0.321	1	10/03/2004
Fluorene	BQL	0.321	1	10/03/2004
Hexachlorobenzene	BQL	0.321	1	10/03/2004
Hexachlorobutadiene	BQL	0.321	1	10/03/2004
Hexachlorocyclopentadiene	BQL	0.642	1	10/03/2004

PARADIGM ANALYTICAL LABORATORIES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTTC912-SB05
Client Project ID: Building TC-912
Lab Sample ID: G128-1382-6l
Lab Project ID: G128-1382
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 09/16/2004 15:10
Date Received: 09/17/2004
Matrix: Soil
Solids: 90.2

Compound	Result mg/Kg	Quantitation Limit mg/Kg	Dilution Factor	Date Analyzed
Hexachloroethane	BQL	0.321	1	10/03/2004
Indeno(1,2,3-c,d)pyrene	BQL	0.321	1	10/03/2004
Isophorone	BQL	0.321	1	10/03/2004
2-Methylnaphthalene	BQL	0.321	1	10/03/2004
2-Methylphenol	BQL	0.321	1	10/03/2004
3- & 4-Methylphenol	BQL	0.321	1	10/03/2004
Naphthalene	BQL	0.321	1	10/03/2004
2-Nitroaniline	BQL	0.321	1	10/03/2004
3-Nitroaniline	BQL	1.61	1	10/03/2004
4-Nitroaniline	BQL	1.61	1	10/03/2004
Nitrobenzene	BQL	0.321	1	10/03/2004
2-Nitrophenol	BQL	0.321	1	10/03/2004
4-Nitrophenol	BQL	1.61	1	10/03/2004
N-Nitrosodi-n-propylamine	BQL	0.321	1	10/03/2004
N-Nitrosodiphenylamine	BQL	0.321	1	10/03/2004
Pentachlorophenol	BQL	1.61	1	10/03/2004
Phenanthrene	BQL	0.321	1	10/03/2004
Phenol	BQL	0.321	1	10/03/2004
Pyrene	BQL	0.321	1	10/03/2004
1,2,4-Trichlorobenzene	BQL	0.321	1	10/03/2004
2,4,5-Trichlorophenol	BQL	0.321	1	10/03/2004
2,4,6-Trichlorophenol	BQL	0.321	1	10/03/2004

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	10.2	102
2-Fluorophenol	10	10.2	102
Nitrobenzene-d5	10	10.4	104
Phenol-d6	10	10.2	102
2,4,6-Tribromophenol	10	10.6	106
4-Terphenyl-d14	10	12.9	129

Comments:

Flags:

BQL = Below Quantitation Limits.

Reviewed By: RNP

PARADIGM ANALYTICAL LABORATORIES, INC.

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & Associates

Project Name: Building TC-912

Sample Information and Analytical Results	
Sample Identification	USTTC912-SB01(1-2)
Sample Matrix	Soil
Date Collected	09/16/04
Date Received	09/17/04
Date Extracted	09/22/04
Date Analyzed	09/26/04
Dry Weight	82.3
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 10 (mg/Kg)
C ₁₉ -C ₃₆ Aliphatics*	< 10 (mg/Kg)
C ₁₁ -C ₂₂ Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	120
Aromatic Surrogate % Recovery	120

Comments:

* = Excludes any surrogates or internal standards.

Sample did not require fractionation.

Lab info: G128-1382-1H

Reviewed By: ENP

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & AssociatesProject Name: Building TC-912

Sample Information and Analytical Results	
Sample Identification	USTTC912-SB02(1-2)
Sample Matrix	Soil
Date Collected	09/16/04
Date Received	09/17/04
Date Extracted	09/22/04
Date Analyzed	10/05/04
Dry Weight	86.4
Dilution Factor	1:1
C ₉ -C ₁₈ Aliphatics*	17 (mg/Kg)
C ₁₉ -C ₃₆ Aliphatics*	< 10 (mg/Kg)
C ₁₁ -C ₂₂ Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	79
Aromatic Surrogate % Recovery	78
Fractionation Surrogate 1 % Recovery	83

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G128-1382-3H

Reviewed By: RNP

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & AssociatesProject Name: Building TC-912

Sample Information and Analytical Results	
Sample Identification	USTTC912-SB03(2-3)
Sample Matrix	Soil
Date Collected	09/16/04
Date Received	09/17/04
Date Extracted	09/22/04
Date Analyzed	09/26/04
Dry Weight	88.1
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 10 (mg/Kg)
C ₁₉ -C ₃₆ Aliphatics*	< 10 (mg/Kg)
C ₁₁ -C ₂₂ Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	120
Aromatic Surrogate % Recovery	110

Comments:

* = Excludes any surrogates or internal standards.

Sample did not require fractionation.

Lab info: G128-1382-4H

Reviewed By: DNP

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & AssociatesProject Name: Building TC-912

Sample Information and Analytical Results	
Sample Identification	USTTC912-SB04(1-2)
Sample Matrix	Soil
Date Collected	09/16/04
Date Received	09/17/04
Date Extracted	09/22/04
Date Analyzed	10/05/04
Dry Weight	69.4
Dilution Factor	1:1
C ₉ -C ₁₈ Aliphatics*	35 (mg/Kg)
C ₁₉ -C ₃₆ Aliphatics*	< 10 (mg/Kg)
C ₁₁ -C ₂₂ Aromatics*	18 (mg/Kg)
Aliphatic Surrogate % Recovery	78
Aromatic Surrogate % Recovery	73
Fractionation Surrogate 1 % Recovery	69

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G128-1382-5H

Reviewed By: RNP

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & AssociatesProject Name: Building TC-912

Sample Information and Analytical Results	
Sample Identification	USTTC912-SB05
Sample Matrix	Soil
Date Collected	09/16/04
Date Received	09/17/04
Date Extracted	09/22/04
Date Analyzed	09/26/04
Dry Weight	90.2
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 10 (mg/Kg)
C ₁₉ -C ₃₆ Aliphatics*	< 10 (mg/Kg)
C ₁₁ -C ₂₂ Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	120
Aromatic Surrogate % Recovery	110

Comments:

* = Excludes any surrogates or internal standards.

