PHASE I LIMITED SITE ASSESSMENT REPORT

FOR

BUILDING A-47
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

NCDENR UST INCIDENT NO. 8914
LAND USE CLASSIFICATION: PENDING
RISK CLASSIFICATION: PENDING

JANUARY 7, 2008

CONTRACT NO. N62470-05-D-6200
DELIVERY ORDER NO. 0049
CATLIN PROJECT NO. 207-048

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TABLE OF CONTENTS

TABLES

TABLE OF CONTENTS (continued)

FIGURES

APPENDICES

PHASE I LIMITED SITE ASSESSMENT REPORT

FOR

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PURPOSE OF INVESTIGATION

The purpose of this Phase I Limited Site Assessment (LSA) is to provide the necessary information for the North Carolina Department of Environment and Natural Resources (NCDENR) to classify the level of risk to human health and the environment resulting from a suspected petroleum release at the Building A-47 project site. CATLIN Engineers and Scientists (CATLIN) was authorized to perform this Phase I Limited Site Assessment (LSA) by the NAVFAC Mid-Atlantic in accordance with the Order of Supplies Contract Number N62470-05-D-6200, Delivery Order Number 0049. The project site is located within the Amphibious Vehicle Maintenance Facility in the Courthouse Bay area of Marine Corps Base (MCB) Camp Lejeune, North Carolina. Figure 1 illustrates the general site location within the local USGS topographic quadrangle map.

Building A-47 Fueling Area and Former UST A-47-3

The area of investigation for the Building A-47 project site is in the vicinity of the former pump islands and fuel transfer lines of the former Underground Storage Tank (UST) A-47-3, located approximately 400 feet east northeast of Building A-47.

Initially, a Site Check Report was prepared in response to the August 17, 1992 UST leak at USTA-47-3 at Building A-47. This report, dated May 21, 1993, stated that a previous diesel fuel leak was discovered in a fuel dispenser line leading from UST A-47-3 on April 30, 1992. During repair activities to the UST, damages to the UST and fuel dispenser line went unreported and were responsible for the August 17, 1992 release.

On April 19, 1994, Quality Environment Company, Inc. (QEC) removed the 30,000 gallon diesel UST A-47-3 from the fueling facility near Building A-47. Additionally, the pump islands and product lines of the former UST A-47-3 were also removed. Table 1 contains UST system information.

Following the removal of the former UST A-47-3 and associated pump islands and product lines, a groundwater and soil sampling program was conducted at the project site by QEC. A groundwater sample was collected from the water within the excavation after the removal of the 30,000 gallon UST and was analyzed per EPA Method 602, EPA Method 625 and EPA Method 3030C. Results of the groundwater sample revealed several compounds in excess of the method detection limits indicating a release occurred from the former UST.

Six soil samples were collected from the locations of the pump island and product lines of the former UST A-47-3. No soil samples were collected from the former UST A-47-3 excavation area. All soil samples were analyzed per EPA Methods 3550/8015 and EPA Method 5030/8015. Laboratory results from the soil samples indicated that a release occurred in the areas of the pump islands and product lines of the former UST A-47-3. Based on the apparent discharges at the Building A-47 fueling area and former UST A-47-3, NCDENR requested MCB Camp Lejeune to conduct a Phase I LSA.

This document provides data to fulfill the initial site assessment and risk characterization requirements in accordance with 15A NCAC 2L .0405. Accordingly, this LSA document has been formatted to conform with the Guidelines for Assessment and Corrective Action effective July 1, 2001 (*2001 Guidelines*).

PHASE I LIMITED SITE ASSESSMENT REPORT

A. SITE IDENTIFICATION

DATE OF REPORT: January 7, 2008
Facility ID: Unknown **UST Incident Number (if known):** 8914
Site Name: Building A-47 Fueling Area and Former UST A-47-3
Site Location: MCB Camp Lejeune
Nearest City/Town: Jacksonville **County:** Onslow

UST Owner: Commanding Officer – MCB Camp Lejeune
Address: I&E/EMD/EQB
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: Amphibious Vehicle Maintenance Facility
Address: Building A-47, Courthouse Base **Phone:**

Consultant/Contractor: CATLIN Engineers and Scientists
Address: 220 Old Dairy Road, Wilmington, North Carolina 28405 **Phone:** (910) 452-5861

Release Information

Date Discovered: April 30, 1992 / August 17, 1992
Northing: 3830262.2 **Easting:** 282612.0
Estimated Quantity of Release: Unknown / 1,000 gallons
Cause of Release: Unknown / Repair activities following original leak
Source of Release (e.g. Piping/UST): Fuel line / Damage to manhole cover to the UST and fuel dispenser line

Sizes and contents of UST system(s) from which the release occurred:

One 30,000-gallon diesel UST and associated fuel dispenser line.

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)

B. RISK CHARACTERIZATION

Limited Site Assessment Risk Classification and Land Use Form

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

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

   According to I&E/EMD/EQB, MCB Camp Lejeune samples the raw water supply wells on a semi-annual basis. CATLIN has reviewed the latest water supply well sampling data from February and July 2007. The information provided indicates that no water supply well has been contaminated as a result of the releases from the Building A-47 source area.

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

   There is no water supply well located within 1,000 feet of the source area of the release (refer to Figure 1).

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

   There is no water supply well not used for drinking water located within 250 feet of the source area of the release (refer to Figure 1).

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

   Currently MCB Camp Lejeune has several locations for potential water supply well locations that are greater than 500 feet from the potential source area (refer to Figure 1).

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

   No evidence of vapor accumulation has been reported.

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

A review of data collected during this investigation does not provide evidence to suggest other factors that would cause the discharge or release to pose an imminent danger to public health, public safety, or the environment.

Intermediate Risk

7. *Is a surface water body located within 500 feet of the source area of the discharge or release?* **YES** NO

The nearest mapped surface water body is located approximately 200 feet towards the southeast (see Figure 1).

*If **YES**, does the maximum groundwater contaminant concentration exceed the surface water quality standards and criteria found in 15A NCAC 2B.0200 by a factor of 10?*
YES **NO**

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

Wellhead protection areas defined by 42 USC 300h-7(e) have not, as of this time, been designated by the State. However, MCB Camp Lejeune has identified wellhead protection areas on the base. Based on the most recent Wellhead Protection Plan – 2002 Update, the potential source area is not located within a proposed wellhead protection area.

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

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.

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

The potential source area is located just above an apparent unconfined surficial groundwater aquifer. While there is the potential for recharge by rainfall to the unconfined surficial aquifer at the Base, the surficial aquifer is not used for water supply aboard MCB, Camp Lejeune. Groundwater obtained from the Castle Hayne Aquifer is the raw water source for MCB Camp Lejeune potable water treatment facilities. An estimated 5 feet of Upper Tertiary Confining Unit, 27 feet of Upper Tertiary Aquifer, and 40 feet of Castle Hayne Confining Unit separate the Castle Hayne aquifer from the surficial aquifer. Data regarding hydrogeologic units below the subject site are discussed in greater detail in Section C.5.

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

Surficial groundwater samples from site monitoring wells USTA47-MW01 and USTA47-MW02 were analyzed per EPA Method 602 + MTBE + Xylenes, EPA Method 625 + TICs and MADEP VPH/EPH parameters. A review of laboratory analysis results indicates no subject analyte concentrations were detected in excess of applicable GCLs. These findings are discussed in greater detail in Section E of this report.

Part II - Land Use

Property Containing Source Area of Release

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

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

MCB, Camp Lejeune does contain primary and secondary residences; however, they are more than 1,500 feet from the potential source area.

2. *Does the property contain a school, daycare center, hospital, playground, park, recreation area, church, nursing home, or other place of public assembly?* YES **NO**
Describe.

MCB, Camp Lejeune does contain the above described places of public assembly; however, they are more than 1,500 feet from the potential source area.

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

The project site is located within the Amphibious Vehicle Maintenance Facility in the Courthouse Bay area of MCB, Camp Lejeune.

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

Under normal circumstances, children are not expected to visit the property.

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

The project site is located within the MCB, Camp Lejeune and is surrounded by a fence.

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

The potential source area is capped by concrete.

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

The current site use is not expected to change in the near future.

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

MCB Camp Lejeune is not subject to local or county-zoning requirements; however, the project site is located within an Industrial/Commercial area.

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

The current use of the local MCB Camp Lejeune area is not likely to change in the near future.

Property Surrounding Source Area of Release
The questions below pertain to the area within 1,500 feet of the source area of the release (excludes property containing source area of the release): See Figure 1

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

The project site A-47 is located approximately 3,250 feet from the nearest primary residence.

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

   The nearest place of public assembly is a recreational sports field which is approximately 3,000 feet (southeast) of the A-47 site.

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

   As previously stated, MCB Camp Lejeune is not subject to local or county-zoning requirements; however, the use of the project site is considered Industrial/Commercial in nature.

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

   The Courthouse Bay area of MCB Camp Lejeune is home to the Marine Corps Engineer School and the 2d Assault Amphibian (AA) Battalion. The Amphibious Vehicle Maintenance Facility is occupied by 2d AA Battalion and is their base from which to operate and train.

C. RECEPTOR INFORMATION

1. Water Supply Wells

No active potable water wells are located within 1,500 feet of the project site.

2. Public Water Supplies

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

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

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

3. Surface Water

As stated previously, the nearest mapped surface water body is located approximately 200 feet towards the southeast (see Figure 1).

4. Wellhead Protection Areas

As stated previously, MCB Camp Lejeune has identified wellhead protection areas on the base. Based on the most recent Wellhead Protection Plan – 2002 Update, the potential source area is not located within a proposed wellhead protection area.

5. Deep Aquifers in the Coastal Plain Physiographic Region

To determine deep aquifers underlying the subject site, the area was profiled in the "Visual Hydrogeologic Framework" database provided in the NCDENR Division of Water Resources website (VHF website) on January 23, 2006. This is a database of well and soil boring log data from numerous locations across the North Carolina Coastal Plain. The program uses data from the three locations closest to the point of interest to provide a cross-section of commonly identified hydrogeologic units likely to be present below the subject site.

Including the Surficial aquifer there are eleven identified aquifers (seven principal aquifers and four minor aquifers) within the North Carolina Coastal Plain Physiographic Region. The January 23, 2006 program results regarding deep aquifers below the subject site can be summarized as follows:

Hydrogeologic Units	Approximate Depth (feet)
Surficial Aquifer	0-32
Upper Tertiary Confining Unit	32-37
Upper Tertiary Aquifer	37-64
Castle Hayne Confining Unit	64-104
Castle Hayne Aquifer	104-254
Pee Dee Confining Unit	254-+280

6. Subsurface Structures

Numerous underground utilities are present throughout MCB Camp Lejeune. Most of these utilities are reportedly located above the surficial groundwater table (± 7 feet BLS) and therefore, are not considered potential receptors.

7. Property Owners and Occupants

The subject site is owned and operated by the Commanding Officer – Marine Corps Base, Camp Lejeune. Refer to Table 2.

D. SITE GEOLOGY AND HYDROGEOLOGY

D.1 Site Geology

The following site geology description is based on visual description of the soil split spoon samples obtained while installing the borehole for the site groundwater monitoring wells USTA47-MW01 and USTA47-MW02. Fine sands with some silts were observed at the site. A summary of site soils as observed during the installation of monitoring wells USTA47-MW01 and USTA47-MW02 are as follows:

Building A-47 (USTA47-MW01)		
Depth in feet BLS	Soil Description	USCS
0-0.5	Concrete. Sand/gravel fill base.	GW
0.5-1	No split spoon sample.	
1-3	Dark brown fine sand with organic silts. Dry.	SM
3-3.5	No split spoon sample.	
3.5-5	Tan fine sand with silt. Medium density. Dry.	SM
5-7	Olive fine sand with some silts. Medium dense.	SM
7-8	Black fine sand with organic silts. Wet.	SM
8-8.5	No split spoon sample.	
8.5-10	Tan silty sand. Wet.	SM
10-13.5	No split spoon sample.	
13.5-15	Olive silty sand.	SM

Building A-47 (USTA47-MW02)		
Depth in feet BLS	Soil Description	USCS
0-0.5	Concrete. Sand/gravel fill base.	GW
0.5-1	No split spoon sample.	
1-3.5	Olive fine sand with some organic fines. Dry.	SM
3.5-5	Olive fine sand with some organic fines. Moist.	SM
5-7.5	Olive fine sand with some organic fines. Wet.	SM
7.5-8.5	No split spoon sample.	
8.5-10	Olive fine sand with some organic fines. Loose. Wet.	SM
10-13.5	No split spoon sample.	
13.5-15	Gravel fill, like UST base material.	GW

The soils described above are consistent with undivided surficial deposits typically encountered within the area Coastal Plain Physiographic Province. A copy of the USTA47-MW01 and USTA47-MW02 well logs including organic vapor screening results, monitoring well as-builts, and North Carolina Well Construction Records have been provided in Appendix A. In addition, boring logs for soil borings USTA47-SS01 to USTA47-SS07 have also been included in Appendix A.

D.2 Site Hydrogeology

During the October 30, 2007 site visit, CATLIN personnel installed site monitoring wells USTA47-MW01 and USTA47-MW02 and obtained depth to water data. Depth to surficial groundwater at wells USTA47-MW01 and USTA47-MW02 was 4.5 feet and 4.7 feet below top of casing, respectively. However, depth to surficial groundwater at the wells USTA47-MW01 and USTA47-MW02 after 24 hours was 6.0 feet below top of casing at both of the monitoring wells. Review of the data generated during this investigation, indicates the surficial groundwater encountered below the potential source area is part of an unconfined surficial aquifer. Site monitoring well details and the groundwater gauging data has been summarized on Table 3. The locations of the monitoring wells have been illustrated on Figure 2.

E. SAMPLING RESULTS

The initial findings of the May 1993 Site Check Report indicated that a diesel fuel leak was discovered at a fuel dispenser line connection on April 30, 1992. During repair activities to the fuel line connection, additional damages to the UST A-47-3 manhole cover and fuel dispenser line went unreported and were responsible for the August 17, 1992 release. As previously stated, soil and groundwater samples collected during the 1994 UST A-47-3 tank removal and closure activities verified a release had occurred, as soil and groundwater contamination was present at the project site.

As part of this LSA investigation, two permanent Type II monitoring wells (USTA47-MW01 and USTA47-MW02) were installed at the location of the former tank basin in order to assess current soil and groundwater conditions. All soil and groundwater assessment fieldwork methods were conducted in general accordance with CATLIN's Standard Methods of Investigation. A copy of the CATLIN Standard Methods of Investigation has been provided in Appendix B.

E.1 Soil Sampling

Building A-47, UST-47-3 Site Check Report

As part of the Site Check Report, seven soil samples and one composite soil sample were collected and analyzed for the presence of TPH. Analytical results indicated that adsorbed-phase hydrocarbon concentrations in the gasoline, mineral spirits, diesel and fuel oil range of the TPH spectrum in all of the soil samples were less than the laboratory method detection limit. However, all of the soil samples contained TPH as lubricating oil. Concentrations of TPH as lubricating oil ranged from 410 ppm to 3,000 ppm.

A-47-3 UST Closure

The tank closure report indicated that there were no visual signs of leakage from the tank, but laboratory analysis of the soil samples taken from the areas of the pump islands and product lines indicated otherwise. Four soil samples were obtained from a depth of one foot below ground surface (BGS) and analyzed for TPH – Oil and Grease, and TPH – Diesel. The highest TPH – Oil and Grease concentration was reported as 933 mg/kg (ppm) and the highest TPH – Diesel concentration was reported as 11,700 mg/kg (ppm). The highest levels of soil contamination were discovered at former dispenser islands.

A-47 LSA Investigation

CATLIN collected a total of nine soil samples (USTA47-MW01, USTA47-MW02, and USTA47-SS01 through USTA47-SS07) for laboratory analysis on October 30 and 31, 2007 as part of the LSA investigation. Soil samples were transported to SGS Environmental Services, Inc. (NC Certification #481) in Wilmington, North Carolina and were analyzed per EPA Method 8260 (including IPE and MTBE), EPA Method 8270 (+ 10 largest non-target peaks), and Volatile and Extractable Petroleum Hydrocarbons (VPH/EPH) using the Massachusetts Department of Environmental Protection (MADEP) Methods.

A copy of the laboratory analytical report and proper Chain-of-Custody (COC) is provided in Appendix D. Analysis of the soil samples submitted for laboratory analysis can be summarized as follows:

EPA METHOD 8260 + IPE + MTBE

Laboratory analysis of the soil samples did not detect any Volatile Organic Compounds per EPA Method 8260 + IPE + MTBE above established Soil to Groundwater (STGW) Maximum Soil Contaminant Concentrations (MSCCs). Acetone, 2-Butanone, n-Butylbenzene, sec-Butylbenzene, Carbon Disulfide, Ethylbenzene, Isopropylbenzene, Naphthalene, and n-Propylbenzene were detected at concentrations less than the STGW MSCCs. All other 8260 target analytes were reported as below the Method Detection Limit (BMDL).

EPA METHOD 8270 (+ TICs)

Laboratory analysis of soil samples USTA47-MW01, USTA47-SS01, USTA47-SS03, and USTA47-SS07 did not detect any Semi-Volatile Organic Compounds per EPA Method 8270. Laboratory analysis of soil samples USTA47-SS05 and USTA47-SS06 detected analytes at concentrations less than the STGW MSCCs. 2-Methylnaphthalene was detected in soil samples USTA47-MW02 and USTA47-SS02 at concentrations (2.49 mg/kg and 1.79 mg/kg, respectively) slightly above the STGW MSCC of 1.7 mg/kg, but well below the Residential MSCC of 63 mg/kg. EPA Method 8270 target analytes Benzo[a]anthracene and Benzo[b]fluoranthene were detected in sample USTA47-SS04 at concentrations (0.880 mg/kg and 1.06 mg/kg, respectively) at or above both the STGW and the Residential MSCCs, but well below the Industrial/Commercial MSCC of 8 mg/kg. Target analyte Benzo[a]pyrene was detected at 0.915 mg/kg, which is above all three MSCCs. The Industrial/Commercial MSCC for Benzo[a]pyrene is 0.78 mg/kg.

In accordance with the *2001 Guidelines,* EPA Method 8270 sample(s) are also analyzed for the ten (10) largest (peak area) non-target compounds, or Tentatively Identified Compounds (TICs). TICs refer to detected compounds, which are not present in the EPA Method 8270 list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared using a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist. Quantitation was accomplished by relative peak height of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak height is equal to or greater than 10% of that of the nearest internal standard. The quantitation standard provided is an estimate. There are no established MSCCs for any TIC. Laboratory analysis detected unknown compounds in all of the soil samples. Unknown alkane compounds were detected in soil samples USTA47-MW01, USTA47-MW02, USTA47-SS01, USTA47-SS02, USTA47-SS04, and USTA47-SS05. An unknown aromatic compound was detected in soil sample USTA47-SS02. Known compounds were detected in soil samples USTA47-MW01 (Octadecanoic acid), USTA47-SS01 (2,6,10-Trimethyl-Dodecane), USTA47-SS02 (2,6-Dimethyl-Undecane, 2,6,10,14-Tetramethyl-Pentadecane, and 4-Methyl-Decane), USTA47-SS04 (2-Methyl-Decane and Dodecamethyl-Cyclohexasiloxane) and USTA47-SS07 (9-Octadecanamide). Refer to the laboratory analytical report in Appendix D for the concentrations of the known and unknown compounds.

MADEP VPH/EPH

There were no C_5-C_8 Aliphatics detected in any of the soil samples. Laboratory analysis detected C_9-C_{18} Aliphatics in five of the soil samples and C_{19}-C_{36} Aliphatics concentrations in seven of the soil samples at concentrations below the lowest established MSCCs. Laboratory analysis detected C_9-C_{22} Aromatics in USTA47-SS02, USTA47-SS05, and USTA47-SS06 at concentrations greater than the STGW MSCC of 34 mg/kg but less

than the Residential MSCC of 469 mg/kg. C_9-C_{22} Aromatics were detected in USTA47-MW02 and USTA47-SS04 at concentrations greater than the Residential MSCC of 469 mg/kg, but well below the Industrial/Commercial MSCC of 12,264 mg/kg.

Tables 4A through 4D and Figures 3A through 3C summarize the soil laboratory data, as well as depict it in relation to the site map.

E.2 Groundwater Sampling

Building A-47, UST-47-3 Site Check Report

As part of the Site Check Report, seven monitoring wells were installed and each monitoring well was sampled and analyzed for the presence of purgeable aromatics by EPA Method 602. Dissolved phase hydrocarbon concentrations in all of the groundwater samples were less than the laboratory method detection limit, with the exception of benzene concentrations in two of the samples. The benzene concentrations of these two samples (1.7 µg/L and 1.3 µg/L) were only slightly above the GWQS of 1 µg/L.

A-47 UST Closure

One groundwater sample was collected during tank closure activities. Groundwater sample WS-1 was collected from the water within the excavation after the UST was removed and analyzed for purgeable aromatic hydrocarbons by EPA Method 602, semi-volatile organics by Method 625, and total lead by Method 3030C. According to the laboratory report, 1,3-Dichlorobenze, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Naphthalene and Phenanthrene were detected at concentrations above the 2L GWQS. Acenaphthene, Anthracene, Fluoranthene, Fluorene, and Pyrene were also detected, but at concentrations below the 2L GWQS.

A-47 LSA Investigation

CATLIN personnel installed two Type II monitoring wells, USTA47-MW01 and USTA47-MW02, on October 30, 2007. The groundwater was allowed to equilibrate, and the wells were gauged to determine the depth to water, potential free-phase product thickness, and well volume. CATLIN purged a minimum of three well volumes from each monitoring well prior to collecting representative groundwater samples. One groundwater sample was obtained from monitoring well USTA47-MW01 and one groundwater sample was obtained from monitoring well USTA47-MW02. The groundwater samples were placed directly into laboratory provided glassware, properly labeled, and placed in an iced cooler prior to delivering to the laboratory. A copy of the Sampling Field Data Worksheet has been provided in Appendix C.

Samples were transported to SGS Environmental Services, Inc. (North Carolina Certification #481) in Wilmington, North Carolina where they were analyzed for petroleum contamination per EPA Method 602, EPA Method 625 (+ 10 largest non-target peaks), and MADEP VPH/EPH.

A copy of the resulting groundwater sample laboratory analytical report and COC is located in Appendix D. For regulatory compliance, the resulting laboratory analysis data has been compared to established 2L Groundwater Quality Standards (GWQS) and Gross Contaminant Levels (GCLs), where established. Analysis of the groundwater samples submitted for laboratory analysis can be summarized as follows:

EPA METHOD 602 + MTBE + Xylenes
Laboratory analysis did not detect any EPA Method 602 + MTBE + Xylenes constituents in the groundwater samples from monitoring wells USTA47-MW01 and USTA47-MW02.

EPA METHOD 625 (+ TICs)
Laboratory analysis did not detect any EPA Method 625 constituents in the groundwater samples from monitoring wells USTA47-MW01 and USTA47-MW02.

In accordance with the *2001 Guidelines,* EPA Method 625 sample(s) are also analyzed for the ten (10) largest (peak area) non-target compounds, or TICs. As previously discussed, TICs refer to detected compounds, which are not present in the EPA Method 625 list of target compounds. Not all TICs are identified and quantitated using individual standards, and the quantitation standard provided is an estimate. There are no established 2L GWQS or GCL Standards for any TIC. Laboratory analysis did not detect any TICs in the USTA47-MW01 groundwater sample. Four unknown TICs were detected in the USTA47-MW02 groundwater sample with concentrations of 19.6 µg/L, 18.8 µg/L, 18 µg/L, and 11.2 µg/L.

MADEP VPH/EPH
Laboratory analysis did not detect any MADEP constituents in the groundwater samples from monitoring wells USTA47-MW01 and USTA47-MW02.

Tables 5A through 5D and Figures 4A through 4C summarize the groundwater laboratory data, as well as depict it in relation to the site map.

E.3 Free-Phase Product

No measurable thickness of free-phase product was detected in the site groundwater monitoring wells USTA47-MW01 and USTA47-MW02 during this Phase I LSA.

F. CONCLUSIONS AND RECOMMENDATIONS

F.1 Conclusions

LSA field and laboratory findings can be summarized as follows:

- Based on the field and laboratory findings of this Phase I LSA, CATLIN concludes that the project sites meet the criteria for Industrial Land Use and Low Risk classification.

- No free-phase product was measured at the site groundwater monitoring wells.

- Nine soil samples (USTA47-MW01, USTA47-MW02, and USTA47-SS01 through USTA47-SS07), were analyzed using EPA Method 8260 (including IPE and MTBE), EPA Method 8270 (+ 10 largest non-target peaks), and MADEP VPH/EPH. The majority of target analytes were either detected at concentrations below applicable STGW MSCCs or reported as BMDL. The exceptions are as follows: one EPA Method 8270 analyte (2-Methylnaphthalene) was detected at a concentration above the STGW MSCC, but below the Residential MSCC. Two EPA Method 8270 analytes (Benzo[a]anthracene and Benzo[b]fluoranthene) were detected at concentrations above STGW and Residential MSCCs, but below the Industrial/Commercial MSCC. Only one EPA Method analyte (Benzo[a]pyrene) was found to be above all applicable MSCCs. MADEP VPH/EPH analysis of soil samples detected C_9-C_{22} Aromatics above the STGW MSCC, but below the Residential MSCC in three samples and above STGW and Residential MSCCs, but below the Industrial/Commerical MSCC, in two samples.

- The monitoring well USTA47-MW01 and USTA47-MW02 groundwater samples were analyzed per EPA Method 602 (including MTBE and Xylenes), EPA Method 625 (+ 10 largest non-target peaks), and MADEP VPH/EPH. Laboratory analyses revealed that all analyte concentrations were either below method detection limits or below applicable 2L GWQS and GCLs.

F.2 Recommendations

Ultimately, NCDENR Division of Waste Management UST Section personnel determine the risk classification for the incident at the subject site. Any additional assessment and/or remediation activities would be based on the pending risk classification. The following recommendations are based on CATLIN personnel evaluating site findings in accordance with the 2001 Guidelines.

The majority of soil target analytes were either detected at concentrations below applicable STGW MSCCs or reported as BMDL. The target analytes that were detected at concentrations above applicable STGW and Residential MSCCs were detected at concentrations below the Industrial/Commercial MSCCs, with the exception of one EPA Method 8270 sample (USTA47-SS04). All groundwater target compounds were either detected at concentrations less than the 2L GWQS or BMDL. CATLIN recommends an excavation be performed in the vicinity of USTA47-SS02 and USTA47-SS04 in order to remove soil contamination in excess of the Residential MSCCs. Upon completion of the excavation and confirmatory soil samples confirm all soil contaminants are below the Residential MSCCs, the site would be eligible for No Further Action with no restrictions.

A copy of this report should be forwarded to the NCDENR at the following address:

North Carolina Department of Environment and Natural Resources
Division of Waste Management
UST Section
Attention: Mr. Bruce Reed
127 Cardinal Drive Extension
Wilmington, North Carolina 28405

G. REFERENCES

AH Environmental Consultants, Wellhead Protection Plan – 2002 Update, Marine Corp Base, Camp Lejeune, North Carolina, August 2002.

ATEC Environmental Consultants. *Underground Storage Tank Site Check Investigation Report, Building A-47, UST SA-21, Camp Lejeune Marine Corps Base.* February 18, 1992.

CATLIN Engineers and Scientists. *Workplan, Phase I Limited Site Assessments, Former CERCLA Sites, Marine Corps Base, Camp Lejeune, North Carolina.* October 19, 2007.

Groundwater Technology Government Services. *Five Well Plus Two Additional Well Site Check Report, Building A-47, UST-47-3, Amphibious Area, Marine Corps Base, Camp Lejeune, North Carolina.* May 21, 1993.

North Carolina Department of Natural Resources and Community Development. *Geology Map of North Carolina* 1985.

North Carolina Department of Environment and Natural Resources (NCDENR), Underground Storage Tank Section. *Guidelines for Assessment and Corrective Action.* Effective July 1, 2001.

North Carolina Department of Environment and Natural Resources (NCDENR), Division of Water Resources, Hydrogeology Framework Database. http:/www.ehnr.state.nc.us/Data_and_Modeling/Ground_Water_Databases/frametstnew.php.

Quality Environment Company, Inc. *Underground Storage Tank Closure Assessment, Fuel Facility Near Building A-47, Marine Corps Base Camp Lejeune, North Carolina.* May 16, 1994.

TABLES

TABLE 1

SITE HISTORY - UST SYSTEM INFORMATION

PHASE I LIMITED SITE ASSESSMENT
BUILDING A-47

MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

UST ID Number	**Product** (gasoline, diesel, jet fuel, etc.)	**Capacity** (gallons)	**Date Installed** (mm/dd/yy)	**Date Permanently Closed (P), or Still in Use* (C)** (mm/dd/yy)	**Was Release Associated With UST System?** (Yes / No)
Unknown	Diesel	30,000	Unknown	(P) 4/19/1994	Yes

TABLE 2

SITE HISTORY - UST OWNER/OPERATOR INFORMATION

PHASE I LIMITED SITE ASSESSMENT
BUILDING A-47

MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

UST ID Number	**Name of Owner or Operator**	**Dates of Ownership/Operation** (mm/dd/yy) to (mm/dd/yy)	**Address**	**Telephone Number**
Unknown	Commanding General Marine Corps Base Camp Lejeune, NC	Unknown to 4/19/94	PSC BOX 20004 Marine Corps Base Camp Lejeune, NC 28542	(910) 451-5068

TABLE 3
WELL CONSTRUCTION INFORMATION

Date: January 2008 Incident No. and Project Name: 8914 - Building A-47

Well ID	**Date Installed** (mm/dd/yy)	**Date Water Level Measured** (mm/dd/yy)	**Well Casing Depth** (ft. BLS)	**Screened Interval** (x to y ft. BLS)	**Bottom of Well** (ft. BLS)	**Top of Casing Elevation** (ft.)	**Depth to Water from Top of Casing** (ft.)	**Free Product Thickness** (ft.)	**Ground Water Elevation** (ft.)	**Comments**
USTA47-MW01	10/30/2007	10/31/2007	3.5	3.5-13.5	13.5	Not Measured	4.5	0.00	Not Measured	Monitoring
USTA47-MW02	10/30/2007	10/31/2007	3	3-13	13	Not Measured	4.7	0.00	Not Measured	Monitoring

ft. BLS = feet below land surface

TABLE 4A SUMMARY OF SOIL LABORATORY RESULTS

Date: January 2008 Incident No. and Project Name: 8914 - Building A-47

Analytical Method: EPA Method 8260 + IPE + MTBE

Sample ID	Contaminant of Concern →		Acetone	2-Butanone	n-Butylbenzene	sec-Butylbenzene	Carbon disulfide	Ethylbenzene	Isopropylbenzene	Naphthalene	n-Propylbenzene	All Other 8260 Compounds
	Date Collected	Sample Depth (ft. BLS)										
Residential MSCC (mg/kg)			1,564	9,385	626	626	1,564	1,560	1,564	313	626	Varies
Industrial/Commercial MSCC (mg/kg)			40,880	245,280	16,350	16,350	40,880	40,000	40,880	8,176	16,350	Varies
Soil to Groundwater MSCC (mg/kg)			2.8	17	4.3	3.3	4.3	4.6	1.7	0.58	1.7	Varies
USTA47-MW01 (1-2)	10/30/2007	1-2	0.0196 J	<0.00592	<0.00104	<0.00110	<0.00292	<0.00094	<0.00097	<0.00093	<0.00137	BMDL
USTA47-MW02 (3.5-5)	10/30/2007	3.5-5	0.0504	<0.00535	0.0302	0.0589	<0.00264	<0.00085	0.0195	<0.00084	0.040	BMDL
USTA47-SS01 (2-3)	10/31/2007	2-3	<0.00744	<0.00585	<0.00103	<0.00109	<0.00289	<0.00093	<0.00096	<0.00092	<0.00136	BMDL
USTA47-SS02 (3-4)	10/31/2007	3-4	0.0959	0.0127 J	0.0201	0.0335	<0.00289	0.00244 J	0.00822	<0.00092	0.0189	BMDL
USTA47-SS03 (5-6)	10/31/2007	5-6	0.0112 J	<0.00523	<0.00092	<0.00097	<0.00258	<0.00083	<0.00086	0.00289 J	<0.00121	BMDL
USTA47-SS04 (1-2)	10/31/2007	1-2	0.0698	<0.00572	<0.00101	<0.00106	<0.00282	<0.00091	<0.00094	<0.00090	0.00157 J	BMDL
USTA47-SS05 (2-3)	10/31/2007	2-3	<0.00752	<0.00591	<0.00104	<0.00110	0.00518 J	<0.00094	<0.00097	<0.00093	<0.00137	BMDL
USTA47-SS06 (1-2)	10/31/2007	1-2	0.0272 J	<0.00593	<0.00104	<0.00110	0.00418 J	<0.00095	<0.00097	<0.00093	<0.00138	BMDL
USTA47-SS07 (4-5)	10/31/2007	4-5	0.0888	<0.00495	<0.00087	<0.00092	<0.00244	<0.00079	<0.00081	<0.00078	<0.00115	BMDL
USTA47-DW01* (3-4)	10/30/2007	3-4	0.0130 J	<0.00411	<0.00072	<0.00077	<0.00203	<0.00066	<0.00067	<0.00064	<0.00096	BMDL

*USTA47-DW01 is a duplicate sample of USTA47-MW01

All results in milligrams per kilogram (mg/kg)

BMDL = Below Method Detection Limit

MSCC = Maximum Soil Contaminant Concentration

J = Estimated concentration, below calibration range and above MDL

ft. BLS = feet below land surface

< = Less than method detection limit

TABLE 4B SUMMARY OF SOIL LABORATORY RESULTS

Date: January 2008 Incident No. and Project Name: 8914 - Building A-47

Analytical Method: EPA Method 8270

Sample ID	Contaminant of Concern →		Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Bis (2-ethylhexyl) phthalate	Chrysene	Fluoranthene	Fluorene	2-Methylnaphthalene	Phenanthrene	Pyrene	All Other 8270 Compounds
	Date Collected	Sample Depth (ft. BGS)											
Residential MSCC (mg/kg)			0.88	0.088	0.88	46	88	620	620	63	469	469	Varies
Industrial/Commercial (mg/kg)			8	0.78	8	410	780	16,400	16,400	1,635	12,264	12,264	Varies
Soil to Groundwater MSCC (mg/kg)			0.34	0.091	1.2	5.6	38	280	44	1.7	60	290	Varies
USTA47-MW01 (1-2)	10/30/2007	1-2	<0.059	<0.052	<0.060	<0.046	<0.037	<0.048	<0.043	<0.100	<0.039	<0.066	BMDL
USTA47-MW02 (3.5-5)	10/30/2007	3.5-5	<0.058	<0.052	<0.059	0.124 J	<0.036	0.121 J	<0.042	**2.49**	0.945	0.155 J	BMDL
USTA47-SS01 (2-3)	10/31/2007	2-3	<0.059	<0.053	<0.060	<0.046	<0.037	<0.048	<0.043	<0.100	<0.039	<0.066	BMDL
USTA47-SS02 (3-4)	10/31/2007	3-4	<0.059	<0.052	<0.060	0.109 J	0.085 J	0.099 J	0.511	**1.79**	0.818	0.249 J	BMDL
USTA47-SS03 (5-6)	10/31/2007	5-6	<0.064	<0.056	<0.064	<0.049	<0.040	<0.051	<0.046	<0.107	<0.042	<0.071	BMDL
USTA47-SS04 (1-2)	10/31/2007	1-2	**0.880 J**	**0.915 J**	**1.06 J**	<0.472	0.915 J	1.65 J	<0.437	<1.03	0.774 J	1.72 J	BMDL
USTA47-SS05 (2-3)	10/31/2007	2-3	<0.055	<0.049	<0.056	0.273 J	<0.034	<0.044	<0.039	<0.093	<0.036	<0.061	BMDL
USTA47-SS06 (1-2)	10/31/2007	1-2	<0.062	<0.055	<0.063	0.132 J	<0.039	0.061 J	<0.044	<0.104	<0.041	<0.069	BMDL
USTA47-SS07 (4-5)	10/31/2007	4-5	<0.062	<0.055	<0.062	<0.048	<0.039	<0.050	<0.044	<0.104	<0.041	<0.069	BMDL

