LEAKING UNDERGROUND STORAGE TANK (LUST)
PHASE I LIMITED SITE ASSESSMENT REPORT

FOR

MICHAEL ROAD FUEL FARM
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

NCDENR UST INCIDENT NO. PENDING

March 28, 2005

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LIST OF ACRONYMS

2000 Guidelines	Groundwater Section Guidelines for Investigation and Remediation of Soil and Groundwater
2001 Guidelines	Guidelines for Assessment and Corrective Action, North Carolina Underground Storage Tank Section (Effective July 1, 2001)
2L GWQS	NCAC T15A:02L Groundwater Quality Standards
ARO	Asheville Regional Office
AS	Air Sparge
AST	Aboveground Storage Tank
BDL	Below Detection Limit
BN	Base/Neutral (extractables)
BNA	Base/Neutral/Acid (extractables)
BQL	Below Quantitation Limit
BLS	Below Land Surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAP	Corrective Action Plan
CATLIN	CATLIN Engineers and Scientists (Formerly RC&A)
CFR	Code of Federal Regulations
Cr	Chromium
CSA	Comprehensive Site Assessment
CNP	Carbon Nitrogen Phosphorous
CPT	Cone Penetrometer Test
DEM	Division of Environmental Management
DIPE	Diisopropyl Ether
DO	Dissolved Oxygen
DOD	Department of Defense
DPT	Direct Push Technology
DWQ	Division of Water Quality
DWM	Division of Waste Management
DTW	Depth to Water
EAD	Environmental Affairs Department
EDB	Ethylene di-bromide
EMD	Environmental Management Division
EPA	Environmental Protection Agency
EPH	Extractable Petroleum Hydrocarbons
EQB	Environmental Quality Branch
Fe	Iron
FID	Flame Ionization Detector
FOD	Foreign Object Debris
FRO	Fayetteville Regional Office
FT	Feet
GCL	Gross Contaminant Level
GIS	Geographic Information System
GPS	Global Positioning System

Guidelines Vol. I	Groundwater Section Guidelines for Investigation and Remediation of Soil and Groundwater, Volume I, Sources Other Than Petroleum Underground Storage Tanks (May 1998)
Guidelines Vol. II	Groundwater Section Guidelines for Investigation and Remediation of Soil and Groundwater, Volume II, Petroleum Underground Storage Tanks (January 2, 1998)
HDPE	High Density Polyethylene
I/C	Industrial/Commercial
ID	Identification
I&E	Installations and Environment Department
IGWQS	Interim Groundwater Quality Standards
IPE	Isopropyl Ether
LANTDIV	Atlantic Division
LSA	Limited Site Assessment
LUST	Leaking Underground Storage Tank
m-	meta
m	meter
MADEP	Massachusetts Department of Environmental Protection
MCALF	Marine Corps Auxiliary Landing Field
MCAS	Marine Corps Air Station
MCB	Marine Corps Base
MCOLF	Marine Corps Outlying Landing Field
MDL	Method Detection Limit
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Litre
MRO	Mooresville Regional Office
MSCC	Maximum Soil Contaminant Concentration
MSL	Mean Sea Level
MTBE	Methyl tertiary butyl ether
µg/Kg	Micrograms per Kilogram
µg/L	Micrograms per Litre
NA	Not Analyzed
N/A	Not Applicable
NC	North Carolina
NCAC	North Carolina Administrative Code
NCDENR	North Carolina Department of Environment and Natural Resources
NCDOC	North Carolina Department of Corrections
NCDOT	North Carolina Department of Transportation
NCSP	North Carolina State Plane
NCSPA	North Carolina State Ports Authority
NE	None Established
NM	Not Measured
NMT	No Measurable Thickness
NS	Not Sampled
o-	ortho
OVA	Organic Vapor Analyzer
p-	para
PAH	Polynuclear Aromatic Hydrocarbons
Pb	Lead
PPB	Parts Per Billion
PPM	Parts Per Million

PID	Photo Ionization Detector
PQL	Practical Quantitation Limit
PVC	Polyvinyl chloride
RBCA	Risk-Based Corrective Action
RCRA	Resource Conservation and Recovery Act
Res	Residential
ROI	Radius of Influence
RRO	Raleigh Regional Office
SOW	Scope of Work
STGW	Soil-to-Groundwater
SVE	Soil Vapor Extraction
SVOC	Semi Volatile Organic Compound
TDHF	Toxicologically Defined Hydrocarbons Fractions
TCLP	Toxicity Characteristic Leaching Procedure
TIC	Tentatively Identified Compound
TKN	Total Kjeldahl Nitrogen
TOC	Top of Casing
TPH	Total Petroleum Hydrocarbons
US	United States
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
VPH	Volatile Petroleum Hydrocarbons
WaRO	Washington Regional Office
WiRO	Wilmington Regional Office
WSRO	Winston-Salem Regional Office

PURPOSE OF INVESTIGATION

CATLIN Engineers and Scientists (CATLIN) was authorized to perform this Phase I Limited Site Assessment (LSA), by the NAVFAC Atlantic in accordance with the Order of Supplies Contract Number N62470-01-D-3009, Delivery Order Number 0137. This document provides data to fulfill the initial site assessment and risk characterization requirements in accordance with 15A NCAC 2L .0115(c)(4). Accordingly, this document has been formatted to conform with the Guidelines for Assessment and Corrective Action effective July 1, 2001 (*2001 Guidelines*). The purpose of the field activities was to collect the necessary information allowing NCDENR to classify the level of risk resulting from the release.

This LSA was conducted in response to the initial findings in the "Michael Road Fuel Farm UST Closure Report" documenting UST removal activities at the subject site. Michael Road Fuel Farm (MRFF) is an approximately six-acre facility located on Michael Road, aboard MCB, Camp Lejeune, North Carolina. Figure 1 illustrates the general site location within the local USGS topographic quadrangle map. MRFF includes building 1070, a fuel dispenser island (10 dispensers), and a separate bulk fuel truck loading rack (three offloading racks, one transfer pump rack and three loading racks for three on-site ASTs) area. The MRFF bulk fuel truck loading rack area included a 2,500-gallon double wall fiberglass UST and associated underground pipeline for the recovery of excess fuels from the operation of the seven truck loading racks. This former UST system, within the MRFF bulk fuel truck loading rack area, is considered the potential source area and the focus of this LSA. Figure 2 illustrates the site map for this area of interest.

According to base personnel, during site operations the UST system rarely contained more than a couple hundred gallons of mixed fuel. However, after recurring intrusion of groundwater within the UST, decommissioning of the UST and associated pipelines were initiated. As indicated in the Shaw Environmental and Infrastructure, Incorporated (Shaw) "Michael Road Fuel Farm UST Closure Report", odor, indicative of petroleum contamination, was evident during the UST removal activities. In addition a crack was evident in the UST sidewall (fiberglass).

Initial abatement activities involved removal of 165 tons of non-hazardous TPH impacted soil from the UST location and 260 tons of non-hazardous TPH impacted soil from the underground fuel pipeline location. One temporary monitoring well was installed within the excavation limits of the UST removal. Laboratory analysis (MADEP- EPH/VPH, EPA Method 8260 and 8270) of four soil samples obtained from the UST excavation revealed no analysis parameters in excess of applicable MSCCs. Laboratory analysis (TPH - GRO and DRO) of 54 soil samples obtained from beneath the former underground fuel pipeline location revealed TPH-DRO concentrations in excess of Action Levels (10 mg/Kg) in twenty soil samples (See Figure 2). Laboratory analysis (EPA Method 8260 and 8270) of the groundwater sample collected from the UST area temporary monitoring well revealed dissolved Benzene, Ethylbenzene, MTBE, Total Xylenes, and Naphthalene concentrations in excess of applicable 2L GWQS. The preliminary results of these activities indicated the necessity to conduct a Phase I LSA.

In general, two "hot spots" of potential petroleum impact were identified during the UST closure activities; the former UST basin where petroleum impact was confirmed via groundwater sampling and a location approximately 30 feet west of the former UST basin where a DRO concentration of 1,480 mg/kg was identified in soil sample 052. Soil samples collected as part of this investigation were collected at areas identified during the UST removal activities with the highest potential for petroleum impact. Six soil samples were collected along the former pipeline, including sample location 052, three soil samples were

taken to help delineate the suspected contamination at location 052 and one soil sample was taken at the location of the Shaw temporary well. Soil samples were obtained for Risk-Based laboratory analysis in an effort to confirm or deny the presence of soil contamination in excess of applicable MSCCs at each of the areas previously identified with potential petroleum impact. It was agreed in a phone conversation between Ms. Nikki Hall with Camp Lejeune and Mr. Bruce Reed with the Wilmington Regional Office of the NCDENR to use this approach to correlate known TPH-DRO laboratory results with Risk-Based results.

In addition, two shallow Type II monitoring wells were installed at the site. One well was installed to replace the temporary well within the former UST basin and one well was installed adjacent to the Shaw pipeline sample 052. Figure 2 illustrates the location of the LSA monitoring wells, LSA soil sampling locations, and permanent monitoring well locations in relation to the areas of concern identified during the UST/pipeline removal activities. Groundwater samples were obtained from both of the newly installed monitoring wells for Risk-Based laboratory analytical analysis

It should be noted that the LSA site soil and groundwater samples were labeled with prefix USTMRFF-. The site identification was subsequently changed to UST1070; therefore, soil and groundwater are discussed in the following text, tables and figures with the prefix UST1070-.

PHASE I LIMITED SITE ASSESSMENT REPORT

A. SITE IDENTIFICATION

DATE OF REPORT: March 28, 2005
Facility ID: N/A **UST Incident Number (if known):** Pending
Site Name: Michael Road Fuel Farm
Site Location: Marine Corps Base, Camp Lejeune
Nearest City/Town: Jacksonville **County:** Onslow

UST Owner: Commanding General – 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: Mr. Harold Taylor – MCB Fuels Operations
Address: Building 1070, Michael Road **Phone:** Unknown

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

Release Information

Date Discovered: September 2004
Longitude: 77° 19' 46.26" W **Latitude:** 34° 40' 22.56" N
Estimated Quantity of Release: Unknown
Cause of Release: Unknown
Source of Release (e.g. Piping/UST):
UST and associated piping is suspected

Sizes and contents of UST system(s) from which the release occurred:
2,500-gallon double wall fiberglass UST and associated underground pipelines used for recovering excess fuel from the facilities seven bulk fuel truck loading racks. The UST and associated pipeline had handled mixed fuels (JP-8, Kerosene, and MOGAS - Gasoline).

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, the MCB samples the base raw water supply wells semi-annually and no contaminants were reported in the latest sampling event. No information provided indicates a water supply well has been contaminated as a result of the release from the MRFF potential 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**

   The potable water well nearest to the potential source area is PSW HP-642 (active) located approximately 2,300 feet to the east-southeast. See 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 located within 1,000 feet of the source area of the release.

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

   Currently there are an adequate number of locations for additional water supply wells to be installed on portions of MCB Camp Lejeune greater than 500 feet from the potential source area.

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.

   Buildings within 500 feet of the potential source area are slab on grade. No evidence of vapor accumulations 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 a tributary to Cogdel's Creek located approximately 2,200 feet south of the potential source area. The storm water retention pond located approximately 290 feet west of the source area is a manmade structure.

*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. Figure 3 illustrates the subject site location in reference to the Geologic Map of North Carolina 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 the MCB, Camp Lejeune potable water treatment facilities. To determine if current petroleum contaminants in the site surficial aquifer could recharge to deeper unconfined or semi-confined aquifer(s), that are or may potentially be utilized as a drinking water source(s), the subject site findings were compared to available data from the MCB Hadnot Point Fuel Farm project (Incident No.'s 3671, 10615 and 27788). The potential Michael Road Fuel Farm source area is located within the boundary of the MCB Hadnot Point Fuel Farm project. The following data was obtained from the report entitled "Identification, Correlation, and Assimilation of Organic Subsurface Soils, Hadnot Point Fuel Farm" dated June 19, 2002.

The Castle Hayne confining unit, where present, appeared to be highly incised by possible paleochannels and other such geologic features that would enable the vertical movement of fluids. Recharge to Coastal Plain aquifers occurs predominantly through direct surface recharge by rainfall in interstream areas (Cardinell, et al, 1995).

The screen interval for the potable water well (PSW HP 642) nearest to the potential source area is 112 to 196 feet BLS or within the Castle Hayne Aquifer (A&H, August 2002). As previously stated, no information provided indicates a water supply well has been contaminated as a result of the release from the MRFF source area.

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

Laboratory analysis of the surficial groundwater samples from site monitoring wells UST1070-MW01 and UST1070-MW02 revealed all EPA Methods 602, 625, MADEP VPH and EPH parameters were well below applicable GCLs.

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 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 nearest building is 1070, a slab on grade office building for MRFF, located approximately 800 feet south west of the potential source area.

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

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.

There is a security fence around the perimeter of the MRFF facility and access is restricted to military vehicles. In addition military and civil service personnel operate the facility.

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

The potential source area is capped by grass-covered topsoil.

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?

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

While MCB, Camp Lejeune is not subject to local or county-zoning requirements; MRFF is located within an area considered as Industrial/Commercial use.

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):

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

Primary and secondary residence areas are greater than 1,500 feet from the potential source area.

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?*

There were no places of public assembly identified within a 1,500 feet radius of the potential source area (See Figure 1).

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

MCB, Camp Lejeune is not subject to local or county zoning requirements. However, MRFF is located within an Industrial/Commercial use area.

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

MRFF is a facility for storing and distributing mixed fuel to military vehicles. Military use of the surrounding properties are storage, railroad transport yard, and military/civil service office buildings.

C. RECEPTOR INFORMATION

1. Water Supply Wells

The nearest active potable water well is PSW HP-642. This well is located approximately 2,300 feet to the east-southeast of the source area.

2. Public Water Supplies

Are public water supplies available within 1,500 feet of the source area of the release?

YES NO

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

Public water is provided to building AS 1070, 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

The nearest mapped surface water body is a tributary to Cogdel's Creek located approximately 2,200 feet south of the potential source area.

4. Wellhead Protection Areas

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 was profiled in the "Visual Hydrogeologic

Framework" of the NCDENR Division of Water Resources website (VHF website). Including the Surficial aquifer there are eleven identified aquifers (seven principal aquifers and four minor ones) within the North Carolina Coastal Plain Physiographic Region. A borehole identified as Hadnot Point Station was installed approximately 1.86 miles from the potential source area to a depth of approximately 1,520 feet BLS. A copy of the Hadnot Point Station borehole data has been provided in Appendix A. Subsurface aquifers identified from this borehole in order of increasing depth were as follows: Surficial, Castle Hayne, Pee Dee, Black Creek, Upper Cape Fear, and Lower Cape Fear. The principal aquifer utilized for potable water in the area of MCB, Camp Lejeune is the Castle Hayne Aquifer.

6. Subsurface Structures

Numerous underground utilities are present throughout MRFF facility. 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 General – Marine Corps Base, Camp Lejeune. Refer to Table 1.