Sample did not require fractionation.

Lab info: G128-1382-6H

Reviewed By: RNL

PARADIGM ANALYTICAL LABORATORIES, INC.

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 08/09/04

Calibration Ranges and Limits

Range	MDL (µg/L)		ML (µg/L)		RL (µg/L) (mg/Kg)	
C ₉ -C ₁₈ Aliphatics	0.1	0.8	0.3	2.6	100	10
C ₁₉ -C ₃₆ Aliphatics	0.1	1.6	0.3	5	100	10
C ₁₁ -C ₂₂ Aromatics	0.2	2.1	0.6	6.7	100	10

Calibration Concentration Levels

Range	Levels (µg/mL)	%RSD or CCC	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	6	9.70	Calibration Factor
	30		
	60		
	120		
	240		
C ₁₉ -C ₃₆ Aliphatics	8	8.6	Calibration Factor
	40		
	80		
	160		
	320		
C ₁₁ -C ₂₂ Aromatics	17	7.9	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 09/26/04

Calibration Check

Range	Levels (µg/mL)	RPD
C ₉ -C ₁₈ Aliphatics	120	-9.6
C ₁₉ -C ₃₆ Aliphatics	160	-14.9
C ₁₁ -C ₂₂ Aromatics	340	-6.5

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 FormClient Name: Richard Catlin & AssociatesProject Name: Building TC-912

Sample Information and Analytical Results	
Sample Identification	USTTC912-SB01(1-2)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	09/16/04
Date Received	09/17/04
Date Extracted	09/16/04
Date Analyzed	09/24/04
Dry Weight	82
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₂ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₀ Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	94
Surrogate % Recovery - FID	110

* = 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: g128-1382-1e

Reviewed By: RLV

VPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Richard Catlin & AssociatesProject Name: Building TC-912

Sample Information and Analytical Results	
Sample Identification	USTTC912-SB02(1-2)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	09/16/04
Date Received	09/17/04
Date Extracted	09/16/04
Date Analyzed	09/24/04
Dry Weight	86
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	18 (mg/Kg)
C ₉ -C ₁₂ Aliphatics**	59 (mg/Kg)
C ₉ -C ₁₀ Aromatics**	34 (mg/Kg)
Surrogate % Recovery - PID	120
Surrogate % Recovery - FID	160***

* = 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.

***= High surrogate recovery due to matrix interference

Lab Info: g128-1382-3e

Reviewed By: ENP

VPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Richard Catlin & AssociatesProject Name: Building TC-912

Sample Information and Analytical Results	
Sample Identification	USTTC912-SB03(2-3)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	09/16/04
Date Received	09/17/04
Date Extracted	09/16/04
Date Analyzed	09/24/04
Dry Weight	88
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₂ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₀ Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	91
Surrogate % Recovery - FID	110

* = 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: g128-1382-4e

Reviewed By: RNC

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & AssociatesProject Name: Building TC-912

Sample Information and Analytical Results	
Sample Identification	USTTC912-SB04(1-2)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	09/16/04
Date Received	09/17/04
Date Extracted	09/16/04
Date Analyzed	09/24/04
Dry Weight	69
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₂ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₀ Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	90
Surrogate % Recovery - FID	110

* = 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: g128-1382-5e

Reviewed By: ENC

VPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Richard Catlin & AssociatesProject Name: Building TC-912

Sample Information and Analytical Results	
Sample Identification	USTTC912-SB05
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	09/16/04
Date Received	09/17/04
Date Extracted	09/16/04
Date Analyzed	09/24/04
Dry Weight	90
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₂ Aliphatics**	< 10 (mg/Kg)
C ₉ -C ₁₀ Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	89
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: g128-1382-6e

Reviewed By: RLV

PARADIGM ANALYTICAL LABORATORIES, INC.

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 08/27/04 PID Initial Calibration Date: 08/27/04

Calibration Ranges and Limits

Range	MDL (07/15/2004) (µg/L)	ML (µg/L)	RL (µg/L) (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	5.5	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C ₉ -C ₁₂ Aliphatics	10	17.3	Calibration Factor
	250		
	500		
	750		
	1000		
C ₉ -C ₁₀ Aromatics	10	2.8	Calibration Factor
	250		
	500		
	750		
	1000		

Calibration Check Date: 09/24/04

Calibration Check

Range	Levels (µg/L) (mg/Kg)		RPD
C ₅ -C ₈ Aliphatics	2000	200	0.7
C ₉ -C ₁₂ Aliphatics	500	50	9.5
C ₉ -C ₁₀ Aromatics	500	50	-6.9

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit

RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

List of Reporting Abbreviations
and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

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

% solids = 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.

Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of-Custody Record & Analytical Request

COC# 42132

Page 1 of 1

Client: Catlin Project ID: Building TC-912 Date: 9-17-04 Report To: Mike E. Mason @ Catlin
 Address: 220 Old Dairy Rd. Contact: Mike E. Mason Turnaround: Standard
 Address: Wilmington NC 28405 Phone: 910-452-5861 Job Number: 204-038
 Quote #: DOD 101 Fax: 910-452-7563 P.O. Number: 240804-6 Invoice To: Shaila @ Catlin

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