All results in milligrams per kilogram (mg/kg)

BMDL = Below Method Detection Limit

MSCC = Maximum Soil Contaminant Concentration

J = Estimated concentration, below calibration range and above MDL

Bold results indicate concentrations above lowest MSCC

ft. BLS = feet below land surface

< = Less than method detection limit

TABLE 4C SUMMARY OF SOIL LABORATORY RESULTS

Date: January 2008 Incident No. and Project Name: 8914 - Building A-47

Analytical Method: MADEP VPH/EPH

Sample ID	Contaminant of Concern →		C_5-C_8 Aliphatics	C_9-C_{12} Aliphatics	C_9-C_{10} Aromatics	C_9-C_{18} Aliphatics	C_{19}-C_{36} Aliphatics	C_{11}-C_{22} Aromatics
	Date Collected	Sample Depth (ft. BLS)						
USTA47-MW01 (1-2)	10/30/2007	1-2	<10.0	<10.0	<10.0	<10.0	53.1	<10.0
USTA47-MW02 (3.5-5)	10/30/2007	3.5-5	<10.0	50.3	39.8	885	201	677
USTA47-SS01 (2-3)	10/31/2007	2-3	<10.0	<10.0	<10.0	<10.0	81.3	<10.0
USTA47-SS02 (3-4)	10/31/2007	3-4	<10.0	73.3	68.8	930	124	274
USTA47-SS03 (5-6)	10/31/2007	5-6	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
USTA47-SS04 (1-2)	10/31/2007	1-2	<10.0	20.8	<10.0	639	1,710	598
USTA47-SS05 (2-3)	10/31/2007	2-3	<10.0	<10.0	<10.0	123	1,070	344
USTA47-SS06 (1-2)	10/31/2007	1-2	<10.0	11.8	<10.0	170	772	38.4
USTA47-SS07 (4-5)	10/31/2007	4-5	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0

All results in milligrams per kilogram (mg/kg)

< = Less than method detection limit

TABLE 4D SUMMARY OF SOIL LABORATORY RESULTS

Date: January 2008 Incident No. and Project Name: 8914 - Building A-47

Analytical Method: MADEP VPH/EPH as compared to NCDENR MSCCs

Sample ID	Contaminant of Concern → Date Collected	Sample Depth (ft. BLS)	C_5-C_8 Aliphatics	C_9-C_{18} Aliphatics	C_{19}-C_{36} Aliphatics	C_9-C_{22} Aromatics
Residential MSCC (mg/kg)			939	9,386	93,860	469
Industrial/Commercial MSCC (mg/kg)			24,528	245,280	#	12,264
Soil to Groundwater MSCC (mg/kg)			72	3,300	##	34
USTA47-MW01 (1-2)	10/30/2007	1-2	<10.0	<20.0	53.1	<20.0
USTA47-MW02 (3.5-5)	10/30/2007	3.5-5	<10.0	935.3	201	**716.8**
USTA47-SS01 (2-3)	10/31/2007	2-3	<10.0	<20.0	81.3	<20.0
USTA47-SS02 (3-4)	10/31/2007	3-4	<10.0	1,003.3	124	**342.8**
USTA47-SS03 (5-6)	10/31/2007	5-6	<10.0	<20.0	<10.0	<20.0
USTA47-SS04 (1-2)	10/31/2007	1-2	<10.0	659.8	1,710	**<608***
USTA47-SS05 (2-3)	10/31/2007	2-3	<10.0	<133*	1,070	**<354***
USTA47-SS06 (1-2)	10/31/2007	1-2	<10.0	181.8	772	**<48.4***
USTA47-SS07 (4-5)	10/31/2007	4-5	<10.0	<20.0	<10.0	<20.0

All results in milligrams per kilogram (mg/kg)

Health based level > 100%

Considered immobile

MSCC = Maximum Soil Contaminant Concentration

Bold results indicate concentrations above lowest MSCC

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

< = Less than method detection limit

TABLE 5A SUMMARY OF GROUNDWATER LABORATORY RESULTS
Date: January 2008 Incident No. and Project Name: 8914 - Building A-47

Analytical Method: EPA Method 602 + MTBE + Xylenes

Well ID	Contaminant of Concern →		All EPA Method 602 Compounds
	Sample ID	Date Collected	
GCL (µg/L) 2L GWQS (µg/L)			Varies Varies
USTA47-MW01	USTA47-MW01	11/1/2007	BMDL
USTA47-DW01*	USTA47-DW01	11/1/2007	BMDL
USTA47-MW02	USTA47-MW02	11/1/2007	BMDL

* USTA47-DW01 is a duplicate sample of USTA47-MW01

All results in micrograms per liter (µg/L).

BMDL = Below Method Detection Limit

GCL = Gross Contaminant Level

2L GWQS = NCAC T15A:02L Groundwater Quality Standards

TABLE 5B SUMMARY OF GROUNDWATER LABORATORY RESULTS
Date: January 2008 Incident No. and Project Name: 8914 - Building A-47

Analytical Method: EPA Method 625

Well ID	Contaminant of Concern →		All EPA Method 625 Compounds
	Sample ID	**Date Collected**	
GCL (µg/L) **2L GWQS (µg/L)**			Varies Varies
USTA47-MW01	USTA47-MW01	11/1/2007	BMDL
USTA47-MW02	USTA47-MW02	11/1/2007	BMDL

All results in micrograms per liter (µg/L).

BMDL = Below Method Detection Limit

GCL = Gross Contaminant Level

2L GWQS = NCAC T15A:02L Groundwater Quality Standards

TABLE 5C SUMMARY OF GROUNDWATER LABORATORY RESULTS
Date: January 2008 Incident No. and Project Name: 8914 - Building A-47

Analytical Method: MADEP VPH/EPH

Well ID	Contaminant of Concern →		C_5-C_8 Aliphatics	C_9-C_{12} Aliphatics	C_9-C_{10} Aromatics	C_9-C_{18} Aliphatics	C_{19}-C_{36} Aliphatics	C_{11}-C_{22} Aromatics
	Sample ID	Date Collected						
USTA47-MW01	USTA47-MW01	11/1/2007	<100	<100	<100	<100	<100	<100
USTA47-MW02	USTA47-MW02	11/1/2007	<100	<100	<100	<100	<100	<100

All results in micrograms per liter (µg/L).
< = Less than method detection limit (MDL)

TABLE 5D SUMMARY OF GROUNDWATER LABORATORY RESULTS

Date: January 2008 Incident No. and Project Name: 8914 - Building A-47

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

Well ID	Contaminant of Concern →		C_5-C_8 Aliphatics	C_9-C_{18} Aliphatics	C_{19}-C_{36} Aliphatics	C_9-C_{22} Aromatics
	Sample ID	Date Collected				
GCL (µg/L) 2L GWQS (µg/L)			NE 420	NE 4,200	NE 42,000	NE 210
USTA47-MW01	USTA47-MW01	11/1/2007	<100	<200	<100	<200
USTA47-MW02	USTA47-MW02	11/1/2007	<100	<200	<100	<200

All results in micrograms per liter (µg/L).

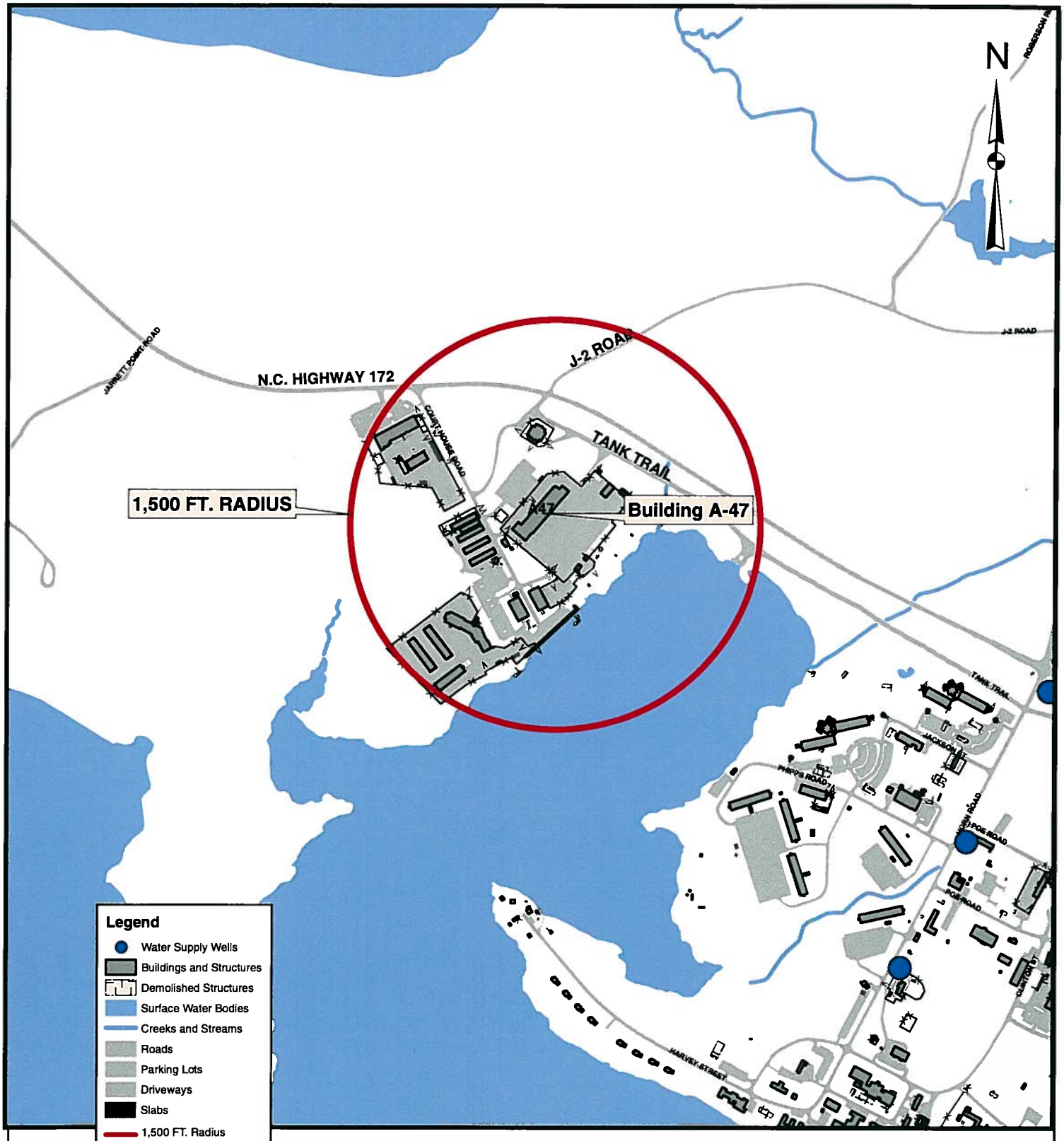
NE = None Established

< = Less than method detection limit (MDL)

GCL = Gross Contaminant Level

2L GWQS = NCAC T15A:02L Groundwater Quality Standards

FIGURES

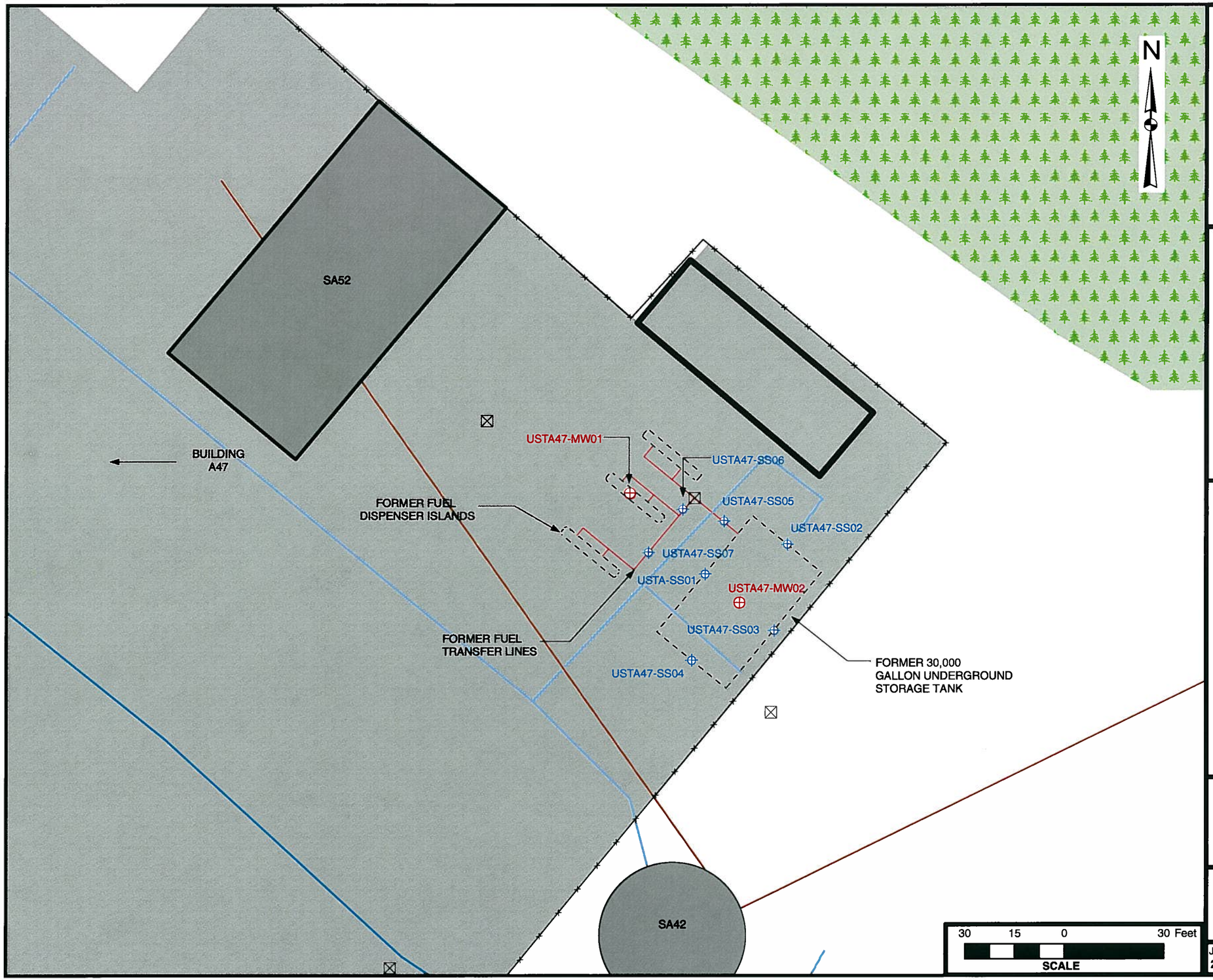


Data Sources: Data Layers provided by MCB Camp Lejeune GIS Office.

CATLIN Engineers and Scientists WILMINGTON, NC	PROJECT: PHASE I LIMITED SITE ASSESSMENT BUILDING A-47 MCB CAMP LEJEUNE		TITLE: 1500 FT. RADIUS WITH WATER WELL SURVEY AND PLACES OF PUBLIC ASSEMBLY			FIGURE 1
	JOB NO: 207-048	DATE: DEC 2007	SCALE: AS SHOWN	DRAWN BY: KAWS	CHECKED BY: SLT	

PHASE I LIMITED SITE ASSESSMENT BUILDING A-47 MCB CAMP LEJEUNE

NAVFAC
Naval Facilities Engineering Command



LEGEND

- Type II Monitoring Well
- Soil Sample
- Unknown Well Type
- Buildings and Structures
- Demolished Structures
- Oil/Water Separators
- Slabs
- Roads, Driveways and Parking Lots
- Forestland
- Above Ground Storage Tank
- Fence
- Gate
- Water Line
- Waste Water Line
- Storm Sewer Line

NOTES

MAP ADAPTED FROM CAMP LEJEUNE GIS DATA BASE.

MONITORING WELLS AND BORING LOCATIONS ARE APPROXIMATE.

CATLIN
Engineers and Scientists

BUILDING A-47
SITE PLAN WITH BORING/
MONITORING WELL LOCATIONS

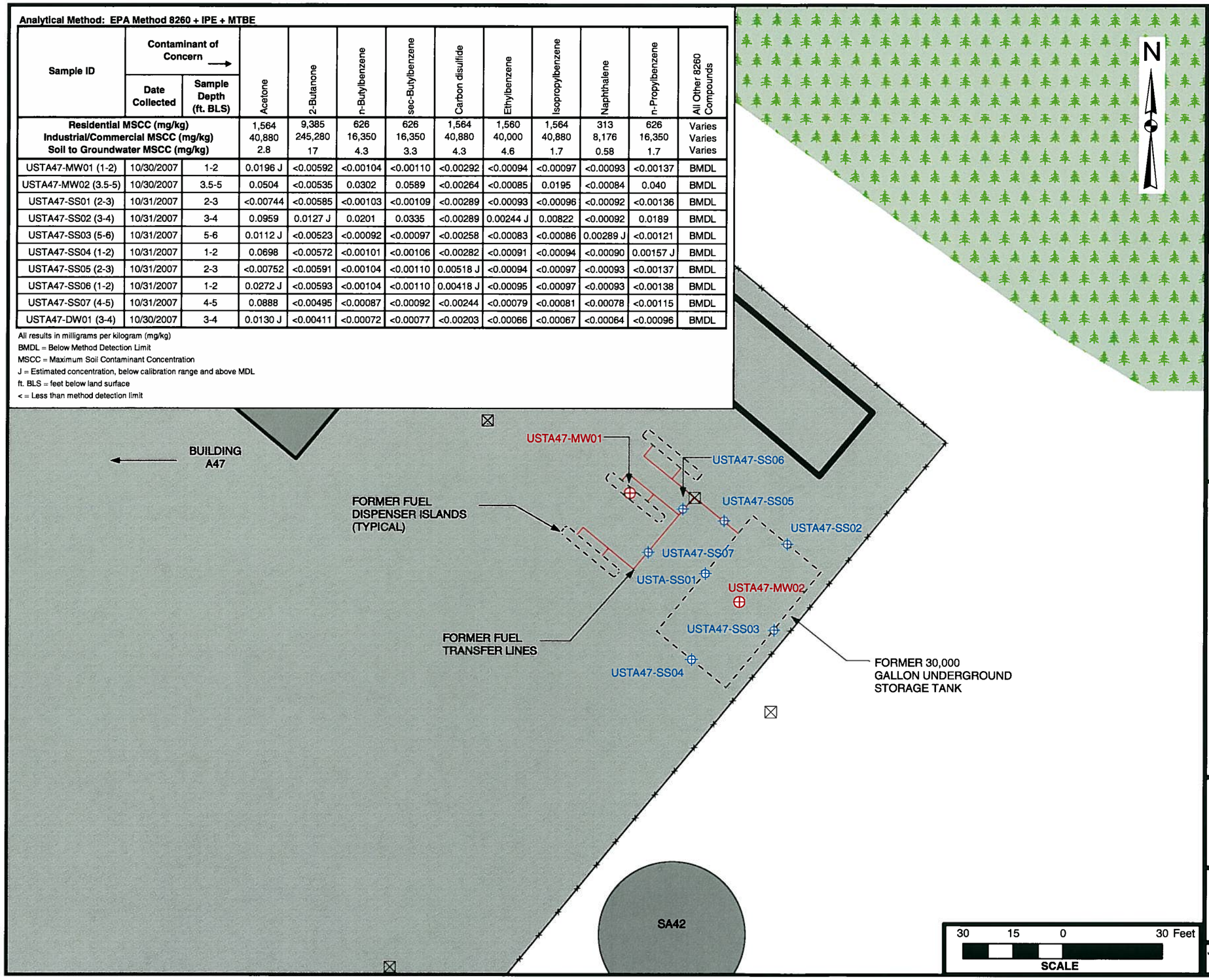
FIGURE 2

Job No.:	Date:	Scale:	Drawn By:	Checked By:
207-048	DEC 2007	AS SHOWN	KAWS	SLT

Analytical Method: EPA Method 8260 + IPE + MTBE

Sample ID	Contaminant of Concern → Date Collected	Sample Depth (ft. BLS)	Acetone	2-Butanone	n-Butylbenzene	sec-Butylbenzene	Carbon disulfide	Ethylbenzene	Isopropylbenzene	Naphthalene	n-Propylbenzene	All Other 8260 Compounds
Residential MSCC (mg/kg)			1,564	9,385	626	626	1,564	1,560	1,564	313	626	Varies
Industrial/Commercial MSCC (mg/kg)			40,880	245,280	16,350	16,350	40,880	40,000	40,880	8,176	16,350	Varies
Soil to Groundwater MSCC (mg/kg)			2.8	17	4.3	3.3	4.3	4.6	1.7	0.58	1.7	Varies
USTA47-MW01 (1-2)	10/30/2007	1-2	0.0196 J	<0.00592	<0.00104	<0.00110	<0.00292	<0.00094	<0.00097	<0.00093	<0.00137	BMDL
USTA47-MW02 (3.5-5)	10/30/2007	3.5-5	0.0504	<0.00535	0.0302	0.0589	<0.00264	<0.00085	0.0195	<0.00084	0.040	BMDL
USTA47-SS01 (2-3)	10/31/2007	2-3	<0.00744	<0.00585	<0.00103	<0.00109	<0.00289	<0.00093	<0.00096	<0.00092	<0.00136	BMDL
USTA47-SS02 (3-4)	10/31/2007	3-4	0.0959	0.0127 J	0.0201	0.0335	<0.00289	0.00244 J	0.00822	<0.00092	0.0189	BMDL
USTA47-SS03 (5-6)	10/31/2007	5-6	0.0112 J	<0.00523	<0.00092	<0.00097	<0.00258	<0.00083	<0.00086	0.00289 J	<0.00121	BMDL
USTA47-SS04 (1-2)	10/31/2007	1-2	0.0698	<0.00572	<0.00101	<0.00106	<0.00282	<0.00091	<0.00094	<0.00090	0.00157 J	BMDL
USTA47-SS05 (2-3)	10/31/2007	2-3	<0.00752	<0.00591	<0.00104	<0.00110	0.00518 J	<0.00094	<0.00097	<0.00093	<0.00137	BMDL
USTA47-SS06 (1-2)	10/31/2007	1-2	0.0272 J	<0.00593	<0.00104	<0.00110	0.00418 J	<0.00095	<0.00097	<0.00093	<0.00138	BMDL
USTA47-SS07 (4-5)	10/31/2007	4-5	0.0888	<0.00495	<0.00087	<0.00092	<0.00244	<0.00079	<0.00081	<0.00078	<0.00115	BMDL
USTA47-DW01 (3-4)	10/30/2007	3-4	0.0130 J	<0.00411	<0.00072	<0.00077	<0.00203	<0.00066	<0.00067	<0.00064	<0.00096	BMDL

All results in milligrams per kilogram (mg/kg)
BMDL = Below Method Detection Limit
MSCC = Maximum Soil Contaminant Concentration
J = Estimated concentration, below calibration range and above MDL
ft. BLS = feet below land surface
< = Less than method detection limit



PHASE I LIMITED SITE ASSESSMENT BUILDING A-47 MCB CAMP LEJEUNE

NAVFAC Naval Facilities Engineering Command

LEGEND

EXISTING	DESCRIPTION
⊕	Type II Monitoring Well
⊕	Soil Sample
⊠	Unknown Well Type
	Buildings and Structures
	Demolished Structures
	Oil/Water Separators
	Slabs
	Roads, Driveways and Parking Lots
	Forestland
	Above Ground Storage Tank
	Fence
	Gate

NOTES

MAP ADAPTED FROM CAMP LEJEUNE GIS DATA BASE.

MONITORING WELLS AND BORING LOCATIONS ARE APPROXIMATE.

CATLIN Engineers and Scientists

SITE PLAN WITH SOIL LABORATORY RESULTS - EPA METHOD 8260 + IPE + MTBE

FIGURE 3A

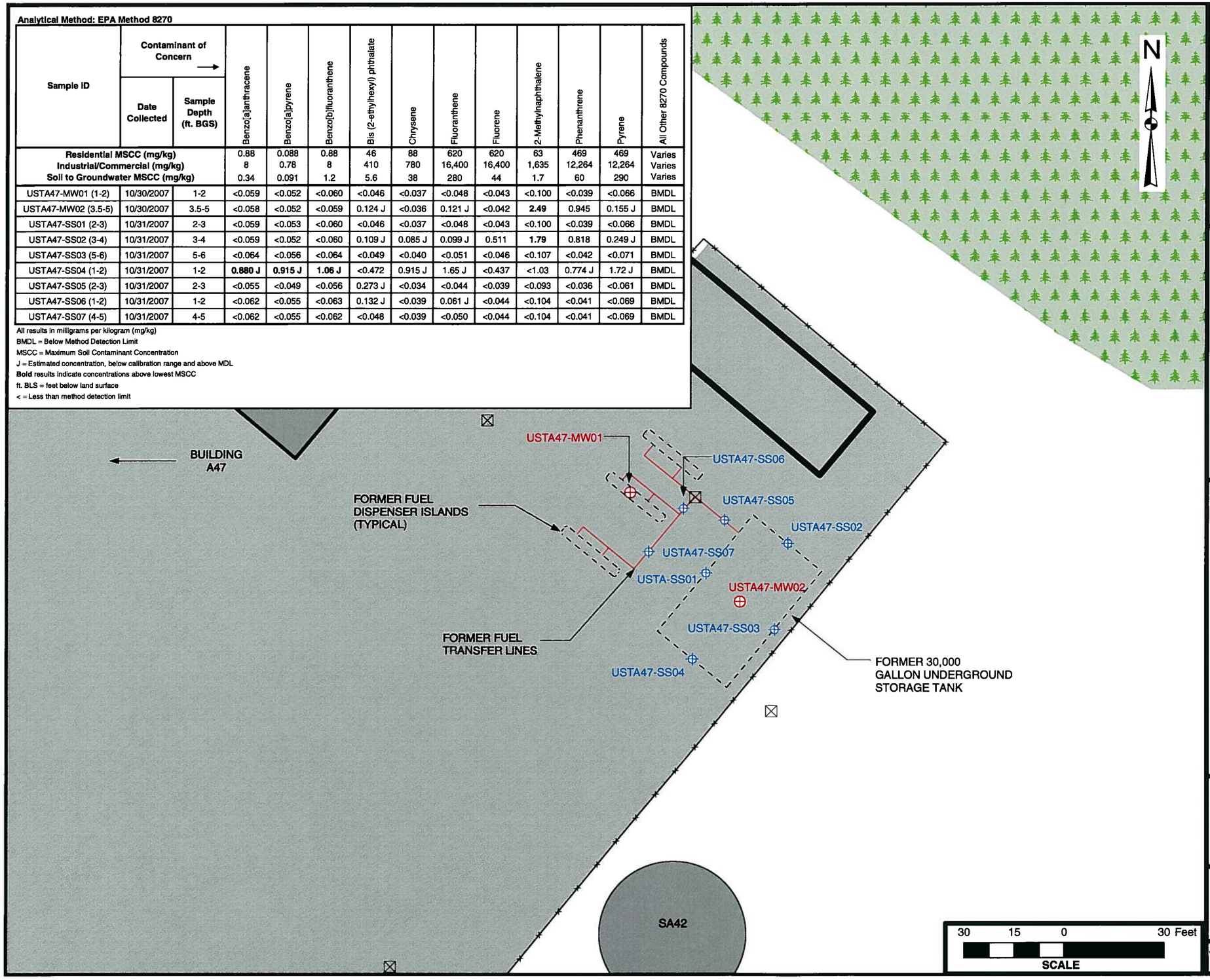
Job No.:	Date:	Scale:	Drawn By:	Checked By:
207-048	DEC 2007	AS SHOWN	KAWS	SLT

PHASE I LIMITED SITE ASSESSMENT BUILDING A-47 MCB CAMP LEJEUNE

Analytical Method: EPA Method 8270

Sample ID	Contaminant of Concern → Date Collected	Sample Depth (ft. BGS)	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Bis (2-ethylhexyl) phthalate	Chrysene	Fluoranthene	Fluorene	2-Methylnaphthalene	Phenanthrene	Pyrene	All Other 8270 Compounds
Residential MSCC (mg/kg)			0.88	0.088	0.88	46	88	620	620	63	469	469	Varies
Industrial/Commercial (mg/kg)			8	0.78	8	410	780	16,400	16,400	1,635	12,264	12,264	Varies
Soil to Groundwater MSCC (mg/kg)			0.34	0.091	1.2	5.6	38	280	44	1.7	60	290	Varies
USTA47-MW01 (1-2)	10/30/2007	1-2	<0.059	<0.052	<0.060	<0.046	<0.037	<0.048	<0.043	<0.100	<0.039	<0.066	BMDL
USTA47-MW02 (3.5-5)	10/30/2007	3.5-5	<0.058	<0.052	<0.059	0.124 J	<0.036	0.121 J	<0.042	**2.49**	0.945	0.155 J	BMDL
USTA47-SS01 (2-3)	10/31/2007	2-3	<0.059	<0.053	<0.060	<0.046	<0.037	<0.048	<0.043	<0.100	<0.039	<0.066	BMDL
USTA47-SS02 (3-4)	10/31/2007	3-4	<0.059	<0.052	<0.060	0.109 J	0.085 J	0.099 J	0.511	**1.79**	0.818	0.249 J	BMDL
USTA47-SS03 (5-6)	10/31/2007	5-6	<0.064	<0.056	<0.064	<0.049	<0.040	<0.051	<0.046	<0.107	<0.042	<0.071	BMDL
USTA47-SS04 (1-2)	10/31/2007	1-2	**0.880 J**	**0.915 J**	**1.06 J**	<0.472	0.915 J	1.65 J	<0.437	<1.03	0.774 J	1.72 J	BMDL
USTA47-SS05 (2-3)	10/31/2007	2-3	<0.055	<0.049	<0.056	0.273 J	<0.034	<0.044	<0.039	<0.093	<0.036	<0.061	BMDL
USTA47-SS06 (1-2)	10/31/2007	1-2	<0.062	<0.055	<0.063	0.132 J	<0.039	0.061 J	<0.044	<0.104	<0.041	<0.069	BMDL
USTA47-SS07 (4-5)	10/31/2007	4-5	<0.062	<0.055	<0.062	<0.048	<0.039	<0.050	<0.044	<0.104	<0.041	<0.069	BMDL

All results in milligrams per kilogram (mg/kg)
BMDL = Below Method Detection Limit
MSCC = Maximum Soil Contaminant Concentration
J = Estimated concentration, below calibration range and above MDL
Bold results indicate concentrations above lowest MSCC
ft. BLS = feet below land surface
< = Less than method detection limit



LEGEND

EXISTING	DESCRIPTION
⊕	Type II Monitoring Well
⊕	Soil Sample
⊠	Unknown Well Type
	Buildings and Structures
	Demolished Structures
	Oil/Water Separators
	Slabs
	Roads, Driveways and Parking Lots
	Forestland
	Above Ground Storage Tank
	Fence
	Gate

NOTES

MAP ADAPTED FROM CAMP LEJEUNE GIS DATA BASE.

MONITORING WELLS AND BORING LOCATIONS ARE APPROXIMATE.