D. SITE GEOLOGY AND HYDROGEOLOGY

D.1 Site Geology

Description to the subsurface geology encountered at the site can be summarized as follows:

<table>
<tr><th colspan="3">UST1070-MW01</th><th colspan="2">UST1070-MW02</th></tr>
<tr><th>Depth in feet BLS</th><th>Soil Description</th><th>USCS</th><th>Soil Description</th><th>USCS</th></tr>
<tr><td>0</td><td rowspan="5">Olive/Tan, silty fine grained sands, few organics</td><td rowspan="5">SM</td><td rowspan="8">Tan, fine sand, few fines
(Fill)</td><td rowspan="12">SP</td></tr>
<tr><td>1</td></tr>
<tr><td>2</td></tr>
<tr><td>3</td></tr>
<tr><td>4</td></tr>
<tr><td>5</td><td rowspan="3">Black, organic, fine grain sands with organic fines</td><td rowspan="3">OH</td></tr>
<tr><td>6</td></tr>
<tr><td>7</td></tr>
<tr><td>8</td><td rowspan="9">Light grey, silty fine grained sands</td><td rowspan="9">SM</td></tr>
<tr><td>9</td><td rowspan="4">Olive, fine to medium grained sand, few fines</td></tr>
<tr><td>10</td></tr>
<tr><td>11</td></tr>
<tr><td>12</td><td rowspan="4">Light grey, silty fine grained sands</td><td rowspan="4">SM</td></tr>
<tr><td>13</td></tr>
<tr><td>14</td></tr>
<tr><td>15</td></tr>
<tr><td>16</td><td>Organic clayey sand</td><td>OH</td></tr>
<tr><td>17</td><td>Same as 12 to 15 feet BLS</td><td>SM</td></tr>
</table>

Site subsurface geology was determined from the description of slit spoon samples and drill cuttings obtained during the installation of boreholes advanced to facilitate the construction of the Type II monitoring wells (UST1070-MW01 and UST1070-MW02) and during advancement of the DPT probes. A copy of the boring logs, monitoring well as-builts, and North Carolina Well Construction records have been provided in Appendix B**.**

The soils described above are consistent with undivided surficial deposits typically encountered in the Coastal Plain physiographic province.

D.2 Site Hydrogeology

During the March 7, 2005 site visit, CATLIN personnel obtained depth to water data from site-monitoring wells UST1070-MW01 and UST1070-MW02. Depth to surficial groundwater at wells UST1070-MW01 and UST1070-MW02 was 7.48 and 6.72 feet below top of casing, respectively. Review of the boring and groundwater data generated during the numerous studies conducted at the adjacent Hadnot Point Fuel Farm, in conjunction with the data generated during this investigation, indicates the groundwater encountered below the potential source area is part of an unconfined surficial aquifer. Site monitoring well details and the latest (October 15, 2003) groundwater gauging data has been summarized on Table 3. The locations of the site monitoring wells have been illustrated on Figure 2.

E. SAMPLING RESULTS

The initial findings in the "Michael Road Fuel Farm UST Closure Report" indicated potential areas of concern in the site subsurface soils and groundwater. To further assess these potential areas of concern, permanent Type II monitoring wells were installed at location of the temporary well installed during the UST closure activities and approximately 30 feet east of the former UST in an area identified with the highest soil DRO concentration adjacent to the former pipeline. Soil samples and groundwater samples were collected for laboratory analysis from each of the permanent monitoring well locations. Additionally, eight DPT soil borings (DPTs) were advanced within and around the identified areas of concern and representative soil samples were collected for laboratory analysis.

All fieldwork methods were conducted in general accordance with CATLIN's Standard Methods of Investigation and Data Evaluation. A copy of the CATLIN Standard Methods of Investigation has been provided in Appendix C.

Note: Per the *2001 Guidelines,* if LSA groundwater sample analysis results reveal groundwater contaminant(s) concentrations exceeding the 2LGWQS by a factor of ten, a Phase II LSA investigation is required.

Initial observation and sampling results from the UST closure activities indicated that a Phase II LSA would be necessary at the site. In order to meet an accelerated schedule of completion, NAVFAC Atlantic authorized Engineering and Environmental Inc. (EEI) to

install additional monitoring well(s). Installation of the additional wells was initiated prior to obtaining the analytical results of the groundwater samples collected during the Phase I LSA. Laboratory results obtained from the Phase I LSA sampling event revealed no groundwater contamination greater than ten times the 2L GWQS. Therefore, additional monitoring well installation was halted following the installation of monitoring well UST1070-MW03 (the first monitoring well installed as part of the Phase II LSA activities). No soil or groundwater samples were obtained from monitoring well UST1070-MW03.

E.1 Soil Sampling

During the LSA field assessment phase, CATLIN personnel obtained subsurface soil samples for laboratory analysis while installing the eight DPT and two monitoring well boreholes on March 4, 2005. At all boreholes locations continuous samples were collected at 1-foot intervals until the apparent surficial water table was encountered. During the monitoring well borehole installation, soil samples were continuously collected to a depth of approximately 12 feet BLS then an additional soil sample was collected from 15 to 17 feet BLS for descriptive purposes.

To assess for potential petroleum contamination the following screening and sample preparation methods were conducted. As each borehole was advanced, the soil samples from the apparent unsaturated subsurface soils were set aside for screening. To assess for potential petroleum contamination the headspace of each sample was screened with an FID. The unsaturated soil sample from each DPT and Monitoring well borehole with the highest FID reading was prepared for laboratory analysis. Each soil sample was labeled with the applicable borehole ID, sample depth, sample date, site name, sampler, and placed in an iced cooler. The samples were then delivered to Paradigm Analytical Laboratories, Inc. (North Carolina Certification #481) in Wilmington, North Carolina. In accordance with the Table 5 of the *2001 Guidelines*, selected soil samples were analyzed for suspected mixed fuels (low to high boiling point fuels) contamination per EPA Method 8260(5035 preparation), EPA Method 8270 (+ 10 largest non-target peaks), MADEP VPH and MADEP EPH.

A copy of the resulting soil sample laboratory analysis report has been provided in Appendix D. For regulatory compliance, the release was reported on or after January 2, 1998 and therefore, resulting laboratory analysis data are compared to Risk-Based Corrective Action Levels or applicable MSCCs listed in the *2001 Guidelines*. Analysis of the soil samples submitted for laboratory analysis can be summarized as follows:

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

Analysis of site soil samples revealed that EPA Method 8260B/5035 parameter compound concentrations were either BQL or compliant with applicable I/C, Residential, and STGW MSCCs.

The EPA Method 8260B/5035 laboratory report data has been summarized on Table 4A. Figure 4A shows a summary of the data in relation to the site map.

EPA Method 8270C

Analysis of site soil samples revealed that EPA Method 8270 parameter compound concentrations were either BQL or compliant with applicable I/C, Residential, and STGW MSCCs.

The EPA Method 8270 laboratory report data has been summarized on Table 4B. Figure 4B shows a summary of the data in relation to the site map.

MADEP VPH/EPH

Except for sample UST1070-SB08 (4-6 feet BLS), analysis of site soil samples revealed that MADEP VPH/EPH hydrocarbon fraction concentrations were either BQL or compliant with applicable I/C, Residential, and STGW MSCCs. UST1070-SB08 (4-6 feet BLS) exhibited C_9-C_{22} aromatic concentration of 171 ug/Kg compliant with applicable I/C and Residential MSCCs however, in excess of the STGW MSCC of 34 ug/Kg). The remaining hydrocarbon fraction concentrations, for soil sample UST1070-SB08, were either BQL or compliant with applicable I/C, Residential, and STGW MSCCs.

The MADEP VPH/EPH laboratory report data has been summarized on Tables 4C and 4D. Figure 4C shows a summary of the data in relation to the site map.

E.2 Groundwater Sampling

CATLIN personnel installed Type II monitoring wells UST1070-MW01 and UST1070-MW02 on March 4, 2005. Following termination of the soil boring, Type II monitoring wells were constructed using two-inch diameter PVC well screen with 0.01-inch slot openings extending from five to 15 feet BLS. The annular space between the well screen and borehole was backfilled with medium grained sand. Each well was developed using a submersible pump.

On March 7, 2005 CATLIN personnel gauged the two newly installed monitoring wells for depth to water, potential free-phase product thickness, and to determine well volume. CATLIN purged a minimum of three well volumes from each of the two monitoring wells prior to placing the groundwater directly into laboratory sample glassware. A copy of the sampling field data worksheet has been provided in Appendix E. All groundwater samples were labeled with the monitoring well identification, sample date, site name, sampler, and placed in an iced cooler. Samples were then delivered to Paradigm Analytical Laboratories, Inc. (Paradigm; North Carolina Certification #481) in Wilmington, North Carolina. In accordance with Table 10 of the *2001 Guidelines,* site groundwater samples were analyzed for suspected mixed fuels contamination per EPA Method 602 + Xylenes, EPA Method 625 (+ 10 largest non-target peaks), MADEP VPH and MADEP EPH.

A copy of the resulting groundwater sample laboratory analysis report has been provided in Appendix D. For regulatory compliance the resulting laboratory analysis data have been

compared to applicable groundwater quality standards listed in the *2001 Guidelines.* Analysis of the groundwater samples submitted for laboratory analysis can be summarized as follows:

EPA METHOD 602 + XYLENES + IPE + MTBE

Analysis of the monitoring well UST1070-MW01 and UST1070-MW02 groundwater samples revealed that EPA Method 602 target compound concentrations were either BQL or below applicable 2L GWQS and GCLs.

The EPA Method 602 + Xylenes + IPE + MTBE laboratory report data has been summarized on Table 5A. Figure 5A shows a summary of the data in relation to the site map.

EPA METHOD 625 + TICS

Analysis of the monitoring well UST1070-MW01 and UST1070-MW02 groundwater samples revealed that EPA Method 625 target compound concentrations were either BQL or below applicable 2L GWQS and GCLs.

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 Tentatively Identified Compounds (TICs). TICs refer to detected compounds, which are not present in the EPA Method 625 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 standards for any of these TICs. Laboratory analysis of the site surficial groundwater samples for the ten largest TICs are summarized as follows:

UST1070-MW01 – No TICs were evident in the groundwater sample.
UST1070-MW02 – Ten TICs were detected in the groundwater sample.

The EPA Method 625 + TICs laboratory report data has been summarized on Table 5B. Figure 5B shows a summary of the data in relation to the site map.

MADEP VPH/EPH

MADEP VPH/EPH analysis of both UST1070-MW01 and UST1070-MW02 groundwater samples revealed that concentrations of toxicological defined hydrocarbon fractions C_5-C_8 Aliphatics, C_9-C_{18} Aliphatics, C_{19}-C_{36} Aliphatics and C_9-C_{22} Aromatics (except for the UST1070-MW02 samples) were either BQL or below applicable 2L GWQS. Analysis results for groundwater UST1070-MW02 sample revealed C_9-C_{22} Aromatic concentration of <230 ug/L which may or may not actually exceed the applicable 2L GWQS of 210 ug/L. Although the C_9-C_{22} Aromatic hydrocarbon fraction

concentration of <230 ug/L was determined by adding a known C_9-C_{10} Aromatic concentration of 130 ug/L to a BQL for C_{11}-C_{22} Aromatic of <100ug/L, as a precaution it should be considered in excess of applicable 2L GWQS. GCLs have not been established for MADEP VPH/EPH hydrocarbon fractions.

MADEP EPH/VPH laboratory report data has been summarized on Tables 5C and 5D. Figure 5C shows a summary of the data in relation to the site map.

Note: Analysis of the groundwater samples revealed groundwater contaminant concentrations less than ten times the 2L GWQS and therefore, a Phase II LSA was not necessary. As discussed in Section F, drilling activities were halted after a single Type II monitoring well (UST1070-MW03) was installed. Although no groundwater data or samples were obtained from UST1070-MW03 the location is illustrated on attached Figures 4A through 5C.

E.3 Free-Phase Product

No measurable thickness of free-phase product was detected in either site groundwater monitoring well 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 subject site meets the criteria for Industrial/Commercial (I/C) land use and Intermediate Risk classification.

Laboratory analysis of the LSA soil samples indicated no EPA Method 8260(5035 preparation), EPA Method 8270 (+ 10 largest non-target peaks), MADEP VPH and MADEP EPH parameters in excess of applicable Industrial/Commercial MSCCs. Soil samples were obtained from the general areas identified in the Shaw Closure report with TPH-DRO analytical results in excess of 10 mg/kg for Risk-Based analysis. Results of the Risk-Based sampling indicated no contaminant concentrations exceeding the Residential MSCC.

Laboratory analysis of the LSA groundwater samples indicated no EPA Method 602 + Xylenes and EPA Method 625 (+ 10 largest non-target peaks) parameters in excess of applicable GCLs and 2LGWQS. No GCLs have been established for MADEP EPH/VPH hydrocarbon fractions. Analysis results for groundwater UST1070-MW02 sample revealed C_9-C_{22} Aromatic concentration of <230 ug/L which may or may not actually exceed the applicable 2L GWQS of 210 ug/L. Although the C_9-C_{22} Aromatic hydrocarbon fraction concentration of <230 ug/L was determined by adding a known C_9-C_{10} Aromatic concentration of 130 ug/L to a BQL for C_{11}-C_{22} Aromatic of

<100ug/L, as a precaution it should be considered in excess of applicable 2L GWQS.

F.2 Recommendations

Ultimately, the NCDENR Division of Waste Management UST Section Underground Storage Section personnel will 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.

Current site soil and groundwater conditions meet the criteria for "No Further Action" with a "Notice of Residual Petroleum" or Land Use Restrictions. However, based on the low C_9-C_{22} Aromatic concentration within the site groundwater at monitoring well UST1070-MW02 it is reasonable to expect natural attenuation to reduce the C_9-C_{22} Aromatic concentration levels to below applicable 2L GWQS. Therefore, it is recommended that a groundwater sample be obtained in one year from UST1070-MW02 and analyzed for MADEP VPH/EPH.

Based on the analytical results of the Risk-Based soil analysis, additional soil assessment is not warranted.

Should the laboratory results indicate compliance with the 2L GWQS, a request for No Further Action should be made.

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.

Cardinell, Alex P., Berg, Steven A., and Lloyd, Orville B., Jr., 1993, Hydrogeologic Framework of U.S. Marine Corps Base at Camp Lejeune, North Carolina: United States Geologic Survey Water-Resources Investigations Report 93-4049, 45 p.

CATLIN Engineers and Scientists. *Identification, Correlation and Assimilation of Organic Subsurface Soils, Hadnot Point Fuel Farm, Marine Corps Base Camp Lejeune, North Carolina,* June 19, 2002.

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.

North Carolina Geological Survey Website. http://www.geology.enr.state.nc.us/

Shaw Environmental Inc. *Michael Road Fuel Farm UST Closure Report, Marine Corps Base Camp Lejeune, Onslow County North Carolina,* January 24, 2002.

Winner, M.D., Jr., and Coble, R.W., 1989, *Hydrogeologic Framework of the North Carolina Coastal Plain Aquifer System: U.S. Geological Survey Open-File Report 87-690,* 155 p.