NAVFAC Naval Facilities Engineering Command

CATLIN Engineers and Scientists

SITE PLAN WITH SOIL LABORATORY RESULTS - EPA METHOD 8270

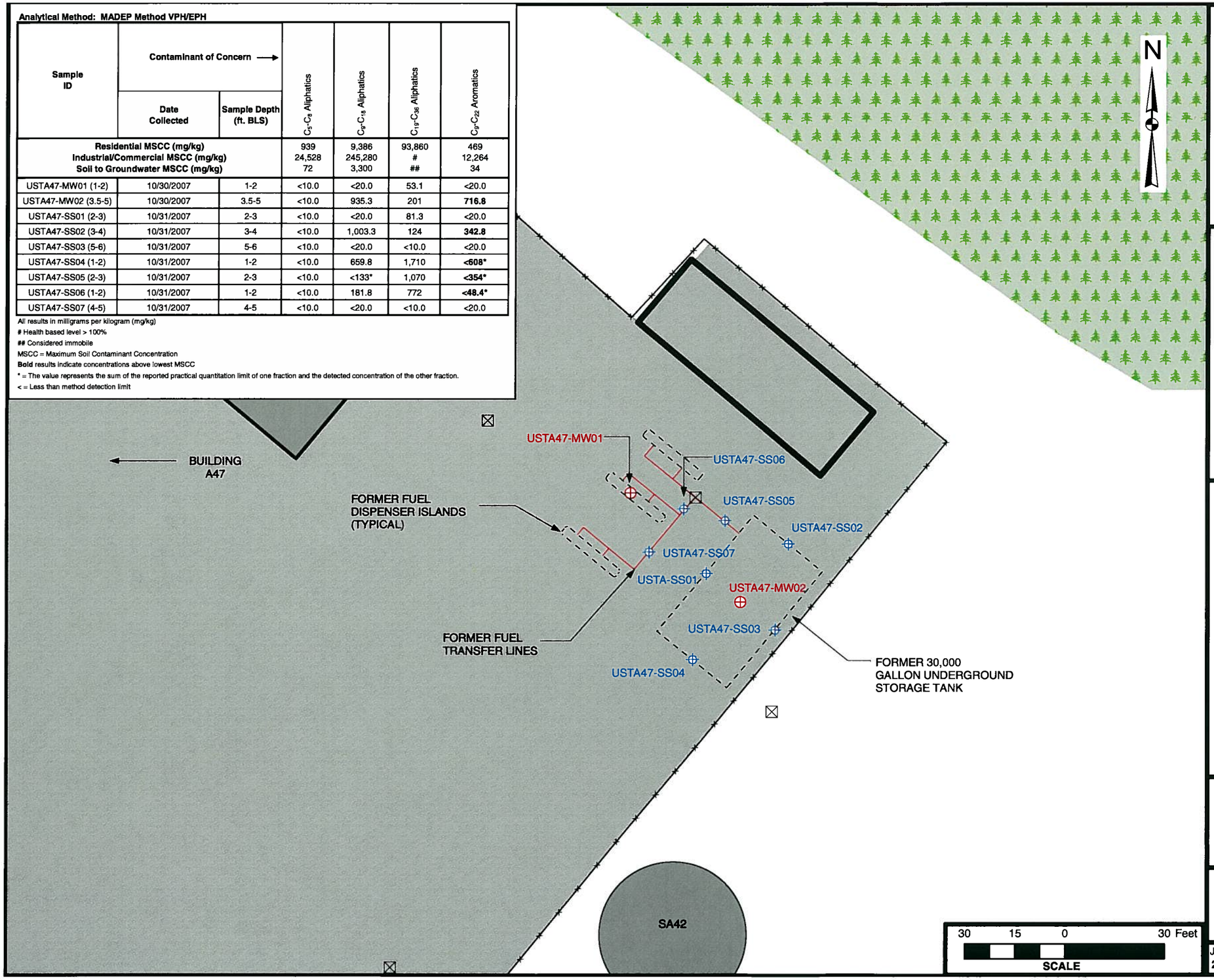
FIGURE 3B

Job No.:	Date:	Scale:	Drawn By:	Checked By:
207-048	DEC 2007	AS SHOWN	KAWS	SLT

Analytical Method: MADEP Method VPH/EPH

Sample ID	Contaminant of Concern → Date Collected	Sample Depth (ft. BLS)	C_5-C_8 Aliphatics	C_9-C_{18} Aliphatics	C_{19}-C_{36} Aliphatics	C_{9}-C_{22} Aromatics
Residential MSCC (mg/kg)			939	9,386	93,860	469
Industrial/Commercial MSCC (mg/kg)			24,528	245,280	#	12,264
Soil to Groundwater MSCC (mg/kg)			72	3,300	##	34
USTA47-MW01 (1-2)	10/30/2007	1-2	<10.0	<20.0	53.1	<20.0
USTA47-MW02 (3.5-5)	10/30/2007	3.5-5	<10.0	935.3	201	**716.8**
USTA47-SS01 (2-3)	10/31/2007	2-3	<10.0	<20.0	81.3	<20.0
USTA47-SS02 (3-4)	10/31/2007	3-4	<10.0	1,003.3	124	**342.8**
USTA47-SS03 (5-6)	10/31/2007	5-6	<10.0	<20.0	<10.0	<20.0
USTA47-SS04 (1-2)	10/31/2007	1-2	<10.0	659.8	1,710	**<608***
USTA47-SS05 (2-3)	10/31/2007	2-3	<10.0	<133*	1,070	**<354***
USTA47-SS06 (1-2)	10/31/2007	1-2	<10.0	181.8	772	**<48.4***
USTA47-SS07 (4-5)	10/31/2007	4-5	<10.0	<20.0	<10.0	<20.0

All results in milligrams per kilogram (mg/kg)
Health based level > 100%
Considered immobile
MSCC = Maximum Soil Contaminant Concentration
Bold results indicate concentrations above lowest MSCC
* = The value represents the sum of the reported practical quantitation limit of one fraction and the detected concentration of the other fraction.
< = Less than method detection limit



PHASE I LIMITED SITE ASSESSMENT BUILDING A-47 MCB CAMP LEJEUNE

NAVFAC Naval Facilities Engineering Command

LEGEND

EXISTING	DESCRIPTION
⊕	Type II Monitoring Well
⊕	Soil Sample
⊠	Unknown Well Type
	Buildings and Structures
	Demolished Structures
	Oil/Water Separators
	Slabs
	Roads, Driveways and Parking Lots
	Forestland
	Above Ground Storage Tank
	Fence
	Gate

NOTES

MAP ADAPTED FROM CAMP LEJEUNE GIS DATA BASE.

MONITORING WELLS AND BORING LOCATIONS ARE APPROXIMATE.

CATLIN Engineers and Scientists

SITE PLAN WITH SOIL LABORATORY RESULTS - MADEP VPH/EPH

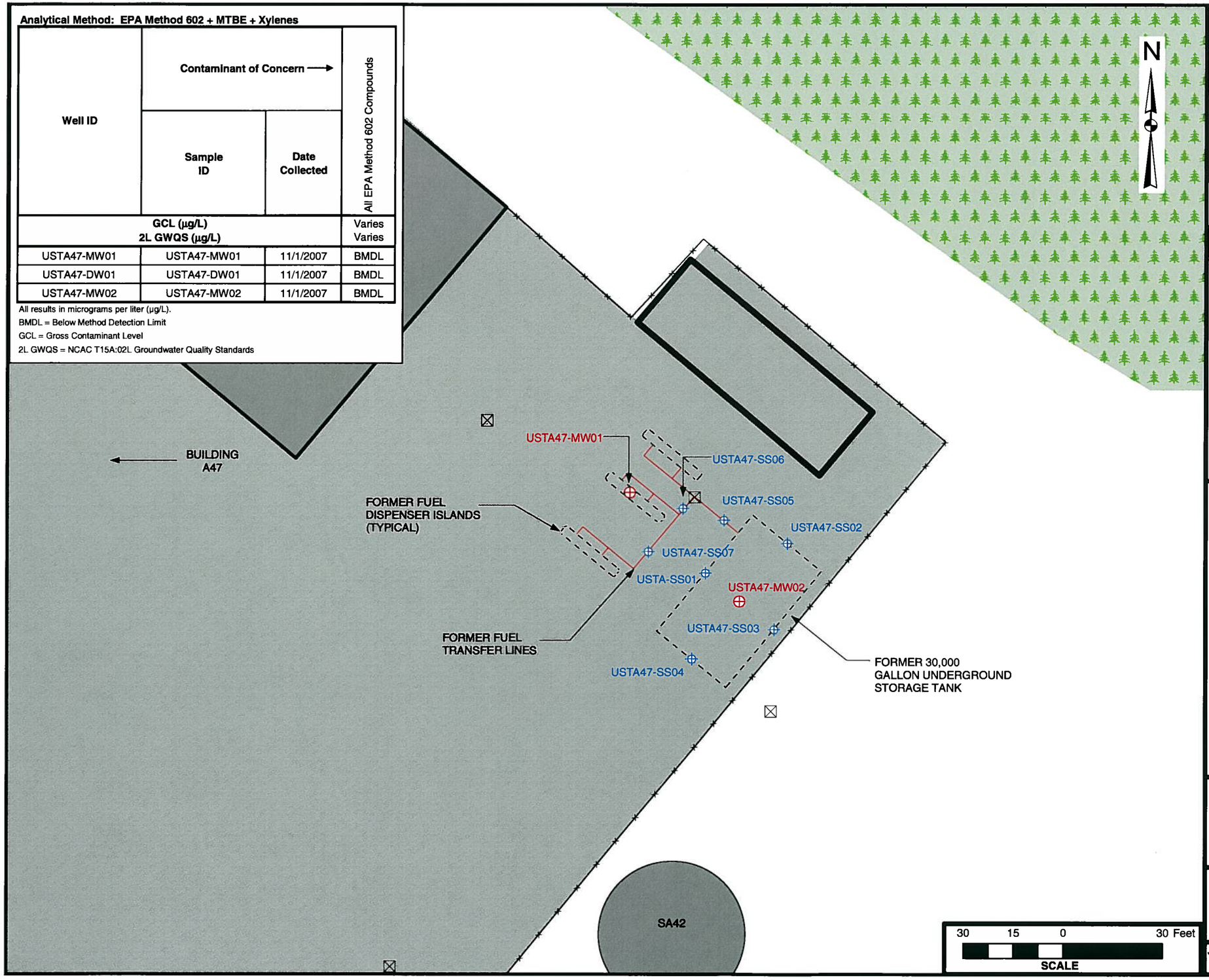
FIGURE 3C

Job No.:	Date:	Scale:	Drawn By:	Checked By:
207-048	DEC 2007	AS SHOWN	KAWS	SLT

Analytical Method: EPA Method 602 + MTBE + Xylenes

Well ID	Contaminant of Concern → Sample ID	Date Collected	All EPA Method 602 Compounds
GCL (µg/L)			Varies
2L GWQS (µg/L)			Varies
USTA47-MW01	USTA47-MW01	11/1/2007	BMDL
USTA47-DW01	USTA47-DW01	11/1/2007	BMDL
USTA47-MW02	USTA47-MW02	11/1/2007	BMDL

All results in micrograms per liter (µg/L).
BMDL = Below Method Detection Limit
GCL = Gross Contaminant Level
2L GWQS = NCAC T15A:02L Groundwater Quality Standards



PHASE I LIMITED SITE ASSESSMENT BUILDING A-47 MCB CAMP LEJEUNE

NAVFAC Naval Facilities Engineering Command

LEGEND

EXISTING	DESCRIPTION
⊕	Type II Monitoring Well
⊕	Soil Sample
☒	Unknown Well Type
	Buildings and Structures
	Demolished Structures
	Oil/Water Separators
	Slabs
	Roads, Driveways and Parking Lots
	Forestland
	Above Ground Storage Tank
	Fence
	Gate

NOTES

MAP ADAPTED FROM CAMP LEJEUNE GIS DATA BASE.

MONITORING WELLS AND BORING LOCATIONS ARE APPROXIMATE.

CATLIN Engineers and Scientists

SITE PLAN WITH GROUNDWATER LABORATORY RESULTS - EPA METHOD 602 + MTBE + XYLENES

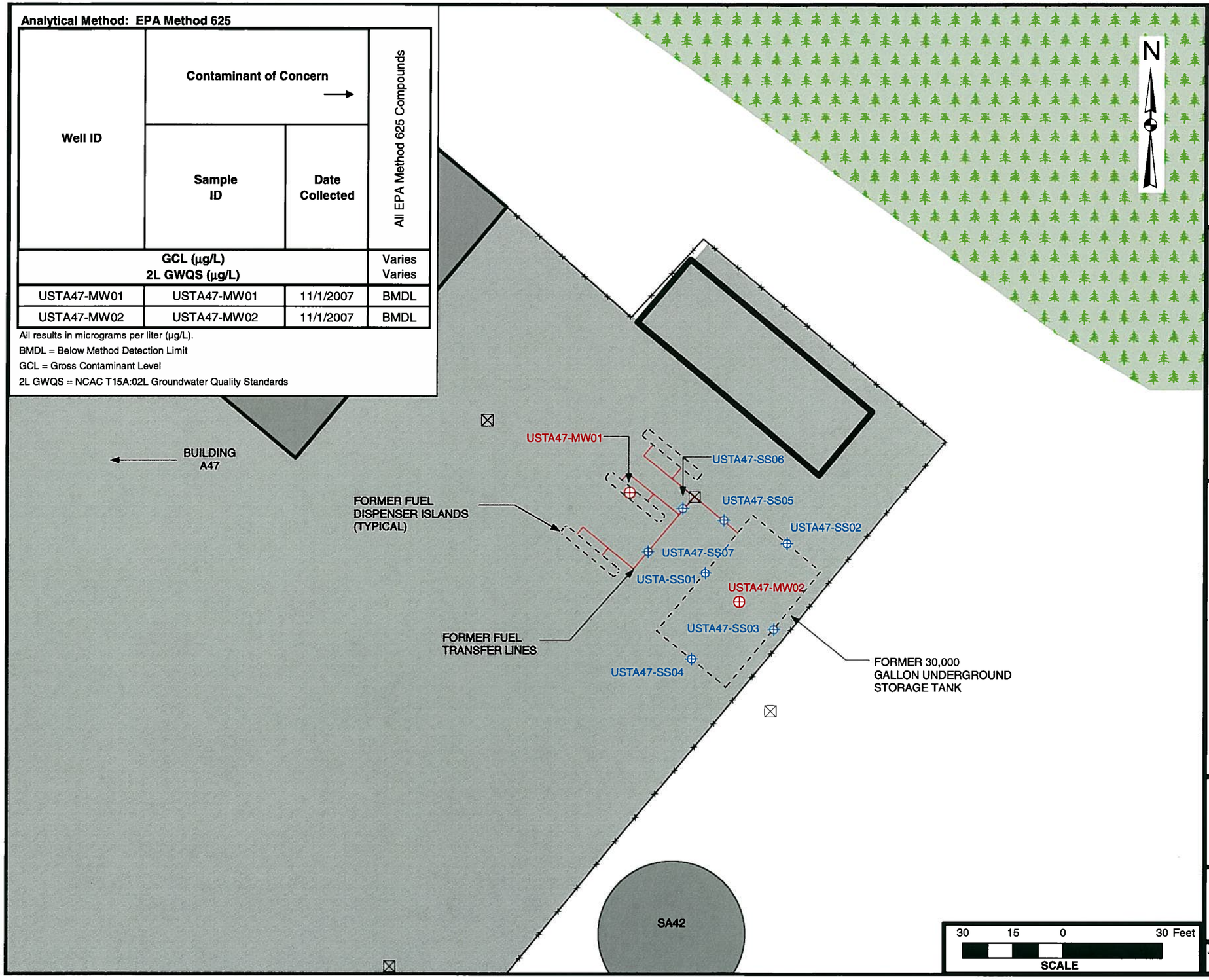
FIGURE 4A

Job No.:	Date:	Scale:	Drawn By:	Checked By:
207-048	DEC 2007	AS SHOWN	KAWS	SLT

Analytical Method: EPA Method 625

Well ID	Contaminant of Concern → Sample ID	Date Collected	All EPA Method 625 Compounds
GCL (µg/L)			Varies
2L GWQS (µg/L)			Varies
USTA47-MW01	USTA47-MW01	11/1/2007	BMDL
USTA47-MW02	USTA47-MW02	11/1/2007	BMDL

All results in micrograms per liter (µg/L).
BMDL = Below Method Detection Limit
GCL = Gross Contaminant Level
2L GWQS = NCAC T15A:02L Groundwater Quality Standards



PHASE I LIMITED SITE ASSESSMENT BUILDING A-47 MCB CAMP LEJEUNE

NAVFAC Naval Facilities Engineering Command

LEGEND

EXISTING	DESCRIPTION
⊕	Type II Monitoring Well
⊕	Soil Sample
⊠	Unknown Well Type
	Buildings and Structures
	Demolished Structures
	Oil/Water Separators
	Slabs
	Roads, Driveways and Parking Lots
	Forestland
	Above Ground Storage Tank
	Fence
	Gate

NOTES

MAP ADAPTED FROM CAMP LEJEUNE GIS DATA BASE.

MONITORING WELLS AND BORING LOCATIONS ARE APPROXIMATE.

CATLIN Engineers and Scientists

SITE PLAN WITH GROUNDWATER LABORATORY RESULTS - EPA METHOD 625

FIGURE 4B

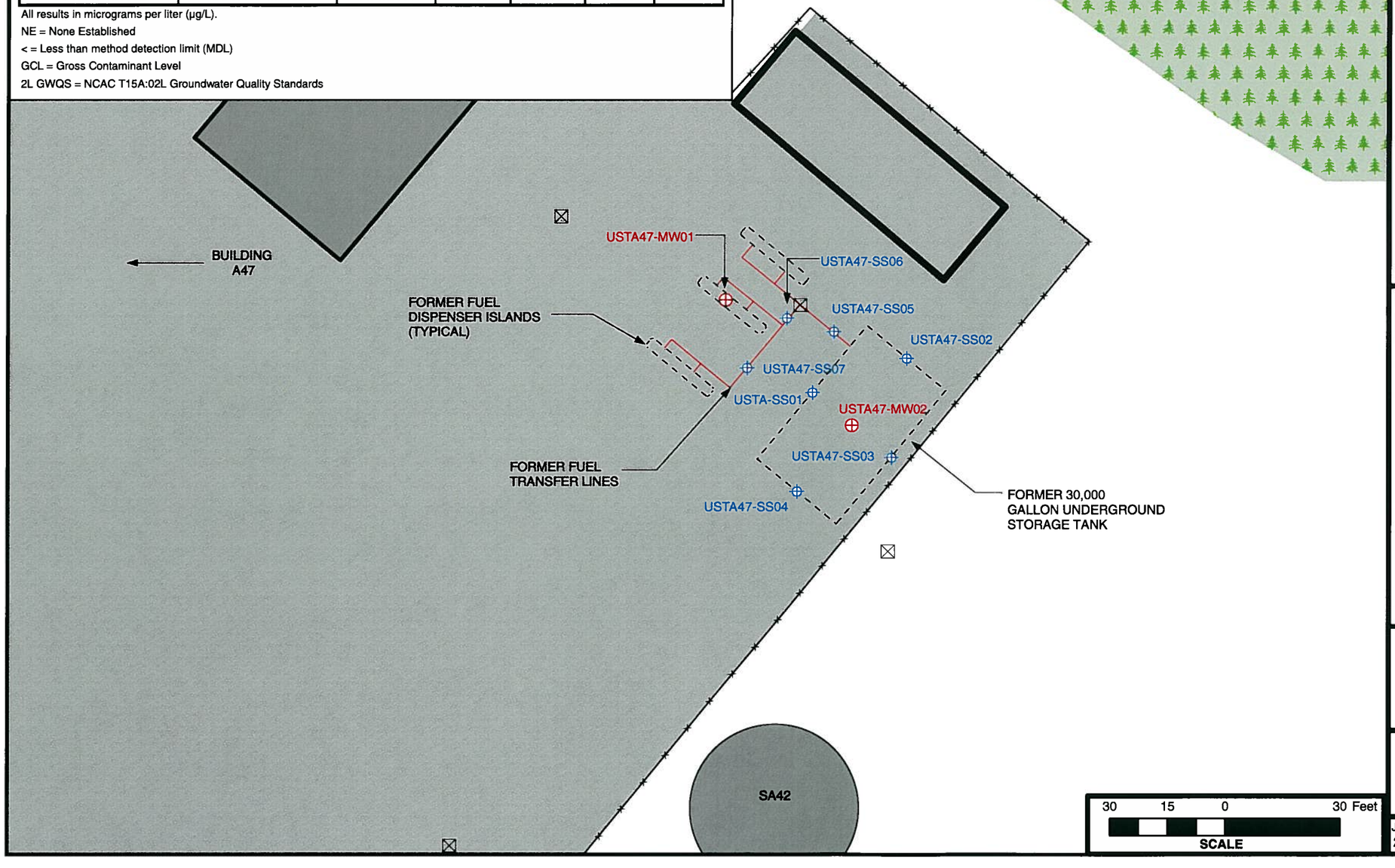
Job No.:	Date:	Scale:	Drawn By:	Checked By:
207-048	DEC 2007	AS SHOWN	KAWS	SLT

PHASE I LIMITED SITE ASSESSMENT BUILDING A-47 MCB CAMP LEJEUNE

Analytical Method: MADEP VPH/EPH

Well ID	Contaminant of Concern → Sample ID	Date Collected	C_5-C_8 Aliphatics	C_9-C_{18} Aliphatics	C_{19}-C_{36} Aliphatics	C_9-C_{22} Aromatics
GCL (µg/L) 2L GWQS (µg/L)			NE 420	NE 4,200	NE 42,000	NE 210
USTA47-MW01	USTA47-MW01	11/1/2007	<100	<200	<100	<200
USTA47-MW02	USTA47-MW02	11/1/2007	<100	<200	<100	<200

All results in micrograms per liter (µg/L).
NE = None Established
< = Less than method detection limit (MDL)
GCL = Gross Contaminant Level
2L GWQS = NCAC T15A:02L Groundwater Quality Standards



LEGEND

EXISTING	DESCRIPTION
⊕	Type II Monitoring Well
⊕	Soil Sample
☒	Unknown Well Type
	Buildings and Structures
	Demolished Structures
	Oil/Water Separators
	Slabs
	Roads, Driveways and Parking Lots
	Forestland
	Above Ground Storage Tank
	Fence
	Gate

NOTES

MAP ADAPTED FROM CAMP LEJEUNE GIS DATA BASE.

MONITORING WELLS AND BORING LOCATIONS ARE APPROXIMATE.

Naval Facilities Engineering Command

Engineers and Scientists

SITE PLAN WITH GROUNDWATER LABORATORY RESULTS - MADEP VPH/EPH

FIGURE 4C

Job No.:	Date:	Scale:	Drawn By:	Checked By:
207-048	DEC 2007	AS SHOWN	KAWS	SLT

APPENDICES

APPENDIX A

BORING LOGS, MONITORING WELL AS-BUILTS, AND NORTH CAROLINA WELL CONSTRUCTION RECORDS

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources - Division of Water Quality

WELL CONTRACTOR CERTIFICATION #: 2799

1. WELL CONTRACTOR:

John E. Wood, III
Well Contractor (Individual) Name

CATLIN Engineers and Scientists
Well Contractor Company Name

STREET ADDRESS 220 Old Dairy Road

Wilmington | North Carolina | 28405
City or Town | State | Zip Code

(910) - 452-5861
Area code - Phone number

2. WELL INFORMATION

SITE WELL ID #(if applicable): USTA47-MW01
STATE WELL PERMIT #(if applicable): N/A
DWQ or OTHER PERMIT # (if applicable): N/A
WELL USE (Check Applicable Box): Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use): _____
DATE DRILLED: 10/30/2007
TIME COMPLETED: 14:00 **AM** ☐ **PM** ☒

3. WELL LOCATION:

CITY: Camp Lejeune COUNTY: Onslow
Courthouse Rd. MCB Camp Lejeune, NC,
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING
Slope ☐ Valley ☐ Flat ☒ Ridge ☐ Other: _____

NORTHING: 3,830,272.4
EASTING: 282,601.8
UTM NAD83 (m)
May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source: ☒ GPS ☐ Topo. map
(Location of well must be shown on a USGS topo map and attached to this form if not using a GPS.)

4. FACILITY - is the name of the business where the well is located.

FACILITY ID #(if applicable) N/A
NAME OF FACILITY:
STREET ADDRESS: Courthouse Rd. MCB Camp Lejeune
Camp Lejeune | NC
City or Town | State | Zip Code
CONTACT PERSON: Mr. Andrew Smith
STREET ADDRESS: Attn: I&E/ EMD/ EQB/ PSC Box 20004

Camp Lejeune | NC | 28542-0004
City or Town | State | Zip Code
(910)- 451-9017
Area code - Phone number

5. WELL DETAILS:

a. TOTAL DEPTH: 13.5
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 4.5 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 0 FT. Above Land Surface*
* Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118

e. YIELD (gpm): N/A **METHOD OF TEST:** N/A
f. DISINFECTION: Type N/A **Amount:** N/A
g. WATER ZONES (depth):
From _____ To _____ From _____ To _____
From _____ To _____ From _____ To _____
From _____ To _____ From _____ To _____

6. CASING:

	Depth		Diameter	Thickness/ Weight	Material
From 0	To 3.5 ft.		2"	Sch. 40	PVC
From _____	To _____ ft.		"		
From _____	To _____ ft.		"		

7. GROUT:

	Depth		Material	Method
From 0.5	To 1 Ft.		Portland Cement	Surface Pour
From 1	To 2 Ft.		Bent. Pellets	Surface Pour
From _____	To _____ Ft.			

8. SCREEN:

	Depth		Diameter	Slot Size	Material
From 3.5	To 13.5 Ft.		2 in.	Slot .010 in.	PVC
From _____	To _____ Ft.		_____ in.	_____ in.	
From _____	To _____ Ft.		_____ in.	_____ in.	

9. SAND/GRAVEL PACK:

	Depth		Size	Material
From 2	To 13.5 Ft.		#2 Medium	Torpedo Sand
From _____	To _____ Ft.			
From _____	To _____ Ft.			

10. DRILLING LOG

From	To	Formation Description
		SEE ATTACHED

11. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

John Wood — 12-12-07
SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE

John E. Wood, III
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days, Attn: Information Management, 1617 Mail Service Center - Raleigh, NC 27699167, Phone No. (919) 733-7015 ext 568.

Modified from Form GW-1b Rev. 7/05

WELL LOG

CATLIN ENGINEERS and SCIENTISTS 207-048 Wilmington, NC

SHEET 1 OF 1

PROJECT NO.: 207-048	STATE: NC	COUNTY: Onslow	LOCATION: Camp Lejuene
PROJECT NAME: Former CERCLA Site USTA47	LOGGED BY: Steve Tyler		WELL ID: USTA47-MW01
	DRILLER: John Wood		
NORTHING: 3830272.4	EASTING: 282601.8	CREW: Bill Miller	
SYSTEM: UTM NAD83 (m)	BORING LOCATION: Bldg. A47		T.O.C. ELEV.:
DRILL MACHINE: D-50	METHOD: H.S. Augers	0 HOUR DTW: 6.0	TOTAL DEPTH: 15.0
START DATE: 10/30/07	FINISH DATE: 10/30/07	24 HOUR DTW: 4.5	WELL DEPTH: 13.5

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION	WELL DETAIL
									0.0 LAND SURFACE	0.0
0.0	P	U	S	H	NA		GW		0.5 CONCRETE. Sand/Gravel fill base.	0.0
1.0	P	U	S	H	4.4	1130	SM		1.0 Dark brown fine SAND w/ organic SILTS. Dry.	1.0
2.0	P	U	S	H	2		SM		2.0 Same as above.	2.0
									3.0	
3.5	4	14	16		0.3		SM		3.5 Tan fine SAND w/ SILT. Medium density. Dry.	3.5
5.0	P	U	S	H	0.2		SM		5.0 Olive SILTY SAND. Wet.	
6.0	P	U	S	H	0		SM		6.0 S.A.A.	
7.0	P	U	S	H	0.4		SM		7.0 Black fine SAND w/ organic SILTS. Wet.	
									8.0	
8.5	4	4	5		0		SM		8.5 Tan SILTY SAND. Wet.	
									10.0	
13.5	1	1	2		0.5		SM		13.5 Olive SILTY SAND.	13.5
									15.0	
									Boring Terminated at Depth 15.0 ft SILTY SAND	

2" Sch. 40 PVC

2" Slot .010 Sch. 40 PVC

Portland Cement | Bentonite Pellets | #2 Medium Sand

CATLIN BORING LOG 207-048 LEJEUNE.SAS USTA47.GPJ TEST.GDT 12/11/07

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources - Division of Water Quality

WELL CONTRACTOR CERTIFICATION #: 2799

1. WELL CONTRACTOR:

John E. Wood, III
Well Contractor (Individual) Name

CATLIN Engineers and Scientists
Well Contractor Company Name

STREET ADDRESS 220 Old Dairy Road

Wilmington | North Carolina | 28405
City or Town | State | Zip Code

(910) - 452-5861
Area code - Phone number

2. WELL INFORMATION

SITE WELL ID #(if applicable): USTA47-MW02
STATE WELL PERMIT #(if applicable): N/A
DWQ or OTHER PERMIT # (if applicable): N/A
WELL USE (Check Applicable Box): Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use): _____
DATE DRILLED: 10/30/2007
TIME COMPLETED: 16:00 **AM** ☐ **PM** ☒

3. WELL LOCATION:

CITY: Camp Lejuene COUNTY: Onslow
Courthouse Rd. MCB Camp Lejuene, NC,
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING
Slope ☐ Valley ☐ Flat ☒ Ridge ☐ Other: _____

NORTHING: 3,830,262.2
EASTING: 282,612.0
UTM NAD83 (m)
May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source: ☒ GPS ☐ Topo. map
(Location of well must be shown on a USGS topo map and attached to this form if not using a GPS.)

4. FACILITY - is the name of the business where the well is located.

FACILITY ID #(if applicable) N/A
NAME OF FACILITY:
STREET ADDRESS: Courthouse Rd. MCB Camp Lejuene
Camp Lejuene | NC
City or Town | State | Zip Code
CONTACT PERSON: Mr. Andrew Smith
STREET ADDRESS: Attn: I&E/ EMD/ EQB/ PSC Box 20004
Camp Lejeune | NC | 28542-0004
City or Town | State | Zip Code
(910)- 451-9017
Area code - Phone number

5. WELL DETAILS:

a. **TOTAL DEPTH:** 13
b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒
c. **WATER LEVEL Below Top of Casing:** 4.7 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 0 FT. Above Land Surface*
* Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118

e. **YIELD (gpm):** N/A **METHOD OF TEST:** N/A
f. **DISINFECTION: Type** N/A **Amount:** N/A
g. **WATER ZONES** (depth):
From ____ To ____ From ____ To ____
From ____ To ____ From ____ To ____
From ____ To ____ From ____ To ____

6. CASING:

	Depth	Diameter	Thickness/ Weight	Material
From 0	To 3 ft.	2"	Sch. 40	PVC
From ____	To ____ ft.	"		
From ____	To ____ ft.	"		

7. GROUT:

	Depth	Material	Method
From 0.5	To 1 Ft.	Portland Cement	Surface Pour
From 1	To 2 Ft.	Bent. Pellets	Surface Pour
From ____	To ____ Ft.		

8. SCREEN:

	Depth	Diameter	Slot Size	Material
From 3	To 13 Ft.	2 in.	Slot .010 in.	PVC
From ____	To ____ Ft.	____ in.	____ in.	
From ____	To ____ Ft.	____ in.	____ in.	

9. SAND/GRAVEL PACK:

	Depth	Size	Material
From 2	To 13 Ft.	#2 Medium	Torpedo Sand
From ____	To ____ Ft.		
From ____	To ____ Ft.		

10. DRILLING LOG

From	To	Formation Description
		SEE ATTACHED

11. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

John Wood
SIGNATURE OF CERTIFIED WELL CONTRACTOR | DATE

John E. Wood, III
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days, Attn: Information Management, 1617 Mail Service Center - Raleigh, NC 27699167, Phone No. (919) 733-7015 ext 568.

Modified from Form GW-1b Rev. 7/05

WELL LOG

CATLIN ENGINEERS and SCIENTISTS 207-048 Wilmington, NC

SHEET 1 OF 1

PROJECT NO.: 207-048	STATE: NC	COUNTY: Onslow	LOCATION: Camp Lejuene
PROJECT NAME: Former CERCLA Site USTA47	LOGGED BY: Steve Tyler	DRILLER: John Wood	WELL ID: USTA47-MW02
NORTHING: 3830262.2	EASTING: 282612.0	CREW: Bill Miller	
SYSTEM: UTM NAD83 (m)	BORING LOCATION: Bldg. A47		T.O.C. ELEV.:
DRILL MACHINE: D-50	METHOD: H.S. Augers	0 HOUR DTW: 6.0	TOTAL DEPTH: 15.0
START DATE: 10/30/07	FINISH DATE: 10/30/07	24 HOUR DTW: 4.7	WELL DEPTH: 13.0

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION	WELL DETAIL
									0.0 LAND SURFACE	0.0
0.0	P	U	S	H	NA		GW		0.5 CONCRETE. Sand/Gravel fill base.	0.0
1.0	P	U	S	H	18.2		SM		1.0 Olive fine SAND w/ some organics fines. Dry.	1.0
2.0	P	U	S	H	40		SM		2.0 S.A.A.	2.0
3.5	6	7	8		80.3	1415	SM		3.5 S.A.A. except medium dense. Moist.	3.0
5.0	P	U	S	H	36.4		SM		5.0 S.A.A. except wet.	
6.0	P	U	S	H	43.2		SM		6.0 S.A.A.	
									7.5	
8.5	2	2	6		40.3		SM		8.5 S.A.A. except loose.	
									10.0	
13.5	2	2	refusal		5.6		GW		13.5 GRAVEL FILL, like UST base material.	13.0
									15.0 Boring Terminated at Depth 15.0 ft GRAVEL FILL	13.0

2" Sch. 40 PVC

2" Slot .010 Sch. 40 PVC

Portland Cement | Bentonite Pellets | #2 Medium Sand

CATLIN BORING LOG 207-048 LEJEUNE.ISAS USTA47.GPJ TEST.GDT 12/11/07

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
207-048
Wilmington, NC

SHEET 1 OF 1

PROJECT NO.: 207-048	**STATE:** NC	**COUNTY:** Onslow	**LOCATION:** Camp Lejuene
PROJECT NAME: Former CERCLA Site USTA47		**LOGGED BY:** Steve Tyler	**BORING ID:** USTA47-SS01
		DRILLER: Steve Tyler	
NORTHING: 383,026.9	**EASTING:** 282,608.8	**CREW:**	
SYSTEM: UTM NAD83 (m)	**BORING LOCATION:** Bldg. A47		**LAND ELEV.:** NM
DRILL MACHINE: Hand Auger	**METHOD:** Direct Push	**0 HOUR DTW:** NA	**BORING DEPTH:** 7.0
START DATE: 10/31/07	**FINISH DATE:** 10/31/07	**24 HOUR DTW:**	**ROCK DEPTH:** --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0	PUSH	DRY			GW		0.5	CONCRETE. Sand/Gravel fill base.	
1.0	PUSH	DRY	▲0		SM		1.0	Olive fine SAND w/ some organic SILTS. Dry.	
2.0	PUSH	DRY	▲0.4	1010	SM		2.0	S.A.A.	
3.0	PUSH	DRY	▲0		SM		3.0	S.A.A.	
4.0	PUSH	DRY	▲0		SM		4.0	Tan fine SAND w/ few SILTS. Dry.	
5.0	PUSH	MOIST	▲0		SM		5.0	S.A.A. except moist.	
6.0	PUSH	WET			SM		6.0	S.A.A. except wet.	
7.0							7.0	Boring Terminated at Depth 7.0 ft Fine SAND w/ SILTS	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO LOG 207-048 LEJEUNE LSAS USTA47.GPJ CATLIN.GDT 12/13/07

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
207-048
Wilmington, NC

SHEET 1 OF 1

PROJECT NO.: 207-048	**STATE:** NC	**COUNTY:** Onslow	**LOCATION:** Camp Lejuene
PROJECT NAME: Former CERCLA Site USTA47		**LOGGED BY:** Steve Tyler	**BORING ID:** USTA47-SS02
		DRILLER: Steve Tyler	
NORTHING: 3,830,267.5	**EASTING:** 282,616.3	**CREW:**	
SYSTEM: UTM NAD83 (m)	**BORING LOCATION:** Bldg. A47		**LAND ELEV.:** NM
DRILL MACHINE: Hand Auger	**METHOD:** Direct Push	**0 HOUR DTW:** NA	**BORING DEPTH:** 7.0
START DATE: 10/31/07	**FINISH DATE:** 10/31/07	**24 HOUR DTW:**	**ROCK DEPTH:** --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0	PUSH	DRY			GW		0.5	CONCRETE. Gravel base.	
1.0	PUSH	DRY	▲0		SM		1.0	Tan fine SAND w/ few SILTS. Dry.	
2.0	PUSH	DRY	▲0.3		SM		2.0	S.A.A.	
3.0	PUSH	DRY	▲34.2	900	SM		3.0	Olive fine SAND w/ few organics. Dry.	
4.0	PUSH	DRY	▲68.7		SM		4.0	S.A.A.	
5.0	PUSH	MOIST	▲58.9		SM		5.0	S.A.A.	
6.0	PUSH	WET	▲68.4		SM		6.0	S.A.A.	
7.0							7.0	Boring Terminated at Depth 7.0 ft Fine SAND	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO_LOG_207-048_LEJEUNE_LSAS_USTA-47.GPJ_CATLIN.GDT_12/13/07

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
207-048
Wilmington, NC

SHEET 1 OF 1

PROJECT NO.: 207-048	**STATE:** NC	**COUNTY:** Onslow	**LOCATION:** Camp Lejuene
PROJECT NAME: Former CERCLA Site USTA47		**LOGGED BY:** Steve Tyler	**BORING ID:** USTA47-SS03
		DRILLER: Steve Tyler	
NORTHING: 3,830,259.7	**EASTING:** 282,615.1	**CREW:**	
SYSTEM: UTM NAD83 (m)	**BORING LOCATION:** Bldg. A47		**LAND ELEV.:** NM
DRILL MACHINE: Hand Auger	**METHOD:** Direct Push	**0 HOUR DTW:** NA	**BORING DEPTH:** 7.0
START DATE: 10/31/07	**FINISH DATE:** 10/31/07	**24 HOUR DTW:**	**ROCK DEPTH:** --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0	PUSH	DRY	▲2.2		SM		1.0	Olive fine SAND w/ some organic SILTS. Dry.	
1.0	PUSH	DRY	▲0		SM		2.0	S.A.A.	
2.0	PUSH	DRY	▲0.1		SM		3.0	S.A.A.	
3.0	PUSH	DRY	▲0.1		SM		4.0	Black fine SAND w/ organic SILTS. Dry.	
4.0	PUSH	DRY	▲0.3		SM		5.0	Tan fine SAND w/ some SILT. Dry.	
5.0	PUSH	MOIST	▲0.5	1110	SM		6.0	S.A.A. Except moist.	
6.0	PUSH	WET	▲0.2		SM		7.0	S.A.A. except wet.	
7.0								Boring Terminated at Depth 7.0 ft Fine SAND w/ some SILTS	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO LOG 207-048 LEJEUNE LSAS USTA-47.GPJ CATLIN.GDT 12/13/07

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
207-048
Wilmington, NC

SHEET 1 OF 1

PROJECT NO.: 207-048	**STATE:** NC	**COUNTY:** Onslow	**LOCATION:** Camp Lejuene
PROJECT NAME: Former CERCLA Site USTA47		**LOGGED BY:** Steve Tyler	**BORING ID:** USTA47-SS04
		DRILLER: Steve Tyler	
NORTHING: 3,830,256.9	**EASTING:** 282,607.6	**CREW:**	
SYSTEM: UTM NAD83 (m)	**BORING LOCATION:** Bldg. A47		**LAND ELEV.:** NM
DRILL MACHINE: Hand Auger	**METHOD:** Direct Push	**0 HOUR DTW:** NA	**BORING DEPTH:** 7.0
START DATE: 10/31/07	**FINISH DATE:** 10/31/07	**24 HOUR DTW:**	**ROCK DEPTH:** --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0	PUSH	DRY			GW		1.0	CONCRETE. Sand/Gravel base.	
1.0	PUSH	DRY	▲8.1	1035	SM		2.0	Olive fine SAND w/ organic SILTS. Dry.	
2.0	PUSH	DRY	▲0.2		SM		3.0	Tan fine SAND w/ few SILTS. Dry.	
3.0	PUSH	DRY	▲0.1		SM		4.0	S.A.A.	
4.0	PUSH	DRY	▲0.2		SM		5.0	S.A.A.	
5.0	PUSH	MOIST	▲0.3		SM		6.0	S.A.A. except moist.	
6.0	PUSH	WET			SM		7.0	S.A.A. except wet.	
7.0								Boring Terminated at Depth 7.0 ft Fine SAND	

▽ = 0hr. DTW ▼ = 24hr. DTW

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
207-048
Wilmington, NC

SHEET 1 OF 1

PROJECT NO.: 207-048	**STATE:** NC	**COUNTY:** Onslow	**LOCATION:** Camp Lejuene
PROJECT NAME: Former CERCLA Site USTA47		**LOGGED BY:** Steve Tyler	**BORING ID:**
		DRILLER: Steve Tyler	**USTA47-SS05**
NORTHING: 3,830,269.8	**EASTING:** 282,610.5	**CREW:**	
SYSTEM: UTM NAD83 (m)	**BORING LOCATION:** Bldg. A47		**LAND ELEV.:** NM
DRILL MACHINE: Hand Auger	**METHOD:** Direct Push	**0 HOUR DTW:** NA	**BORING DEPTH:** 7.0
START DATE: 10/31/07	**FINISH DATE:** 10/31/07	**24 HOUR DTW:**	**ROCK DEPTH:** --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0	PUSH	DRY			GW		1.0	CONCRETE. Sand/Gravel fill.	
1.0	PUSH	DRY	▲0.2		SM		2.0	Fine SAND w/ some SILT. Dry.	
2.0	PUSH	DRY	▲0.6	830	SM		3.0	S.A.A.	
3.0	PUSH	DRY	▲0.2		SM		4.0	Olive fine SAND w/ some SILTS. Dry.	
4.0	PUSH	DRY	▲0.2		SM		5.0	S.A.A.	
5.0	PUSH	DRY	▲0.4		SM		6.0	S.A.A.	
6.0	PUSH	WET	▲0		SM		7.0	S.A.A. except wet.	
7.0								Boring Terminated at Depth 7.0 ft Fine SAND	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO_LOG_207-048_LEJEUNE_SAS_USTA47.GPJ_CATLIN.GDT_12/13/07

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
207-048
Wilmington, NC

SHEET 1 OF 1

PROJECT NO.: 207-048	**STATE:** NC	**COUNTY:** Onslow	**LOCATION:** Camp Lejuene
PROJECT NAME: Former CERCLA Site USTA47		**LOGGED BY:** Steve Tyler	**BORING ID:**
		DRILLER: Steve Tyler	**USTA47-SS06**
NORTHING: 3,830,270.8	**EASTING:** 282,606.7	**CREW:**	
SYSTEM: UTM NAD83 (m)	**BORING LOCATION:** Bldg. A47		**LAND ELEV.:** NM
DRILL MACHINE: Hand Auger	**METHOD:** Direct Push	**0 HOUR DTW:** NA	**BORING DEPTH:** 7.0
START DATE: 10/30/07	**FINISH DATE:** 10/30/07	**24 HOUR DTW:**	**ROCK DEPTH:** --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0	PUSH	DRY			GW		1.0	CONCRETE. Gravel/Sand base.	
1.0	PUSH	DRY	▲4.7	1500	SM		2.0	Olive fine SAND w/ few SILTS. Dry.	
2.0	PUSH	DRY	▲1.7		SM		3.0	Tan fine SAND w/ few SILTS. Dry.	
3.0	PUSH	DRY	▲0.9		SM		4.0	S.A.A.	
4.0	PUSH	DRY	▲1.2		SM		5.0	S.A.A.	
5.0	PUSH	MOIST	▲0.8		SM		6.0	S.A.A. except moist.	
6.0	PUSH	WET	▲0.6		SM		7.0	S.A.A. except wet.	
7.0								Boring Terminated at Depth 7.0 ft Fine SAND w/ few SILT	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO LOG 207-048 LEJEUNE I SAS USTA 47 GPJ CATLIN GDT 12/13/07

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
207-048
Wilmington, NC

SHEET 1 OF 1

PROJECT NO.: 207-048	**STATE:** NC	**COUNTY:** Onslow	**LOCATION:** Camp Lejuene
PROJECT NAME: Former CERCLA Site USTA47		**LOGGED BY:** Steve Tyler	**BORING ID:** USTA47-SS07
		DRILLER: Steve Tyler	
NORTHING: 3,830,266.8	**EASTING:** 282,603.6	**CREW:**	
SYSTEM: UTM NAD83 (m)	**BORING LOCATION:** Bldg. A47		**LAND ELEV.:** NM
DRILL MACHINE: Hand Auger	**METHOD:** Direct Push	**0 HOUR DTW:** NA	**BORING DEPTH:** 7.0
START DATE: 10/31/07	**FINISH DATE:** 10/31/07	**24 HOUR DTW:**	**ROCK DEPTH:** --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0	PUSH	DRY			GW		1.0	CONCRETE. Sand/Gravel base.	
1.0	PUSH	DRY	▲0		SM		2.0	Olive fine SAND w/ few organic SILTS. Dry.	
2.0	PUSH	DRY	▲0.2		SM		3.0	S.A.A.	
3.0	PUSH	DRY	▲0		SM		4.0	Tan fine SAND w/ few SILTS. Dry.	
4.0	PUSH	DRY	▲0.4	930	SM		5.0	Olive fine SAND w/ some organic SILTS. Dry.	
5.0	PUSH	MOIST	▲0		SC		6.0	Olive/gray fine SAND w/ CLAY. Moderate plasticity.	
6.0	PUSH	WET	▲0		SM		7.0	Tan SAND w/ SILTS. Wet.	
7.0								Boring Terminated at Depth 7.0 ft SILTY SAND	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO_LOG_207-048_LEJEUNE_SAS_USTA-47.GPJ_CATLIN.GDT_12/13/07

APPENDIX B

CATLIN STANDARD METHODS OF INVESTIGATION

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 (FID).
- 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 C

SAMPLING FIELD DATA WORKSHEET

CATLIN
ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

MONITORING WELL SAMPLING RECORD

CATLIN PROJECT:	**Former CERCLA Sites Building A-47**	LOGGED BY:	Steve Tyler
		DATE:	10/31/2007
CATLIN PROJECT # :	**207-048**	DAY:	Thursday
CLIENT'S NAME:	**MCB Camp Lejeune**	WEATHER:	Clear, 70's

WELL NO.	MW01		MW02		
TIME SAMPLED	1000		1030		
WELL DIAMETER	2"		2"		
WELL DEPTH - A	13.5'		13'		
DEPTH TO WATER - B	4.45'		4.71'		
(A-B) FT. WATER IN WELL - C	9.05'		8.29'		
GALLONS/FT. - D	0.163		0.163		
(CXD) ONE VOLUME - E	1.47		1.35		
(EX3) THREE VOLUMES - F	4.45		4.05		
VOLUME OF BAILER - G*	Geopump		Geopump		
(F/G) NO. BAILS REQUIRED - H*					
NO. BAILS REMOVED - I*					
VOLUME REMOVED	8 gal		7 gal		
TURBIDITY	Slight - tan		Slight - black		
COMMENTS	6 oz duplicate labeled as DW01 sampled at 0930				

VOLUMES:
1" WELL = 0.045 GAL/FT.
2" WELL = 0.163 GAL/FT.
4" WELL = 0.661 GAL/FT.
6" WELL = 1.501 GAL/FT.

3' X 1.5" BAILER = 0.24 GAL/BAIL
4' X 1.5" BAILER = 0.37 GAL/BAIL

NOTES: AIR TEMP = ~ 75°
TURBIDITY - Indicate clear, slight, moderate or high.
* - An entry of PUMP indicates that bailers were not used to develop/purge the well and that a pump was used to remove the volume indicated.

APPENDIX D

LABORATORY REPORTS
AND
CHAIN-OF-CUSTODY DOCUMENTATION

Mr. Jason Cook
Richard Catlin & Associates
P.O. Box 10279
Wilmington NC 28404-0279

Report Number: G128-2058

Client Project: USTA47

Dear Mr. Cook:

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

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

Thank you for using SGS Environmental Services for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
SGS Environmental Services, Inc.

Laboratory Director
J. Patrick Weaver

Date 11/15/2007

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

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

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

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

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

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

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

% Rec = Percent Recovery

% soilds = Percent Solids

Special Notes:

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

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

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-MW01 (1-2)
Client Project ID: USTA47
Lab Sample ID G128-2058-1A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-30-2007 12:30
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 5.03 g
%Solids: 91.1

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.0196**	0.0545	0.00753	1	11/6/2007	J
Benzene	BQL	0.00545	0.00117	1	11/6/2007	
Bromobenzene	BQL	0.00545	0.00112	1	11/6/2007	
Bromochloromethane	BQL	0.00545	0.00187	1	11/6/2007	
Bromodichloromethane	BQL	0.00545	0.00108	1	11/6/2007	
Bromoform	BQL	0.00545	0.00109	1	11/6/2007	
Bromomethane	BQL	0.00545	0.00114	1	11/6/2007	
2-Butanone	BQL	0.0272	0.00592	1	11/6/2007	
n-Butylbenzene	BQL	0.00545	0.00104	1	11/6/2007	
sec-Butylbenzene	BQL	0.00545	0.00110	1	11/6/2007	
tert-Butylbenzene	BQL	0.00545	0.00122	1	11/6/2007	
Carbon disulfide	BQL	0.00545	0.00292	1	11/6/2007	
Carbon tetrachloride	BQL	0.00545	0.00111	1	11/6/2007	
Chlorobenzene	BQL	0.00545	0.00130	1	11/6/2007	
Chloroethane	BQL	0.00545	0.00173	1	11/6/2007	
Chloroform	BQL	0.00545	0.00131	1	11/6/2007	
Chloromethane	BQL	0.00545	0.00123	1	11/6/2007	
2-Chlorotoluene	BQL	0.00545	0.00110	1	11/6/2007	
4-Chlorotoluene	BQL	0.00545	0.00136	1	11/6/2007	
Dibromochloromethane	BQL	0.00545	0.00150	1	11/6/2007	
1,2-Dibromo-3-chloropropane	BQL	0.00545	0.00158	1	11/6/2007	
Dibromomethane	BQL	0.00545	0.00165	1	11/6/2007	
1,2-Dibromoethane (EDB)	BQL	0.00545	0.00123	1	11/6/2007	
1,2-Dichlorobenzene	BQL	0.00545	0.00141	1	11/6/2007	
1,3-Dichlorobenzene	BQL	0.00545	0.00139	1	11/6/2007	
1,4-Dichlorobenzene	BQL	0.00545	0.00114	1	11/6/2007	
trans-1,4-Dichloro-2-butene	BQL	0.00545	0.00150	1	11/6/2007	
1,1-Dichloroethane	BQL	0.00545	0.00115	1	11/6/2007	
1,1-Dichloroethene	BQL	0.00545	0.00161	1	11/6/2007	
1,2-Dichloroethane	BQL	0.00545	0.00144	1	11/6/2007	
cis-1,2-Dichloroethene	BQL	0.00545	0.00139	1	11/6/2007	
trans-1,2-dichloroethene	BQL	0.00545	0.00123	1	11/6/2007	
1,2-Dichloropropane	BQL	0.00545	0.00129	1	11/6/2007	
1,3-Dichloropropane	BQL	0.00545	0.00122	1	11/6/2007	
2,2-Dichloropropane	BQL	0.00545	0.00131	1	11/6/2007	
1,1-Dichloropropene	BQL	0.00545	0.00171	1	11/6/2007	
cis-1,3-Dichloropropene	BQL	0.00545	0.00091	1	11/6/2007	
trans-1,3-Dichloropropene	BQL	0.00545	0.00105	1	11/6/2007	
Dichlorodifluoromethane	BQL	0.00545	0.00144	1	11/6/2007	
Diisopropyl ether (DIPE)	BQL	0.00545	0.00123	1	11/6/2007	
Ethylbenzene	BQL	0.00545	0.00094	1	11/6/2007	
Hexachlorobutadiene	BQL	0.00545	0.00106	1	11/6/2007	

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-MW01 (1-2)
Client Project ID: USTA47
Lab Sample ID G128-2058-1A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-30-2007 12:30
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 5.03 g
%Solids: 91.1

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
2-Hexanone	BQL	0.00545	0.00353	1	11/6/2007	
Iodomethane	BQL	0.00545	0.00118	1	11/6/2007	
Isopropylbenzene	BQL	0.00545	0.00097	1	11/6/2007	
4-Isopropyltoluene	BQL	0.00545	0.00117	1	11/6/2007	
Methylene chloride	BQL	0.0218	0.00130	1	11/6/2007	
4-Methyl-2-pentanone	BQL	0.00545	0.00504	1	11/6/2007	
Methyl-tert-butyl ether (MTBE)	BQL	0.00545	0.00121	1	11/6/2007	
Naphthalene	BQL	0.00545	0.00093	1	11/6/2007	
n-Propyl benzene	BQL	0.00545	0.00137	1	11/6/2007	
Styrene	BQL	0.00545	0.00120	1	11/6/2007	
1,1,1,2-Tetrachloroethane	BQL	0.00545	0.00111	1	11/6/2007	
1,1,2,2-Tetrachloroethane	BQL	0.00545	0.00123	1	11/6/2007	
Tetrachloroethene	BQL	0.00545	0.00100	1	11/6/2007	
Toluene	BQL	0.00545	0.00109	1	11/6/2007	
1,2,3-Trichlorobenzene	BQL	0.00545	0.00113	1	11/6/2007	
1,2,4-Trichlorobenzene	BQL	0.00545	0.00112	1	11/6/2007	
Trichloroethene	BQL	0.00545	0.00104	1	11/6/2007	
1,1,1-Trichloroethane	BQL	0.00545	0.00123	1	11/6/2007	
1,1,2-Trichloroethane	BQL	0.00545	0.00179	1	11/6/2007	
Trichlorofluoromethane	BQL	0.00545	0.00112	1	11/6/2007	
1,2,3-Trichloropropane	BQL	0.00545	0.00135	1	11/6/2007	
1,2,4-Trimethylbenzene	BQL	0.00545	0.00137	1	11/6/2007	
1,3,5-Trimethylbenzene	BQL	0.00545	0.00124	1	11/6/2007	
Vinyl chloride	BQL	0.00545	0.00148	1	11/6/2007	
m-,p-Xylene	BQL	0.0109	0.00209	1	11/6/2007	
o-Xylene	BQL	0.00545	0.00106	1	11/6/2007	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	0.05	0.063	126
Toluene-d8	0.05	0.0467	94
4-Bromofluorobenzene	0.05	0.0574	115

Comments:

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

Reviewed By: 

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-MW02 (3.5-5)
Client Project ID: USTA47
Lab Sample ID G128-2058-2A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-30-2007 14:15
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 5.55 g
%Solids: 91.3

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.0504**	0.0492	0.00681	1	11/6/2007	
Benzene	BQL	0.00492	0.00105	1	11/6/2007	
Bromobenzene	BQL	0.00492	0.00101	1	11/6/2007	
Bromochloromethane	BQL	0.00492	0.00169	1	11/6/2007	
Bromodichloromethane	BQL	0.00492	0.00098	1	11/6/2007	
Bromoform	BQL	0.00492	0.00099	1	11/6/2007	
Bromomethane	BQL	0.00492	0.00103	1	11/6/2007	
2-Butanone	BQL	0.0246	0.00535	1	11/6/2007	
n-Butylbenzene	**0.0302**	0.00492	0.00094	1	11/6/2007	
sec-Butylbenzene	**0.0589**	0.00492	0.00100	1	11/6/2007	
tert-Butylbenzene	BQL	0.00492	0.00110	1	11/6/2007	
Carbon disulfide	BQL	0.00492	0.00264	1	11/6/2007	
Carbon tetrachloride	BQL	0.00492	0.00100	1	11/6/2007	
Chlorobenzene	BQL	0.00492	0.00117	1	11/6/2007	
Chloroethane	BQL	0.00492	0.00157	1	11/6/2007	
Chloroform	BQL	0.00492	0.00118	1	11/6/2007	
Chloromethane	BQL	0.00492	0.00111	1	11/6/2007	
2-Chlorotoluene	BQL	0.00492	0.00100	1	11/6/2007	
4-Chlorotoluene	BQL	0.00492	0.00123	1	11/6/2007	
Dibromochloromethane	BQL	0.00492	0.00136	1	11/6/2007	
1,2-Dibromo-3-chloropropane	BQL	0.00492	0.00143	1	11/6/2007	
Dibromomethane	BQL	0.00492	0.00149	1	11/6/2007	
1,2-Dibromoethane (EDB)	BQL	0.00492	0.00111	1	11/6/2007	
1,2-Dichlorobenzene	BQL	0.00492	0.00127	1	11/6/2007	
1,3-Dichlorobenzene	BQL	0.00492	0.00126	1	11/6/2007	
1,4-Dichlorobenzene	BQL	0.00492	0.00103	1	11/6/2007	
trans-1,4-Dichloro-2-butene	BQL	0.00492	0.00136	1	11/6/2007	
1,1-Dichloroethane	BQL	0.00492	0.00104	1	11/6/2007	
1,1-Dichloroethene	BQL	0.00492	0.00146	1	11/6/2007	
1,2-Dichloroethane	BQL	0.00492	0.00130	1	11/6/2007	
cis-1,2-Dichloroethene	BQL	0.00492	0.00126	1	11/6/2007	
trans-1,2-dichloroethene	BQL	0.00492	0.00111	1	11/6/2007	
1,2-Dichloropropane	BQL	0.00492	0.00116	1	11/6/2007	
1,3-Dichloropropane	BQL	0.00492	0.00110	1	11/6/2007	
2,2-Dichloropropane	BQL	0.00492	0.00118	1	11/6/2007	
1,1-Dichloropropene	BQL	0.00492	0.00155	1	11/6/2007	
cis-1,3-Dichloropropene	BQL	0.00492	0.00082	1	11/6/2007	
trans-1,3-Dichloropropene	BQL	0.00492	0.00095	1	11/6/2007	
Dichlorodifluoromethane	BQL	0.00492	0.00130	1	11/6/2007	
Diisopropyl ether (DIPE)	BQL	0.00492	0.00111	1	11/6/2007	
Ethylbenzene	BQL	0.00492	0.00085	1	11/6/2007	
Hexachlorobutadiene	BQL	0.00492	0.00096	1	11/6/2007	

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-MW02 (3.5-5)
Client Project ID: USTA47
Lab Sample ID G128-2058-2A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-30-2007 14:15
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 5.55 g
%Solids: 91.3

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
2-Hexanone	BQL	0.00492	0.00319	1	11/6/2007	
Iodomethane	BQL	0.00492	0.00106	1	11/6/2007	
Isopropylbenzene	**0.0195**	0.00492	0.00088	1	11/6/2007	
4-Isopropyltoluene	BQL	0.00492	0.00105	1	11/6/2007	
Methylene chloride	BQL	0.0197	0.00117	1	11/6/2007	
4-Methyl-2-pentanone	BQL	0.00492	0.00456	1	11/6/2007	
Methyl-tert-butyl ether (MTBE)	BQL	0.00492	0.00109	1	11/6/2007	
Naphthalene	BQL	0.00492	0.00084	1	11/6/2007	
n-Propyl benzene	**0.0400**	0.00492	0.00124	1	11/6/2007	
Styrene	BQL	0.00492	0.00108	1	11/6/2007	
1,1,1,2-Tetrachloroethane	BQL	0.00492	0.00100	1	11/6/2007	
1,1,2,2-Tetrachloroethane	BQL	0.00492	0.00111	1	11/6/2007	
Tetrachloroethene	BQL	0.00492	0.00090	1	11/6/2007	
Toluene	BQL	0.00492	0.00098	1	11/6/2007	
1,2,3-Trichlorobenzene	BQL	0.00492	0.00102	1	11/6/2007	
1,2,4-Trichlorobenzene	BQL	0.00492	0.00101	1	11/6/2007	
Trichloroethene	BQL	0.00492	0.00094	1	11/6/2007	
1,1,1-Trichloroethane	BQL	0.00492	0.00111	1	11/6/2007	
1,1,2-Trichloroethane	BQL	0.00492	0.00162	1	11/6/2007	
Trichlorofluoromethane	BQL	0.00492	0.00101	1	11/6/2007	
1,2,3-Trichloropropane	BQL	0.00492	0.00122	1	11/6/2007	
1,2,4-Trimethylbenzene	BQL	0.00492	0.00124	1	11/6/2007	
1,3,5-Trimethylbenzene	BQL	0.00492	0.00112	1	11/6/2007	
Vinyl chloride	BQL	0.00492	0.00134	1	11/6/2007	
m-,p-Xylene	BQL	0.00985	0.00189	1	11/6/2007	
o-Xylene	BQL	0.00492	0.00095	1	11/6/2007	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	0.05	0.0583	117
Toluene-d8	0.05	0.0534	107
4-Bromofluorobenzene	0.05	0.0628	126

Comments:

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

Reviewed By: 

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-SS01 (2-3)
Client Project ID: USTA47
Lab Sample ID G128-2058-3A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-31-2007 10:10
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 5.13 g
%Solids: 90.4

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	BQL	0.0538	0.00744	1	11/6/2007	
Benzene	BQL	0.00538	0.00115	1	11/6/2007	
Bromobenzene	BQL	0.00538	0.00111	1	11/6/2007	
Bromochloromethane	BQL	0.00538	0.00185	1	11/6/2007	
Bromodichloromethane	BQL	0.00538	0.00107	1	11/6/2007	
Bromoform	BQL	0.00538	0.00108	1	11/6/2007	
Bromomethane	BQL	0.00538	0.00113	1	11/6/2007	
2-Butanone	BQL	0.0269	0.00585	1	11/6/2007	
n-Butylbenzene	BQL	0.00538	0.00103	1	11/6/2007	
sec-Butylbenzene	BQL	0.00538	0.00109	1	11/6/2007	
tert-Butylbenzene	BQL	0.00538	0.00121	1	11/6/2007	
Carbon disulfide	BQL	0.00538	0.00289	1	11/6/2007	
Carbon tetrachloride	BQL	0.00538	0.00110	1	11/6/2007	
Chlorobenzene	BQL	0.00538	0.00128	1	11/6/2007	
Chloroethane	BQL	0.00538	0.00171	1	11/6/2007	
Chloroform	BQL	0.00538	0.00129	1	11/6/2007	
Chloromethane	BQL	0.00538	0.00122	1	11/6/2007	
2-Chlorotoluene	BQL	0.00538	0.00109	1	11/6/2007	
4-Chlorotoluene	BQL	0.00538	0.00135	1	11/6/2007	
Dibromochloromethane	BQL	0.00538	0.00149	1	11/6/2007	
1,2-Dibromo-3-chloropropane	BQL	0.00538	0.00156	1	11/6/2007	
Dibromomethane	BQL	0.00538	0.00163	1	11/6/2007	
1,2-Dibromoethane (EDB)	BQL	0.00538	0.00122	1	11/6/2007	
1,2-Dichlorobenzene	BQL	0.00538	0.00139	1	11/6/2007	
1,3-Dichlorobenzene	BQL	0.00538	0.00138	1	11/6/2007	
1,4-Dichlorobenzene	BQL	0.00538	0.00113	1	11/6/2007	
trans-1,4-Dichloro-2-butene	BQL	0.00538	0.00149	1	11/6/2007	
1,1-Dichloroethane	BQL	0.00538	0.00114	1	11/6/2007	
1,1-Dichloroethene	BQL	0.00538	0.00159	1	11/6/2007	
1,2-Dichloroethane	BQL	0.00538	0.00142	1	11/6/2007	
cis-1,2-Dichloroethene	BQL	0.00538	0.00138	1	11/6/2007	
trans-1,2-dichloroethene	BQL	0.00538	0.00122	1	11/6/2007	
1,2-Dichloropropane	BQL	0.00538	0.00127	1	11/6/2007	
1,3-Dichloropropane	BQL	0.00538	0.00121	1	11/6/2007	
2,2-Dichloropropane	BQL	0.00538	0.00129	1	11/6/2007	
1,1-Dichloropropene	BQL	0.00538	0.00169	1	11/6/2007	
cis-1,3-Dichloropropene	BQL	0.00538	0.00090	1	11/6/2007	
trans-1,3-Dichloropropene	BQL	0.00538	0.00104	1	11/6/2007	
Dichlorodifluoromethane	BQL	0.00538	0.00142	1	11/6/2007	
Diisopropyl ether (DIPE)	BQL	0.00538	0.00122	1	11/6/2007	
Ethylbenzene	BQL	0.00538	0.00093	1	11/6/2007	
Hexachlorobutadiene	BQL	0.00538	0.00105	1	11/6/2007	

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-SS01 (2-3)
Client Project ID: USTA47
Lab Sample ID G128-2058-3A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-31-2007 10:10
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 5.13 g
%Solids: 90.4

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
2-Hexanone	BQL	0.00538	0.00349	1	11/6/2007	
Iodomethane	BQL	0.00538	0.00116	1	11/6/2007	
Isopropylbenzene	BQL	0.00538	0.00096	1	11/6/2007	
4-Isopropyltoluene	BQL	0.00538	0.00115	1	11/6/2007	
Methylene chloride	BQL	0.0215	0.00128	1	11/6/2007	
4-Methyl-2-pentanone	BQL	0.00538	0.00498	1	11/6/2007	
Methyl-tert-butyl ether (MTBE)	BQL	0.00538	0.00120	1	11/6/2007	
Naphthalene	BQL	0.00538	0.00092	1	11/6/2007	
n-Propyl benzene	BQL	0.00538	0.00136	1	11/6/2007	
Styrene	BQL	0.00538	0.00118	1	11/6/2007	
1,1,1,2-Tetrachloroethane	BQL	0.00538	0.00110	1	11/6/2007	
1,1,2,2-Tetrachloroethane	BQL	0.00538	0.00122	1	11/6/2007	
Tetrachloroethene	BQL	0.00538	0.00099	1	11/6/2007	
Toluene	BQL	0.00538	0.00107	1	11/6/2007	
1,2,3-Trichlorobenzene	BQL	0.00538	0.00112	1	11/6/2007	
1,2,4-Trichlorobenzene	BQL	0.00538	0.00111	1	11/6/2007	
Trichloroethene	BQL	0.00538	0.00103	1	11/6/2007	
1,1,1-Trichloroethane	BQL	0.00538	0.00122	1	11/6/2007	
1,1,2-Trichloroethane	BQL	0.00538	0.00177	1	11/6/2007	
Trichlorofluoromethane	BQL	0.00538	0.00111	1	11/6/2007	
1,2,3-Trichloropropane	BQL	0.00538	0.00134	1	11/6/2007	
1,2,4-Trimethylbenzene	BQL	0.00538	0.00136	1	11/6/2007	
1,3,5-Trimethylbenzene	BQL	0.00538	0.00123	1	11/6/2007	
Vinyl chloride	BQL	0.00538	0.00146	1	11/6/2007	
m-,p-Xylene	BQL	0.0108	0.00207	1	11/6/2007	
o-Xylene	BQL	0.00538	0.00104	1	11/6/2007	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	0.05	0.058	116
Toluene-d8	0.05	0.0487	97
4-Bromofluorobenzene	0.05	0.0529	106

Comments:

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

Reviewed By: 

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-SS02 (3-4)
Client Project ID: USTA47
Lab Sample ID G128-2058-4A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-31-2007 09:00
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 5.09 g
%Solids: 91.1

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.0959**	0.0538	0.00744	1	11/6/2007	
Benzene	BQL	0.00538	0.00115	1	11/6/2007	
Bromobenzene	BQL	0.00538	0.00111	1	11/6/2007	
Bromochloromethane	BQL	0.00538	0.00185	1	11/6/2007	
Bromodichloromethane	BQL	0.00538	0.00107	1	11/6/2007	
Bromoform	BQL	0.00538	0.00108	1	11/6/2007	
Bromomethane	BQL	0.00538	0.00113	1	11/6/2007	
2-Butanone	**0.0127**	0.0269	0.00585	1	11/6/2007	J
n-Butylbenzene	**0.0201**	0.00538	0.00103	1	11/6/2007	
sec-Butylbenzene	**0.0335**	0.00538	0.00109	1	11/6/2007	
tert-Butylbenzene	BQL	0.00538	0.00121	1	11/6/2007	
Carbon disulfide	BQL	0.00538	0.00289	1	11/6/2007	
Carbon tetrachloride	BQL	0.00538	0.00110	1	11/6/2007	
Chlorobenzene	BQL	0.00538	0.00128	1	11/6/2007	
Chloroethane	BQL	0.00538	0.00171	1	11/6/2007	
Chloroform	BQL	0.00538	0.00129	1	11/6/2007	
Chloromethane	BQL	0.00538	0.00122	1	11/6/2007	
2-Chlorotoluene	BQL	0.00538	0.00109	1	11/6/2007	
4-Chlorotoluene	BQL	0.00538	0.00135	1	11/6/2007	
Dibromochloromethane	BQL	0.00538	0.00149	1	11/6/2007	
1,2-Dibromo-3-chloropropane	BQL	0.00538	0.00156	1	11/6/2007	
Dibromomethane	BQL	0.00538	0.00163	1	11/6/2007	
1,2-Dibromoethane (EDB)	BQL	0.00538	0.00122	1	11/6/2007	
1,2-Dichlorobenzene	BQL	0.00538	0.00139	1	11/6/2007	
1,3-Dichlorobenzene	BQL	0.00538	0.00138	1	11/6/2007	
1,4-Dichlorobenzene	BQL	0.00538	0.00113	1	11/6/2007	
trans-1,4-Dichloro-2-butene	BQL	0.00538	0.00149	1	11/6/2007	
1,1-Dichloroethane	BQL	0.00538	0.00114	1	11/6/2007	
1,1-Dichloroethene	BQL	0.00538	0.00159	1	11/6/2007	
1,2-Dichloroethane	BQL	0.00538	0.00142	1	11/6/2007	
cis-1,2-Dichloroethene	BQL	0.00538	0.00138	1	11/6/2007	
trans-1,2-dichloroethene	BQL	0.00538	0.00122	1	11/6/2007	
1,2-Dichloropropane	BQL	0.00538	0.00127	1	11/6/2007	
1,3-Dichloropropane	BQL	0.00538	0.00121	1	11/6/2007	
2,2-Dichloropropane	BQL	0.00538	0.00129	1	11/6/2007	
1,1-Dichloropropene	BQL	0.00538	0.00169	1	11/6/2007	
cis-1,3-Dichloropropene	BQL	0.00538	0.00090	1	11/6/2007	
trans-1,3-Dichloropropene	BQL	0.00538	0.00104	1	11/6/2007	
Dichlorodifluoromethane	BQL	0.00538	0.00142	1	11/6/2007	
Diisopropyl ether (DIPE)	BQL	0.00538	0.00122	1	11/6/2007	
Ethylbenzene	**0.00244**	0.00538	0.00093	1	11/6/2007	J
Hexachlorobutadiene	BQL	0.00538	0.00105	1	11/6/2007	

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-SS02 (3-4)
Client Project ID: USTA47
Lab Sample ID G128-2058-4A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-31-2007 09:00
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 5.09 g
%Solids: 91.1

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
2-Hexanone	BQL	0.00538	0.00349	1	11/6/2007	
Iodomethane	BQL	0.00538	0.00116	1	11/6/2007	
Isopropylbenzene	**0.00822**	0.00538	0.00096	1	11/6/2007	
4-Isopropyltoluene	BQL	0.00538	0.00115	1	11/6/2007	
Methylene chloride	BQL	0.0215	0.00128	1	11/6/2007	
4-Methyl-2-pentanone	BQL	0.00538	0.00499	1	11/6/2007	
Methyl-tert-butyl ether (MTBE)	BQL	0.00538	0.00120	1	11/6/2007	
Naphthalene	BQL	0.00538	0.00092	1	11/6/2007	
n-Propyl benzene	**0.0189**	0.00538	0.00136	1	11/6/2007	
Styrene	BQL	0.00538	0.00118	1	11/6/2007	
1,1,1,2-Tetrachloroethane	BQL	0.00538	0.00110	1	11/6/2007	
1,1,2,2-Tetrachloroethane	BQL	0.00538	0.00122	1	11/6/2007	
Tetrachloroethene	BQL	0.00538	0.00099	1	11/6/2007	
Toluene	BQL	0.00538	0.00107	1	11/6/2007	
1,2,3-Trichlorobenzene	BQL	0.00538	0.00112	1	11/6/2007	
1,2,4-Trichlorobenzene	BQL	0.00538	0.00111	1	11/6/2007	
Trichloroethene	BQL	0.00538	0.00103	1	11/6/2007	
1,1,1-Trichloroethane	BQL	0.00538	0.00122	1	11/6/2007	
1,1,2-Trichloroethane	BQL	0.00538	0.00177	1	11/6/2007	
Trichlorofluoromethane	BQL	0.00538	0.00111	1	11/6/2007	
1,2,3-Trichloropropane	BQL	0.00538	0.00134	1	11/6/2007	
1,2,4-Trimethylbenzene	BQL	0.00538	0.00136	1	11/6/2007	
1,3,5-Trimethylbenzene	BQL	0.00538	0.00123	1	11/6/2007	
Vinyl chloride	BQL	0.00538	0.00146	1	11/6/2007	
m-,p-Xylene	BQL	0.0108	0.00207	1	11/6/2007	
o-Xylene	BQL	0.00538	0.00104	1	11/6/2007	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	0.05	0.0576	115
Toluene-d8	0.05	0.0531	106
4-Bromofluorobenzene	0.05	0.0563	113