TABLES

TABLE 1

SITE HISTORY
UST SYSTEM INFORMATION

Former Michael Road Fuel Farm UST

UST ID Number	**Product** (gasoline, diesel, jet fuel, etc.)	**Capacity** (gallons)	**Date Installed** (m/dd/yy)	**Date Permanently Closed (P), or Still in Use* (C)** (m/dd/yy)	**Was Release Associated With UST System?** (Yes / No)
961-1	Mixed fuels	2,500	Unknown	(P) 09/04	Yes

TABLE 2

SITE HISTORY
UST OWNER/OPERATOR INFORMATION

Former Michael Road Fuel Farm UST

UST ID Number	Name of Owner or Operator	Dates of Ownership/Operation (m/dd/yy) to (m/dd/yy)	Owner or Operator?
961-1	Commanding General Marine Corps Base Camp Lejeune, NC	Unknown to 09/04	Owner and Operator

Address	Telephone Number
I&E/EMD/EQB PSC 20004 Marine Corps Base, Camp Lejeune, NC 28542	910-451-5068

TABLE 3

SITE WELL CONSTRUCTION INFORMATION

Date: Mar-05 Incident Number and Name: Pending/Michael Road Fuel Farm Facility ID#: 4-002740

Well ID	Date Installed (m/dd/yy)	Date Water Level Measured (m/dd/yy)	Well Casing Depth (ft. BGS)	Screened Interval (x to y ft. BGS)	Bottom of Well (ft. BGS)	Top of Casing Elevation (ft.)	Depth to Water from Top of Casing (ft.)	Free Product Thickness** (ft.)	Ground Water Elevation* (ft.)	Comments
UST1070-MW01	3/4/2005	3/7/2005	5	5-15	15	29.08	7.48	<0.00	21.60	
UST1070-MW02	3/4/2005	3/7/2005	5	5-15	15	28.68	6.72	<0.00	21.96	

* Reference point for top of casing elevation was adjacent monitorign well USTNPFF-MW03; elevation 31.21 feet

** If free product is present in a well, ground water elevation should be calculated by: [Top of Casing Elevation - Depth to Water] + [free product thickness x 0.8581]

ft BLS = feet below land surface

TABLE 4A SUMMARY OF SOIL LABORATORY RESULTS

Date: Mar-05 Incident Number and Name:Pending/Michael Road Fuel Farm Facility ID#:4-002740

Analytical Method: EPA Method 8260B/5035

Sample ID	Contaminant of Concern →		Acetone	2-Butanone	sec-Butylbenzene	tert-Butylbenzene	Naphthalene	1,3,5-Trimethylbenzene	Remaining EPA Method 8260 parameters
	Date Collected	Sample Depth (ft. BLS)							
US1070-MW01	3/4/2005	4-5'	0.0542	0.00889	<0.00596	<0.00596	<0.00596	<0.00596	BQL
UST1070-MW02	3/4/2005	1-2'	0.0072	<0.0217	<0.00434	<0.00434	<0.00434	<0.00434	BQL
UST1070-SB01	3/7/2005	4-6'	0.00613	<0.0243	<0.00487	<0.00487	<0.00487	<0.00487	BQL
UST1070-SB02	3/7/2005	2-4'	0.0116	<0.0243	<0.00485	<0.00485	<0.00485	<0.00485	BQL
UST1070-SB03	3/7/2005	4-8'	0.0152	<0.025	<0.00501	<0.00501	<0.00501	<0.00501	BQL
UST1070-SB04	3/7/2005	2-4'	0.00438	<0.0251	<0.00502	<0.00502	<0.00502	<0.00502	BQL
UST1070-SB05	3/7/2005	4-6'	0.0224	0.00489	<0.00431	<0.00431	0.00312	<0.00431	BQL
UST1070-SB06	3/7/2005	4-6'	0.013	<0.028	<0.00559	<0.00559	<0.00559	<0.00559	BQL
UST1070-SB07	3/7/2005	2-4'	0.0148	<0.0234	<0.00468	<0.00468	<0.00468	<0.00468	BQL
UST1070-SB08	3/7/2005	4-6'	<0.0503	<0.0252	0.011	<0.00503	0.0541	0.0311	BQL
UST1070-MW01 Duplicate	3/7/2005	4-5'	0.0585	0.00892	<0.00666	<0.00666	<0.00666	<0.00666	BQL
Residential MSCC (mg/kg) **Industrial/Commercial MSCC (mg/kg)** **Soil to Groundwater MSCC (mg/kg)**			1,564 40,880 3	None Established	156 4,088 3	156 4,088 3	63 1,635 0.58	782 20,440 8	Varies

All results in mg/kg.

ft. BLS = feet land surface

BQL - Below Quantitation Limit

TABLE 4B SUMMARY OF SOIL LABORATORY RESULTS
Date: Mar-05

Incident Number and Name:Pending/Michael Road Fuel Farm

Facility ID#:4-002740

Analytical Method: EPA Method 8270

Sample ID	Contaminant of Concern →		Acenaphthene	Acenaphthylene	Benzoic Acid	Bis(2-ethylhexyl)phthalate	Chrysene	Fluoranthene	Fluorene	2-Methylnaphthalene	Naphthalene	Pyrene	Remaining EPA Method 8270
	Date Collected	Sample Depth (ft. BLS)											
UST1070-MW01	3/4/2005	4-5'	<0.428	<0.428	2.96	<0.428	<0.428	<0.428	<0.428	<0.428	<0.428	<0.428	BQL
UST1070-MW02	3/4/2005	1-2'	<0.355	<0.355	<0.71	<0.355	<0.355	<0.355	<0.355	<0.355	<0.355	<0.355	BQL
UST1070-SB01	3/7/2005	4-6'	<0.373	<0.373	<0.746	<0.373	<0.373	<0.373	<0.373	<0.373	<0.373	<0.373	BQL
UST1070-SB02	3/7/2005	2-4'	<0.368	<0.368	<0.736	<0.368	<0.368	0.059	<0.368	<0.368	<0.368	<0.368	BQL
UST1070-SB03	3/7/2005	4-8'	<0.369	<0.369	2.63	<0.369	<0.369	<0.369	<0.369	<0.369	<0.369	<0.369	BQL
UST1070-SB04	3/7/2005	2-4'	<0.35	<0.35	<0.701	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	BQL
UST1070-SB05	3/7/2005	4-6'	0.081	0.114	<0.672	0.279	0.054	<0.336	0.057	<0.336	0.071	0.077	BQL
UST1070-SB06	3/7/2005	4-6'	<0.394	<0.394	<0.788	<0.394	<0.394	<0.394	<0.394	<0.394	<0.394	<0.394	BQL
UST1070-SB07	3/7/2005	2-4'	<0.337	<0.337	<0.673	<0.337	<0.337	<0.337	<0.337	<0.337	<0.337	<0.337	BQL
UST1070-SB08	3/7/2005	4-6'	0.104	<0.386	<0.772	<0.386	<0.386	<0.386	<0.386	2.14	0.486	<0.386	BQL
Residential MSCC (mg/kg)			940	469	62,571	46	88	620	620	63	63	469	Varies
Industrial/Commercial MSCC (mg/kg)			24,000	12,264	1,635,200	410	780	16,400	16,400	1,635	1,635	12,264	
Soil to Groundwater MSCC (mg/kg)			8	11	112	6.67	38	44	276	3	0.58	286	

All results in mg/kg.
ft. BLS = feet land surface
BQL - Below Quantitation Limit

TABLE 4C SUMMARY OF SOIL LABORATORY RESULTS

Date: Mar-05 Incident Number and Name:Pending/Michael Road Fuel Farm Facility ID#:4-002740

Analytical Method: MADEP Method EPH/VPH

Sample ID	Contaminant of Concern →		C9-C18 Aliphatics	C19-C36 Aliphatics	C11-C22 Aromatics	C5-C8 Aliphatics	C9-C12 Aliphatics	C9-C10 Aromatics
	Date Collected	Sample Depth (ft. BGS)						
UST1070-MW01	3/4/2005	4-5'	<10	<10	<10	<100	<100	<100
UST1070-MW02	3/4/2005	1-2'	<10	<10	<10	<100	<100	<100
UST1070-SB01	3/7/2005	2-4'	<10	<10	<10	<100	<100	<100
UST1070-SB02	3/7/2005	2-4'	<10	<10	<10	<100	<100	<100
UST1070-SB03	3/7/2005	4-8'	<10	<10	<10	<100	<100	<100
UST1070-SB04	3/7/2005	2-4'	<10	<10	<10	<100	<100	<100
UST1070-SB05	3/7/2005	4-6'	1500	1700	690	<100	<100	<100
UST1070-SB06	3/7/2005	4-6'	<10	<10	<10	<100	<100	<100
UST1070-SB07	3/7/2005	2-4'	<10	100	<10	<100	<100	<100
UST1070-SB08	3/7/2005	4-6'	2600	<10	140	<100	19	31

All results in mg/kg.
ft. BLS = feet land surface

TABLE 4D SUMMARY OF SOIL LABORATORY RESULTS

Date: Mar-05 Incident Number and Name:Pending/Michael Road Fuel Farm Facility ID#:4-002740

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

Sample ID	Contaminant of Concern →		C5-C8 Aliphatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C9-C22 Aromatics
	Date Collected	Sample Depth (ft. BLS)				
UST1070-MW01	3/4/2005	4-5'	<10	<10	<10	<20
UST1070-MW02	3/4/2005	1-2'	<10	<10	<10	<20
UST1070-SB01	3/7/2005	4-6'	<10	<10	<10	<20
UST1070-SB02	3/7/2005	2-4'	<10	<10	<10	<20
UST1070-SB03	3/7/2005	4-8'	<10	<10	<10	<20
UST1070-SB04	3/7/2005	2-4'	<10	<10	<10	<20
UST1070-SB05	3/7/2005	4-6'	<10	<1,510	1,700	<700
UST1070-SB06	3/7/2005	4-6'	<10	<10	<10	<20
UST1070-SB07	3/7/2005	2-4'	<10	<10	100	<20
UST1070-SB08	3/7/2005	4-6'	<10	2,619	<10	171
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	3,255	**	34

All results in mg/kg.

ft. BLS = feet land surface

* - Health based level (>100%)

** - Considered Immobile

TABLE 5A SUMMARY OF GROUNDWATER LABORATORY RESULTS

Date: Mar-05 Incident Number and Name: Pending/Michael Road Fuel Farm Facility ID#: 4-002740

Analytical Method: EPA Method 602+ XYLENES+IPE+MTBE

Well ID	Contaminant of Concern → Sample ID	Date Collected	Benzene	Diisopropyl ether (DIPE)	Ethylbenzene	Methyl-tert butyl ether (MTBE)	Toluene	m/p-Xylene
2L GWQS			1	70	29	200	1000	530
GCL			5,000	70,000	29,000	200,000	257,500	87,500
UST1070-MW01	UST1070-MW01	3/7/2005	<1	<1	<1	3.22	<1	<4
UST1070-MW01 Duplicate	UST1070-MW01 Duplicate	3/7/2005	<1	<1	<1	2.99	<1	<4
UST1070-MW02	UST1070-MW02	3/7/2005	<1	<1	1.08	<2	<1	<4

All results in µg/L

TABLE 5B SUMMARY OF GROUNDWATER LABORATORY RESULTS

Date: Mar-05 Incident Number and Name: Pending/Michael Road Fuel Farm Facility ID#: 4-002740

Analytical Method: EPA Method 625 + TICS

Well ID	Contaminant of Concern →		Bis(2-ethylhexyl)phthalate	Remaining EPA Method 625 Parameters
	Sample ID	Date Collected		
2L GWQS GCL			3 3,000	Varies Varies
UST1070-MW01	UST1070-MW01	3/7/2005	<10	BQL
UST1070-MW02	UST1070-MW02	3/7/2005	2.1	BQL

BQL = Below quantitation limit

All results in µg/L

TABLE 5C SUMMARY OF GROUNDWATER LABORATORY RESULTS

Date: Mar-05 Incident Number and Name: Pending/Michael Road Fuel Farm Facility ID#: 4-002740

Analytical Method: MADEP Method VPH/EPH

Well ID	Contaminant of Concern →		C9-C18 Aliphatics	C19-C36 Aliphatics	C11-C22 Aromatics	C5-C8 Aliphatics	C9-C12 Aliphatics	C9-C10 Aromatics
	Sample ID	Date Collected						
UST1070-MW01	UST1070-MW01	3/7/2005	<100	<100	<100	<100	<100	<100
UST1070-MW02	UST1070-MW02	3/7/2005	<100	<100	<100	<100	<100	130

All results in µg/L

TABLE 5D SUMMARY OF GROUNDWATER LABORATORY RESULTS

Date: Mar-05 Incident Number and Name: Pending/Michael Road Fuel Farm Facility ID#: 4-002740

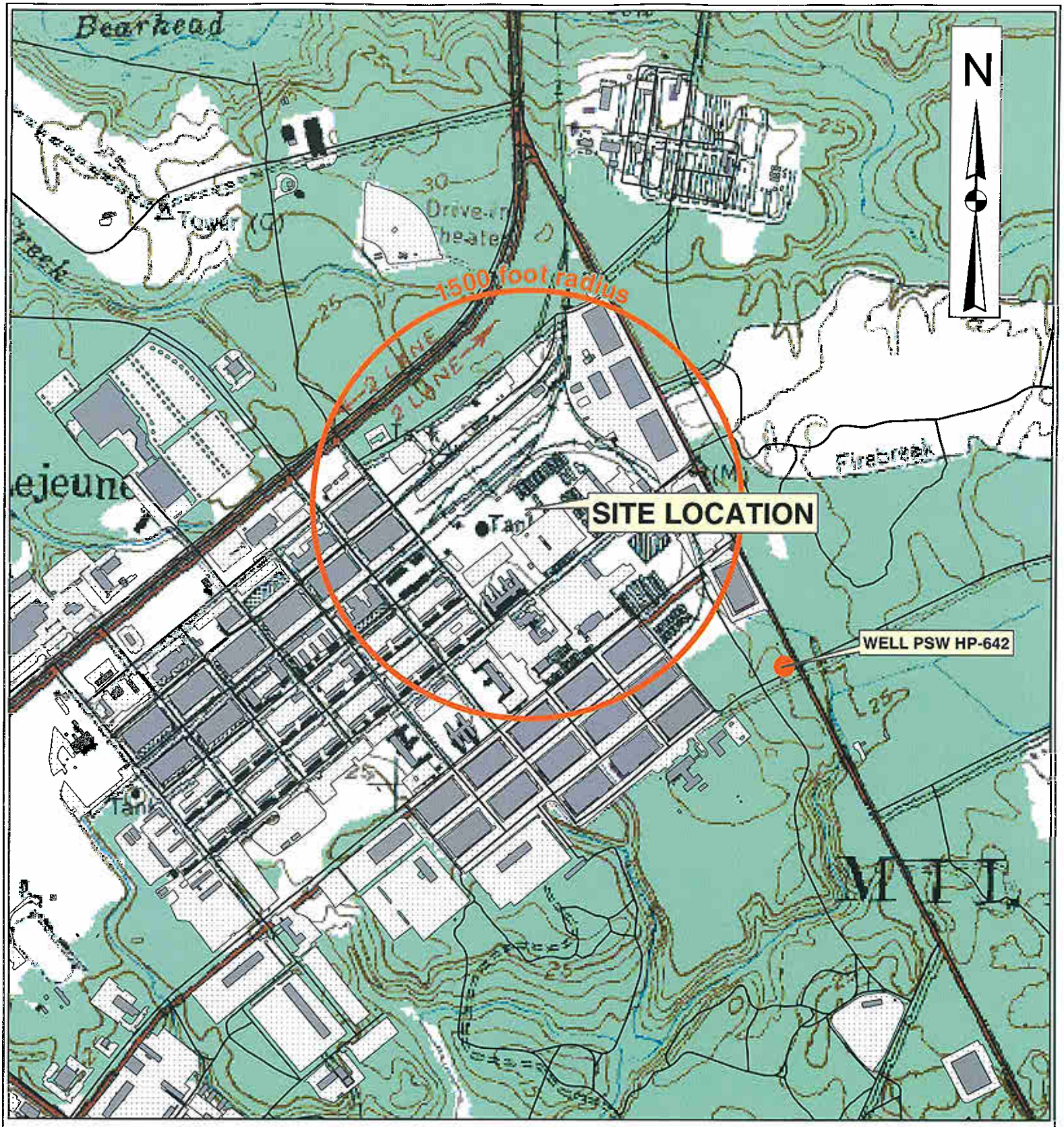
Analytical Method: MADEP Method VPH/EPH as compared to NCDENR 2L GWQS

Well ID	Contaminant of Concern →		C5-C8 Aliphatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C9-C22 Aromatics
	Sample ID	Date Collected				
GCL 2L GWQS			NE 420	NE 4200	NE 42000	NE 210
UST1070-MW01	UST1070-MW01	3/7/2005	<100	<200	<100	<200
UST1070-MW02	UST1070-MW02	3/7/2005	<100	<200	<100	**<230**

Bold figure indicates concentration could exceed applicable 2L GWQS.