Comments:

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

Reviewed By: 

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-SS03 (5-6)
Client Project ID: USTA47
Lab Sample ID G128-2058-5A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-31-2007 11:10
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 6.21 g
%Solids: 83.7

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.0112**	0.0481	0.00665	1	11/6/2007	J
Benzene	BQL	0.00481	0.00103	1	11/6/2007	
Bromobenzene	BQL	0.00481	0.00099	1	11/6/2007	
Bromochloromethane	BQL	0.00481	0.00166	1	11/6/2007	
Bromodichloromethane	BQL	0.00481	0.00096	1	11/6/2007	
Bromoform	BQL	0.00481	0.00096	1	11/6/2007	
Bromomethane	BQL	0.00481	0.00101	1	11/6/2007	
2-Butanone	BQL	0.0241	0.00523	1	11/6/2007	
n-Butylbenzene	BQL	0.00481	0.00092	1	11/6/2007	
sec-Butylbenzene	BQL	0.00481	0.00097	1	11/6/2007	
tert-Butylbenzene	BQL	0.00481	0.00108	1	11/6/2007	
Carbon disulfide	BQL	0.00481	0.00258	1	11/6/2007	
Carbon tetrachloride	BQL	0.00481	0.00098	1	11/6/2007	
Chlorobenzene	BQL	0.00481	0.00115	1	11/6/2007	
Chloroethane	BQL	0.00481	0.00153	1	11/6/2007	
Chloroform	BQL	0.00481	0.00116	1	11/6/2007	
Chloromethane	BQL	0.00481	0.00109	1	11/6/2007	
2-Chlorotoluene	BQL	0.00481	0.00097	1	11/6/2007	
4-Chlorotoluene	BQL	0.00481	0.00120	1	11/6/2007	
Dibromochloromethane	BQL	0.00481	0.00133	1	11/6/2007	
1,2-Dibromo-3-chloropropane	BQL	0.00481	0.00140	1	11/6/2007	
Dibromomethane	BQL	0.00481	0.00145	1	11/6/2007	
1,2-Dibromoethane (EDB)	BQL	0.00481	0.00109	1	11/6/2007	
1,2-Dichlorobenzene	BQL	0.00481	0.00124	1	11/6/2007	
1,3-Dichlorobenzene	BQL	0.00481	0.00123	1	11/6/2007	
1,4-Dichlorobenzene	BQL	0.00481	0.00101	1	11/6/2007	
trans-1,4-Dichloro-2-butene	BQL	0.00481	0.00133	1	11/6/2007	
1,1-Dichloroethane	BQL	0.00481	0.00102	1	11/6/2007	
1,1-Dichloroethene	BQL	0.00481	0.00142	1	11/6/2007	
1,2-Dichloroethane	BQL	0.00481	0.00127	1	11/6/2007	
cis-1,2-Dichloroethene	BQL	0.00481	0.00123	1	11/6/2007	
trans-1,2-dichloroethene	BQL	0.00481	0.00109	1	11/6/2007	
1,2-Dichloropropane	BQL	0.00481	0.00114	1	11/6/2007	
1,3-Dichloropropane	BQL	0.00481	0.00108	1	11/6/2007	
2,2-Dichloropropane	BQL	0.00481	0.00116	1	11/6/2007	
1,1-Dichloropropene	BQL	0.00481	0.00151	1	11/6/2007	
cis-1,3-Dichloropropene	BQL	0.00481	0.00080	1	11/6/2007	
trans-1,3-Dichloropropene	BQL	0.00481	0.00093	1	11/6/2007	
Dichlorodifluoromethane	BQL	0.00481	0.00127	1	11/6/2007	
Diisopropyl ether (DIPE)	BQL	0.00481	0.00109	1	11/6/2007	
Ethylbenzene	BQL	0.00481	0.00083	1	11/6/2007	
Hexachlorobutadiene	BQL	0.00481	0.00094	1	11/6/2007	

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-SS03 (5-6)
Client Project ID: USTA47
Lab Sample ID G128-2058-5A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-31-2007 11:10
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 6.21 g
%Solids: 83.7

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
2-Hexanone	BQL	0.00481	0.00312	1	11/6/2007	
Iodomethane	BQL	0.00481	0.00104	1	11/6/2007	
Isopropylbenzene	BQL	0.00481	0.00086	1	11/6/2007	
4-Isopropyltoluene	BQL	0.00481	0.00103	1	11/6/2007	
Methylene chloride	BQL	0.0193	0.00115	1	11/6/2007	
4-Methyl-2-pentanone	BQL	0.00481	0.00446	1	11/6/2007	
Methyl-tert-butyl ether (MTBE)	BQL	0.00481	0.00107	1	11/6/2007	
Naphthalene	**0.00289**	0.00481	0.00082	1	11/6/2007	J
n-Propyl benzene	BQL	0.00481	0.00121	1	11/6/2007	
Styrene	BQL	0.00481	0.00106	1	11/6/2007	
1,1,1,2-Tetrachloroethane	BQL	0.00481	0.00098	1	11/6/2007	
1,1,2,2-Tetrachloroethane	BQL	0.00481	0.00109	1	11/6/2007	
Tetrachloroethene	BQL	0.00481	0.00088	1	11/6/2007	
Toluene	BQL	0.00481	0.00096	1	11/6/2007	
1,2,3-Trichlorobenzene	BQL	0.00481	0.00100	1	11/6/2007	
1,2,4-Trichlorobenzene	BQL	0.00481	0.00099	1	11/6/2007	
Trichloroethene	BQL	0.00481	0.00092	1	11/6/2007	
1,1,1-Trichloroethane	BQL	0.00481	0.00109	1	11/6/2007	
1,1,2-Trichloroethane	BQL	0.00481	0.00158	1	11/6/2007	
Trichlorofluoromethane	BQL	0.00481	0.00099	1	11/6/2007	
1,2,3-Trichloropropane	BQL	0.00481	0.00119	1	11/6/2007	
1,2,4-Trimethylbenzene	BQL	0.00481	0.00121	1	11/6/2007	
1,3,5-Trimethylbenzene	BQL	0.00481	0.00110	1	11/6/2007	
Vinyl chloride	BQL	0.00481	0.00131	1	11/6/2007	
m-,p-Xylene	BQL	0.00963	0.00185	1	11/6/2007	
o-Xylene	BQL	0.00481	0.00093	1	11/6/2007	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	0.05	0.0573	115
Toluene-d8	0.05	0.0496	99
4-Bromofluorobenzene	0.05	0.0522	104

Comments:

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

Reviewed By:

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-SS04 (1-2)
Client Project ID: USTA47
Lab Sample ID G128-2058-6A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-31-2007 10:45
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 5.42 g
%Solids: 87.4

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.0698**	0.0527	0.00728	1	11/6/2007	
Benzene	BQL	0.00527	0.00113	1	11/6/2007	
Bromobenzene	BQL	0.00527	0.00109	1	11/6/2007	
Bromochloromethane	BQL	0.00527	0.00181	1	11/6/2007	
Bromodichloromethane	BQL	0.00527	0.00105	1	11/6/2007	
Bromoform	BQL	0.00527	0.00105	1	11/6/2007	
Bromomethane	BQL	0.00527	0.00111	1	11/6/2007	
2-Butanone	BQL	0.0263	0.00572	1	11/6/2007	
n-Butylbenzene	BQL	0.00527	0.00101	1	11/6/2007	
sec-Butylbenzene	BQL	0.00527	0.00106	1	11/6/2007	
tert-Butylbenzene	BQL	0.00527	0.00118	1	11/6/2007	
Carbon disulfide	BQL	0.00527	0.00282	1	11/6/2007	
Carbon tetrachloride	BQL	0.00527	0.00107	1	11/6/2007	
Chlorobenzene	BQL	0.00527	0.00125	1	11/6/2007	
Chloroethane	BQL	0.00527	0.00168	1	11/6/2007	
Chloroform	BQL	0.00527	0.00126	1	11/6/2007	
Chloromethane	BQL	0.00527	0.00119	1	11/6/2007	
2-Chlorotoluene	BQL	0.00527	0.00106	1	11/6/2007	
4-Chlorotoluene	BQL	0.00527	0.00132	1	11/6/2007	
Dibromochloromethane	BQL	0.00527	0.00145	1	11/6/2007	
1,2-Dibromo-3-chloropropane	BQL	0.00527	0.00153	1	11/6/2007	
Dibromomethane	BQL	0.00527	0.00159	1	11/6/2007	
1,2-Dibromoethane (EDB)	BQL	0.00527	0.00119	1	11/6/2007	
1,2-Dichlorobenzene	BQL	0.00527	0.00136	1	11/6/2007	
1,3-Dichlorobenzene	BQL	0.00527	0.00135	1	11/6/2007	
1,4-Dichlorobenzene	BQL	0.00527	0.00111	1	11/6/2007	
trans-1,4-Dichloro-2-butene	BQL	0.00527	0.00145	1	11/6/2007	
1,1-Dichloroethane	BQL	0.00527	0.00112	1	11/6/2007	
1,1-Dichloroethene	BQL	0.00527	0.00156	1	11/6/2007	
1,2-Dichloroethane	BQL	0.00527	0.00139	1	11/6/2007	
cis-1,2-Dichloroethene	BQL	0.00527	0.00135	1	11/6/2007	
trans-1,2-dichloroethene	BQL	0.00527	0.00119	1	11/6/2007	
1,2-Dichloropropane	BQL	0.00527	0.00124	1	11/6/2007	
1,3-Dichloropropane	BQL	0.00527	0.00118	1	11/6/2007	
2,2-Dichloropropane	BQL	0.00527	0.00126	1	11/6/2007	
1,1-Dichloropropene	BQL	0.00527	0.00165	1	11/6/2007	
cis-1,3-Dichloropropene	BQL	0.00527	0.00088	1	11/6/2007	
trans-1,3-Dichloropropene	BQL	0.00527	0.00101	1	11/6/2007	
Dichlorodifluoromethane	BQL	0.00527	0.00139	1	11/6/2007	
Diisopropyl ether (DIPE)	BQL	0.00527	0.00119	1	11/6/2007	
Ethylbenzene	BQL	0.00527	0.00091	1	11/6/2007	
Hexachlorobutadiene	BQL	0.00527	0.00103	1	11/6/2007	

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-SS04 (1-2)
Client Project ID: USTA47
Lab Sample ID G128-2058-6A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-31-2007 10:45
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 5.42 g
%Solids: 87.4

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
2-Hexanone	BQL	0.00527	0.00341	1	11/6/2007	
Iodomethane	BQL	0.00527	0.00114	1	11/6/2007	
Isopropylbenzene	BQL	0.00527	0.00094	1	11/6/2007	
4-Isopropyltoluene	BQL	0.00527	0.00113	1	11/6/2007	
Methylene chloride	BQL	0.0211	0.00125	1	11/6/2007	
4-Methyl-2-pentanone	BQL	0.00527	0.00488	1	11/6/2007	
Methyl-tert-butyl ether (MTBE)	BQL	0.00527	0.00117	1	11/6/2007	
Naphthalene	BQL	0.00527	0.00090	1	11/6/2007	
n-Propyl benzene	**0.00157**	0.00527	0.00133	1	11/6/2007	J
Styrene	BQL	0.00527	0.00116	1	11/6/2007	
1,1,1,2-Tetrachloroethane	BQL	0.00527	0.00107	1	11/6/2007	
1,1,2,2-Tetrachloroethane	BQL	0.00527	0.00119	1	11/6/2007	
Tetrachloroethene	BQL	0.00527	0.00097	1	11/6/2007	
Toluene	BQL	0.00527	0.00105	1	11/6/2007	
1,2,3-Trichlorobenzene	BQL	0.00527	0.00110	1	11/6/2007	
1,2,4-Trichlorobenzene	BQL	0.00527	0.00109	1	11/6/2007	
Trichloroethene	BQL	0.00527	0.00101	1	11/6/2007	
1,1,1-Trichloroethane	BQL	0.00527	0.00119	1	11/6/2007	
1,1,2-Trichloroethane	BQL	0.00527	0.00173	1	11/6/2007	
Trichlorofluoromethane	BQL	0.00527	0.00109	1	11/6/2007	
1,2,3-Trichloropropane	BQL	0.00527	0.00131	1	11/6/2007	
1,2,4-Trimethylbenzene	BQL	0.00527	0.00133	1	11/6/2007	
1,3,5-Trimethylbenzene	BQL	0.00527	0.00120	1	11/6/2007	
Vinyl chloride	BQL	0.00527	0.00143	1	11/6/2007	
m-,p-Xylene	BQL	0.0105	0.00202	1	11/6/2007	
o-Xylene	BQL	0.00527	0.00102	1	11/6/2007	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	0.05	0.0578	116
Toluene-d8	0.05	0.0486	97
4-Bromofluorobenzene	0.05	0.0486	97

Comments:

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

Reviewed By: 

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-SS05 (2-3)
Client Project ID: USTA47
Lab Sample ID G128-2058-7A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-31-2007 08:30
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 4.86 g
%Solids: 94.5

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	BQL	0.0544	0.00752	1	11/6/2007	
Benzene	BQL	0.00544	0.00117	1	11/6/2007	
Bromobenzene	BQL	0.00544	0.00112	1	11/6/2007	
Bromochloromethane	BQL	0.00544	0.00187	1	11/6/2007	
Bromodichloromethane	BQL	0.00544	0.00108	1	11/6/2007	
Bromoform	BQL	0.00544	0.00109	1	11/6/2007	
Bromomethane	BQL	0.00544	0.00114	1	11/6/2007	
2-Butanone	BQL	0.0272	0.00591	1	11/6/2007	
n-Butylbenzene	BQL	0.00544	0.00104	1	11/6/2007	
sec-Butylbenzene	BQL	0.00544	0.00110	1	11/6/2007	
tert-Butylbenzene	BQL	0.00544	0.00122	1	11/6/2007	
Carbon disulfide	**0.00518**	0.00544	0.00292	1	11/6/2007	J
Carbon tetrachloride	BQL	0.00544	0.00111	1	11/6/2007	
Chlorobenzene	BQL	0.00544	0.00130	1	11/6/2007	
Chloroethane	BQL	0.00544	0.00173	1	11/6/2007	
Chloroform	BQL	0.00544	0.00131	1	11/6/2007	
Chloromethane	BQL	0.00544	0.00123	1	11/6/2007	
2-Chlorotoluene	BQL	0.00544	0.00110	1	11/6/2007	
4-Chlorotoluene	BQL	0.00544	0.00136	1	11/6/2007	
Dibromochloromethane	BQL	0.00544	0.00150	1	11/6/2007	
1,2-Dibromo-3-chloropropane	BQL	0.00544	0.00158	1	11/6/2007	
Dibromomethane	BQL	0.00544	0.00164	1	11/6/2007	
1,2-Dibromoethane (EDB)	BQL	0.00544	0.00123	1	11/6/2007	
1,2-Dichlorobenzene	BQL	0.00544	0.00140	1	11/6/2007	
1,3-Dichlorobenzene	BQL	0.00544	0.00139	1	11/6/2007	
1,4-Dichlorobenzene	BQL	0.00544	0.00114	1	11/6/2007	
trans-1,4-Dichloro-2-butene	BQL	0.00544	0.00150	1	11/6/2007	
1,1-Dichloroethane	BQL	0.00544	0.00115	1	11/6/2007	
1,1-Dichloroethene	BQL	0.00544	0.00161	1	11/6/2007	
1,2-Dichloroethane	BQL	0.00544	0.00144	1	11/6/2007	
cis-1,2-Dichloroethene	BQL	0.00544	0.00139	1	11/6/2007	
trans-1,2-dichloroethene	BQL	0.00544	0.00123	1	11/6/2007	
1,2-Dichloropropane	BQL	0.00544	0.00128	1	11/6/2007	
1,3-Dichloropropane	BQL	0.00544	0.00122	1	11/6/2007	
2,2-Dichloropropane	BQL	0.00544	0.00131	1	11/6/2007	
1,1-Dichloropropene	BQL	0.00544	0.00171	1	11/6/2007	
cis-1,3-Dichloropropene	BQL	0.00544	0.00091	1	11/6/2007	
trans-1,3-Dichloropropene	BQL	0.00544	0.00105	1	11/6/2007	
Dichlorodifluoromethane	BQL	0.00544	0.00144	1	11/6/2007	
Diisopropyl ether (DIPE)	BQL	0.00544	0.00123	1	11/6/2007	
Ethylbenzene	BQL	0.00544	0.00094	1	11/6/2007	
Hexachlorobutadiene	BQL	0.00544	0.00106	1	11/6/2007	

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-SS05 (2-3)
Client Project ID: USTA47
Lab Sample ID G128-2058-7A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-31-2007 08:30
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 4.86 g
%Solids: 94.5

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
2-Hexanone	BQL	0.00544	0.00353	1	11/6/2007	
Iodomethane	BQL	0.00544	0.00118	1	11/6/2007	
Isopropylbenzene	BQL	0.00544	0.00097	1	11/6/2007	
4-Isopropyltoluene	BQL	0.00544	0.00117	1	11/6/2007	
Methylene chloride	BQL	0.0218	0.00130	1	11/6/2007	
4-Methyl-2-pentanone	BQL	0.00544	0.00504	1	11/6/2007	
Methyl-tert-butyl ether (MTBE)	BQL	0.00544	0.00121	1	11/6/2007	
Naphthalene	BQL	0.00544	0.00093	1	11/6/2007	
n-Propyl benzene	BQL	0.00544	0.00137	1	11/6/2007	
Styrene	BQL	0.00544	0.00120	1	11/6/2007	
1,1,1,2-Tetrachloroethane	BQL	0.00544	0.00111	1	11/6/2007	
1,1,2,2-Tetrachloroethane	BQL	0.00544	0.00123	1	11/6/2007	
Tetrachloroethene	BQL	0.00544	0.00100	1	11/6/2007	
Toluene	BQL	0.00544	0.00109	1	11/6/2007	
1,2,3-Trichlorobenzene	BQL	0.00544	0.00113	1	11/6/2007	
1,2,4-Trichlorobenzene	BQL	0.00544	0.00112	1	11/6/2007	
Trichloroethene	BQL	0.00544	0.00104	1	11/6/2007	
1,1,1-Trichloroethane	BQL	0.00544	0.00123	1	11/6/2007	
1,1,2-Trichloroethane	BQL	0.00544	0.00179	1	11/6/2007	
Trichlorofluoromethane	BQL	0.00544	0.00112	1	11/6/2007	
1,2,3-Trichloropropane	BQL	0.00544	0.00135	1	11/6/2007	
1,2,4-Trimethylbenzene	BQL	0.00544	0.00137	1	11/6/2007	
1,3,5-Trimethylbenzene	BQL	0.00544	0.00124	1	11/6/2007	
Vinyl chloride	BQL	0.00544	0.00148	1	11/6/2007	
m-,p-Xylene	BQL	0.0109	0.00209	1	11/6/2007	
o-Xylene	BQL	0.00544	0.00106	1	11/6/2007	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	0.05	0.0581	116
Toluene-d8	0.05	0.0485	97
4-Bromofluorobenzene	0.05	0.0511	102

Comments:

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

Reviewed By:

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-SS06 (1-2)
Client Project ID: USTA47
Lab Sample ID G128-2058-8A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-31-2007 15:00
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 5.34 g
%Solids: 85.8

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.0272**	0.0546	0.00754	1	11/6/2007	J
Benzene	BQL	0.00546	0.00117	1	11/6/2007	
Bromobenzene	BQL	0.00546	0.00112	1	11/6/2007	
Bromochloromethane	BQL	0.00546	0.00188	1	11/6/2007	
Bromodichloromethane	BQL	0.00546	0.00108	1	11/6/2007	
Bromoform	BQL	0.00546	0.00109	1	11/6/2007	
Bromomethane	BQL	0.00546	0.00115	1	11/6/2007	
2-Butanone	BQL	0.0273	0.00593	1	11/6/2007	
n-Butylbenzene	BQL	0.00546	0.00104	1	11/6/2007	
sec-Butylbenzene	BQL	0.00546	0.00110	1	11/6/2007	
tert-Butylbenzene	BQL	0.00546	0.00122	1	11/6/2007	
Carbon disulfide	**0.00418**	0.00546	0.00293	1	11/6/2007	J
Carbon tetrachloride	BQL	0.00546	0.00111	1	11/6/2007	
Chlorobenzene	BQL	0.00546	0.00130	1	11/6/2007	
Chloroethane	BQL	0.00546	0.00174	1	11/6/2007	
Chloroform	BQL	0.00546	0.00131	1	11/6/2007	
Chloromethane	BQL	0.00546	0.00123	1	11/6/2007	
2-Chlorotoluene	BQL	0.00546	0.00110	1	11/6/2007	
4-Chlorotoluene	BQL	0.00546	0.00136	1	11/6/2007	
Dibromochloromethane	BQL	0.00546	0.00151	1	11/6/2007	
1,2-Dibromo-3-chloropropane	BQL	0.00546	0.00158	1	11/6/2007	
Dibromomethane	BQL	0.00546	0.00165	1	11/6/2007	
1,2-Dibromoethane (EDB)	BQL	0.00546	0.00123	1	11/6/2007	
1,2-Dichlorobenzene	BQL	0.00546	0.00141	1	11/6/2007	
1,3-Dichlorobenzene	BQL	0.00546	0.00140	1	11/6/2007	
1,4-Dichlorobenzene	BQL	0.00546	0.00115	1	11/6/2007	
trans-1,4-Dichloro-2-butene	BQL	0.00546	0.00151	1	11/6/2007	
1,1-Dichloroethane	BQL	0.00546	0.00116	1	11/6/2007	
1,1-Dichloroethene	BQL	0.00546	0.00162	1	11/6/2007	
1,2-Dichloroethane	BQL	0.00546	0.00144	1	11/6/2007	
cis-1,2-Dichloroethene	BQL	0.00546	0.00140	1	11/6/2007	
trans-1,2-dichloroethene	BQL	0.00546	0.00123	1	11/6/2007	
1,2-Dichloropropane	BQL	0.00546	0.00129	1	11/6/2007	
1,3-Dichloropropane	BQL	0.00546	0.00122	1	11/6/2007	
2,2-Dichloropropane	BQL	0.00546	0.00131	1	11/6/2007	
1,1-Dichloropropene	BQL	0.00546	0.00171	1	11/6/2007	
cis-1,3-Dichloropropene	BQL	0.00546	0.00091	1	11/6/2007	
trans-1,3-Dichloropropene	BQL	0.00546	0.00105	1	11/6/2007	
Dichlorodifluoromethane	BQL	0.00546	0.00144	1	11/6/2007	
Diisopropyl ether (DIPE)	BQL	0.00546	0.00123	1	11/6/2007	
Ethylbenzene	BQL	0.00546	0.00095	1	11/6/2007	
Hexachlorobutadiene	BQL	0.00546	0.00106	1	11/6/2007	

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-SS06 (1-2)
Client Project ID: USTA47
Lab Sample ID G128-2058-8A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-31-2007 15:00
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 5.34 g
%Solids: 85.8

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
2-Hexanone	BQL	0.00546	0.00354	1	11/6/2007	
Iodomethane	BQL	0.00546	0.00118	1	11/6/2007	
Isopropylbenzene	BQL	0.00546	0.00097	1	11/6/2007	
4-Isopropyltoluene	BQL	0.00546	0.00117	1	11/6/2007	
Methylene chloride	BQL	0.0218	0.00130	1	11/6/2007	
4-Methyl-2-pentanone	BQL	0.00546	0.00505	1	11/6/2007	
Methyl-tert-butyl ether (MTBE)	BQL	0.00546	0.00121	1	11/6/2007	
Naphthalene	BQL	0.00546	0.00093	1	11/6/2007	
n-Propyl benzene	BQL	0.00546	0.00138	1	11/6/2007	
Styrene	BQL	0.00546	0.00120	1	11/6/2007	
1,1,1,2-Tetrachloroethane	BQL	0.00546	0.00111	1	11/6/2007	
1,1,2,2-Tetrachloroethane	BQL	0.00546	0.00123	1	11/6/2007	
Tetrachloroethene	BQL	0.00546	0.00100	1	11/6/2007	
Toluene	BQL	0.00546	0.00109	1	11/6/2007	
1,2,3-Trichlorobenzene	BQL	0.00546	0.00114	1	11/6/2007	
1,2,4-Trichlorobenzene	BQL	0.00546	0.00112	1	11/6/2007	
Trichloroethene	BQL	0.00546	0.00104	1	11/6/2007	
1,1,1-Trichloroethane	BQL	0.00546	0.00123	1	11/6/2007	
1,1,2-Trichloroethane	BQL	0.00546	0.00179	1	11/6/2007	
Trichlorofluoromethane	BQL	0.00546	0.00112	1	11/6/2007	
1,2,3-Trichloropropane	BQL	0.00546	0.00135	1	11/6/2007	
1,2,4-Trimethylbenzene	BQL	0.00546	0.00138	1	11/6/2007	
1,3,5-Trimethylbenzene	BQL	0.00546	0.00124	1	11/6/2007	
Vinyl chloride	BQL	0.00546	0.00148	1	11/6/2007	
m-,p-Xylene	BQL	0.0109	0.00210	1	11/6/2007	
o-Xylene	BQL	0.00546	0.00106	1	11/6/2007	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	0.05	0.0586	117
Toluene-d8	0.05	0.0483	97
4-Bromofluorobenzene	0.05	0.0535	107

Comments:

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

Reviewed By:

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-SS07 (4-5)
Client Project ID: USTA47
Lab Sample ID G128-2058-9A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-31-2007 09:30
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 6.34 g
%Solids: 86.4

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.0888**	0.0456	0.00630	1	11/6/2007	
Benzene	BQL	0.00456	0.00098	1	11/6/2007	
Bromobenzene	BQL	0.00456	0.00094	1	11/6/2007	
Bromochloromethane	BQL	0.00456	0.00157	1	11/6/2007	
Bromodichloromethane	BQL	0.00456	0.00090	1	11/6/2007	
Bromoform	BQL	0.00456	0.00091	1	11/6/2007	
Bromomethane	BQL	0.00456	0.00096	1	11/6/2007	
2-Butanone	BQL	0.0228	0.00495	1	11/6/2007	
n-Butylbenzene	BQL	0.00456	0.00087	1	11/6/2007	
sec-Butylbenzene	BQL	0.00456	0.00092	1	11/6/2007	
tert-Butylbenzene	BQL	0.00456	0.00102	1	11/6/2007	
Carbon disulfide	BQL	0.00456	0.00244	1	11/6/2007	
Carbon tetrachloride	BQL	0.00456	0.00093	1	11/6/2007	
Chlorobenzene	BQL	0.00456	0.00109	1	11/6/2007	
Chloroethane	BQL	0.00456	0.00145	1	11/6/2007	
Chloroform	BQL	0.00456	0.00109	1	11/6/2007	
Chloromethane	BQL	0.00456	0.00103	1	11/6/2007	
2-Chlorotoluene	BQL	0.00456	0.00092	1	11/6/2007	
4-Chlorotoluene	BQL	0.00456	0.00114	1	11/6/2007	
Dibromochloromethane	BQL	0.00456	0.00126	1	11/6/2007	
1,2-Dibromo-3-chloropropane	BQL	0.00456	0.00132	1	11/6/2007	
Dibromomethane	BQL	0.00456	0.00138	1	11/6/2007	
1,2-Dibromoethane (EDB)	BQL	0.00456	0.00103	1	11/6/2007	
1,2-Dichlorobenzene	BQL	0.00456	0.00118	1	11/6/2007	
1,3-Dichlorobenzene	BQL	0.00456	0.00117	1	11/6/2007	
1,4-Dichlorobenzene	BQL	0.00456	0.00096	1	11/6/2007	
trans-1,4-Dichloro-2-butene	BQL	0.00456	0.00126	1	11/6/2007	
1,1-Dichloroethane	BQL	0.00456	0.00097	1	11/6/2007	
1,1-Dichloroethene	BQL	0.00456	0.00135	1	11/6/2007	
1,2-Dichloroethane	BQL	0.00456	0.00120	1	11/6/2007	
cis-1,2-Dichloroethene	BQL	0.00456	0.00117	1	11/6/2007	
trans-1,2-dichloroethene	BQL	0.00456	0.00103	1	11/6/2007	
1,2-Dichloropropane	BQL	0.00456	0.00108	1	11/6/2007	
1,3-Dichloropropane	BQL	0.00456	0.00102	1	11/6/2007	
2,2-Dichloropropane	BQL	0.00456	0.00109	1	11/6/2007	
1,1-Dichloropropene	BQL	0.00456	0.00143	1	11/6/2007	
cis-1,3-Dichloropropene	BQL	0.00456	0.00076	1	11/6/2007	
trans-1,3-Dichloropropene	BQL	0.00456	0.00088	1	11/6/2007	
Dichlorodifluoromethane	BQL	0.00456	0.00120	1	11/6/2007	
Diisopropyl ether (DIPE)	BQL	0.00456	0.00103	1	11/6/2007	
Ethylbenzene	BQL	0.00456	0.00079	1	11/6/2007	
Hexachlorobutadiene	BQL	0.00456	0.00089	1	11/6/2007	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-SS07 (4-5)
Client Project ID: USTA47
Lab Sample ID G128-2058-9A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-31-2007 09:30
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 6.34 g
%Solids: 86.4

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
2-Hexanone	BQL	0.00456	0.00295	1	11/6/2007	
Iodomethane	BQL	0.00456	0.00099	1	11/6/2007	
Isopropylbenzene	BQL	0.00456	0.00081	1	11/6/2007	
4-Isopropyltoluene	BQL	0.00456	0.00098	1	11/6/2007	
Methylene chloride	BQL	0.0182	0.00109	1	11/6/2007	
4-Methyl-2-pentanone	BQL	0.00456	0.00422	1	11/6/2007	
Methyl-tert-butyl ether (MTBE)	BQL	0.00456	0.00101	1	11/6/2007	
Naphthalene	BQL	0.00456	0.00078	1	11/6/2007	
n-Propyl benzene	BQL	0.00456	0.00115	1	11/6/2007	
Styrene	BQL	0.00456	0.00100	1	11/6/2007	
1,1,1,2-Tetrachloroethane	BQL	0.00456	0.00093	1	11/6/2007	
1,1,2,2-Tetrachloroethane	BQL	0.00456	0.00103	1	11/6/2007	
Tetrachloroethene	BQL	0.00456	0.00084	1	11/6/2007	
Toluene	BQL	0.00456	0.00091	1	11/6/2007	
1,2,3-Trichlorobenzene	BQL	0.00456	0.00095	1	11/6/2007	
1,2,4-Trichlorobenzene	BQL	0.00456	0.00094	1	11/6/2007	
Trichloroethene	BQL	0.00456	0.00087	1	11/6/2007	
1,1,1-Trichloroethane	BQL	0.00456	0.00103	1	11/6/2007	
1,1,2-Trichloroethane	BQL	0.00456	0.00150	1	11/6/2007	
Trichlorofluoromethane	BQL	0.00456	0.00094	1	11/6/2007	
1,2,3-Trichloropropane	BQL	0.00456	0.00113	1	11/6/2007	
1,2,4-Trimethylbenzene	BQL	0.00456	0.00115	1	11/6/2007	
1,3,5-Trimethylbenzene	BQL	0.00456	0.00104	1	11/6/2007	
Vinyl chloride	BQL	0.00456	0.00124	1	11/6/2007	
m-,p-Xylene	BQL	0.00912	0.00175	1	11/6/2007	
o-Xylene	BQL	0.00456	0.00088	1	11/6/2007	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	0.05	0.0579	116
Toluene-d8	0.05	0.0488	98
4-Bromofluorobenzene	0.05	0.0506	101

Comments:

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

Reviewed By:

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-DW01 (3-4)
Client Project ID: USTA47
Lab Sample ID G128-2058-10A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-30-2007 11:30
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 6.59 g
%Solids: 100.0

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	0.0130	0.0379	0.00523	1	11/6/2007	J
Benzene	BQL	0.00379	0.00081	1	11/6/2007	
Bromobenzene	BQL	0.00379	0.00078	1	11/6/2007	
Bromochloromethane	BQL	0.00379	0.00130	1	11/6/2007	
Bromodichloromethane	BQL	0.00379	0.00075	1	11/6/2007	
Bromoform	BQL	0.00379	0.00076	1	11/6/2007	
Bromomethane	BQL	0.00379	0.00080	1	11/6/2007	
2-Butanone	BQL	0.0189	0.00411	1	11/6/2007	
n-Butylbenzene	BQL	0.00379	0.00072	1	11/6/2007	
sec-Butylbenzene	BQL	0.00379	0.00077	1	11/6/2007	
tert-Butylbenzene	BQL	0.00379	0.00085	1	11/6/2007	
Carbon disulfide	BQL	0.00379	0.00203	1	11/6/2007	
Carbon tetrachloride	BQL	0.00379	0.00077	1	11/6/2007	
Chlorobenzene	BQL	0.00379	0.00090	1	11/6/2007	
Chloroethane	BQL	0.00379	0.00120	1	11/6/2007	
Chloroform	BQL	0.00379	0.00091	1	11/6/2007	
Chloromethane	BQL	0.00379	0.00086	1	11/6/2007	
2-Chlorotoluene	BQL	0.00379	0.00077	1	11/6/2007	
4-Chlorotoluene	BQL	0.00379	0.00095	1	11/6/2007	
Dibromochloromethane	BQL	0.00379	0.00105	1	11/6/2007	
1,2-Dibromo-3-chloropropane	BQL	0.00379	0.00110	1	11/6/2007	
Dibromomethane	BQL	0.00379	0.00114	1	11/6/2007	
1,2-Dibromoethane (EDB)	BQL	0.00379	0.00086	1	11/6/2007	
1,2-Dichlorobenzene	BQL	0.00379	0.00098	1	11/6/2007	
1,3-Dichlorobenzene	BQL	0.00379	0.00097	1	11/6/2007	
1,4-Dichlorobenzene	BQL	0.00379	0.00080	1	11/6/2007	
trans-1,4-Dichloro-2-butene	BQL	0.00379	0.00105	1	11/6/2007	
1,1-Dichloroethane	BQL	0.00379	0.00080	1	11/6/2007	
1,1-Dichloroethene	BQL	0.00379	0.00112	1	11/6/2007	
1,2-Dichloroethane	BQL	0.00379	0.00100	1	11/6/2007	
cis-1,2-Dichloroethene	BQL	0.00379	0.00097	1	11/6/2007	
trans-1,2-dichloroethene	BQL	0.00379	0.00086	1	11/6/2007	
1,2-Dichloropropane	BQL	0.00379	0.00089	1	11/6/2007	
1,3-Dichloropropane	BQL	0.00379	0.00085	1	11/6/2007	
2,2-Dichloropropane	BQL	0.00379	0.00091	1	11/6/2007	
1,1-Dichloropropene	BQL	0.00379	0.00119	1	11/6/2007	
cis-1,3-Dichloropropene	BQL	0.00379	0.00063	1	11/6/2007	
trans-1,3-Dichloropropene	BQL	0.00379	0.00073	1	11/6/2007	
Dichlorodifluoromethane	BQL	0.00379	0.00100	1	11/6/2007	
Diisopropyl ether (DIPE)	BQL	0.00379	0.00086	1	11/6/2007	
Ethylbenzene	BQL	0.00379	0.00066	1	11/6/2007	
Hexachlorobutadiene	BQL	0.00379	0.00074	1	11/6/2007	