All results in µg/L

FIGURES



1,000 500 0 1,000 Feet

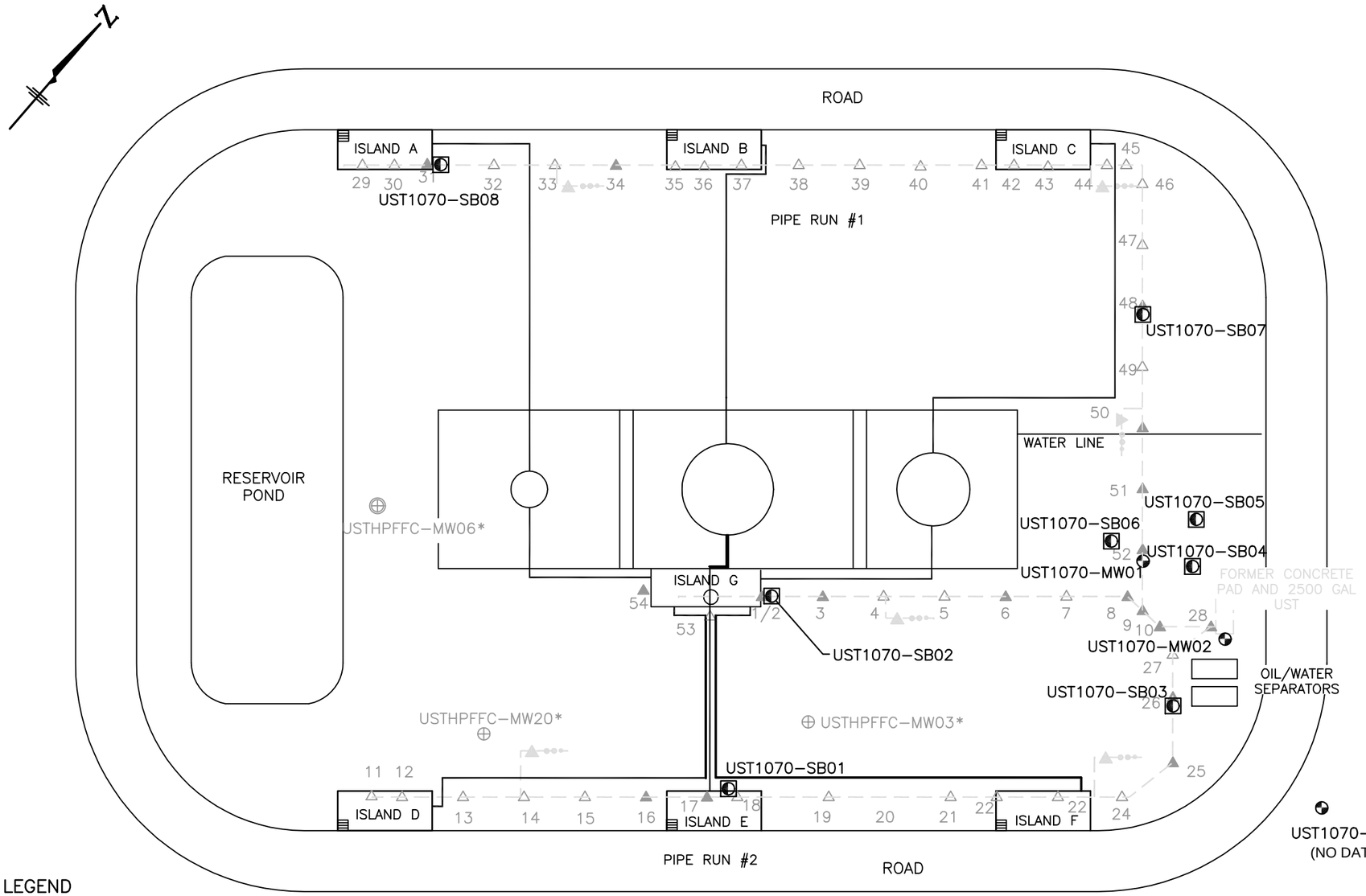
SCALE

Data Sources: USGS Topographic Quadrangle Camp Lejeune (1952, Photorevised 1971). GIS data provided by Camp Lejeune GIS Department.

CATLIN ENGINEERS and SCIENTISTS

PROJECT	TITLE	FIGURE
WORKPLAN PHASE I LSA MICHAEL ROAD FUEL FARM MCB CAMP LEJEUNE, NC	GENERAL LOCATION USGS TOPOGRAPHIC QUADRANGLE	1

JOB NO.	DATE	SCALE	DRAWN BY	CHECKED BY
204-100	MAR 2005	AS SHOWN	SAC	MEM



SHAW UST REMOVAL - SOIL SAMPLING RESULTS		
Results (detected) mg/kg (ppm)		
Sample No.	DRO	GRO
001	**28.70**	<4.9
002	**39.10**	<4.5
003	**21.30**	<5.2
005	9.53	<5.7
006	**27.80**	<5.1
007	7.03	<5.7
008	**15.50**	<5.1
009	**40.80**	<5.8
010	**25.20**	<5.3
014	6.67	<5.4
015	6.18	<5.2
016	**22.20**	<4.5
017	**49.60**	<5.0
018	6.77	<5.9
019	8.46	<5.5
022	7.34	<5.2
024A	**11.80**	<4.5
024	9.08	<5.6
025	**10.90**	<5.2
026	**30.40**	<5.2
027	6.88	<5.4
028	**14.60**	<5.2
030	5.87	<5.3
031	**18.50**	<4.9
032	6.94	<5.3
034	**12.10**	<4.7
036	6.19	<5.4
037	**16.80**	<4.6
038	7.37	<4.8
039	5.90	<4.6
043	8.42	<5.1
046	7.28	<5.2
047	7.04	<4.9
048	**26.60**	<5.6
049	6.97	<3.2
050	**19.90**	<4.8
051	**32.70**	<5.5
052	**1,480**	<5.2
053	6.88	<4.8
054	**11.70**	<5.7
To Horizontally Delineate Area Around Sample 052		

LEGEND

EXISTING	NEW	DESCRIPTION
	◐	SOIL BORING
⊕	◒	TYPE II MONITORING WELL
⊕		TYPE III MONITORING WELL
△		SAMPLE LOCATION BELOW 10 mg/Kg
▲		SAMPLE LOCATION ABOVE 10 mg/Kg
———		EXISTING 4" PIPING
- - - - -		FORMER FUEL LINE
▲ •••		FORMER ANODE TEST STATION
▤		STORM DRAIN

NOTE:
1. SITE MAP ADAPTED FROM SHAW ENVIRONMENTAL, INC.
2. MONITORING WELL UST1070–MW02 LOCATION WAS CHOSEN TO DUPLICATE SHAW TEMPORARY PIEZOMETER TMP–1.
3. * MONITORING WELL IS FOR ASSESSMENT OF A SEPARATE GROUNDWATER INCIDENT.

40 20 0 40
SCALE IN FEET

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

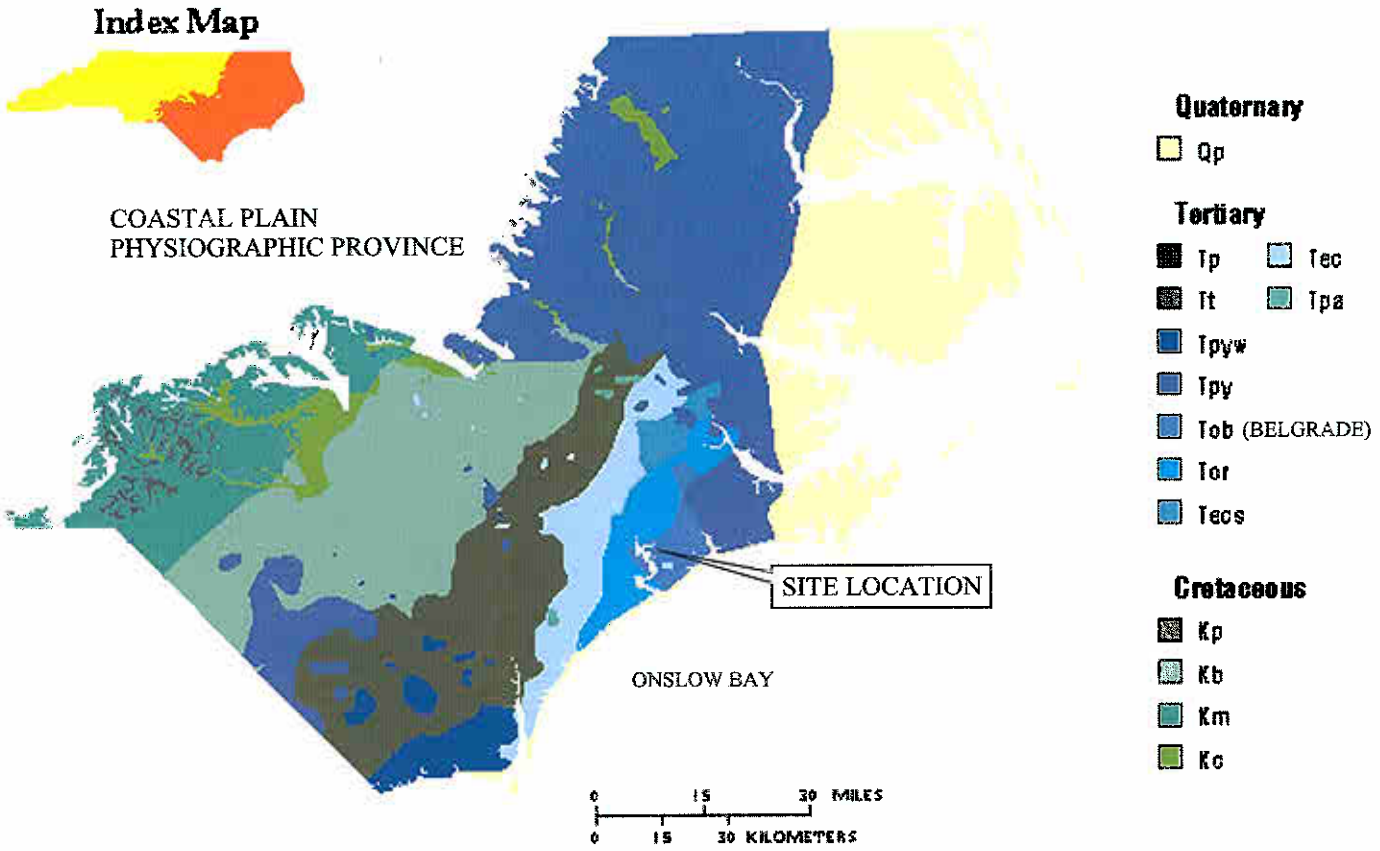
PROJECT: MICHAEL ROAD FUEL FARM MCB CAMP LEJEUNE, NC

TITLE: SITE MAP WITH MONITORING WELL AND SOIL BORING LOCATIONS

FIGURE: 2

JOB NO. 204–100 | DATE: MAR 2005 | SCALE: 1"=40' | DRAWN BY: HCS | CHECKED BY: MEM

204100–2039–02



NOTE:
1. MODIFIED FROM NORTH CAROLINA GEOLOGIC SURVEY WEBSITE.

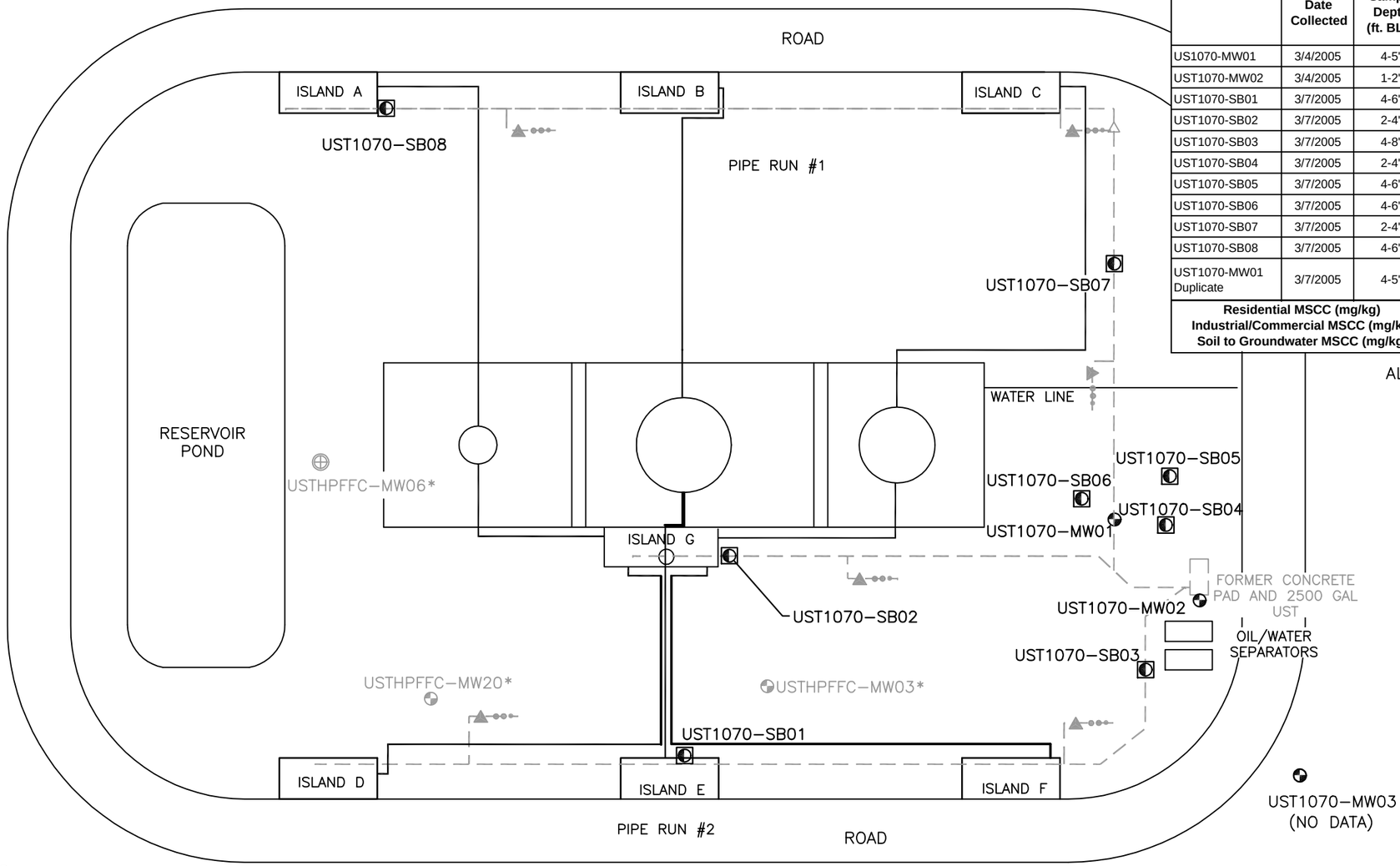
CAELIN ENGINEERS and SCIENTISTS WILMINGTON, NORTH CAROLINA	PROJECT: MICHAEL ROAD FUEL FARM MCB CAMP LEJEUNE, NC		TITLE: COASTAL PLAIN PHYSIOGRAPHIC PROVINCE			FIGURE 3
	JOB NO: 204--100	DATE: MAR 2005	SCALE: AS SHOWN	DRAWN BY: HCS	CHECKED BY: MEM	

204100-2039-03

Analytical Method: EPA Method 8260B/5035

Sample ID	Contaminant of Concern → Date Collected	Sample Depth (ft. BLS)	Acetone	2-Butanone	sec-Butylbenzene	tert-Butylbenzene	Naphthalene	1,3,5-Trimethylbenzene	Remaining EPA Method 8260 parameters
US1070-MW01	3/4/2005	4-5'	0.0542	0.00889	<0.00596	<0.00596	<0.00596	<0.00596	BQL
UST1070-MW02	3/4/2005	1-2'	0.0072	<0.0217	<0.00434	<0.00434	<0.00434	<0.00434	BQL
UST1070-SB01	3/7/2005	4-6'	0.00613	<0.0243	<0.00487	<0.00487	<0.00487	<0.00487	BQL
UST1070-SB02	3/7/2005	2-4'	0.0116	<0.0243	<0.00485	<0.00485	<0.00485	<0.00485	BQL
UST1070-SB03	3/7/2005	4-8'	0.0152	<0.025	<0.00501	<0.00501	<0.00501	<0.00501	BQL
UST1070-SB04	3/7/2005	2-4'	0.00438	<0.0251	<0.00502	<0.00502	<0.00502	<0.00502	BQL
UST1070-SB05	3/7/2005	4-6'	0.0224	0.00489	<0.00431	<0.00431	0.00312	<0.00431	BQL
UST1070-SB06	3/7/2005	4-6'	0.013	<0.028	<0.00559	<0.00559	<0.00559	<0.00559	BQL
UST1070-SB07	3/7/2005	2-4'	0.0148	<0.0234	<0.00468	<0.00468	<0.00468	<0.00468	BQL
UST1070-SB08	3/7/2005	4-6'	<0.0503	<0.0252	0.011	<0.00503	0.0541	0.0311	BQL
UST1070-MW01 Duplicate	3/7/2005	4-5'	0.0585	0.00892	<0.00666	<0.00666	<0.00666	<0.00666	BQL
Residential MSCC (mg/kg)			1,564	None Established	156	156	63	782	Varies
Industrial/Commercial MSCC (mg/kg)			40,880		4,088	4,088	1,635	20,440	
Soil to Groundwater MSCC (mg/kg)			3		3	3	0.58	8	

ALL RESULTS IN mg/Kg.