SGS ENVIRONMENTAL SERVICES, INC.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTA47-DW01 (3-4)
Client Project ID: USTA47
Lab Sample ID G128-2058-10A
Lab Project ID: G128-2058
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 10-30-2007 11:30
Date Received: 11/1/2007
Matrix: Soil
Sample Amount: 6.59 g
%Solids: 100.0

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
2-Hexanone	BQL	0.00379	0.00245	1	11/6/2007	
Iodomethane	BQL	0.00379	0.00082	1	11/6/2007	
Isopropylbenzene	BQL	0.00379	0.00067	1	11/6/2007	
4-Isopropyltoluene	BQL	0.00379	0.00081	1	11/6/2007	
Methylene chloride	BQL	0.0152	0.00090	1	11/6/2007	
4-Methyl-2-pentanone	BQL	0.00379	0.00351	1	11/6/2007	
Methyl-tert-butyl ether (MTBE)	BQL	0.00379	0.00084	1	11/6/2007	
Naphthalene	BQL	0.00379	0.00064	1	11/6/2007	
n-Propyl benzene	BQL	0.00379	0.00096	1	11/6/2007	
Styrene	BQL	0.00379	0.00083	1	11/6/2007	
1,1,1,2-Tetrachloroethane	BQL	0.00379	0.00077	1	11/6/2007	
1,1,2,2-Tetrachloroethane	BQL	0.00379	0.00086	1	11/6/2007	
Tetrachloroethene	BQL	0.00379	0.00069	1	11/6/2007	
Toluene	BQL	0.00379	0.00076	1	11/6/2007	
1,2,3-Trichlorobenzene	BQL	0.00379	0.00079	1	11/6/2007	
1,2,4-Trichlorobenzene	BQL	0.00379	0.00078	1	11/6/2007	
Trichloroethene	BQL	0.00379	0.00072	1	11/6/2007	
1,1,1-Trichloroethane	BQL	0.00379	0.00086	1	11/6/2007	
1,1,2-Trichloroethane	BQL	0.00379	0.00124	1	11/6/2007	
Trichlorofluoromethane	BQL	0.00379	0.00078	1	11/6/2007	
1,2,3-Trichloropropane	BQL	0.00379	0.00094	1	11/6/2007	
1,2,4-Trimethylbenzene	BQL	0.00379	0.00096	1	11/6/2007	
1,3,5-Trimethylbenzene	BQL	0.00379	0.00086	1	11/6/2007	
Vinyl chloride	BQL	0.00379	0.00103	1	11/6/2007	
m-,p-Xylene	BQL	0.00758	0.00145	1	11/6/2007	
o-Xylene	BQL	0.00379	0.00073	1	11/6/2007	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	0.05	0.0592	118
Toluene-d8	0.05	0.0479	96
4-Bromofluorobenzene	0.05	0.0545	109

Comments:

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

Reviewed By:

SGS ENVIRONMENTAL SERVICES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-MW01 (1-2)
Client Project ID: USTA47
Lab Sample ID: G128-2058-1H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DES
Date Collected: 10/30/2007 12:30
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 91.06

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.342	0.049	1	11/13/2007	
Acenaphthylene	BQL	0.342	0.046	1	11/13/2007	
Anthracene	BQL	0.342	0.050	1	11/13/2007	
Benzo[a]anthracene	BQL	0.342	0.059	1	11/13/2007	
Benzo[a]pyrene	BQL	0.342	0.052	1	11/13/2007	
Benzo[b]fluoranthene	BQL	0.342	0.060	1	11/13/2007	
Benzo[g,h,i]perylene	BQL	0.342	0.093	1	11/13/2007	
Benzo[k]fluoranthene	BQL	0.342	0.066	1	11/13/2007	
Benzoic Acid	BQL	0.685	0.685	1	11/13/2007	
Bis(2-chloroethoxy)methane	BQL	0.342	0.051	1	11/13/2007	
Bis(2-chloroethyl)ether	BQL	0.342	0.041	1	11/13/2007	
Bis(2-chloroisopropyl)ether	BQL	0.342	0.043	1	11/13/2007	
Bis(2-ethylhexyl)phthalate	BQL	0.342	0.046	1	11/13/2007	
4-bromophenyl phenyl ether	BQL	0.342	0.058	1	11/13/2007	
Butylbenzylphthalate	BQL	0.342	0.053	1	11/13/2007	
2-Chloronaphthalene	BQL	0.342	0.054	1	11/13/2007	
2-Chlorophenol	BQL	0.342	0.107	1	11/13/2007	
4-Chloro-3-methylphenol	BQL	0.342	0.107	1	11/13/2007	
4-Chloroaniline	BQL	1.71	0.261	1	11/13/2007	
4-Chlorophenyl phenyl ether	BQL	0.342	0.050	1	11/13/2007	
Chrysene	BQL	0.342	0.037	1	11/13/2007	
Dibenzo[a,h]anthracene	BQL	0.342	0.096	1	11/13/2007	
Dibenzofuran	BQL	0.342	0.062	1	11/13/2007	
Di-n-Butylphthalate	BQL	0.342	0.041	1	11/13/2007	
1,2-Dichlorobenzene	BQL	0.342	0.038	1	11/13/2007	
1,3-Dichlorobenzene	BQL	0.342	0.037	1	11/13/2007	
1,4-Dichlorobenzene	BQL	0.342	0.039	1	11/13/2007	
3,3'-Dichlorobenzidine	BQL	0.685	0.086	1	11/13/2007	
2,4-Dichlorophenol	BQL	0.342	0.123	1	11/13/2007	
Diethylphthalate	BQL	0.342	0.044	1	11/13/2007	
Dimethylphthalate	BQL	0.342	0.041	1	11/13/2007	
2,4-Dimethylphenol	BQL	0.342	0.245	1	11/13/2007	
Di-n-octylphthalate	BQL	0.342	0.057	1	11/13/2007	
4,6-Dinitro-2-methylphenol	BQL	1.71	0.202	1	11/13/2007	
2,4-Dinitrophenol	BQL	1.71	0.754	1	11/13/2007	
2,4-Dinitrotoluene	BQL	0.342	0.045	1	11/13/2007	
2,6-Dinitrotoluene	BQL	0.342	0.062	1	11/13/2007	
Diphenylamine *	BQL	0.342	0.034	1	11/13/2007	
Fluoranthene	BQL	0.342	0.048	1	11/13/2007	
Fluorene	BQL	0.342	0.043	1	11/13/2007	
Hexachlorobenzene	BQL	0.342	0.053	1	11/13/2007	
Hexachlorobutadiene	BQL	0.342	0.055	1	11/13/2007	
Hexachlorocyclopentadiene	BQL	0.685	0.035	1	11/13/2007	
Hexachloroethane	BQL	0.342	0.031	1	11/13/2007	
Indeno(1,2,3-c,d)pyrene	BQL	0.342	0.088	1	11/13/2007	
Isophorone	BQL	0.342	0.050	1	11/13/2007	
2-Methylnaphthalene	BQL	0.342	0.100	1	11/13/2007	

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-MW01 (1-2)
Client Project ID: USTA47
Lab Sample ID: G128-2058-1H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DES
Date Collected: 10/30/2007 12:30
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 91.06

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
2-Methylphenol	BQL	0.342	0.121	1	11/13/2007	
3- & 4-Methylphenol	BQL	0.342	0.116	1	11/13/2007	
Naphthalene	BQL	0.342	0.028	1	11/13/2007	
2-Nitroaniline	BQL	0.342	0.054	1	11/13/2007	
3-Nitroaniline	BQL	1.71	0.353	1	11/13/2007	
4-Nitroaniline	BQL	1.71	0.105	1	11/13/2007	
Nitrobenzene	BQL	0.342	0.046	1	11/13/2007	
2-Nitrophenol	BQL	0.342	0.106	1	11/13/2007	
4-Nitrophenol	BQL	1.71	0.095	1	11/13/2007	
N-Nitrosodi-n-propylamine	BQL	0.342	0.044	1	11/13/2007	
Pentachlorophenol	BQL	1.71	0.089	1	11/13/2007	
Phenanthrene	BQL	0.342	0.039	1	11/13/2007	
Phenol	BQL	0.342	0.094	1	11/13/2007	
Pyrene	BQL	0.342	0.066	1	11/13/2007	
1,2,4-Trichlorobenzene	BQL	0.342	0.043	1	11/13/2007	
2,4,5-Trichlorophenol	BQL	0.342	0.133	1	11/13/2007	
2,4,6-Trichlorophenol	BQL	0.342	0.122	1	11/13/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.3	83
2-Fluorophenol	10	7.6	76
Nitrobenzene-d5	10	7.6	76
Phenol-d6	10	7.8	78
2,4,6-Tribromophenol	10	7.5	75
4-Terphenyl-d14	10	9.1	91

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

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

Reviewed By:

SGS ENVIRONMENTAL SERVICES, INC.

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTA47-MW01 (1-2)
Client Project ID: USTA47
Lab Sample ID: G128-2058-1H
Lab Project ID: G128-2058
Sample Wt/Vol: 32.07 g
Dilution: 1

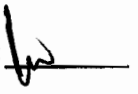
Analyzed By: DES
Date Collected: 10/30/2007 12:30
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Date Analyzed: 11/13/2007
Matrix: Soil
% Solids: 91.1

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/KG)
1	Unknown	17.55			729
2	Octadecanoic acid	16.37	000057-11-4	91	719
3	Unknown	12.23			455
4	Alkane, Unknown	13.32			329
5	Unknown	11.25			222
6	Unknown	12.07			172
7					
8					
9					
10					

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

SGS ENVIRONMENTAL SERVICES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-MW02 (3.5-5)
Client Project ID: USTA47
Lab Sample ID: G128-2058-2H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/30/2007 14:15
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 91.3

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.336	0.048	1	11/12/2007	
Acenaphthylene	BQL	0.336	0.045	1	11/12/2007	
Anthracene	BQL	0.336	0.049	1	11/12/2007	
Benzo[a]anthracene	BQL	0.336	0.058	1	11/12/2007	
Benzo[a]pyrene	BQL	0.336	0.052	1	11/12/2007	
Benzo[b]fluoranthene	BQL	0.336	0.059	1	11/12/2007	
Benzo[g,h,i]perylene	BQL	0.336	0.092	1	11/12/2007	
Benzo[k]fluoranthene	BQL	0.336	0.065	1	11/12/2007	
Benzoic Acid	BQL	0.673	0.673	1	11/12/2007	
Bis(2-chloroethoxy)methane	BQL	0.336	0.050	1	11/12/2007	
Bis(2-chloroethyl)ether	BQL	0.336	0.041	1	11/12/2007	
Bis(2-chloroisopropyl)ether	BQL	0.336	0.042	1	11/12/2007	
Bis(2-ethylhexyl)phthalate	**0.124**	0.336	0.045	1	11/12/2007	J
4-bromophenyl phenyl ether	BQL	0.336	0.057	1	11/12/2007	
Butylbenzylphthalate	BQL	0.336	0.052	1	11/12/2007	
2-Chloronaphthalene	BQL	0.336	0.053	1	11/12/2007	
2-Chlorophenol	BQL	0.336	0.105	1	11/12/2007	
4-Chloro-3-methylphenol	BQL	0.336	0.105	1	11/12/2007	
4-Chloroaniline	BQL	1.68	0.256	1	11/12/2007	
4-Chlorophenyl phenyl ether	BQL	0.336	0.049	1	11/12/2007	
Chrysene	BQL	0.336	0.036	1	11/12/2007	
Dibenzo[a,h]anthracene	BQL	0.336	0.094	1	11/12/2007	
Dibenzofuran	BQL	0.336	0.061	1	11/12/2007	
Di-n-Butylphthalate	BQL	0.336	0.040	1	11/12/2007	
1,2-Dichlorobenzene	BQL	0.336	0.037	1	11/12/2007	
1,3-Dichlorobenzene	BQL	0.336	0.037	1	11/12/2007	
1,4-Dichlorobenzene	BQL	0.336	0.038	1	11/12/2007	
3,3'-Dichlorobenzidine	BQL	0.673	0.085	1	11/12/2007	
2,4-Dichlorophenol	BQL	0.336	0.121	1	11/12/2007	
Diethylphthalate	BQL	0.336	0.043	1	11/12/2007	
Dimethylphthalate	BQL	0.336	0.041	1	11/12/2007	
2,4-Dimethylphenol	BQL	0.336	0.241	1	11/12/2007	
Di-n-octylphthalate	BQL	0.336	0.056	1	11/12/2007	
4,6-Dinitro-2-methylphenol	BQL	1.68	0.198	1	11/12/2007	
2,4-Dinitrophenol	BQL	1.68	0.741	1	11/12/2007	
2,4-Dinitrotoluene	BQL	0.336	0.044	1	11/12/2007	
2,6-Dinitrotoluene	BQL	0.336	0.061	1	11/12/2007	
Diphenylamine *	BQL	0.336	0.033	1	11/12/2007	
Fluoranthene	**0.121**	0.336	0.047	1	11/12/2007	J
Fluorene	BQL	0.336	0.042	1	11/12/2007	
Hexachlorobenzene	BQL	0.336	0.052	1	11/12/2007	
Hexachlorobutadiene	BQL	0.336	0.054	1	11/12/2007	
Hexachlorocyclopentadiene	BQL	0.673	0.035	1	11/12/2007	
Hexachloroethane	BQL	0.336	0.030	1	11/12/2007	
Indeno(1,2,3-c,d)pyrene	BQL	0.336	0.086	1	11/12/2007	
Isophorone	BQL	0.336	0.049	1	11/12/2007	
2-Methylnaphthalene	**2.49**	0.336	0.098	1	11/12/2007	

SGS ENVIRONMENTAL SERVICES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-MW02 (3.5-5)
Client Project ID: USTA47
Lab Sample ID: G128-2058-2H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/30/2007 14:15
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 91.3

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
2-Methylphenol	BQL	0.336	0.118	1	11/12/2007	
3- & 4-Methylphenol	BQL	0.336	0.114	1	11/12/2007	
Naphthalene	BQL	0.336	0.027	1	11/12/2007	
2-Nitroaniline	BQL	0.336	0.053	1	11/12/2007	
3-Nitroaniline	BQL	1.68	0.346	1	11/12/2007	
4-Nitroaniline	BQL	1.68	0.104	1	11/12/2007	
Nitrobenzene	BQL	0.336	0.045	1	11/12/2007	
2-Nitrophenol	BQL	0.336	0.104	1	11/12/2007	
4-Nitrophenol	BQL	1.68	0.093	1	11/12/2007	
N-Nitrosodi-n-propylamine	BQL	0.336	0.043	1	11/12/2007	
Pentachlorophenol	BQL	1.68	0.088	1	11/12/2007	
Phenanthrene	**0.945**	0.336	0.038	1	11/12/2007	
Phenol	BQL	0.336	0.092	1	11/12/2007	
Pyrene	**0.155**	0.336	0.065	1	11/12/2007	J
1,2,4-Trichlorobenzene	BQL	0.336	0.042	1	11/12/2007	
2,4,5-Trichlorophenol	BQL	0.336	0.130	1	11/12/2007	
2,4,6-Trichlorophenol	BQL	0.336	0.120	1	11/12/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.8	78
2-Fluorophenol	10	8.5	85
Nitrobenzene-d5	10	9.9	99
Phenol-d6	10	8.2	82
2,4,6-Tribromophenol	10	7.8	78
4-Terphenyl-d14	10	7.5	75

Comments:

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

Reviewed By: 

SGS ENVIRONMENTAL SERVICES, INC.

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTA47-MW02 (3.5-5)
Client Project ID: USTA47
Lab Sample ID: G128-2058-2H
Lab Project ID: G128-2058
Sample Wt/Vol: 32.56 g
Dilution: 1

Analyzed By: DES
Date Collected: 10/30/2007 14:15
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Date Analyzed: 11/12/2007
Matrix: Soil
% Solids: 91.3

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/KG)
1	Alkane, Unknown	9.65			1400
2	Unknown	10.39			1340
3	Unknown	9.20			1050
4	Alkane, Unknown	7.16			987
5	Alkane, Unknown	8.31			969
6	Alkane, Unknown	7.50			903
7	Alkane, Unknown	9.39			800
8	Unknown	5.93			751
9	Unknown	7.33			606
10	Alkane, Unknown	6.58			575

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

SGS ENVIRONMENTAL SERVICES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-SS01 (2-3)
Client Project ID: USTA47
Lab Sample ID: G128-2058-3H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/31/2007 10:10
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 90.35

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.343	0.049	1	11/12/2007	
Acenaphthylene	BQL	0.343	0.046	1	11/12/2007	
Anthracene	BQL	0.343	0.050	1	11/12/2007	
Benzo[a]anthracene	BQL	0.343	0.059	1	11/12/2007	
Benzo[a]pyrene	BQL	0.343	0.053	1	11/12/2007	
Benzo[b]fluoranthene	BQL	0.343	0.060	1	11/12/2007	
Benzo[g,h,i]perylene	BQL	0.343	0.093	1	11/12/2007	
Benzo[k]fluoranthene	BQL	0.343	0.066	1	11/12/2007	
Benzoic Acid	BQL	0.687	0.687	1	11/12/2007	
Bis(2-chloroethoxy)methane	BQL	0.343	0.051	1	11/12/2007	
Bis(2-chloroethyl)ether	BQL	0.343	0.042	1	11/12/2007	
Bis(2-chloroisopropyl)ether	BQL	0.343	0.043	1	11/12/2007	
Bis(2-ethylhexyl)phthalate	BQL	0.343	0.046	1	11/12/2007	
4-bromophenyl phenyl ether	BQL	0.343	0.058	1	11/12/2007	
Butylbenzylphthalate	BQL	0.343	0.053	1	11/12/2007	
2-Chloronaphthalene	BQL	0.343	0.054	1	11/12/2007	
2-Chlorophenol	BQL	0.343	0.107	1	11/12/2007	
4-Chloro-3-methylphenol	BQL	0.343	0.107	1	11/12/2007	
4-Chloroaniline	BQL	1.72	0.262	1	11/12/2007	
4-Chlorophenyl phenyl ether	BQL	0.343	0.051	1	11/12/2007	
Chrysene	BQL	0.343	0.037	1	11/12/2007	
Dibenzo[a,h]anthracene	BQL	0.343	0.096	1	11/12/2007	
Dibenzofuran	BQL	0.343	0.063	1	11/12/2007	
Di-n-Butylphthalate	BQL	0.343	0.041	1	11/12/2007	
1,2-Dichlorobenzene	BQL	0.343	0.038	1	11/12/2007	
1,3-Dichlorobenzene	BQL	0.343	0.037	1	11/12/2007	
1,4-Dichlorobenzene	BQL	0.343	0.039	1	11/12/2007	
3,3'-Dichlorobenzidine	BQL	0.687	0.087	1	11/12/2007	
2,4-Dichlorophenol	BQL	0.343	0.124	1	11/12/2007	
Diethylphthalate	BQL	0.343	0.044	1	11/12/2007	
Dimethylphthalate	BQL	0.343	0.042	1	11/12/2007	
2,4-Dimethylphenol	BQL	0.343	0.245	1	11/12/2007	
Di-n-octylphthalate	BQL	0.343	0.057	1	11/12/2007	
4,6-Dinitro-2-methylphenol	BQL	1.72	0.202	1	11/12/2007	
2,4-Dinitrophenol	BQL	1.72	0.756	1	11/12/2007	
2,4-Dinitrotoluene	BQL	0.343	0.045	1	11/12/2007	
2,6-Dinitrotoluene	BQL	0.343	0.063	1	11/12/2007	
Diphenylamine *	BQL	0.343	0.034	1	11/12/2007	
Fluoranthene	BQL	0.343	0.048	1	11/12/2007	
Fluorene	BQL	0.343	0.043	1	11/12/2007	
Hexachlorobenzene	BQL	0.343	0.053	1	11/12/2007	
Hexachlorobutadiene	BQL	0.343	0.055	1	11/12/2007	
Hexachlorocyclopentadiene	BQL	0.687	0.035	1	11/12/2007	
Hexachloroethane	BQL	0.343	0.031	1	11/12/2007	
Indeno(1,2,3-c,d)pyrene	BQL	0.343	0.088	1	11/12/2007	
Isophorone	BQL	0.343	0.051	1	11/12/2007	
2-Methylnaphthalene	BQL	0.343	0.100	1	11/12/2007	

SGS ENVIRONMENTAL SERVICES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-SS01 (2-3)
Client Project ID: USTA47
Lab Sample ID: G128-2058-3H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/31/2007 10:10
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 90.35

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
2-Methylphenol	BQL	0.343	0.121	1	11/12/2007	
3- & 4-Methylphenol	BQL	0.343	0.116	1	11/12/2007	
Naphthalene	BQL	0.343	0.028	1	11/12/2007	
2-Nitroaniline	BQL	0.343	0.054	1	11/12/2007	
3-Nitroaniline	BQL	1.72	0.354	1	11/12/2007	
4-Nitroaniline	BQL	1.72	0.106	1	11/12/2007	
Nitrobenzene	BQL	0.343	0.046	1	11/12/2007	
2-Nitrophenol	BQL	0.343	0.106	1	11/12/2007	
4-Nitrophenol	BQL	1.72	0.095	1	11/12/2007	
N-Nitrosodi-n-propylamine	BQL	0.343	0.044	1	11/12/2007	
Pentachlorophenol	BQL	1.72	0.090	1	11/12/2007	
Phenanthrene	BQL	0.343	0.039	1	11/12/2007	
Phenol	BQL	0.343	0.094	1	11/12/2007	
Pyrene	BQL	0.343	0.066	1	11/12/2007	
1,2,4-Trichlorobenzene	BQL	0.343	0.043	1	11/12/2007	
2,4,5-Trichlorophenol	BQL	0.343	0.133	1	11/12/2007	
2,4,6-Trichlorophenol	BQL	0.343	0.122	1	11/12/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.9	79
2-Fluorophenol	10	8.2	82
Nitrobenzene-d5	10	7.9	79
Phenol-d6	10	7.6	76
2,4,6-Tribromophenol	10	7.9	79
4-Terphenyl-d14	10	9.2	92

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

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

Reviewed By: 

SGS ENVIRONMENTAL SERVICES, INC.

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTA47-SS01 (2-3)
Client Project ID: USTA47
Lab Sample ID: G128-2058-3H
Lab Project ID: G128-2058
Sample Wt/Vol: 32.24 g
Dilution: 1

Analyzed By: DES
Date Collected: 10/31/2007 10:10
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Date Analyzed: 11/12/2007
Matrix: Soil
% Solids: 90.4

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/KG)
1	Unknown	11.75			5010
2	Alkane, Unknown	13.25			769
3	Alkane, Unknown	11.17			550
4	Unknown	15.42			495
5	Alkane, Unknown	11.50			420
6	Unknown	12.17			393
7	Dodecane, 2,6,10-trimethyl-	11.31	003891-98-3	91	381
8	Alkane, Unknown	12.82			295
9	Alkane, Unknown	9.61			182
10	Unknown	9.20			176

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

SGS ENVIRONMENTAL SERVICES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-SS02 (3-4)
Client Project ID: USTA47
Lab Sample ID: G128-2058-4H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/31/2007 9:00
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 91.05

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.341	0.049	1	11/12/2007	
Acenaphthylene	BQL	0.341	0.045	1	11/12/2007	
Anthracene	BQL	0.341	0.049	1	11/12/2007	
Benzo[a]anthracene	BQL	0.341	0.059	1	11/12/2007	
Benzo[a]pyrene	BQL	0.341	0.052	1	11/12/2007	
Benzo[b]fluoranthene	BQL	0.341	0.060	1	11/12/2007	
Benzo[g,h,i]perylene	BQL	0.341	0.093	1	11/12/2007	
Benzo[k]fluoranthene	BQL	0.341	0.066	1	11/12/2007	
Benzoic Acid	BQL	0.682	0.682	1	11/12/2007	
Bis(2-chloroethoxy)methane	BQL	0.341	0.051	1	11/12/2007	
Bis(2-chloroethyl)ether	BQL	0.341	0.041	1	11/12/2007	
Bis(2-chloroisopropyl)ether	BQL	0.341	0.043	1	11/12/2007	
Bis(2-ethylhexyl)phthalate	**0.109**	0.341	0.046	1	11/12/2007	J
4-bromophenyl phenyl ether	BQL	0.341	0.058	1	11/12/2007	
Butylbenzylphthalate	BQL	0.341	0.053	1	11/12/2007	
2-Chloronaphthalene	BQL	0.341	0.054	1	11/12/2007	
2-Chlorophenol	BQL	0.341	0.107	1	11/12/2007	
4-Chloro-3-methylphenol	BQL	0.341	0.106	1	11/12/2007	
4-Chloroaniline	BQL	1.70	0.260	1	11/12/2007	
4-Chlorophenyl phenyl ether	BQL	0.341	0.050	1	11/12/2007	
Chrysene	**0.085**	0.341	0.037	1	11/12/2007	J
Dibenzo[a,h]anthracene	BQL	0.341	0.095	1	11/12/2007	
Dibenzofuran	BQL	0.341	0.062	1	11/12/2007	
Di-n-Butylphthalate	BQL	0.341	0.041	1	11/12/2007	
1,2-Dichlorobenzene	BQL	0.341	0.038	1	11/12/2007	
1,3-Dichlorobenzene	BQL	0.341	0.037	1	11/12/2007	
1,4-Dichlorobenzene	BQL	0.341	0.039	1	11/12/2007	
3,3'-Dichlorobenzidine	BQL	0.682	0.086	1	11/12/2007	
2,4-Dichlorophenol	BQL	0.341	0.123	1	11/12/2007	
Diethylphthalate	BQL	0.341	0.044	1	11/12/2007	
Dimethylphthalate	BQL	0.341	0.041	1	11/12/2007	
2,4-Dimethylphenol	BQL	0.341	0.244	1	11/12/2007	
Di-n-octylphthalate	BQL	0.341	0.056	1	11/12/2007	
4,6-Dinitro-2-methylphenol	BQL	1.70	0.201	1	11/12/2007	
2,4-Dinitrophenol	BQL	1.70	0.751	1	11/12/2007	
2,4-Dinitrotoluene	BQL	0.341	0.044	1	11/12/2007	
2,6-Dinitrotoluene	BQL	0.341	0.062	1	11/12/2007	
Diphenylamine *	BQL	0.341	0.033	1	11/12/2007	
Fluoranthene	**0.099**	0.341	0.048	1	11/12/2007	J
Fluorene	**0.511**	0.341	0.042	1	11/12/2007	
Hexachlorobenzene	BQL	0.341	0.053	1	11/12/2007	
Hexachlorobutadiene	BQL	0.341	0.055	1	11/12/2007	
Hexachlorocyclopentadiene	BQL	0.682	0.035	1	11/12/2007	
Hexachloroethane	BQL	0.341	0.031	1	11/12/2007	
Indeno(1,2,3-c,d)pyrene	BQL	0.341	0.087	1	11/12/2007	
Isophorone	BQL	0.341	0.050	1	11/12/2007	
2-Methylnaphthalene	**1.79**	0.341	0.100	1	11/12/2007	

SGS ENVIRONMENTAL SERVICES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-SS02 (3-4)
Client Project ID: USTA47
Lab Sample ID: G128-2058-4H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/31/2007 9:00
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 91.05

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
2-Methylphenol	BQL	0.341	0.120	1	11/12/2007	
3- & 4-Methylphenol	BQL	0.341	0.116	1	11/12/2007	
Naphthalene	BQL	0.341	0.028	1	11/12/2007	
2-Nitroaniline	BQL	0.341	0.054	1	11/12/2007	
3-Nitroaniline	BQL	1.70	0.351	1	11/12/2007	
4-Nitroaniline	BQL	1.70	0.105	1	11/12/2007	
Nitrobenzene	BQL	0.341	0.046	1	11/12/2007	
2-Nitrophenol	BQL	0.341	0.106	1	11/12/2007	
4-Nitrophenol	BQL	1.70	0.094	1	11/12/2007	
N-Nitrosodi-n-propylamine	BQL	0.341	0.043	1	11/12/2007	
Pentachlorophenol	BQL	1.70	0.089	1	11/12/2007	
Phenanthrene	**0.818**	0.341	0.039	1	11/12/2007	
Phenol	BQL	0.341	0.093	1	11/12/2007	
Pyrene	**0.249**	0.341	0.065	1	11/12/2007	J
1,2,4-Trichlorobenzene	BQL	0.341	0.043	1	11/12/2007	
2,4,5-Trichlorophenol	BQL	0.341	0.132	1	11/12/2007	
2,4,6-Trichlorophenol	BQL	0.341	0.121	1	11/12/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.5	75
2-Fluorophenol	10	7.7	77
Nitrobenzene-d5	10	9.4	94
Phenol-d6	10	7.7	77
2,4,6-Tribromophenol	10	7.7	77
4-Terphenyl-d14	10	8.3	83

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

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

Reviewed By: 

SGS ENVIRONMENTAL SERVICES, INC.

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTA47-SS02 (3-4)
Client Project ID: USTA47
Lab Sample ID: G128-2058-4H
Lab Project ID: G128-2058
Sample Wt/Vol: 32.22 g
Dilution: 1

Analyzed By: DES
Date Collected: 10/31/2007 9:00
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Date Analyzed: 11/12/2007
Matrix: Soil
% Solids: 91.1

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/KG)
1	Undecane, 2,6-dimethyl-	9.07	017301-23-4	97	2170
2	Decane, 4-methyl-	7.00	002847-72-5	90	1850
3	Unknown	7.19			1740
4	Pentadecane, 2,6,10,14-tetramethyl-	13.33	001921-70-6	97	1440
5	Alkane, Unknown	7.16			1400
6	Alkane, Unknown	11.38			1360
7	Alkane, Unknown	9.65			1110
8	Alkane, Unknown	5.93			1050
9	Aromatic, Unknown	7.50			1000
10	Unknown	7.33			954

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

SGS ENVIRONMENTAL SERVICES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-SS03 (5-6)
Client Project ID: USTA47
Lab Sample ID: G128-2058-5H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/31/2007 11:10
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 83.65

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.367	0.053	1	11/12/2007	
Acenaphthylene	BQL	0.367	0.049	1	11/12/2007	
Anthracene	BQL	0.367	0.053	1	11/12/2007	
Benzo[a]anthracene	BQL	0.367	0.064	1	11/12/2007	
Benzo[a]pyrene	BQL	0.367	0.056	1	11/12/2007	
Benzo[b]fluoranthene	BQL	0.367	0.064	1	11/12/2007	
Benzo[g,h,i]perylene	BQL	0.367	0.100	1	11/12/2007	
Benzo[k]fluoranthene	BQL	0.367	0.071	1	11/12/2007	
Benzoic Acid	BQL	0.734	0.734	1	11/12/2007	
Bis(2-chloroethoxy)methane	BQL	0.367	0.055	1	11/12/2007	
Bis(2-chloroethyl)ether	BQL	0.367	0.044	1	11/12/2007	
Bis(2-chloroisopropyl)ether	BQL	0.367	0.046	1	11/12/2007	
Bis(2-ethylhexyl)phthalate	BQL	0.367	0.049	1	11/12/2007	
4-bromophenyl phenyl ether	BQL	0.367	0.062	1	11/12/2007	
Butylbenzylphthalate	BQL	0.367	0.057	1	11/12/2007	
2-Chloronaphthalene	BQL	0.367	0.058	1	11/12/2007	
2-Chlorophenol	BQL	0.367	0.115	1	11/12/2007	
4-Chloro-3-methylphenol	BQL	0.367	0.115	1	11/12/2007	
4-Chloroaniline	BQL	1.84	0.280	1	11/12/2007	
4-Chlorophenyl phenyl ether	BQL	0.367	0.054	1	11/12/2007	
Chrysene	BQL	0.367	0.040	1	11/12/2007	
Dibenzo[a,h]anthracene	BQL	0.367	0.103	1	11/12/2007	
Dibenzofuran	BQL	0.367	0.067	1	11/12/2007	
Di-n-Butylphthalate	BQL	0.367	0.044	1	11/12/2007	
1,2-Dichlorobenzene	BQL	0.367	0.041	1	11/12/2007	
1,3-Dichlorobenzene	BQL	0.367	0.040	1	11/12/2007	
1,4-Dichlorobenzene	BQL	0.367	0.042	1	11/12/2007	
3,3'-Dichlorobenzidine	BQL	0.734	0.093	1	11/12/2007	
2,4-Dichlorophenol	BQL	0.367	0.132	1	11/12/2007	
Diethylphthalate	BQL	0.367	0.047	1	11/12/2007	
Dimethylphthalate	BQL	0.367	0.044	1	11/12/2007	
2,4-Dimethylphenol	BQL	0.367	0.263	1	11/12/2007	
Di-n-octylphthalate	BQL	0.367	0.061	1	11/12/2007	
4,6-Dinitro-2-methylphenol	BQL	1.84	0.216	1	11/12/2007	
2,4-Dinitrophenol	BQL	1.84	0.808	1	11/12/2007	
2,4-Dinitrotoluene	BQL	0.367	0.048	1	11/12/2007	
2,6-Dinitrotoluene	BQL	0.367	0.067	1	11/12/2007	
Diphenylamine *	BQL	0.367	0.036	1	11/12/2007	
Fluoranthene	BQL	0.367	0.051	1	11/12/2007	
Fluorene	BQL	0.367	0.046	1	11/12/2007	
Hexachlorobenzene	BQL	0.367	0.057	1	11/12/2007	
Hexachlorobutadiene	BQL	0.367	0.059	1	11/12/2007	
Hexachlorocyclopentadiene	BQL	0.734	0.038	1	11/12/2007	
Hexachloroethane	BQL	0.367	0.033	1	11/12/2007	
Indeno(1,2,3-c,d)pyrene	BQL	0.367	0.094	1	11/12/2007	
Isophorone	BQL	0.367	0.054	1	11/12/2007	
2-Methylnaphthalene	BQL	0.367	0.107	1	11/12/2007	

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-SS03 (5-6)
Client Project ID: USTA47
Lab Sample ID: G128-2058-5H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/31/2007 11:10
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 83.65

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
2-Methylphenol	BQL	0.367	0.129	1	11/12/2007	
3- & 4-Methylphenol	BQL	0.367	0.124	1	11/12/2007	
Naphthalene	BQL	0.367	0.030	1	11/12/2007	
2-Nitroaniline	BQL	0.367	0.058	1	11/12/2007	
3-Nitroaniline	BQL	1.84	0.378	1	11/12/2007	
4-Nitroaniline	BQL	1.84	0.113	1	11/12/2007	
Nitrobenzene	BQL	0.367	0.050	1	11/12/2007	
2-Nitrophenol	BQL	0.367	0.114	1	11/12/2007	
4-Nitrophenol	BQL	1.84	0.102	1	11/12/2007	
N-Nitrosodi-n-propylamine	BQL	0.367	0.047	1	11/12/2007	
Pentachlorophenol	BQL	1.84	0.096	1	11/12/2007	
Phenanthrene	BQL	0.367	0.042	1	11/12/2007	
Phenol	BQL	0.367	0.101	1	11/12/2007	
Pyrene	BQL	0.367	0.071	1	11/12/2007	
1,2,4-Trichlorobenzene	BQL	0.367	0.046	1	11/12/2007	
2,4,5-Trichlorophenol	BQL	0.367	0.142	1	11/12/2007	
2,4,6-Trichlorophenol	BQL	0.367	0.131	1	11/12/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.7	77
2-Fluorophenol	10	7.9	79
Nitrobenzene-d5	10	7.5	75
Phenol-d6	10	7.7	77
2,4,6-Tribromophenol	10	7.7	77
4-Terphenyl-d14	10	9.1	91

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

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

Reviewed By:

SGS ENVIRONMENTAL SERVICES, INC.