LEGEND

EXISTING	NEW	DESCRIPTION
	◐	DPT SOIL SAMPLE
⊕	◓	TYPE II MONITORING WELL
⊕		TYPE III MONITORING WELL
———		EXISTING 4" PIPING
– – – – –		FORMER FUEL LINE
▲ •••		FORMER ANODE TEST STATION
BQL		BELOW QUANTITATION LIMIT

NOTE:
1. SITE MAP ADAPTED FROM SHAW ENVIRONMENTAL, INC.
2. * MONITORING WELL IS FOR ASSESSMENT OF A SEPARATE GROUNDWATER INCIDENT.

40 20 0 40
SCALE IN FEET

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT: MICHAEL ROAD FUEL FARM MCB CAMP LEJEUNE, NC

TITLE: SITE MAP WITH SOIL LABORATORY RESULTS – EPA METHOD 8260B/5035

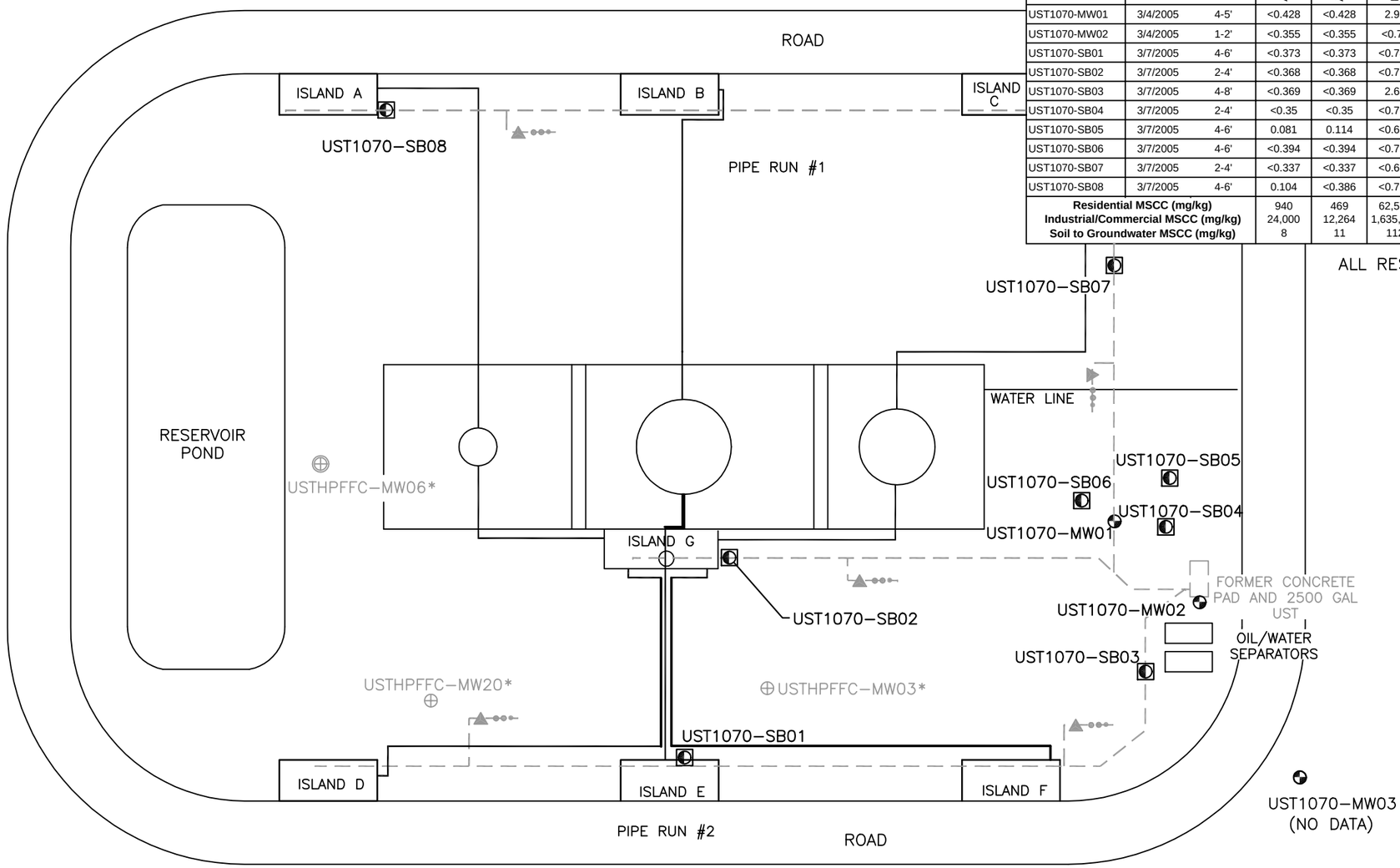
FIGURE: 4A

JOB NO. 204–100 | DATE: MAR 2005 | SCALE: 1"=40' | DRAWN BY: HCS | CHECKED BY: MEM

204100–2039–04A

Sample ID	Contaminant of Concern →		Acenaphthene	Acenaphthylene	Benzoic Acid	Bis(2-ethylhexyl) phthalate	Chrysene	Fluoranthene	Fluorene	2-Methylnaphthalene	Naphthalene	Pyrene	Remaining EPA Method 8270
	Date Collected	Sample Depth (ft. BLS)											
UST1070-MW01	3/4/2005	4-5'	<0.428	<0.428	2.96	<0.428	<0.428	<0.428	<0.428	<0.428	<0.428	<0.428	BQL
UST1070-MW02	3/4/2005	1-2'	<0.355	<0.355	<0.71	<0.355	<0.355	<0.355	<0.355	<0.355	<0.355	<0.355	BQL
UST1070-SB01	3/7/2005	4-6'	<0.373	<0.373	<0.746	<0.373	<0.373	<0.373	<0.373	<0.373	<0.373	<0.373	BQL
UST1070-SB02	3/7/2005	2-4'	<0.368	<0.368	<0.736	<0.368	<0.368	0.059	<0.368	<0.368	<0.368	<0.368	BQL
UST1070-SB03	3/7/2005	4-8'	<0.369	<0.369	2.63	<0.369	<0.369	<0.369	<0.369	<0.369	<0.369	<0.369	BQL
UST1070-SB04	3/7/2005	2-4'	<0.35	<0.35	<0.701	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	BQL
UST1070-SB05	3/7/2005	4-6'	0.081	0.114	<0.672	0.279	0.054	<0.336	0.057	<0.336	0.071	0.077	BQL
UST1070-SB06	3/7/2005	4-6'	<0.394	<0.394	<0.788	<0.394	<0.394	<0.394	<0.394	<0.394	<0.394	<0.394	BQL
UST1070-SB07	3/7/2005	2-4'	<0.337	<0.337	<0.673	<0.337	<0.337	<0.337	<0.337	<0.337	<0.337	<0.337	BQL
UST1070-SB08	3/7/2005	4-6'	0.104	<0.386	<0.772	<0.386	<0.386	<0.386	<0.386	2.14	0.486	<0.386	BQL
Residential MSCC (mg/kg)			940	469	62,571	46	88	620	620	63	63	469	
Industrial/Commercial MSCC (mg/kg)			24,000	12,264	1,635,200	410	780	16,400	16,400	1,635	1,635	12,264	Varies
Soil to Groundwater MSCC (mg/kg)			8	11	112	6.67	38	44	276	3	0.58	286	

ALL RESULTS IN mg/Kg.



LEGEND

EXISTING	NEW	DESCRIPTION
	◐	DPT SOIL SAMPLE
⊕	◒	TYPE II MONITORING WELL
⊕		TYPE III MONITORING WELL
———		EXISTING 4" PIPING
- - - - -		FORMER FUEL LINE
▲ •••		FORMER ANODE TEST STATION
BQL		BELOW QUANTITATION LIMIT

NOTE:
1. SITE MAP ADAPTED FROM SHAW ENVIRONMENTAL, INC.
2. * MONITORING WELL IS FOR ASSESSMENT OF A SEPARATE GROUNDWATER INCIDENT.

40 20 0 40
SCALE IN FEET

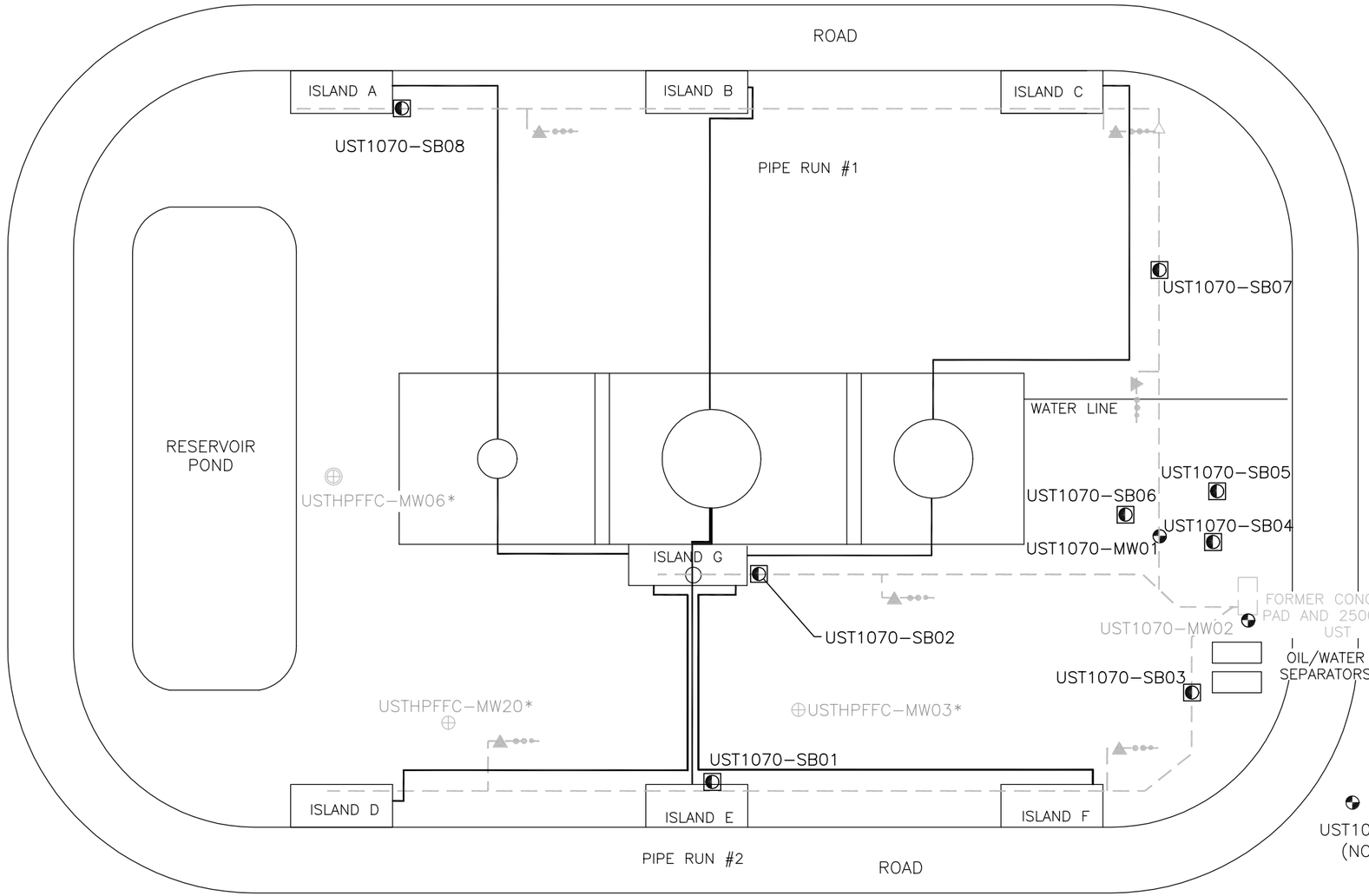
CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT: MICHAEL ROAD FUEL FARM MCB CAMP LEJEUNE, NC
JOB NO. 204-100 | DATE: MAR 2005

TITLE: SITE MAP WITH SOIL LABORATORY RESULTS – EPA METHOD 8270
SCALE: 1"=40' | DRAWN BY: HCS | CHECKED BY: MEM

FIGURE 4B

204100-2039-04B



Analytical Method: MADEP Method EPH/VPH

Sample ID	Contaminant of Concern →		C5-C8 Aliphatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C9-C22 Aromatics
	Date Collected	Sample Depth (ft. BLS)				
UST1070-MW01	3/4/2005	4-5'	<10	<10	<10	<20
UST1070-MW02	3/4/2005	1-2'	<10	<10	<10	<20
UST1070-SB01	3/7/2005	4-6'	<10	<10	<10	<20
UST1070-SB02	3/7/2005	2-4'	<10	<10	<10	<20
UST1070-SB03	3/7/2005	4-8'	<10	<10	<10	<20
UST1070-SB04	3/7/2005	2-4'	<10	<10	<10	<20
UST1070-SB05	3/7/2005	4-6'	<10	<1,510	1,700	<700
UST1070-SB06	3/7/2005	4-6'	<10	<10	<10	<20
UST1070-SB07	3/7/2005	2-4'	<10	<10	100	<20
UST1070-SB08	3/7/2005	4-6'	<10	2,619	<10	171
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	3,255	***	34

1. ALL RESULTS IN mg/Kg.
2. ** HEALTH BASED LEVEL (>10%).
3. *** CONSIDERED IMMOBILE.

LEGEND

EXISTING	NEW	DESCRIPTION
	◐	DPT SOIL SAMPLE
⊕	◔	TYPE II MONITORING WELL
⊕		TYPE III MONITORING WELL
———		EXISTING 4" PIPING
- - - - -		FORMER FUEL LINE
▲ •••		FORMER ANODE TEST STATION

NOTE:
1. SITE MAP ADAPTED FROM SHAW ENVIRONMENTAL, INC.
2. * MONITORING WELL IS FOR ASSESSMENT OF A SEPARATE GROUNDWATER INCIDENT.

40 20 0 40
SCALE IN FEET

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT: MICHAEL ROAD FUEL FARM MCB CAMP LEJEUNE, NC

TITLE: SITE MAP WITH SOIL LABORATORY RESULTS – MADEP EPH/VPH AS COMPARED TO NCDENR MSCCs

FIGURE: 4C

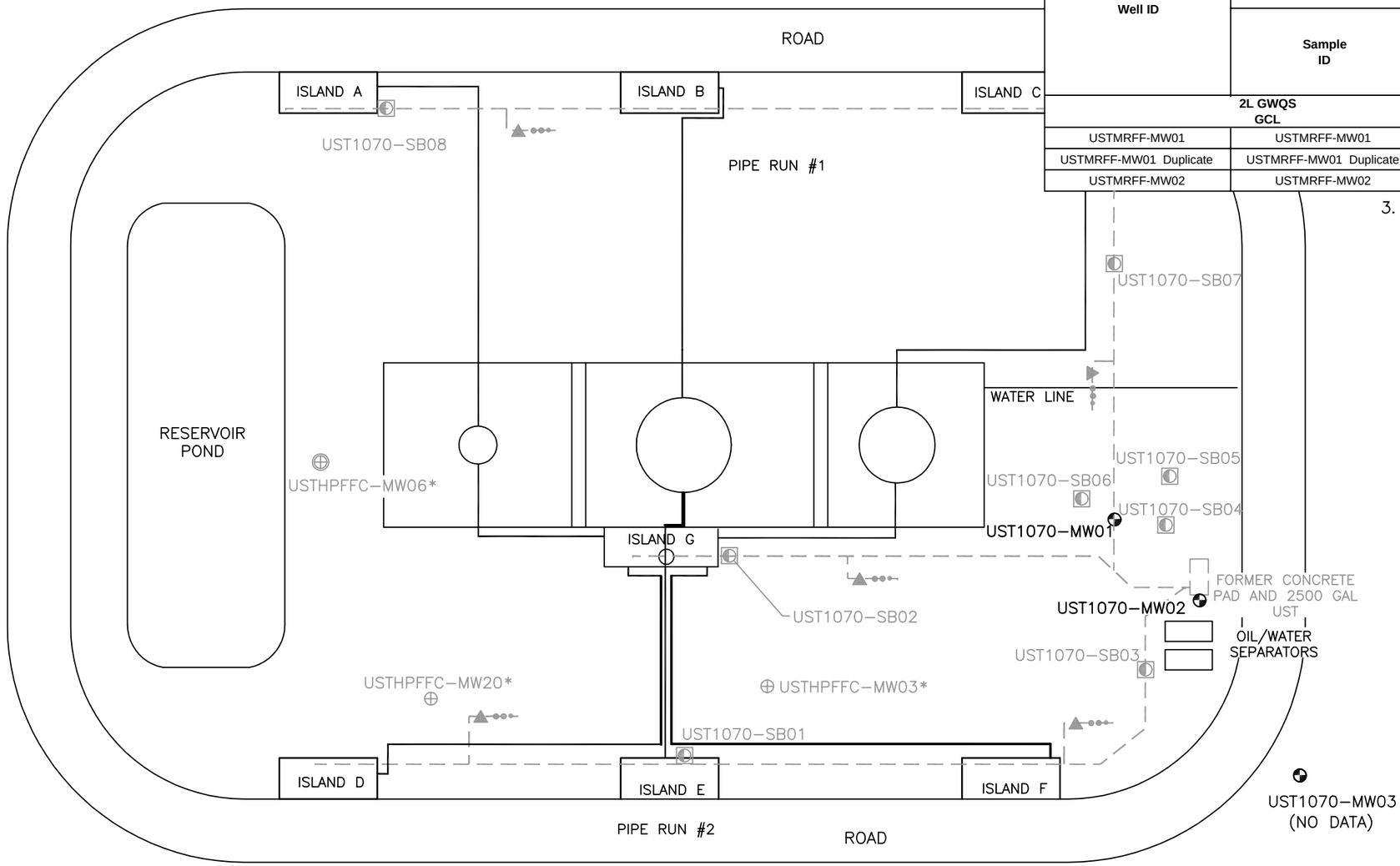
JOB NO. 204-100 | DATE: MAR 2005 | SCALE: 1"=40' | DRAWN BY: HCS | CHECKED BY: MEM

204100-2039-04C

Analytical Method: EPA Method 602+ XYLENES+IPE+MTBE

Well ID	Contaminant of Concern → Sample ID	Date Collected	Benzene	Diisopropyl ether (DIPE)	Ethylbenzene	Methyl-tert butyl ether (MTBE)	Toluene	m/p-Xylene
2L GWQS			1	70	29	200	1000	530
GCL			5,000	70,000	29,000	200,000	257,500	87,500
USTMRFF-MW01	USTMRFF-MW01	3/7/2005	<1	<1	<1	3.22	<1	<4
USTMRFF-MW01 Duplicate	USTMRFF-MW01 Duplicate	3/7/2005	<1	<1	<1	2.99	<1	<4
USTMRFF-MW02	USTMRFF-MW02	3/7/2005	<1	<1	1.08	<2	<1	<4

3. ALL RESULTS IN µg/L.



LEGEND

EXISTING	NEW	DESCRIPTION
	◐	DPT SOIL SAMPLE
⊕	◓	TYPE II MONITORING WELL
⊕		TYPE III MONITORING WELL
———		EXISTING 4" PIPING
- - - - -		FORMER FUEL LINE
▲ •••		FORMER ANODE TEST STATION

NOTE:
1. SITE MAP ADAPTED FROM SHAW ENVIRONMENTAL, INC.
2. * MONITORING WELL IS FOR ASSESSMENT OF A SEPARATE GROUNDWATER INCIDENT.
3. * MONITORING WELL IS FOR ASSESSMENT OF A SEPARATE GROUNDWATER INCIDENT.

40 20 0 40
SCALE IN FEET

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

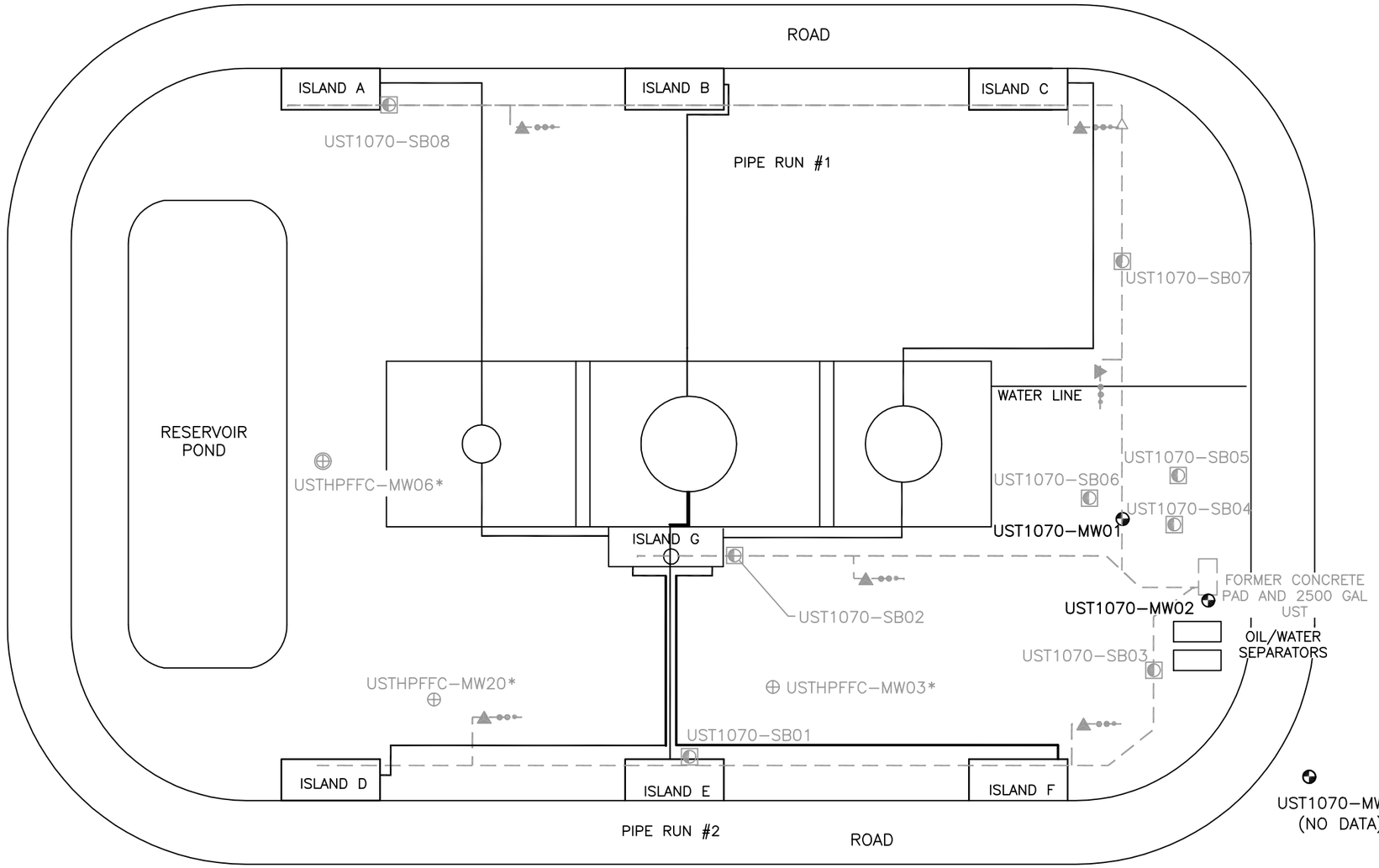
PROJECT: MICHAEL ROAD FUEL FARM MCB CAMP LEJEUNE, NC

TITLE: SITE MAP WITH GROUNDWATER LABORATORY RESULTS – EPA METHOD 602 + XYLENES + IPE + MTBE

FIGURE: 5A

JOB NO. 204–100 | DATE: MAR 2005 | SCALE: 1"=40' | DRAWN BY: HCS | CHECKED BY: MEM

204100–2039–05A



Analytical Method: EPA Method 625 + TICS

Well ID	Contaminant of Concern →		Bis(2-ethylhexyl) phthalate	All Other Target Analytes
	Sample ID	Date Collected		
2L GWQS			3	Varies
GCL			3,000	Varies
USTMRFF-MW01	USTMRFF-MW01	3/7/2005	<10	BQL
USTMRFF-MW02	USTMRFF-MW02	3/7/2005	2.1	BQL

ALL RESULTS IN µg/L.

N

LEGEND

EXISTING	NEW	DESCRIPTION
	◐	DPT SOIL SAMPLE
⊕	◒	TYPE II MONITORING WELL
⊕		TYPE III MONITORING WELL
———		EXISTING 4" PIPING
– – – – –		FORMER FUEL LINE
▲ •••		FORMER ANODE TEST STATION
BQL		BELOW QUANTITATION LIMIT

NOTE:
1. SITE MAP ADAPTED FROM SHAW ENVIRONMENTAL, INC.
2. * MONITORING WELL IS FOR ASSESSMENT OF A SEPARATE GROUNDWATER INCIDENT.

40 20 0 40
SCALE IN FEET

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

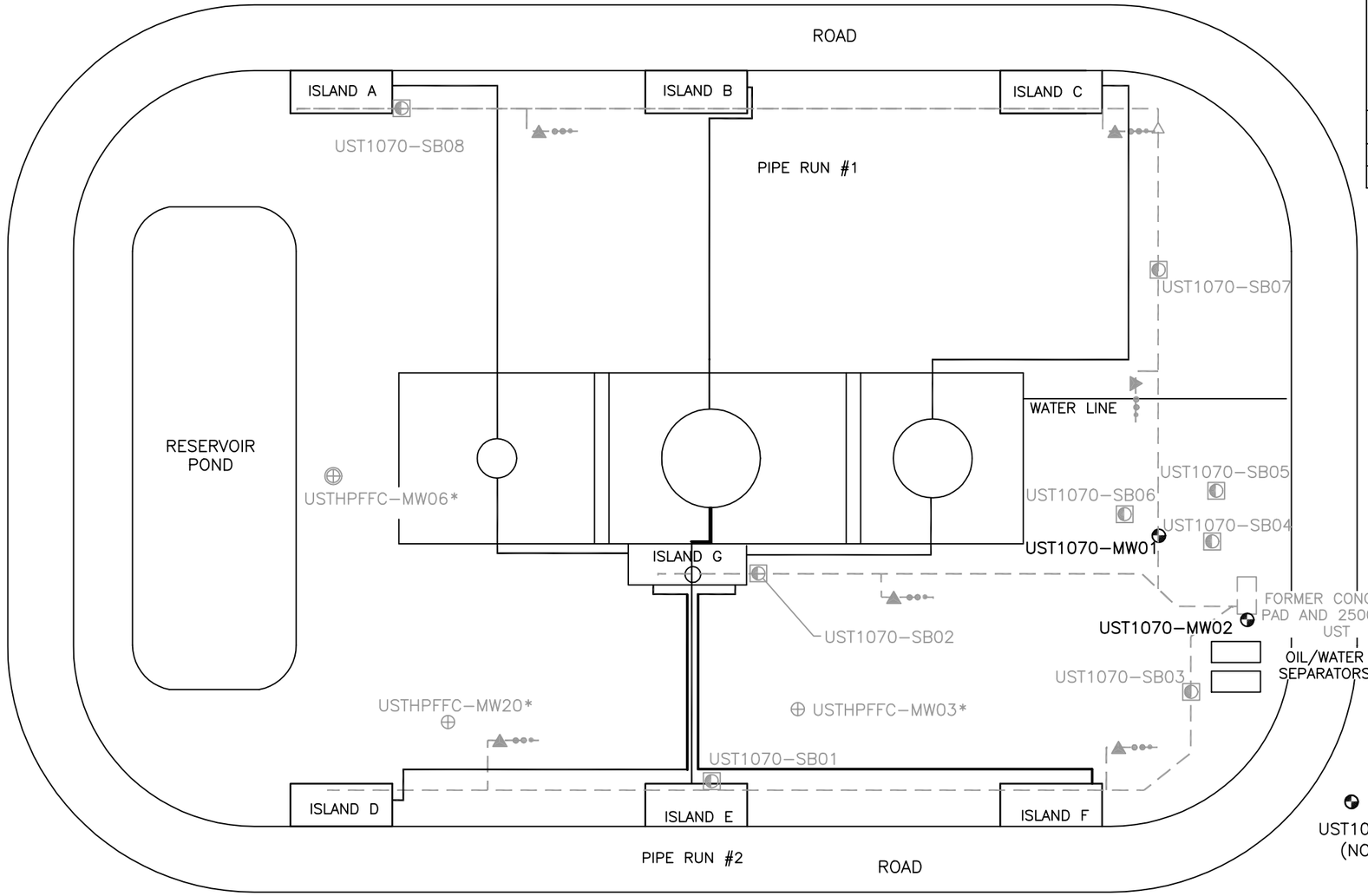
PROJECT: MICHAEL ROAD FUEL FARM MCB CAMP LEJEUNE, NC

TITLE: SITE MAP WITH GROUNDWATER LABORATORY RESULTS – EPA METHOD 625 + TICs

FIGURE: 5B

JOB NO. 204–100 | DATE: MAR 2005 | SCALE: 1"=40' | DRAWN BY: HCS | CHECKED BY: MEM

204100–2039–05B



Analytical Method: MADEP Method EPH/VPH

Well ID	Contaminant of Concern →		C9-C18 Aliphatics	C19-C36 Aliphatics	C9-C22 Aromatics	C5-C8 Aliphatics
	Sample ID	Date Collected				
2L GWQS			4,200	42,000	210	420
USTMRFF-MW01	USTMRFF-MW01	3/7/2005	<200	<100	<200	<100
USTMRFF-MW02	USTMRFF-MW02	3/7/2005	<200	<100	<230	<100

ALL RESULTS IN µg/L.
SHADED METHOD QUANTITATION LIMIT EXCEEDS APPLICABLE 2L GWQS.