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTA47-SS03 (5-6)
Client Project ID: USTA47
Lab Sample ID: G128-2058-5H
Lab Project ID: G128-2058
Sample Wt/Vol: 32.56 g
Dilution: 1

Analyzed By: DES
Date Collected: 10/31/2007 11:10
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Date Analyzed: 11/12/2007
Matrix: Soil
% Solids: 83.7

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/KG)
1	Unknown	17.47			663
2	Unknown	12.17			178
3					
4					
5					
6					
7					
8					
9					
10					

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-SS04 (1-2)
Client Project ID: USTA47
Lab Sample ID: G128-2058-6H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/31/2007 10:45
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 87.38

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	3.52	0.503	10	11/12/2007	
Acenaphthylene	BQL	3.52	0.468	10	11/12/2007	
Anthracene	BQL	3.52	0.510	10	11/12/2007	
Benzo[a]anthracene	**0.880**	3.52	0.609	10	11/12/2007	J
Benzo[a]pyrene	**0.915**	3.52	0.539	10	11/12/2007	J
Benzo[b]fluoranthene	**1.06**	3.52	0.616	10	11/12/2007	J
Benzo[g,h,i]perylene	BQL	3.52	0.958	10	11/12/2007	
Benzo[k]fluoranthene	BQL	3.52	0.679	10	11/12/2007	
Benzoic Acid	BQL	7.04	7.04	10	11/12/2007	
Bis(2-chloroethoxy)methane	BQL	3.52	0.525	10	11/12/2007	
Bis(2-chloroethyl)ether	BQL	3.52	0.426	10	11/12/2007	
Bis(2-chloroisopropyl)ether	BQL	3.52	0.440	10	11/12/2007	
Bis(2-ethylhexyl)phthalate	BQL	3.52	0.472	10	11/12/2007	
4-bromophenyl phenyl ether	BQL	3.52	0.595	10	11/12/2007	
Butylbenzylphthalate	BQL	3.52	0.542	10	11/12/2007	
2-Chloronaphthalene	BQL	3.52	0.553	10	11/12/2007	
2-Chlorophenol	BQL	3.52	1.10	10	11/12/2007	
4-Chloro-3-methylphenol	BQL	3.52	1.10	10	11/12/2007	
4-Chloroaniline	BQL	17.6	2.68	10	11/12/2007	
4-Chlorophenyl phenyl ether	BQL	3.52	0.517	10	11/12/2007	
Chrysene	**0.915**	3.52	0.380	10	11/12/2007	J
Dibenzo[a,h]anthracene	BQL	3.52	0.986	10	11/12/2007	
Dibenzofuran	BQL	3.52	0.641	10	11/12/2007	
Di-n-Butylphthalate	BQL	3.52	0.419	10	11/12/2007	
1,2-Dichlorobenzene	BQL	3.52	0.391	10	11/12/2007	
1,3-Dichlorobenzene	BQL	3.52	0.384	10	11/12/2007	
1,4-Dichlorobenzene	BQL	3.52	0.398	10	11/12/2007	
3,3'-Dichlorobenzidine	BQL	7.04	0.887	10	11/12/2007	
2,4-Dichlorophenol	BQL	3.52	1.27	10	11/12/2007	
Diethylphthalate	BQL	3.52	0.454	10	11/12/2007	
Dimethylphthalate	BQL	3.52	0.426	10	11/12/2007	
2,4-Dimethylphenol	BQL	3.52	2.52	10	11/12/2007	
Di-n-octylphthalate	BQL	3.52	0.581	10	11/12/2007	
4,6-Dinitro-2-methylphenol	BQL	17.6	2.07	10	11/12/2007	
2,4-Dinitrophenol	BQL	17.6	7.75	10	11/12/2007	
2,4-Dinitrotoluene	BQL	3.52	0.458	10	11/12/2007	
2,6-Dinitrotoluene	BQL	3.52	0.641	10	11/12/2007	
Diphenylamine *	BQL	3.52	0.345	10	11/12/2007	
Fluoranthene	**1.65**	3.52	0.493	10	11/12/2007	J
Fluorene	BQL	3.52	0.437	10	11/12/2007	
Hexachlorobenzene	BQL	3.52	0.542	10	11/12/2007	
Hexachlorobutadiene	BQL	3.52	0.563	10	11/12/2007	
Hexachlorocyclopentadiene	BQL	7.04	0.363	10	11/12/2007	
Hexachloroethane	BQL	3.52	0.317	10	11/12/2007	
Indeno(1,2,3-c,d)pyrene	BQL	3.52	0.901	10	11/12/2007	
Isophorone	BQL	3.52	0.517	10	11/12/2007	
2-Methylnaphthalene	BQL	3.52	1.03	10	11/12/2007	

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-SS04 (1-2)
Client Project ID: USTA47
Lab Sample ID: G128-2058-6H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/31/2007 10:45
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 87.38

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
2-Methylphenol	BQL	3.52	1.24	10	11/12/2007	
3- & 4-Methylphenol	BQL	3.52	1.19	10	11/12/2007	
Naphthalene	BQL	3.52	0.285	10	11/12/2007	
2-Nitroaniline	BQL	3.52	0.553	10	11/12/2007	
3-Nitroaniline	BQL	17.6	3.63	10	11/12/2007	
4-Nitroaniline	BQL	17.6	1.08	10	11/12/2007	
Nitrobenzene	BQL	3.52	0.475	10	11/12/2007	
2-Nitrophenol	BQL	3.52	1.09	10	11/12/2007	
4-Nitrophenol	BQL	17.6	0.975	10	11/12/2007	
N-Nitrosodi-n-propylamine	BQL	3.52	0.447	10	11/12/2007	
Pentachlorophenol	BQL	17.6	0.919	10	11/12/2007	
Phenanthrene	**0.774**	3.52	0.401	10	11/12/2007	J
Phenol	BQL	3.52	0.965	10	11/12/2007	
Pyrene	**1.72**	3.52	0.676	10	11/12/2007	J
1,2,4-Trichlorobenzene	BQL	3.52	0.440	10	11/12/2007	
2,4,5-Trichlorophenol	BQL	3.52	1.36	10	11/12/2007	
2,4,6-Trichlorophenol	BQL	3.52	1.25	10	11/12/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	1	NA	NA
2-Fluorophenol	1	NA	NA
Nitrobenzene-d5	1	NA	NA
Phenol-d6	1	NA	NA
2,4,6-Tribromophenol	1	NA	NA
4-Terphenyl-d14	1	NA	NA

Comments:
* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.
Sample reported at a dilution due to sample matrix interference.

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

Reviewed By:

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTA47-SS04 (1-2)
Client Project ID: USTA47
Lab Sample ID: G128-2058-6H
Lab Project ID: G128-2058
Sample Wt/Vol: 32.51 g
Dilution: 10

Analyzed By: DES
Date Collected: 10/31/2007 10:45
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Date Analyzed: 11/12/2007
Matrix: Soil
% Solids: 87.4

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/KG)
1	Unknown	11.75			53800
2	Unknown	11.31			9800
3	Decane, 2-methyl-	13.25	006975-98-0	90	8300
4	Unknown	11.50			5560
5	Cyclohexasiloxane, dodecamethyl-	9.85	000540-97-6	91	5200
6	Unknown	12.17			4890
7	Unknown	16.53			4550
8	Alkane, Unknown	12.82			3990
9	Alkane, Unknown	11.17			3240
10	Unknown	12.64			3080

Comment:

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Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

SGS ENVIRONMENTAL SERVICES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-SS05 (2-3)
Client Project ID: USTA47
Lab Sample ID: G128-2058-7J
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/31/2007 8:30
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 94.48

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.317	0.045	1	11/12/2007	
Acenaphthylene	BQL	0.317	0.042	1	11/12/2007	
Anthracene	BQL	0.317	0.046	1	11/12/2007	
Benzo[a]anthracene	BQL	0.317	0.055	1	11/12/2007	
Benzo[a]pyrene	BQL	0.317	0.049	1	11/12/2007	
Benzo[b]fluoranthene	BQL	0.317	0.056	1	11/12/2007	
Benzo[g,h,i]perylene	BQL	0.317	0.086	1	11/12/2007	
Benzo[k]fluoranthene	BQL	0.317	0.061	1	11/12/2007	
Benzoic Acid	BQL	0.634	0.634	1	11/12/2007	
Bis(2-chloroethoxy)methane	BQL	0.317	0.047	1	11/12/2007	
Bis(2-chloroethyl)ether	BQL	0.317	0.038	1	11/12/2007	
Bis(2-chloroisopropyl)ether	BQL	0.317	0.040	1	11/12/2007	
Bis(2-ethylhexyl)phthalate	**0.273**	0.317	0.043	1	11/12/2007	J
4-bromophenyl phenyl ether	BQL	0.317	0.054	1	11/12/2007	
Butylbenzylphthalate	BQL	0.317	0.049	1	11/12/2007	
2-Chloronaphthalene	BQL	0.317	0.050	1	11/12/2007	
2-Chlorophenol	BQL	0.317	0.099	1	11/12/2007	
4-Chloro-3-methylphenol	BQL	0.317	0.099	1	11/12/2007	
4-Chloroaniline	BQL	1.58	0.241	1	11/12/2007	
4-Chlorophenyl phenyl ether	BQL	0.317	0.047	1	11/12/2007	
Chrysene	BQL	0.317	0.034	1	11/12/2007	
Dibenzo[a,h]anthracene	BQL	0.317	0.089	1	11/12/2007	
Dibenzofuran	BQL	0.317	0.058	1	11/12/2007	
Di-n-Butylphthalate	BQL	0.317	0.038	1	11/12/2007	
1,2-Dichlorobenzene	BQL	0.317	0.035	1	11/12/2007	
1,3-Dichlorobenzene	BQL	0.317	0.035	1	11/12/2007	
1,4-Dichlorobenzene	BQL	0.317	0.036	1	11/12/2007	
3,3'-Dichlorobenzidine	BQL	0.634	0.080	1	11/12/2007	
2,4-Dichlorophenol	BQL	0.317	0.114	1	11/12/2007	
Diethylphthalate	BQL	0.317	0.041	1	11/12/2007	
Dimethylphthalate	BQL	0.317	0.038	1	11/12/2007	
2,4-Dimethylphenol	BQL	0.317	0.227	1	11/12/2007	
Di-n-octylphthalate	BQL	0.317	0.052	1	11/12/2007	
4,6-Dinitro-2-methylphenol	BQL	1.58	0.187	1	11/12/2007	
2,4-Dinitrophenol	BQL	1.58	0.698	1	11/12/2007	
2,4-Dinitrotoluene	BQL	0.317	0.041	1	11/12/2007	
2,6-Dinitrotoluene	BQL	0.317	0.058	1	11/12/2007	
Diphenylamine *	BQL	0.317	0.031	1	11/12/2007	
Fluoranthene	BQL	0.317	0.044	1	11/12/2007	
Fluorene	BQL	0.317	0.039	1	11/12/2007	
Hexachlorobenzene	BQL	0.317	0.049	1	11/12/2007	
Hexachlorobutadiene	BQL	0.317	0.051	1	11/12/2007	
Hexachlorocyclopentadiene	BQL	0.634	0.033	1	11/12/2007	
Hexachloroethane	BQL	0.317	0.029	1	11/12/2007	
Indeno(1,2,3-c,d)pyrene	BQL	0.317	0.081	1	11/12/2007	
Isophorone	BQL	0.317	0.047	1	11/12/2007	
2-Methylnaphthalene	BQL	0.317	0.093	1	11/12/2007	

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-SS05 (2-3)
Client Project ID: USTA47
Lab Sample ID: G128-2058-7J
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/31/2007 8:30
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 94.48

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
2-Methylphenol	BQL	0.317	0.112	1	11/12/2007	
3- & 4-Methylphenol	BQL	0.317	0.107	1	11/12/2007	
Naphthalene	BQL	0.317	0.026	1	11/12/2007	
2-Nitroaniline	BQL	0.317	0.050	1	11/12/2007	
3-Nitroaniline	BQL	1.58	0.326	1	11/12/2007	
4-Nitroaniline	BQL	1.58	0.098	1	11/12/2007	
Nitrobenzene	BQL	0.317	0.043	1	11/12/2007	
2-Nitrophenol	BQL	0.317	0.098	1	11/12/2007	
4-Nitrophenol	BQL	1.58	0.088	1	11/12/2007	
N-Nitrosodi-n-propylamine	BQL	0.317	0.040	1	11/12/2007	
Pentachlorophenol	BQL	1.58	0.083	1	11/12/2007	
Phenanthrene	BQL	0.317	0.036	1	11/12/2007	
Phenol	BQL	0.317	0.087	1	11/12/2007	
Pyrene	BQL	0.317	0.061	1	11/12/2007	
1,2,4-Trichlorobenzene	BQL	0.317	0.040	1	11/12/2007	
2,4,5-Trichlorophenol	BQL	0.317	0.123	1	11/12/2007	
2,4,6-Trichlorophenol	BQL	0.317	0.113	1	11/12/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.5	85
2-Fluorophenol	10	8.4	84
Nitrobenzene-d5	10	8.1	81
Phenol-d6	10	7.5	75
2,4,6-Tribromophenol	10	8.1	81
4-Terphenyl-d14	10	8.5	85

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

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

Reviewed By: 

SGS ENVIRONMENTAL SERVICES, INC.

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTA47-SS05 (2-3)
Client Project ID: USTA47
Lab Sample ID: G128-2058-7J
Lab Project ID: G128-2058
Sample Wt/Vol: 33.40 g
Dilution: 1

Analyzed By: DES
Date Collected: 10/31/2007 8:30
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Date Analyzed: 11/12/2007
Matrix: Soil
% Solids: 94.5

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/KG)
1	Unknown	11.75			5220
2	Alkane, Unknown	11.32			1090
3	Alkane, Unknown	13.26			1080
4	Unknown	11.18			1080
5	Unknown	10.70			347
6	Unknown	9.85			186
7	Unknown	9.61			166
8	Unknown	9.04			144
9					
10					

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

SGS ENVIRONMENTAL SERVICES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-SS06 (1-2)
Client Project ID: USTA47
Lab Sample ID: G128-2058-8H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/31/2007 15:00
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 85.77

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.358	0.051	1	11/13/2007	
Acenaphthylene	BQL	0.358	0.048	1	11/13/2007	
Anthracene	BQL	0.358	0.052	1	11/13/2007	
Benzo[a]anthracene	BQL	0.358	0.062	1	11/13/2007	
Benzo[a]pyrene	BQL	0.358	0.055	1	11/13/2007	
Benzo[b]fluoranthene	BQL	0.358	0.063	1	11/13/2007	
Benzo[g,h,i]perylene	BQL	0.358	0.097	1	11/13/2007	
Benzo[k]fluoranthene	BQL	0.358	0.069	1	11/13/2007	
Benzoic Acid	BQL	0.716	0.716	1	11/13/2007	
Bis(2-chloroethoxy)methane	BQL	0.358	0.053	1	11/13/2007	
Bis(2-chloroethyl)ether	BQL	0.358	0.043	1	11/13/2007	
Bis(2-chloroisopropyl)ether	BQL	0.358	0.045	1	11/13/2007	
Bis(2-ethylhexyl)phthalate	**0.132**	0.358	0.048	1	11/13/2007	J
4-bromophenyl phenyl ether	BQL	0.358	0.061	1	11/13/2007	
Butylbenzylphthalate	BQL	0.358	0.055	1	11/13/2007	
2-Chloronaphthalene	BQL	0.358	0.056	1	11/13/2007	
2-Chlorophenol	BQL	0.358	0.112	1	11/13/2007	
4-Chloro-3-methylphenol	BQL	0.358	0.112	1	11/13/2007	
4-Chloroaniline	BQL	1.79	0.273	1	11/13/2007	
4-Chlorophenyl phenyl ether	BQL	0.358	0.053	1	11/13/2007	
Chrysene	BQL	0.358	0.039	1	11/13/2007	
Dibenzo[a,h]anthracene	BQL	0.358	0.100	1	11/13/2007	
Dibenzofuran	BQL	0.358	0.065	1	11/13/2007	
Di-n-Butylphthalate	BQL	0.358	0.043	1	11/13/2007	
1,2-Dichlorobenzene	BQL	0.358	0.040	1	11/13/2007	
1,3-Dichlorobenzene	BQL	0.358	0.039	1	11/13/2007	
1,4-Dichlorobenzene	BQL	0.358	0.040	1	11/13/2007	
3,3'-Dichlorobenzidine	BQL	0.716	0.090	1	11/13/2007	
2,4-Dichlorophenol	BQL	0.358	0.129	1	11/13/2007	
Diethylphthalate	BQL	0.358	0.046	1	11/13/2007	
Dimethylphthalate	BQL	0.358	0.043	1	11/13/2007	
2,4-Dimethylphenol	BQL	0.358	0.256	1	11/13/2007	
Di-n-octylphthalate	BQL	0.358	0.059	1	11/13/2007	
4,6-Dinitro-2-methylphenol	BQL	1.79	0.211	1	11/13/2007	
2,4-Dinitrophenol	BQL	1.79	0.788	1	11/13/2007	
2,4-Dinitrotoluene	BQL	0.358	0.047	1	11/13/2007	
2,6-Dinitrotoluene	BQL	0.358	0.065	1	11/13/2007	
Diphenylamine *	BQL	0.358	0.035	1	11/13/2007	
Fluoranthene	**0.061**	0.358	0.050	1	11/13/2007	J
Fluorene	BQL	0.358	0.044	1	11/13/2007	
Hexachlorobenzene	BQL	0.358	0.055	1	11/13/2007	
Hexachlorobutadiene	BQL	0.358	0.057	1	11/13/2007	
Hexachlorocyclopentadiene	BQL	0.716	0.037	1	11/13/2007	
Hexachloroethane	BQL	0.358	0.032	1	11/13/2007	
Indeno(1,2,3-c,d)pyrene	BQL	0.358	0.092	1	11/13/2007	
Isophorone	BQL	0.358	0.053	1	11/13/2007	
2-Methylnaphthalene	BQL	0.358	0.104	1	11/13/2007	

SGS ENVIRONMENTAL SERVICES, INC.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-SS06 (1-2)
Client Project ID: USTA47
Lab Sample ID: G128-2058-8H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/31/2007 15:00
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 85.77

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
2-Methylphenol	BQL	0.358	0.126	1	11/13/2007	
3- & 4-Methylphenol	BQL	0.358	0.121	1	11/13/2007	
Naphthalene	BQL	0.358	0.029	1	11/13/2007	
2-Nitroaniline	BQL	0.358	0.056	1	11/13/2007	
3-Nitroaniline	BQL	1.79	0.369	1	11/13/2007	
4-Nitroaniline	BQL	1.79	0.110	1	11/13/2007	
Nitrobenzene	BQL	0.358	0.048	1	11/13/2007	
2-Nitrophenol	BQL	0.358	0.111	1	11/13/2007	
4-Nitrophenol	BQL	1.79	0.099	1	11/13/2007	
N-Nitrosodi-n-propylamine	BQL	0.358	0.045	1	11/13/2007	
Pentachlorophenol	BQL	1.79	0.093	1	11/13/2007	
Phenanthrene	BQL	0.358	0.041	1	11/13/2007	
Phenol	BQL	0.358	0.098	1	11/13/2007	
Pyrene	BQL	0.358	0.069	1	11/13/2007	
1,2,4-Trichlorobenzene	BQL	0.358	0.045	1	11/13/2007	
2,4,5-Trichlorophenol	BQL	0.358	0.138	1	11/13/2007	
2,4,6-Trichlorophenol	BQL	0.358	0.127	1	11/13/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.5	75
2-Fluorophenol	10	7.6	76
Nitrobenzene-d5	10	7.4	74
Phenol-d6	10	7.4	74
2,4,6-Tribromophenol	10	7.6	76
4-Terphenyl-d14	10	8.8	88

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

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

Reviewed By: 

SGS ENVIRONMENTAL SERVICES, INC.

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTA47-SS06 (1-2)
Client Project ID: USTA47
Lab Sample ID: G128-2058-8H
Lab Project ID: G128-2058
Sample Wt/Vol: 32.58 g
Dilution: 1

Analyzed By: DES
Date Collected: 10/31/2007 15:00
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Date Analyzed: 11/12/2007
Matrix: Soil
% Solids: 85.8

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/KG)
1	Unknown	11.75			3320
2	Unknown	11.18			797
3	Unknown	11.51			787
4	Unknown	9.21			222
5	Unknown	9.04			210
6	Unknown	11.43			205
7	Unknown	10.70			188
8	Unknown	11.83			185
9	Unknown	9.59			160
10	Unknown	9.46			159

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-SS07 (4-5)
Client Project ID: USTA47
Lab Sample ID: G128-2058-9H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/31/2007 9:30
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 86.36

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.357	0.051	1	11/13/2007	
Acenaphthylene	BQL	0.357	0.048	1	11/13/2007	
Anthracene	BQL	0.357	0.052	1	11/13/2007	
Benzo[a]anthracene	BQL	0.357	0.062	1	11/13/2007	
Benzo[a]pyrene	BQL	0.357	0.055	1	11/13/2007	
Benzo[b]fluoranthene	BQL	0.357	0.062	1	11/13/2007	
Benzo[g,h,i]perylene	BQL	0.357	0.097	1	11/13/2007	
Benzo[k]fluoranthene	BQL	0.357	0.069	1	11/13/2007	
Benzoic Acid	BQL	0.714	0.714	1	11/13/2007	
Bis(2-chloroethoxy)methane	BQL	0.357	0.053	1	11/13/2007	
Bis(2-chloroethyl)ether	BQL	0.357	0.043	1	11/13/2007	
Bis(2-chloroisopropyl)ether	BQL	0.357	0.045	1	11/13/2007	
Bis(2-ethylhexyl)phthalate	BQL	0.357	0.048	1	11/13/2007	
4-bromophenyl phenyl ether	BQL	0.357	0.060	1	11/13/2007	
Butylbenzylphthalate	BQL	0.357	0.055	1	11/13/2007	
2-Chloronaphthalene	BQL	0.357	0.056	1	11/13/2007	
2-Chlorophenol	BQL	0.357	0.112	1	11/13/2007	
4-Chloro-3-methylphenol	BQL	0.357	0.111	1	11/13/2007	
4-Chloroaniline	BQL	1.78	0.272	1	11/13/2007	
4-Chlorophenyl phenyl ether	BQL	0.357	0.053	1	11/13/2007	
Chrysene	BQL	0.357	0.039	1	11/13/2007	
Dibenzo[a,h]anthracene	BQL	0.357	0.100	1	11/13/2007	
Dibenzofuran	BQL	0.357	0.065	1	11/13/2007	
Di-n-Butylphthalate	BQL	0.357	0.043	1	11/13/2007	
1,2-Dichlorobenzene	BQL	0.357	0.040	1	11/13/2007	
1,3-Dichlorobenzene	BQL	0.357	0.039	1	11/13/2007	
1,4-Dichlorobenzene	BQL	0.357	0.040	1	11/13/2007	
3,3'-Dichlorobenzidine	BQL	0.714	0.090	1	11/13/2007	
2,4-Dichlorophenol	BQL	0.357	0.128	1	11/13/2007	
Diethylphthalate	BQL	0.357	0.046	1	11/13/2007	
Dimethylphthalate	BQL	0.357	0.043	1	11/13/2007	
2,4-Dimethylphenol	BQL	0.357	0.255	1	11/13/2007	
Di-n-octylphthalate	BQL	0.357	0.059	1	11/13/2007	
4,6-Dinitro-2-methylphenol	BQL	1.78	0.210	1	11/13/2007	
2,4-Dinitrophenol	BQL	1.78	0.786	1	11/13/2007	
2,4-Dinitrotoluene	BQL	0.357	0.046	1	11/13/2007	
2,6-Dinitrotoluene	BQL	0.357	0.065	1	11/13/2007	
Diphenylamine *	BQL	0.357	0.035	1	11/13/2007	
Fluoranthene	BQL	0.357	0.050	1	11/13/2007	
Fluorene	BQL	0.357	0.044	1	11/13/2007	
Hexachlorobenzene	BQL	0.357	0.055	1	11/13/2007	
Hexachlorobutadiene	BQL	0.357	0.057	1	11/13/2007	
Hexachlorocyclopentadiene	BQL	0.714	0.037	1	11/13/2007	
Hexachloroethane	BQL	0.357	0.032	1	11/13/2007	
Indeno(1,2,3-c,d)pyrene	BQL	0.357	0.091	1	11/13/2007	
Isophorone	BQL	0.357	0.053	1	11/13/2007	
2-Methylnaphthalene	BQL	0.357	0.104	1	11/13/2007	

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTA47-SS07 (4-5)
Client Project ID: USTA47
Lab Sample ID: G128-2058-9H
Lab Project ID: G128-2058
Report Basis: Dry weight

Analyzed By: DCS
Date Collected: 10/31/2007 9:30
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Matrix: Soil
% Solids: 86.36

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
2-Methylphenol	BQL	0.357	0.126	1	11/13/2007	
3- & 4-Methylphenol	BQL	0.357	0.121	1	11/13/2007	
Naphthalene	BQL	0.357	0.029	1	11/13/2007	
2-Nitroaniline	BQL	0.357	0.056	1	11/13/2007	
3-Nitroaniline	BQL	1.78	0.368	1	11/13/2007	
4-Nitroaniline	BQL	1.78	0.110	1	11/13/2007	
Nitrobenzene	BQL	0.357	0.048	1	11/13/2007	
2-Nitrophenol	BQL	0.357	0.111	1	11/13/2007	
4-Nitrophenol	BQL	1.78	0.099	1	11/13/2007	
N-Nitrosodi-n-propylamine	BQL	0.357	0.045	1	11/13/2007	
Pentachlorophenol	BQL	1.78	0.093	1	11/13/2007	
Phenanthrene	BQL	0.357	0.041	1	11/13/2007	
Phenol	BQL	0.357	0.098	1	11/13/2007	
Pyrene	BQL	0.357	0.069	1	11/13/2007	
1,2,4-Trichlorobenzene	BQL	0.357	0.045	1	11/13/2007	
2,4,5-Trichlorophenol	BQL	0.357	0.138	1	11/13/2007	
2,4,6-Trichlorophenol	BQL	0.357	0.127	1	11/13/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.7	77
2-Fluorophenol	10	8.2	82
Nitrobenzene-d5	10	7.7	77
Phenol-d6	10	7.6	76
2,4,6-Tribromophenol	10	7.6	76
4-Terphenyl-d14	10	8.6	86

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

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

Reviewed By: 

SGS ENVIRONMENTAL SERVICES, INC.

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTA47-SS07 (4-5)
Client Project ID: USTA47
Lab Sample ID: G128-2058-9H
Lab Project ID: G128-2058
Sample Wt/Vol: 32.45 g
Dilution: 1

Analyzed By: DES
Date Collected: 10/31/2007 9:30
Date Received: 11/1/2007
Date Extracted: 11/7/2007
Date Analyzed: 11/12/2007
Matrix: Soil
% Solids: 86.4

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/KG)
1	Unknown	11.76			4320
2	Unknown	16.28			1460
3	Unknown	23.48			1340
4	9-Octadecenamide, (Z)-	17.48	000301-02-0	95	1080
5	Unknown	20.25			913
6	Unknown	19.22			497
7	Unknown	17.38			475
8	Unknown	11.20			159
9					
10					

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-MW01 (1-2)
Sample Matrix	Soil
Date Collected	10/30/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/09/07 03:11 - 11/09/07 03:39
Dry Weight	91.1
Dilution Factor	5 - 1
Initial weight (g)	13.49
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	BQL	10.0	
C19-C36 Aliphatics	53.1	10.0	
C11-C22 Aromatics	BQL	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (chloro-octadecane)	50.6		40	140
Aromatic (ortho-terphenyl)	40.7		40	140
Fractionation 1 (2-bromonaphthalene)	42.1		40	140
Fractionation 2 (2-fluorobiphenyl)	43.1		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2058-1G	Lab Info: G128-2058-1G
Aliphatic: EP110807/037F3501.D	Aromatic: EP110807/038F3601.D

Reviewed By:

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-MW02 (3.5-5)
Sample Matrix	Soil
Date Collected	10/30/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/09/07 04:07 - 11/09/07 04:35
Dry Weight	91.3
Dilution Factor	20 - 5
Initial weight (g)	12.03
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	885	10.0	
C19-C36 Aliphatics	201	10.0	
C11-C22 Aromatics	677	10.0	

Surrogates	Percent Recovery	Flags	Limits Lower	Limits Upper
Aliphatic (chloro-octadecane)	73.5		40	140
Aromatic (ortho-terphenyl)	85.5		40	140
Fractionation 1 (2-bromonaphthalene)	92.7		40	140
Fractionation 2 (2-fluorobiphenyl)	90.7		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2058-2G	Lab Info: G128-2058-2G
Aliphatic: EP110807/039F3701.D	Aromatic: EP110807/040F3801.D

Reviewed By:

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-SS01 (2-3)
Sample Matrix	Soil
Date Collected	10/31/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/09/07 05:03 - 11/09/07 05:31
Dry Weight	90.4
Dilution Factor	5 - 1
Initial weight (g)	12.77
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	BQL	10.0	
C19-C36 Aliphatics	81.3	10.0	
C11-C22 Aromatics	BQL	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (chloro-octadecane)	57.5		40	140
Aromatic (ortho-terphenyl)	56.7		40	140
Fractionation 1 (2-bromonaphthalene)	69.7		40	140
Fractionation 2 (2-fluorobiphenyl)	71.6		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2058-3G	Lab Info: G128-2058-3G
Aliphatic: EP110807/041F3901.D	Aromatic: EP110807/042F4001.D

Reviewed By:

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-SS02 (3-4)
Sample Matrix	Soil
Date Collected	10/31/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/09/07 05:58 - 11/09/07 06:26
Dry Weight	91.1
Dilution Factor	50 - 10
Initial weight (g)	12.96
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	930	14.5	
C19-C36 Aliphatics	124	14.5	
C11-C22 Aromatics	274	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (chloro-octadecane)	69.3		40	140
Aromatic (ortho-terphenyl)	52.0		40	140
Fractionation 1 (2-bromonaphthalene)	54.9		40	140
Fractionation 2 (2-fluorobiphenyl)	54.0		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2058-4G	Lab Info: G128-2058-4G
Aliphatic: EP110807/043F4101.D	Aromatic: EP110807/044F4201.D

Reviewed By:

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-SS03 (5-6)
Sample Matrix	Soil
Date Collected	10/31/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/08/07 15:52 - 11/08/07 16:20
Dry Weight	83.7
Dilution Factor	1 - 1
Initial weight (g)	13.04
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	BQL	10.0	
C19-C36 Aliphatics	BQL	10.0	
C11-C22 Aromatics	BQL	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (chloro-octadecane)	55.6		40	140
Aromatic (ortho-terphenyl)	50.6		40	140
Fractionation 1 (2-bromonaphthalene)	52.0		40	140
Fractionation 2 (2-fluorobiphenyl)	53.6		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2058-5G	Lab Info: G128-2058-5G
Aliphatic: EP110807/013F1101.D	Aromatic: EP110807/014F1201.D

Reviewed By: _____

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-SS04 (1-2)
Sample Matrix	Soil
Date Collected	10/31/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/13/07 12:27 - 11/13/07 02:39
Dry Weight	87.4
Dilution Factor	2 - 1
Initial weight (g)	12.55
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	639	10.0	
C19-C36 Aliphatics	1710	10.0	
C11-C22 Aromatics	598	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (chloro-octadecane)	77.8		40	140
Aromatic (ortho-terphenyl)	52.4		40	140
Fractionation 1 (2-bromonaphthalene)	61.0		40	140
Fractionation 2 (2-fluorobiphenyl)	62.2		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2058-6G	Lab Info: G128-2058-6G
Aliphatic: EP111307/004F0401.D	Aromatic: EP111207/034F3101.D

Reviewed By:

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-SS05 (2-3)
Sample Matrix	Soil
Date Collected	10/31/07
Date Received	11/01/07
Date Extracted	11/14/07
Date Analyzed	11/16/07 11:05 - 11/15/07 17:02
Dry Weight	94.5
Dilution Factor	2 - 1
Initial weight (g)	12.50
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	123	10.0	
C19-C36 Aliphatics	1070	10.0	
C11-C22 Aromatics	344	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (chloro-octadecane)	82.1		40	140
Aromatic (ortho-terphenyl)	82.2		40	140
Fractionation 1 (2-bromonaphthalene)	90.9		40	140
Fractionation 2 (2-fluorobiphenyl)	90.9		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2058-7M	Lab Info: G128-2058-7M
Aliphatic: EP111607/003F0101.D	Aromatic: EP111507/002F0201.D

Reviewed By:

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-SS06 (1-2)
Sample Matrix	Soil
Date Collected	10/31/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/09/07 17:18 - 11/09/07 17:47
Dry Weight	85.8
Dilution Factor	1 - 1
Initial weight (g)	12.32
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	170	10.0	
C19-C36 Aliphatics	772	10.0	
C11-C22 Aromatics	38.4	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (chloro-octadecane)	63.8		40	140
Aromatic (ortho-terphenyl)	40.5		40	140
Fractionation 1 (2-bromonaphthalene)	41.6		40	140
Fractionation 2 (2-fluorobiphenyl)	42.6		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2058-8G	Lab Info: G128-2058-8G
Aliphatic: EP110907/001F0101.D	Aromatic: EP110907/002F0201.D

Reviewed By:

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-SS07 (4-5)
Sample Matrix	Soil
Date Collected	10/31/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/08/07 16:49 - 11/08/07 17:17
Dry Weight	86.4
Dilution Factor	1 - 1
Initial weight (g)	13.24
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	BQL	10.0	
C19-C36 Aliphatics	BQL	10.0	
C11-C22 Aromatics	BQL	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (chloro-octadecane)	73.5		40	140
Aromatic (ortho-terphenyl)	45.8		40	140
Fractionation 1 (2-bromonaphthalene)	46.5		40	140
Fractionation 2 (2-fluorobiphenyl)	48.4		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2058-9G	Lab Info: G128-2058-9G
Aliphatic: EP110807/015F1301.D	Aromatic: EP110807/016F1401.D