N

LEGEND

EXISTING	NEW	DESCRIPTION
	◐	DPT SOIL SAMPLE
⊕	◓	TYPE II MONITORING WELL
⊕		TYPE III MONITORING WELL
———		EXISTING 4" PIPING
– – – –		FORMER FUEL LINE
▲ •••		FORMER ANODE TEST STATION

NOTE:
1. SITE MAP ADAPTED FROM SHAW ENVIRONMENTAL, INC.
2. * MONITORING WELL IS FOR ASSESSMENT OF A SEPARATE GROUNDWATER INCIDENT.

40 20 0 40
SCALE IN FEET

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT: MICHAEL ROAD FUEL FARM MCB CAMP LEJEUNE, NC

TITLE: SITE MAP WITH GROUNDWATER LABORATORY RESULTS – MADEP VPH/EPH AS COMPARED TO NCDENR 2L GWQS

FIGURE: 5C

JOB NO. 204–100 | DATE: MAR 2005 | SCALE: 1"=40' | DRAWN BY: HCS | CHECKED BY: MEM

204100–2039–05C

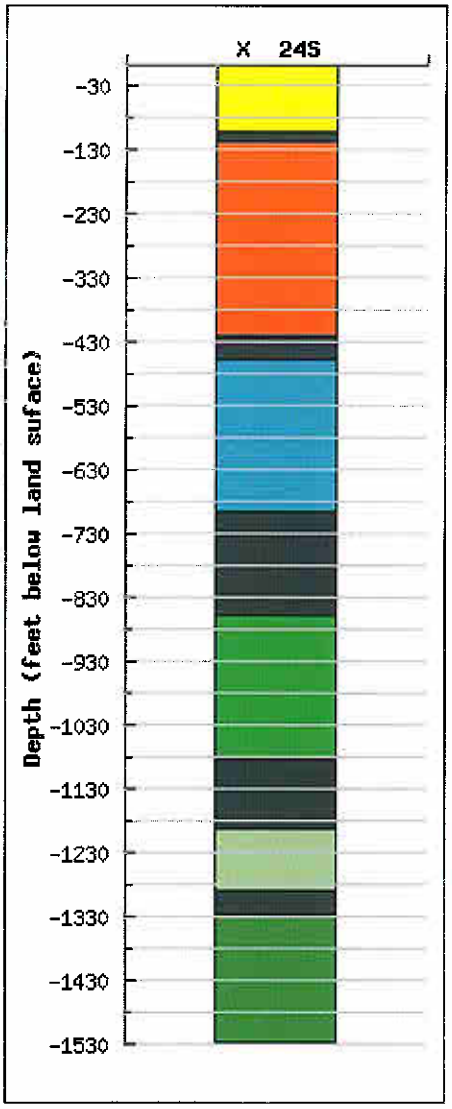
APPENDIX A

HYDROGEOLOGY FRAMEWORK PROFILE DETAIL FOR HADNOT POINT STATION

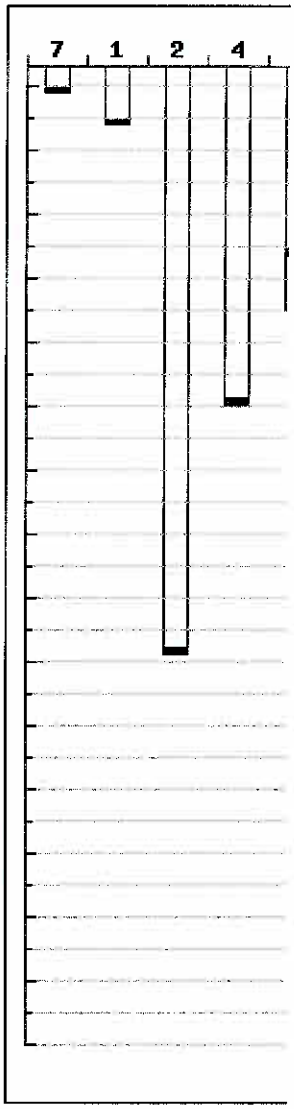
DWR Hydrogeologic Framework Detail for X 24S

Field	Data
County	Onslow
Latitude	34.692738
Longitude	-77.351433
Show Map	
Location Accuracy	GPS
Quad (link to active wells)	X 24S
Name (link to logs)	Hadnot Point Station
Depth	1526.00
Land Surface	20.00
Upper Tertiary CU	10001
Upper Tertiary	10001
Yorktown CU	10001
Yorktown	10001
Pungo River CU	10001
Pungo River	10001
Castle Hayne CU	-82
Castle Hayne	-98
Beaufort CU	10001
Beaufort	10001
Peedee CU	-400
Peedee	-440
Black Creek CU	-676
Black Creek	-838
Upper Cape Fear CU	-1063
Upper Cape Fear	-1174
Lower Cape Fear CU	-1270
Lower Cape Fear	-1306
Lower Cretaceous CU	10000
Lower Cretaceous	10000
Basement	10000

Unit top elevations are shown in table, depths are shown in plot



Units with 10001 foot elevations do not exist and units with 10000 foot elevations are not penetrated.



Monitoring well ids, dep and screened intervals at thi i -- indicates an inactive

NC Division of Water Resources, DENR - 1611 Mail Service Center - Raleigh, NC 27699-1611
Phone: (919)733-4064 - Fax: (919)733-3558

Last Modified: 02.22.2005

APPENDIX B

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

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
204-100
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 204-100	**STATE:** NC	**COUNTY:** Onslow	**LOCATION:** Camp Lejeune
PROJECT NAME: Michael Road Fuel Farm	**LOGGED BY:** Steve Tyler		**BORING ID:** USTMRFF-SB01
	DRILLER: Bobbie Fowler		
LATITUDE: 3,839,200.0	**LONGITUDE:** 286,540.4	**CREW:** Tom Stetler	
SYSTEM: UTM NAD83 (m)	**BORING LOCATION:** See Map		**LAND ELEV.:** NM
DRILL MACHINE: Diedrich D-25	**METHOD:** HSA	**0 HOUR DTW:** NA	**BORING DEPTH:** 8.0
START DATE: 03/07/05	**FINISH DATE:** 03/07/05	**24 HOUR DTW:** NA	**ROCK DEPTH:** --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	SAMP. TYPE	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0	H P H P	SS	▲0				0.0		
2.0	H P H P	SS	▲0.5						
4.0	H P H P	SS	▲12	USTMRFF -SB01 (4-6)	SP			Tan, fine SAND (FILL). Wet at 6-8' bls.	
6.0	H P H P	SS	▲8.2						
8.0							8.0	Boring Terminated at Depth 8.0 ft	

CATLIN ENVIRO LOG 204-100 MRFF.GPJ CATLIN.GDT 03/24/05

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
204-100
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 204-100	**STATE:** NC	**COUNTY:** Onslow	**LOCATION:** Camp Lejeune
PROJECT NAME: Michael Road Fuel Farm		**LOGGED BY:** Steve Tyler	**BORING ID:** USTMRFF-SB02
		DRILLER: Bobbie Fowler	
LATITUDE: 3,839,218.1	**LONGITUDE:** 286,531.8	**CREW:** Tom Stetler	
SYSTEM: UTM NAD83 (m)	**BORING LOCATION:** See Map		**LAND ELEV.:** NM
DRILL MACHINE: Diedrich D-25	**METHOD:** HSA	**0 HOUR DTW:** NA	**BORING DEPTH:** 8.0
START DATE: 03/07/05	**FINISH DATE:** 03/07/05	**24 HOUR DTW:** NA	**ROCK DEPTH:** --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	SAMP. TYPE	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0	H P H P	SS	▲0.2				0.0		
2.0	H P H P	SS	▲1075	USTMRFF -SB02 (2-4)	SM			Tan/olive, SILTY, fine SANDS.	
4.0	H P H P	SS	▲4.0				4.0		
6.0	H P H P	SS	▲4.4		SP			Tan/yellow, CLAYEY, fine SANDS.	
8.0							8.0	Boring Terminated at Depth 8.0 ft	

CATLIN ENVIRO LOG 204-100 MREF.GPJ CATLIN.GDT 03/24/05

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
204-100
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 204-100	STATE: NC	COUNTY: Onslow	LOCATION: Camp Lejeune
PROJECT NAME: Michael Road Fuel Farm	LOGGED BY: Steve Tyler		BORING ID: USTMRFF-SB03
	DRILLER: Bobbie Fowler		
LATITUDE: 3,839,234.5	LONGITUDE: 286,565.8	CREW: Tom Stetler	
SYSTEM: UTM NAD83 (m)	BORING LOCATION: See Map		LAND ELEV.: NM
DRILL MACHINE: Diedrich D-25	METHOD: HSA	0 HOUR DTW: NA	BORING DEPTH: 8.0
START DATE: 03/07/05	FINISH DATE: 03/07/05	24 HOUR DTW: NA	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	SAMP. TYPE	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0	H P H P	SS	▲0				0.0		
4.0					SM			Tan/olive, SILTY, fine SANDS.	
	H P H P	SS	▲64	USTMRFF -SB03 (4-8)			8.0		
8.0								Boring Terminated at Depth 8.0 ft	

CATLIN ENVIRO LOG 204-100 MREF.GPJ CATLIN.GDT 03/24/05

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
204-100
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 204-100	STATE: NC	COUNTY: Onslow	LOCATION: Camp Lejeune
PROJECT NAME: Michael Road Fuel Farm		LOGGED BY: Steve Tyler	BORING ID: USTMRFF-SB04
		DRILLER: Bobbie Fowler	
LATITUDE: 3,839,244.2	LONGITUDE: 286,559.7	CREW: Tom Stetler	
SYSTEM: UTM NAD83 (m)	BORING LOCATION: See Map		LAND ELEV.: NM
DRILL MACHINE: Diedrich D-25	METHOD: HSA	0 HOUR DTW: NA	BORING DEPTH: 8.0
START DATE: 03/07/05	FINISH DATE: 03/07/05	24 HOUR DTW: NA	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	SAMP. TYPE	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0	H P H P	SS	▲0.5				0.0		
2.0	H P H P	SS	▲0.8		SP			Tan, clean, fine SAND (FILL).	
4.0	H P H P	SS	▲0						
6.0	H P H P	SS	▲204.5	USTMRFF-SB04 (6-8)	SM		6.0	Olive, SILTY, fine SANDS. Wet.	
8.0							8.0	Boring Terminated at Depth 8.0 ft	

CATLIN ENVIRO LOG 204-100 MRFF.GPJ CATLIN.GDT 03/24/05

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
204-100
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 204-100	**STATE:** NC	**COUNTY:** Onslow	**LOCATION:** Camp Lejeune
PROJECT NAME: Michael Road Fuel Farm	**LOGGED BY:** Steve Tyler		**BORING ID:** USTMRFF-SB05
	DRILLER: Bobbie Fowler		
LATITUDE: 3,839,248.0	**LONGITUDE:** 286,556.8	**CREW:** Tom Stetler	
SYSTEM: UTM NAD83 (m)	**BORING LOCATION:** See Map		**LAND ELEV.:** NM
DRILL MACHINE: Diedrich D-25	**METHOD:** HSA	**0 HOUR DTW:** NA	**BORING DEPTH:** 8.0
START DATE: 03/07/05	**FINISH DATE:** 03/07/05	**24 HOUR DTW:** NA	**ROCK DEPTH:** --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	SAMP. TYPE	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0	H P H P	SS	▲12.8		SM		0.0	Tan/olive, SILTY, fine SANDS.	
2.0	H P H P	SS	▲90.2				4.0		
4.0	H P H P	SS	▲113.4	USTMRFF -SB05 (4-6)	SM		4.0	Black, olive, SILTY, SILTY, fine SANDS with some organic HCO. Wet.	
6.0	H P H P	SS	▲95.7				8.0		
8.0								Boring Terminated at Depth 8.0 ft	

CATLIN ENVIRO LOG 204-100 MREF.GPJ CATLIN.GDT 03/24/05

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
204-100
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 204-100	STATE: NC	COUNTY: Onslow	LOCATION: Camp Lejeune
PROJECT NAME: Michael Road Fuel Farm		LOGGED BY: Steve Tyler	BORING ID: USTMRFF-SB06
		DRILLER: Bobbie Fowler	
LATITUDE: 3,839,241.6	LONGITUDE: 286,552.0	CREW: Tom Stetler	
SYSTEM: UTM NAD83 (m)	BORING LOCATION: See Map		LAND ELEV.: NM
DRILL MACHINE: Diedrich D-25	METHOD: HSA	0 HOUR DTW: NA	BORING DEPTH: 8.0
START DATE: 03/07/05	FINISH DATE: 03/07/05	24 HOUR DTW: NA	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	SAMP. TYPE	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION DEPTH	ELEVATION
							0.0 LAND SURFACE	
0.0	H P H P	SS	▲49.7		SM		0.0 Tan/olive, SILTY, fine SANDS.	
2.0	H P H P	SS	▲8.1					
4.0	H P H P	SS	▲427	USTMRFF-SB06 (4-6)	SM		4.0 Black, organic, SILTY, fine SANDS.	
6.0	H P H P	SS	▲215.9		SP		6.0 Olive, fine SANDS. Wet.	
8.0							8.0 Boring Terminated at Depth 8.0 ft	

CATLIN ENVIRO LOG 204-100 MREF.GPJ CATLIN.GDT 03/24/05

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
204-100
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 204-100	STATE: NC	COUNTY: Onslow	LOCATION: Camp Lejeune
PROJECT NAME: Michael Road Fuel Farm	LOGGED BY: Steve Tyler		BORING ID: USTMRFF-SB07
	DRILLER: Bobbie Fowler		
LATITUDE: 3,839,261.4	LONGITUDE: 286,541.1	CREW: Tom Stetler	
SYSTEM: UTM NAD83 (m)	BORING LOCATION: See Map		LAND ELEV.: NM
DRILL MACHINE: Diedrich D-25	METHOD: HSA	0 HOUR DTW: NA	BORING DEPTH: 8.0
START DATE: 03/07/05	FINISH DATE: 03/07/05	24 HOUR DTW: NA	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	SAMP. TYPE	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION	DEPTH	ELEVATION
							LAND SURFACE	0.0	
0.0	H P H P	SS	▲683		SP		Olive/tan, fine SANDS.	0.0	
2.0	H P H P	SS	▲1263	USTMRFF-SB07 (2-4)				4.0	
4.0	H P H P	SS	▲950		SP		S.A.A with some plasticity.	6.0	
6.0	H P H P	SS	▲1394		SP		Olive/tan, fine SANDS.	8.0	
8.0							Boring Terminated at Depth 8.0 ft		

CATLIN ENVIRO_LOG_204-100_MREF.GPJ CATLIN.GDT 03/24/05

BORING LOG

CATLIN ENGINEERS and SCIENTISTS
204-100
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 204-100	**STATE:** NC	**COUNTY:** Onslow	**LOCATION:** Camp Lejeune
PROJECT NAME: Michael Road Fuel Farm		**LOGGED BY:** Steve Tyler **DRILLER:** Bobbie Fowler	**BORING ID:** USTMRFF-SB08
LATITUDE: 3,839,228.5	**LONGITUDE:** 286,480.0	**CREW:** Tom Stetler	
SYSTEM: UTM NAD83 (m)	**BORING LOCATION:** See Map		**LAND ELEV.:** NM
DRILL MACHINE: Diedrich D-25	**METHOD:** HSA	**0 HOUR DTW:** NA	**BORING DEPTH:** 8.0
START DATE: 03/07/05	**FINISH DATE:** 03/07/05	**24 HOUR DTW:** NA	**ROCK DEPTH:** --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	SAMP. TYPE	OVA RESULTS (ppm) 0 1000 2000 3000 4000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0	H P H P	SS	▲0				0.0		
2.0	H P H P	SS	▲36.6						
4.0	H P H P	SS	▲148	USTMRFF -SB08 (4-6)	SP			Olive/black, fine grained SANDS.	
6.0	H P H P	SS	▲67.0						
8.0							8.0	Boring Terminated at Depth 8.0 ft	

CATLIN ENVIRO_LOG_204-100_MRFF.GPJ_CATLIN.GDT_03/24/05

WELL LOG

CATLIN ENGINEERS and SCIENTISTS
204-100
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 204-100	STATE: NC	COUNTY: Onslow	LOCATION: Camp Lejeune
PROJECT NAME: Michael Road Fuel Farm		LOGGED BY: Steve Tyler	WELL ID: UST1070-MW01
		DRILLER: Bobbie Fowler	
NORTHING: 3,839,241.3	EASTING: 286,555.7	CREW: Bill Miller	
SYSTEM: UTM NAD83 (m)	BORING LOCATION: See Map		T.O.C. ELEV.: 29.08
DRILL MACHINE: Diedrich D-25	METHOD: HSA	0 HOUR DTW: 10.0	BORING DEPTH: 17.0
START DATE: 03/04/05	FINISH DATE: 03/04/05	24 HOUR DTW: 7.5	WELL DEPTH: 15.0

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION	DEPTH	ELEVATION	WELL DETAIL
										0.0	29.1	0.0
0.0					5.9		SM		Olive/tan, SILTY fine SAND with few organics. Dry. No HCO.			
1.0					13.9							
2.0					10.7							
3.0					15.7					4.0	25.1	
4.0	2	2			344	USTMRFF-MW01 (4-5)	OH		Black, organic, fine SAND with silt/clay. Slight HCO.			
5.0			4	6	273							
6.0	1	2			117					7.0	22.1	
7.0			2	3	242		SM		Light gray, SILTY, fine SAND with slight plasticity. Wet at 10' bls. No HCO.			
8.0	2	2	3	4	134							
10.0	2	4	5	7	87.5					12.0	17.1	
										15.0	14.1	
15.0	4	4	8	6	91.8		SM		S.A.A.	17.0	12.1	
									Boring Terminated at Elevation 12.1 ft Lab samples submitted under USTMRFF-MW01 nomenclature.			