Reviewed By:

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-MW01
Sample Matrix	Water
Date Collected	11/01/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/13/07 14:48 - 11/13/07 15:17
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	500
Final Volume (mL)	5.0

Analytical Results			
Analytes**	Result µg/L	Report Limit µg/L	Flags
C9-C18 Aliphatics	BQL	100	
C19-C36 Aliphatics	BQL	100	
C11-C22 Aromatics	BQL	100	

Surrogates	Percent Recovery	Flags	Limits Lower	Limits Upper
Aliphatic (chloro-octadecane)	40.3		40	140
Aromatic (ortho-terphenyl)	40.2		40	140
Fractionation 1 (2-bromonaphthalene)	56.8		40	140
Fractionation 2 (2-fluorobiphenyl)	58.6		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2058-11H	Lab Info: G128-2058-11H
Aliphatic: EP111307/009F0901.D	Aromatic: EP111307/010F1001.D

Reviewed By: _____

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-MW02
Sample Matrix	Water
Date Collected	11/01/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/08/07 12:06 - 11/08/07 12:35
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	500
Final Volume (mL)	5.0

Analytical Results			
Analytes**	Result µg/L	Report Limit µg/L	Flags
C9-C18 Aliphatics	BQL	100	
C19-C36 Aliphatics	BQL	100	
C11-C22 Aromatics	BQL	100	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (chloro-octadecane)	61.7		40	140
Aromatic (ortho-terphenyl)	46.9		40	140
Fractionation 1 (2-bromonaphthalene)	46.0		40	140
Fractionation 2 (2-fluorobiphenyl)	47.4		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2058-13H	Lab Info: G128-2058-13H
Aliphatic: EP110807/005F0301.D	Aromatic: EP110807/006F0401.D

Reviewed By:

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 10/25/07

Calibration Ranges and Limits

Range	MDL (10/17/06) (µg/L)	MDL (10/17/06) (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C9-C18 Aliphatics	28.1	0.847	89	2.69	100	10
C19-C36 Aliphatics	36.5	1.17	116	3.72	100	10
C11-C22 Aromatics	27.6	9.47	87.8	30.1	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_9-C_{18} Aliphatics	400	12.5	16.84	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		
C_{19}-C_{36} Aliphatics	400	12.5	9.14	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		
C_{11}-C_{22} Aromatics	400	12.5	2.74	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		

Calibration Check Date: 11/08/07
11/08/07

Filenames: ep110807/001f0101.d
ep110807/002f0201.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	200	6.25	1.1	≤±25%
C19-C36 Aliphatics	200	6.25	2.9	≤±25%
C11-C22 Aromatics	200	6.25	-0.5	≤±25%

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

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 10/25/07

Calibration Ranges and Limits

Range	MDL (10/17/06) (µg/L)	MDL (10/17/06) (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C9-C18 Aliphatics	28.1	0.847	89	2.69	100	10
C19-C36 Aliphatics	36.5	1.17	116	3.72	100	10
C11-C22 Aromatics	27.6	9.47	87.8	30.1	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_9-C_{18} Aliphatics	400	12.5	16.84	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		
C_{19}-C_{36} Aliphatics	400	12.5	9.14	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		
C_{11}-C_{22} Aromatics	400	12.5	2.74	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		

Calibration Check Date: 11/08/07, 11/09/07

Filenames: ep110807/099f4701.d, ep110807/100f4801.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	200	6.25	10.7	≤±25%
C19-C36 Aliphatics	200	6.25	14.0	≤±25%
C11-C22 Aromatics	200	6.25	3.6	≤±25%

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

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 10/25/07

Calibration Ranges and Limits

Range	MDL (10/17/06) (µg/L)	MDL (10/17/06) (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C9-C18 Aliphatics	28.1	0.847	89	2.69	100	10
C19-C36 Aliphatics	36.5	1.17	116	3.72	100	10
C11-C22 Aromatics	27.6	9.47	87.8	30.1	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_9-C_{18} Aliphatics	400	12.5	16.84	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		
C_{19}-C_{36} Aliphatics	400	12.5	9.14	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		
C_{11}-C_{22} Aromatics	400	12.5	2.74	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		

Calibration Check Date: 11/09/07, 11/09/07

Filenames: ep110907/008f0801.d, ep110907/009f0901.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	200	6.25	13.2	≤±25%
C19-C36 Aliphatics	200	6.25	14.7	≤±25%
C11-C22 Aromatics	200	6.25	2.8	≤±25%

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

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 10/25/07

Calibration Ranges and Limits

Range	MDL (10/17/06) (µg/L)	MDL (10/17/06) (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C9-C18 Aliphatics	28.1	0.847	89	2.69	100	10
C19-C36 Aliphatics	36.5	1.17	116	3.72	100	10
C11-C22 Aromatics	27.6	9.47	87.8	30.1	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_9-C_{18} Aliphatics	400	12.5	16.84	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		
C_{19}-C_{36} Aliphatics	400	12.5	9.14	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		
C_{11}-C_{22} Aromatics	400	12.5	2.74	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		

Calibration Check Date: 11/12/07, 11/13/07

Filenames: ep111207/049f4601.d, ep111207/050f4701.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	200	6.25	-2.9	≤±25%
C19-C36 Aliphatics	200	6.25	1.7	≤±25%
C11-C22 Aromatics	200	6.25	0.4	≤±25%

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

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 10/25/07

Calibration Ranges and Limits

Range	MDL (10/17/06) (µg/L)	MDL (10/17/06) (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C9-C18 Aliphatics	28.1	0.847	89	2.69	100	10
C19-C36 Aliphatics	36.5	1.17	116	3.72	100	10
C11-C22 Aromatics	27.6	9.47	87.8	30.1	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_9-C_{18} Aliphatics	400	12.5	16.84	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		
C_{19}-C_{36} Aliphatics	400	12.5	9.14	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		
C_{11}-C_{22} Aromatics	400	12.5	2.74	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		

Calibration Check Date: 11/13/07
11/13/07

Filenames: ep111307/021f2101.d
ep111307/022f2201.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	200	6.25	4.8	≤±25%
C19-C36 Aliphatics	200	6.25	6.6	≤±25%
C11-C22 Aromatics	200	6.25	1.1	≤±25%

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

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 10/25/07

Calibration Ranges and Limits

Range	MDL (10/17/06) (µg/L)	MDL (10/17/06) (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C9-C18 Aliphatics	28.1	0.847	89	2.69	100	10
C19-C36 Aliphatics	36.5	1.17	116	3.72	100	10
C11-C22 Aromatics	27.6	9.47	87.8	30.1	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_9-C_{18} Aliphatics	400	12.5	16.84	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		
C_{19}-C_{36} Aliphatics	400	12.5	9.14	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		
C_{11}-C_{22} Aromatics	400	12.5	2.74	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		

Calibration Check Date: 11/16/07
11/16/07

Filenames: ep111607/001F0101.d
ep111607/002F0201.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	200	6.25	3.7	≤±25%
C19-C36 Aliphatics	200	6.25	6.7	≤±25%
C11-C22 Aromatics	200	6.25	7.2	≤±25%

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

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 10/25/07

Calibration Ranges and Limits

Range	MDL (10/17/06) (µg/L)	MDL (10/17/06) (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C9-C18 Aliphatics	28.1	0.847	89	2.69	100	10
C19-C36 Aliphatics	36.5	1.17	116	3.72	100	10
C11-C22 Aromatics	27.6	9.47	87.8	30.1	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_9-C_{18} Aliphatics	400	12.5	16.84	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		
C_{19}-C_{36} Aliphatics	400	12.5	9.14	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		
C_{11}-C_{22} Aromatics	400	12.5	2.74	Calibration Factor
	200	6.25		
	100	3.13		
	50	1.56		
	10	0.313		

Calibration Check Date: 11/16/07
11/16/07

Filenames: ep111607/009F0701.d
ep111607/010F0801.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	200	6.25	1.6	≤±25%
C19-C36 Aliphatics	200	6.25	4.1	≤±25%
C11-C22 Aromatics	200	6.25	1.3	≤±25%

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

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-MW01 (1-2)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	10/30/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/08/07 20:14 - 11/08/07 20:14
Dry Weight	91.1
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags
C_5-C_8 Aliphatics**	BQL	10.0	
C_9-C_{12} Aliphatics**	BQL	10.0	
C_9-C_{10} Aromatics**	BQL	10.0	

	Percent Recovery	Flags	Limits Lower	Limits Upper
Surrogate % Recovery - PID	108		70	130
Surrogate % Recovery - FID	101		70	130

* = 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 and are unadjusted for individual analytes.

Lab Info: g128-2058-1e	Lab Info: g128-2058-1e
FID Info: VP110807/027F0101.D	PID Info: VP110807/027R0101.D

Reviewed By:

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-MW02 (3.5-5)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	10/30/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/08/07 05:14 - 11/08/07 05:14
Dry Weight	91.3
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags
C_5-C_8 Aliphatics**	BQL	10.0	
C_9-C_{12} Aliphatics**	50.3	10.0	
C_9-C_{10} Aromatics**	39.8	10.0	

	Percent Recovery	Flags	Limits Lower	Limits Upper
Surrogate % Recovery - PID	91.4		70	130
Surrogate % Recovery - FID	99.8		70	130

* = 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 and are unadjusted for individual analytes.

Lab Info: g128-2058-2d	Lab Info: g128-2058-2d
FID Info: VP110707/047F0101.D	PID Info: VP110707/047R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-SS01 (2-3)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	10/31/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/08/07 22:03 - 11/08/07 22:03
Dry Weight	90.4
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags
C_5-C_8 Aliphatics**	BQL	10.0	
C_9-C_{12} Aliphatics**	BQL	10.0	
C_9-C_{10} Aromatics**	BQL	10.0	

	Percent Recovery	Flags	Limits Lower	Limits Upper
Surrogate % Recovery - PID	77.7		70	130
Surrogate % Recovery - FID	74.1		70	130

* = 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 and are unadjusted for individual analytes.

Lab Info: g128-2058-3e	Lab Info: g128-2058-3e
FID Info: VP110807/031F0101.D	PID Info: VP110807/031R0101.D

Reviewed By:

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-SS02 (3-4)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	10/31/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/08/07 22:30 - 11/08/07 22:30
Dry Weight	91.1
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags
C_5-C_8 Aliphatics**	BQL	10.0	
C_9-C_{12} Aliphatics**	73.3	10.0	
C_9-C_{10} Aromatics**	68.8	10.0	

	Percent Recovery	Flags	Limits Lower	Limits Upper
Surrogate % Recovery - PID	103		70	130
Surrogate % Recovery - FID	114		70	130

* = 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 and are unadjusted for individual analytes.

Lab Info: g128-2058-4e	Lab Info: g128-2058-4e
FID Info: VP110807/032F0101.D	PID Info: VP110807/032R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-SS03 (5-6)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	10/31/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/08/07 22:57 - 11/08/07 22:57
Dry Weight	83.7
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags
C_5-C_8 Aliphatics**	BQL	10.0	
C_9-C_{12} Aliphatics**	BQL	10.0	
C_9-C_{10} Aromatics**	BQL	10.0	

	Percent Recovery	Flags	Limits Lower	Limits Upper
Surrogate % Recovery - PID	78.8		70	130
Surrogate % Recovery - FID	76.1		70	130

* = 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 and are unadjusted for individual analytes.

Lab Info: g128-2058-5e	Lab Info: g128-2058-5e
FID Info: VP110807/033F0101.D	PID Info: VP110807/033R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-SS04 (1-2)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	10/31/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/08/07 23:24 - 11/08/07 23:24
Dry Weight	87.4
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags
C_5-C_8 Aliphatics**	BQL	10.0	
C_9-C_{12} Aliphatics**	20.8	10.0	
C_9-C_{10} Aromatics**	BQL	10.0	

	Percent Recovery	Flags	Limits Lower	Limits Upper
Surrogate % Recovery - PID	78.6		70	130
Surrogate % Recovery - FID	78.9		70	130

* = 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 and are unadjusted for individual analytes.

Lab Info: g128-2058-6e	Lab Info: g128-2058-6e
FID Info: VP110807/034F0101.D	PID Info: VP110807/034R0101.D

Reviewed By:

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-SS05 (2-3)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	10/31/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/08/07 23:51 - 11/08/07 23:51
Dry Weight	94.5
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags
C_5-C_8 Aliphatics**	BQL	10.0	
C_9-C_{12} Aliphatics**	BQL	10.0	
C_9-C_{10} Aromatics**	BQL	10.0	

	Percent Recovery	Flags	Limits Lower	Limits Upper
Surrogate % Recovery - PID	73.3		70	130
Surrogate % Recovery - FID	71.6		70	130

* = 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 and are unadjusted for individual analytes.

Lab Info: g128-2058-7e	Lab Info: g128-2058-7e
FID Info: VP110807/035F0101.D	PID Info: VP110807/035R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-SS06 (1-2)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	10/31/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/09/07 10:21 - 11/09/07 10:21
Dry Weight	85.8
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags
C_5-C_8 Aliphatics**	BQL	10.0	
C_9-C_{12} Aliphatics**	11.8	10.0	
C_9-C_{10} Aromatics**	BQL	10.0	

	Percent Recovery	Flags	Limits Lower	Limits Upper
Surrogate % Recovery - PID	115		70	130
Surrogate % Recovery - FID	106		70	130

* = 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 and are unadjusted for individual analytes.

Lab Info: g128-2058-8e	Lab Info: g128-2058-8e
FID Info: VP110907/005F0101.D	PID Info: VP110907/005R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-SS07 (4-5)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	10/31/07
Date Received	11/01/07
Date Extracted	11/05/07
Date Analyzed	11/09/07 10:48 - 11/09/07 10:48
Dry Weight	86.4
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags
C_5-C_8 Aliphatics**	BQL	10.0	
C_9-C_{12} Aliphatics**	BQL	10.0	
C_9-C_{10} Aromatics**	BQL	10.0	

	Percent Recovery	Flags	Limits Lower	Limits Upper
Surrogate % Recovery - PID	105		70	130
Surrogate % Recovery - FID	96.6		70	130

* = 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 and are unadjusted for individual analytes.

Lab Info: g128-2058-9e	Lab Info: g128-2058-9e
FID Info: VP110907/006F0101.D	PID Info: VP110907/006R0101.D

Reviewed By:

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-MW01
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	11/01/07
Date Received	11/01/07
Date Extracted	11/09/07 05:45 - 11/09/07 05:45
Date Analyzed	11/09/07 05:45 - 11/09/07 05:45
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result µg/L	Report Limit µg/L	Flags
C_5-C_8 Aliphatics**	BQL	100	
C_9-C_{12} Aliphatics**	BQL	100	
C_9-C_{10} Aromatics**	BQL	100	

	Percent Recovery	Flags	Limits Lower	Limits Upper
Surrogate % Recovery - PID	107		70	130
Surrogate % Recovery - FID	98.1		70	130

* = 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 and are unadjusted for individual analytes.

Lab Info:	g128-2058-11d	Lab Info:	g128-2058-11d
FID Info:	VP110807/048F0101.D	PID Info:	VP110807/048R0101.D

Reviewed By:

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTA47

Sample Information	
Sample Identification	USTA47-MW02
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	11/01/07
Date Received	11/01/07
Date Extracted	11/09/07 04:23 - 11/09/07 04:23
Date Analyzed	11/09/07 04:23 - 11/09/07 04:23
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result µg/L	Report Limit µg/L	Flags
C_5-C_8 Aliphatics**	BQL	100	
C_9-C_{12} Aliphatics**	BQL	100	
C_9-C_{10} Aromatics**	BQL	100	

	Percent Recovery	Flags	Limits Lower	Limits Upper
Surrogate % Recovery - PID	103		70	130
Surrogate % Recovery - FID	97.1		70	130

* = 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 and are unadjusted for individual analytes.

Lab Info:	g128-2058-13d	Lab Info:	g128-2058-13d
FID Info:	VP110807/045F0101.D	PID Info:	VP110807/045R0101.D

Reviewed By:

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 11/06/07 PID Initial Calibration Date: 11/06/07

Calibration Ranges and Limits

Range	MDL (µg/L)	MDL (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C_5-C_8 Aliphatics	33.1	0.265	105	0.842	100	10
C_9-C_{12} Aliphatics	30.9	0.247	98.3	0.786	100	10
C_9-C_{10} Aromatics	27.7	0.222	88.1	0.705	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_5-C_8 Aliphatics	10	0.8	5.12	Calibration Factor
	250	20		
	500	40		
	750	60		
	1000	80		
C_9-C_{12} Aliphatics	10	0.8	1.00	Linear Regression
	250	20		
	500	40		
	750	60		
	1000	80		
C_9-C_{10} Aromatics	10	0.8	20.79	Calibration Factor
	250	20		
	500	40		
	750	60		
	1000	80		

Calibration Check Date: 11/09/07 Filename: VP110907/051F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C_5-C_8 Aliphatics	500	4	-0.3	±25%
C_9-C_{12} Aliphatics	500	4	12.9	±25%
C_9-C_{10} Aromatics	500	4	18.1	±25%

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

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 11/06/07 PID Initial Calibration Date: 11/06/07

Calibration Ranges and Limits

Range	MDL (µg/L)	MDL (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C_5-C_8 Aliphatics	33.1	0.265	105	0.842	100	10
C_9-C_{12} Aliphatics	30.9	0.247	98.3	0.786	100	10
C_9-C_{10} Aromatics	27.7	0.222	88.1	0.705	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_5-C_8 Aliphatics	10	0.8	5.12	Calibration Factor
	250	20		
	500	40		
	750	60		
	1000	80		
C_9-C_{12} Aliphatics	10	0.8	1.00	Linear Regression
	250	20		
	500	40		
	750	60		
	1000	80		
C_9-C_{10} Aromatics	10	0.8	20.79	Calibration Factor
	250	20		
	500	40		
	750	60		
	1000	80		

Calibration Check Date: 11/07/07 Filename: VP110707/041F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C_5-C_8 Aliphatics	500	4	0.8	±25%
C_9-C_{12} Aliphatics	500	4	6.2	±25%
C_9-C_{10} Aromatics	500	4	6.1	±25%

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

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 11/06/07 PID Initial Calibration Date: 11/06/07

Calibration Ranges and Limits

Range	MDL (µg/L)	MDL (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C_5-C_8 Aliphatics	33.1	0.265	105	0.842	100	10
C_9-C_{12} Aliphatics	30.9	0.247	98.3	0.786	100	10
C_9-C_{10} Aromatics	27.7	0.222	88.1	0.705	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_5-C_8 Aliphatics	10	0.8	5.12	Calibration Factor
	250	20		
	500	40		
	750	60		
	1000	80		
C_9-C_{12} Aliphatics	10	0.8	1.00	Linear Regression
	250	20		
	500	40		
	750	60		
	1000	80		
C_9-C_{10} Aromatics	10	0.8	20.79	Calibration Factor
	250	20		
	500	40		
	750	60		
	1000	80		

Calibration Check Date: 11/08/07 Filename: VP110807/037F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C_5-C_8 Aliphatics	500	4	2.3	±25%
C_9-C_{12} Aliphatics	500	4	5.2	±25%
C_9-C_{10} Aromatics	500	4	3.2	±25%

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

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 11/06/07 PID Initial Calibration Date: 11/06/07

Calibration Ranges and Limits

Range	MDL (µg/L)	MDL (mg/Kg)	ML (µg/L)	ML (mg/Kg)	RL (µg/L)	RL (mg/Kg)
C_5-C_8 Aliphatics	33.1	0.265	105	0.842	100	10
C_9-C_{12} Aliphatics	30.9	0.247	98.3	0.786	100	10
C_9-C_{10} Aromatics	27.7	0.222	88.1	0.705	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C_5-C_8 Aliphatics	10	0.8	5.12	Calibration Factor
	250	20		
	500	40		
	750	60		
	1000	80		
C_9-C_{12} Aliphatics	10	0.8	1.00	Linear Regression
	250	20		
	500	40		
	750	60		
	1000	80		
C_9-C_{10} Aromatics	10	0.8	20.79	Calibration Factor
	250	20		
	500	40		
	750	60		
	1000	80		

Calibration Check Date: 11/08/07 Filename: VP110807/004F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C_5-C_8 Aliphatics	500	4	5.3	±25%
C_9-C_{12} Aliphatics	500	4	16.0	±25%
C_9-C_{10} Aromatics	500	4	18.0	±25%

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

Results for Volatiles

by GC 602

Client Sample ID: USTA47-MW01
Client Project ID: USTA47
Lab Sample ID: G128-2058-11E
Lab Project ID: G128-2058

Analyzed By: RSB
Date Collected: 11/1/2007 10:00
Date Received: 11/1/2007
Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.183	1	11/9/2007	
Diisopropyl ether (DIPE)	BQL	1.00	0.229	1	11/9/2007	
Ethylbenzene	BQL	1.00	0.181	1	11/9/2007	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.359	1	11/9/2007	
Toluene	BQL	1.00	0.157	1	11/9/2007	
m/p-Xylene	BQL	2.00	0.481	1	11/9/2007	
o-Xylene	BQL	2.00	0.584	1	11/9/2007	

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.6	101

Comments:
All values corrected for dilution.
BQL = Below quantitation limit.

Reviewed By: GC-VOA_WA

Results for Volatiles
by GC 602

Client Sample ID: USTA47-DW01
Client Project ID: USTA47
Lab Sample ID: G128-2058-12B
Lab Project ID: G128-2058

Analyzed By: RSB
Date Collected: 11/1/2007 9:30
Date Received: 11/1/2007
Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.183	1	11/12/2007	
Diisopropyl ether (DIPE)	BQL	1.00	0.229	1	11/12/2007	
Ethylbenzene	BQL	1.00	0.181	1	11/12/2007	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.359	1	11/12/2007	
Toluene	BQL	1.00	0.157	1	11/12/2007	
m/p-Xylene	BQL	2.00	0.481	1	11/12/2007	
o-Xylene	BQL	2.00	0.584	1	11/12/2007	

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.4	98.4

Comments:
All values corrected for dilution.
BQL = Below quantitation limit.

Reviewed By: GC-VOA_WA

Results for Volatiles

by GC 602

Client Sample ID: USTA47-MW02
Client Project ID: USTA47
Lab Sample ID: G128-2058-13E
Lab Project ID: G128-2058

Analyzed By: RSB
Date Collected: 11/1/2007 10:30
Date Received: 11/1/2007
Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.183	1	11/10/2007	
Diisopropyl ether (DIPE)	BQL	1.00	0.229	1	11/10/2007	
Ethylbenzene	BQL	1.00	0.181	1	11/10/2007	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.359	1	11/10/2007	
Toluene	BQL	1.00	0.157	1	11/10/2007	
m/p-Xylene	BQL	2.00	0.481	1	11/10/2007	
o-Xylene	BQL	2.00	0.584	1	11/10/2007	

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.6	102

Comments:
All values corrected for dilution.
BQL = Below quantitation limit.

Reviewed By:

SGS ENVIRONMENTAL SERVICES, INC.

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTA47-MW01
Client Project ID: USTA47
Lab Sample ID: G128-2058-11J
Lab Project ID: G128-2058

Analyzed By: DCS
Date Collected: 11/1/2007 10:00
Date Received: 11/1/2007
Date Extracted: 11/6/2007
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	11/13/2007	
Acenaphthylene	BQL	10.0	1.12	1	11/13/2007	
Anthracene	BQL	10.0	1.75	1	11/13/2007	
Benzo[a]anthracene	BQL	10.0	1.36	1	11/13/2007	
Benzo[a]pyrene	BQL	10.0	1.27	1	11/13/2007	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	11/13/2007	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	11/13/2007	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	11/13/2007	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	11/13/2007	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	11/13/2007	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	11/13/2007	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	11/13/2007	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	11/13/2007	
Butylbenzylphthalate	BQL	10.0	1.53	1	11/13/2007	
2-Chloronaphthalene	BQL	10.0	1.25	1	11/13/2007	
2-Chlorophenol	BQL	10.0	4.22	1	11/13/2007	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	11/13/2007	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	11/13/2007	
Chrysene	BQL	10.0	1.11	1	11/13/2007	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	11/13/2007	
Di-n-Butylphthalate	BQL	10.0	1.65	1	11/13/2007	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	11/13/2007	
2,4-Dichlorophenol	BQL	10.0	3.75	1	11/13/2007	
Diethylphthalate	BQL	10.0	1.48	1	11/13/2007	
Dimethylphthalate	BQL	10.0	1.04	1	11/13/2007	
2,4-Dimethylphenol	BQL	10.0	9.25	1	11/13/2007	
Di-n-octylphthalate	BQL	10.0	1.16	1	11/13/2007	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	11/13/2007	
2,4-Dinitrophenol	BQL	50.0	4.20	1	11/13/2007	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	11/13/2007	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	11/13/2007	
Diphenylamine *	BQL	10.0	1.53	1	11/13/2007	
Fluoranthene	BQL	10.0	1.41	1	11/13/2007	
Fluorene	BQL	10.0	1.22	1	11/13/2007	
Hexachlorobenzene	BQL	10.0	1.22	1	11/13/2007	
Hexachlorobutadiene	BQL	10.0	1.58	1	11/13/2007	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	11/13/2007	
Hexachloroethane	BQL	10.0	1.58	1	11/13/2007	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	11/13/2007	
Isophorone	BQL	10.0	1.27	1	11/13/2007	
Naphthalene	BQL	10.0	1.08	1	11/13/2007	
Nitrobenzene	BQL	10.0	1.32	1	11/13/2007	
2-Nitrophenol	BQL	10.0	3.52	1	11/13/2007	
4-Nitrophenol	BQL	50.0	3.17	1	11/13/2007	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	11/13/2007	
Pentachlorophenol	BQL	50.0	2.83	1	11/13/2007	
Phenanthrene	BQL	10.0	1.38	1	11/13/2007	

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTA47-MW01
Client Project ID: USTA47
Lab Sample ID: G128-2058-11J
Lab Project ID: G128-2058

Analyzed By: DCS
Date Collected: 11/1/2007 10:00
Date Received: 11/1/2007
Date Extracted: 11/6/2007
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	10.0	3.38	1	11/13/2007	
Pyrene	BQL	10.0	2.08	1	11/13/2007	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	11/13/2007	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	11/13/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	6.9	69
2-Fluorophenol	10	6.4	64
Nitrobenzene-d5	10	6.6	66
Phenol-d6	10	6.5	65
2,4,6-Tribromophenol	10	8.3	83
4-Terphenyl-d14	10	8.5	85

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

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

Reviewed By:

SGS

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTA47-MW01
Client Project ID: USTA47
Lab Sample ID: G128-2058-11J
Lab Project ID: G128-2058
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: DES
Date Collected: 11/1/2007 10:00
Date Received: 11/1/2007
Date Extracted: 11/6/2007
Date Analyzed: 11/12/2007
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	No library search compounds detected.				
2					
3					
4					
5					
6					
7					
8					
9					
10					

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

SGS ENVIRONMENTAL SERVICES, INC.

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTA47-MW02
Client Project ID: USTA47
Lab Sample ID: G128-2058-13I
Lab Project ID: G128-2058

Analyzed By: DES
Date Collected: 11/1/2007 10:30
Date Received: 11/1/2007
Date Extracted: 11/6/2007
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	11/13/2007	
Acenaphthylene	BQL	10.0	1.12	1	11/13/2007	
Anthracene	BQL	10.0	1.75	1	11/13/2007	
Benzo[a]anthracene	BQL	10.0	1.36	1	11/13/2007	
Benzo[a]pyrene	BQL	10.0	1.27	1	11/13/2007	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	11/13/2007	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	11/13/2007	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	11/13/2007	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	11/13/2007	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	11/13/2007	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	11/13/2007	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	11/13/2007	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	11/13/2007	
Butylbenzylphthalate	BQL	10.0	1.53	1	11/13/2007	
2-Chloronaphthalene	BQL	10.0	1.25	1	11/13/2007	
2-Chlorophenol	BQL	10.0	4.22	1	11/13/2007	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	11/13/2007	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	11/13/2007	
Chrysene	BQL	10.0	1.11	1	11/13/2007	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	11/13/2007	
Di-n-Butylphthalate	BQL	10.0	1.65	1	11/13/2007	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	11/13/2007	
2,4-Dichlorophenol	BQL	10.0	3.75	1	11/13/2007	
Diethylphthalate	BQL	10.0	1.48	1	11/13/2007	
Dimethylphthalate	BQL	10.0	1.04	1	11/13/2007	
2,4-Dimethylphenol	BQL	10.0	9.25	1	11/13/2007	
Di-n-octylphthalate	BQL	10.0	1.16	1	11/13/2007	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	11/13/2007	
2,4-Dinitrophenol	BQL	50.0	4.20	1	11/13/2007	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	11/13/2007	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	11/13/2007	
Diphenylamine *	BQL	10.0	1.53	1	11/13/2007	
Fluoranthene	BQL	10.0	1.41	1	11/13/2007	
Fluorene	BQL	10.0	1.22	1	11/13/2007	
Hexachlorobenzene	BQL	10.0	1.22	1	11/13/2007	
Hexachlorobutadiene	BQL	10.0	1.58	1	11/13/2007	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	11/13/2007	
Hexachloroethane	BQL	10.0	1.58	1	11/13/2007	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	11/13/2007	
Isophorone	BQL	10.0	1.27	1	11/13/2007	
Naphthalene	BQL	10.0	1.08	1	11/13/2007	
Nitrobenzene	BQL	10.0	1.32	1	11/13/2007	
2-Nitrophenol	BQL	10.0	3.52	1	11/13/2007	
4-Nitrophenol	BQL	50.0	3.17	1	11/13/2007	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	11/13/2007	
Pentachlorophenol	BQL	50.0	2.83	1	11/13/2007	
Phenanthrene	BQL	10.0	1.38	1	11/13/2007	

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTA47-MW02
Client Project ID: USTA47
Lab Sample ID: G128-2058-13I
Lab Project ID: G128-2058

Analyzed By: DES
Date Collected: 11/1/2007 10:30
Date Received: 11/1/2007
Date Extracted: 11/6/2007
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	10.0	3.38	1	11/13/2007	
Pyrene	BQL	10.0	2.08	1	11/13/2007	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	11/13/2007	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	11/13/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.9	79
2-Fluorophenol	10	7	70
Nitrobenzene-d5	10	7.5	75
Phenol-d6	10	7.5	75
2,4,6-Tribromophenol	10	7.8	78
4-Terphenyl-d14	10	8.7	87

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

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

Reviewed By:

SGS ENVIRONMENTAL SERVICES, INC.

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTA47-MW02
Client Project ID: USTA47
Lab Sample ID: G128-2058-13I
Lab Project ID: G128-2058
Sample Wt/Vol: 500 ML
Dilution: 1

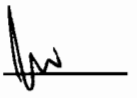
Analyzed By: DES
Date Collected: 11/1/2007 10:30
Date Received: 11/1/2007
Date Extracted: 11/6/2007
Date Analyzed: 11/13/2007
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	9.01			19.6
2	Unknown	12.23			18.8
3	Unknown	13.12			18
4	Unknown	8.40			11.2
5					
6					
7					
8					
9					
10					

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

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(1)

CLIENT: CATLIN ENG. & SCI

CONTACT: JASON COOK PHONE NO:(910) 452-5861

PROJECT: UST447 SITE/PWSID# :

REPORTS TO: ATTN: JASON COOK E-MAIL:

FAX NO.:( )

INVOICE TO: ATTN: SHEILA SMITH QUOTE # DOD101 PER J. COOK 998 11/2/07

P.O. NUMBER 271101-04

SGS Reference: G128-2058

PAGE 1 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP G=GRAB)	Preservatives Used	Analysis Required (3) EPA 8260 5035 PREP / EPA 8270 MASTER / MADEP EPH / MADEP VPH	REMARKS
	UST447 - MW01 (1-2')	10-30-07	1230	SOIL	3			✓ ✓ ✓	EDD FORMAT
	UST447-MW02 (3.5-5')	10-30-07	1415					✓ ✓ ✓	PLS REPORT
	UST447-SS01 (2-3')	10-31-07	1010					✓ ✓ ✓	LOW RUNS
	UST447-SS02 (3-4')		0900					✓ ✓ ✓	
	UST447-SS03 (5-6')		1110					✓ ✓ ✓	
	UST447-SS04 (1-2')		1045					✓ ✓ ✓	ADD TICS TO
	UST447-SS05 (2-3')		0830					✓ ✓ ✓	8270 PER
	UST447-SS06 (1-2')		1500					✓ ✓ ✓	J. COOK ON 11/6/07
	UST447-SS07 (4-5')		0930					✓ ✓ ✓	
NO % SOLIDS	UST447-DW01 (3-4')	10-30-07	1130		1			✓ → REPORT AS RECEIVED PER J. COOK 998 11/2	

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:	Date	Time
[signature]	11-1-07	1700			
Relinquished By: (2)	Date	Time	Received By:	Date	Time
Relinquished By: (3)	Date	Time	Received By:	Date	Time
Relinquished By: (4)	Date	Time	Received By: [signature]	Date 11-1-07	Time 1710

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature °C: IR 6.0°C

Special Deliverable Requirements:

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:

☐ RUSH _____ Date Needed ☐ STD

N.C. CERTIFICATION #481

SGS ENVIRONMENTAL SERVICES, INC.

☐ 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
☐ 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557
☐ 1270 Greenbrier Street Charleston, WV 25311 Tel: (304) 346-0725 Fax: (304) 346-0761

White - Retained by Lab
Yellow - Returned with Report
Pink - Retained by Sampler

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(1)
CLIENT: CATLIN ENG. & SCI.
CONTACT: JASON COOK PHONE NO:( )
PROJECT: UST447 SITE/PWSID# :
REPORTS TO: E-MAIL:
CATLIN: JASON COOK FAX NO.:( )
INVOICE TO: QUOTE #
CATLIN: SHEILA SMITH P.O. NUMBER 271101-04

SGS Reference: 6128-2058

PAGE 2 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP G=GRAB)	Preservatives Used	Analysis Required (3) EPA 625 + TICs	EPA 602 + MADEP VPH	MADEP EPH	EPA 602 (MTBE)	REMARKS
	UST447-MW01	11-1-07	1000	GW	5			✓	✓	✓		
	UST447-DW01		0930		3					✓		EDD FORMAT
	UST447 MW02		1030		5			✓	✓	✓		
												PLS REPORT LOW RUNS
												ADD TICS TO LIST FOR J. COOK ON 11/2/07 SRR

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:	Date	Time
	11-1-07	1700			
Relinquished By: (2)	Date	Time	Received By:	Date	Time
Relinquished By: (3)	Date	Time	Received By:	Date	Time
Relinquished By: (4)	Date	Time	Received By:	Date	Time
				11-1-07	1710

(4)

Shipping Carrier:
Shipping Ticket No:
Special Deliverable Requirements:

Samples Received Cold? (Circle) YES NO
Temperature °C: 4° I 6.0°C on ice
Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:
☐ RUSH _____ Date Needed ☐ STD

SGS ENVIRONMENTAL SERVICES, INC.

N.C. CERTIFICATION #481

93 of 93

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☐ 1270 Greenbrier Street Charleston, WV 25311 Tel: (304) 346-0725 Fax: (304) 346-0761

White - Retained by Lab
Yellow - Returned with Report
Pink - Retained by Sampler