WELL DETAIL: 0.0 – 1.0 Portland Cement; 1.0 – 4.0 2" Sch. 40 PVC; 4.0 – 5.0 Bentonite Pellets; 5.0 – 15.0 2" Slot .010 Sch. 40 PVC; 15.0 – 15.0 #2 Medium Sand

CATLIN BORING LOG 204-100 MRFF GPJ TEST.GDT 03/24/05

WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR (INDIVIDUAL) NAME (print) Bobbie Fowler **CERTIFICATION #** 2869

WELL CONTRACTOR COMPANY NAME CATLIN Engineers & Scientists **PHONE #** (910) 452-5861

STATE WELL CONSTRUCTION PERMIT # (if applicable) 2869 **ASSOCIATED WQ PERMIT #** (if applicable) N/A

UST1070- MW01

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐
   Monitoring ☒ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use _____
2. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Camp Lejeune County: Onslow
   _____
   (Road Name and Numbers, Community, Subdivision, Lot No., Zip Code)

   Topographic/Land Setting
   ☐ Ridge ☐ Slope ☐ Valley ☒ Flat
   (check appropriate box)

   Northing/Easting of well location
   3839241.346/286555.7
   UTM NAD83 (m)

   Latitude/longitude source: ☒ GPS ☐ Topo. map
   (check box)
3. OWNER: LANTDIV NAVFACENGCOM Commanding General
   Address: AC/S EMD/Marine Corps Base/PSC Box 20004
   (Street or Route No.)
   Camp Lejeune (City or Town) NC (State) 28542-0004 (Zip Code)
   _____
   Area code - Phone number

   DEPTH From To — DRILLING LOG Formation Description
4. DATE DRILLED: 3/4/20053/4/2005
5. TOTAL DEPTH: 15
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing 7.48 FT.
   (Use "+" if Above Top of Casing)
8. 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

   SEE ATTACHED
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): Surficial Aquifer
    _____
12. DISINFECTION: Type N/A Amount N/A
13. CASING:

	Depth	Diameter	Wall Thickness or Weight/Ft.	Material
From	0 To 5 ft.	2 in.	Sch. 40	PVC
From	To ft.	in.		
From	To ft.	in.		

14. GROUT:

	Depth	Material	Method
From	0 To 1 ft.	Concrete	Surface Pour
From	1 To 4 ft.	Bent. Pellets	Surface Pour

15. SCREEN:

	Depth	Diameter	Slot Size	Material
From	5 To 15 ft.	2 in.	Slot .010 in.	PVC
From	To ft.	in.	in.	

16. SAND/GRAVEL PACK:

	Depth	Size	Material
From	4 To 15 ft.	#2 Medium	Torpedo Sand
From	To ft.		

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include road numbers and common road names.

SEE ATTACHED

17. REMARKS: Lab samples submitted under USTMRFF-MW01 nomenclature.

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.

SIGNATURE OF PERSON CONSTRUCTING THE WELL — DATE 3-18-05

Submit original to Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days.

Modified from: GW-1 REV.07/2001

WELL LOG

CATLIN ENGINEERS and SCIENTISTS 204-100 Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 204-100	STATE: NC	COUNTY: Onslow	LOCATION: Camp Lejeune
PROJECT NAME: Michael Road Fuel Farm		LOGGED BY: Steve Tyler	WELL ID: UST1070-MW02
		DRILLER: Bobbie Fowler	
NORTHING: 3,839,242.9	EASTING: 286,563.7	CREW: Bill Miller	
SYSTEM: UTM NAD83 (m)	BORING LOCATION: See Map		T.O.C. ELEV.: 28.68
DRILL MACHINE: Diedrich D-25	METHOD: HSA	0 HOUR DTW: 9.0	BORING DEPTH: 17.0
START DATE: 03/04/05	FINISH DATE: 03/04/05	24 HOUR DTW: 6.7	WELL DEPTH: 15.0

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION	DEPTH	ELEVATION
									LAND SURFACE	0.0	28.7
0.0					3.6		SP		Tan, fine SAND with few fines. (FILL) Dry. No HCO.		
1.0					2.2	USTMRFF-MW02 (1-2)					
2.0					1.7						
3.0					2.8						
4.0	2	3	3	4	0					6.0	22.7
6.0	1	1	1	0	0		SP		Olive, fine to med. grained SAND. No fines. Wet. HCO.		
8.0	1	2	3	2	568						
10.0	2	2	4	3						11.0	17.7
							SM		Light gray, SILTY, fine SAND. Wet. No HCO.	15.0	13.7
15.0							OH		Organic, CLAYEY, fine SAND lense.	15.5	13.2
	HP	HP	3	4			SM		Olive, fine to med. grained SANDS with few organic fines. Wet. No HCO.	17.0	11.7
									Boring Terminated at Elevation 11.7 ft Lab samples submitted under USTMRFF-MW02 nomenclature.		

WELL DETAIL: 0.0 to 1.0 Portland Cement; 1.0 to 4.0 Bentonite Pellets; 4.0 to 15.0 #2 Medium Sand; 2" Sch. 40 PVC; 2" Slot .010 Sch. 40 PVC; 5.0; 15.0

CATLIN BORING LOG 204-100 MREF.GPJ TEST.GDT 03/24/05

WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR (INDIVIDUAL) NAME (print) Bobbie Fowler — CERTIFICATION # 2869

WELL CONTRACTOR COMPANY NAME CATLIN Engineers & Scientists — PHONE # (910) 452-5861

STATE WELL CONSTRUCTION PERMIT # (if applicable) 2869 — ASSOCIATED WQ PERMIT # (if applicable) N/A

UST1070- MW02

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐
   Monitoring ☒ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use _____
2. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Camp Lejeune County: Onslow
   _____
   (Road Name and Numbers, Community, Subdivision, Lot No., Zip Code)
3. OWNER: LANTDIV NAVFACENGCOM Commanding General
   Address: AC/S EMD/Marine Corps Base/PSC Box 20004
   (Street or Route No.)
   Camp Lejeune (City or Town) | NC (State) | 28542-0004 (Zip Code)
   _____
   Area code - Phone number
4. DATE DRILLED: 3/4/20053/4/2005
5. TOTAL DEPTH: 15
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing 6.72 FT.
   (Use "+" if Above Top of Casing)
8. 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
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): Surficial Aquifer
    _____
12. DISINFECTION: Type N/A Amount N/A
13. CASING:

	Depth	Diameter	Wall Thickness or Weight/Ft.	Material
From	0 To 5 ft.	2 in.	Sch. 40	PVC
From	To ft.	in.		
From	To ft.	in.		

14. GROUT:

	Depth	Material	Method
From	0 To 1 ft.	Concrete	Surface Pour
From	1 To 4 ft.	Bent. Pellets	Surface Pour

15. SCREEN:

	Depth	Diameter	Slot Size	Material
From	5 To 15 ft.	2 in.	Slot .010 in.	PVC
From	To ft.	in.	in.	

16. SAND/GRAVEL PACK:

	Depth	Size	Material
From	4 To 15 ft.	#2 Medium	Torpedo Sand
From	To ft.		

17. REMARKS: Lab samples submitted under USTMRFF-MW02 nomenclature.

Topographic/Land Setting
☐ Ridge ☐ Slope ☐ Valley ☒ Flat
(check appropriate box)

Northing/Easting of well location
3839242.9/286563.715
UTM NAD83 (m)

Latitude/longitude source: ☒ GPS ☐ Topo. map
(check box)

DEPTH From To — DRILLING LOG Formation Description

SEE ATTACHED

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include road numbers and common road names.

SEE ATTACHED

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.

SIGNATURE OF PERSON CONSTRUCTING THE WELL — DATE 3-18-05

Submit original to Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days.

Modified from: GW-1 REV.07/2001

APPENDIX C

STANDARD PROCEDURES

CATLIN STANDARD METHODS OF INVESTIGATION

(REVISED APRIL 2002)

1.0 DATA COLLECTION

1.1 BACKGROUND DATA

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

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

1.2 SURVEYS AND POTENTIAL RECEPTOR DATA

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

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

1.2.1 Horizontal Survey

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

1.2.2 Vertical Survey

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

1.3 DRILLING AND MONITORING WELL/PIEZOMETER INSTALLATION

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

1.3.1 Drilling Methods and Subsurface Data Collection

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

Auger Drilling

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

Hand Augering

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

Direct Push

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

Other Methods

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

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

1.3.2 Hydropunch Installation

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

1.3.3 Well Installation

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

1.3.4 Well Development

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

1.4 HYDROGEOLOGIC DATA COLLECTION

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

1.4.1 Regional Geology

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

1.4.2 Site Geology

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

1.4.3 Groundwater Occurrence and Characteristics

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

Well Water Levels

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

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

Aquifer Testing

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

Other Methods

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

1.5 PETROLEUM HYDROCARBON DATA COLLECTION

1.5.1 Collection Methods

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

Field Analysis

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

Laboratory Analysis

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

1.5.2 Field Sampling

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

Product Samples

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

Vapor Samples

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

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

Soil Samples

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

Groundwater Samples

Groundwater samples are collected in accordance with the following procedures:

- Creeks/Lakes/Etc.

  Grab samples are obtained.

- Domestic Wells

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

- Monitoring Wells

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

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

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

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

Sampling records are field prepared.

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

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

2.0 DATA EVALUATION

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

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

APPENDIX D

SAMPLING FIELD DATA WORKSHEET

SAMPLING FIELD DATA WORKSHEET

MICHAEL ROAD FUEL FARM
MARINE CORP BASE
CAMP LEJEUNE, NORTH CAROLINA

Well No.	*Date*	*Time Sampled*	*Diameter (in.)*	*Well Depth (feet)*	*DTW (feet)*	*Feet of Water in Well*	*Gal/Foot*	*One Volume (gals.)*	*Three Volumes (gals.)*	*Volume of Bailer (gals.)*	*No. Bails Required*	*No. Bails Taken*
USTMRFF-MW01	3/7/2005	12:30	2	15	7.48	7.52	0.163	1.23	3.68	0.24	15.32	pumped
USTMRFF-MW02	3/7/2005	11:40	2	15	6.72	8.28	0.163	1.35	4.05	0.24	16.87	pumped

APPENDIX E

LABORATORY REPORTS
AND
CHAIN-OF-CUSTODY DOCUMENTATION

FILE COPY

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive
Wilmington, North Carolina 28405
(910) 350-1903
Fax (910) 350-1557

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

Report Number: G128-1474

Client Project: MAYFA-MRFF

Dear Mr. Mason:

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

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

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

Sincerely,
Paradigm Analytical Laboratories, Inc.

3/8/05

Laboratory Director — Date
J. Patrick Weaver

Results for Volatiles
by GC 602

Client Sample ID: USTMRFF-MW01
Client Project ID: MAYFA-MRFF
Lab Sample ID: G128-1474-1A
Lab Project ID: G128-1474

Analyzed By: DCS
Date Collected: 3/7/2005 12:30
Date Received: 3/7/2005
Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	3/8/2005
Diisopropyl ether (DIPE)	BQL	1.00	1	3/8/2005
Ethylbenzene	BQL	1.00	1	3/8/2005
Methyl-tert butyl ether (MTBE)	**3.22**	2.00	1	3/8/2005
Toluene	BQL	1.00	1	3/8/2005
m/p-Xylene	BQL	2.00	1	3/8/2005
o-Xylene	BQL	2.00	1	3/8/2005

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	37.6	94

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

Reviewed By: GF

Results for Volatiles
by GC 602

Client Sample ID: USTMRFF-MW01 Duplicate
Client Project ID: MAYFA-MRFF
Lab Sample ID: G128-1474-2A
Lab Project ID: G128-1474

Analyzed By: DCS
Date Collected: 3/7/2005 12:30
Date Received: 3/7/2005
Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	3/8/2005
Diisopropyl ether (DIPE)	BQL	1.00	1	3/8/2005
Ethylbenzene	BQL	1.00	1	3/8/2005
Methyl-tert butyl ether (MTBE)	**2.99**	2.00	1	3/8/2005
Toluene	BQL	1.00	1	3/8/2005
m/p-Xylene	BQL	2.00	1	3/8/2005
o-Xylene	BQL	2.00	1	3/8/2005

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.0	94.9

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

Reviewed By:

Results for Volatiles
by GC 602

Client Sample ID: USTMRFF-MW02
Client Project ID: MAYFA-MRFF
Lab Sample ID: G128-1474-3A
Lab Project ID: G128-1474

Analyzed By: DCS
Date Collected: 3/7/2005 11:40
Date Received: 3/7/2005
Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	3/8/2005
Diisopropyl ether (DIPE)	BQL	1.00	1	3/8/2005
Ethylbenzene	**1.08**	1.00	1	3/8/2005
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	3/8/2005
Toluene	BQL	1.00	1	3/8/2005
m/p-Xylene	BQL	2.00	1	3/8/2005
o-Xylene	BQL	2.00	1	3/8/2005

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.6	99

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

Reviewed By:

Results for Volatiles
by GC 602

Client Sample ID: Trip Blank
Client Project ID: MAYFA-MRFF
Lab Sample ID: G128-1474-4A
Lab Project ID: G128-1474

Analyzed By: DCS
Date Collected: 3/7/2005 0:00
Date Received: 3/7/2005
Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	3/8/2005
Diisopropyl ether (DIPE)	BQL	1.00	1	3/8/2005
Ethylbenzene	BQL	1.00	1	3/8/2005
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	3/8/2005
Toluene	BQL	1.00	1	3/8/2005
m/p-Xylene	BQL	2.00	1	3/8/2005
o-Xylene	BQL	2.00	1	3/8/2005

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	37.7	94.3

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

Reviewed By: AF

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: MAYFA-MRFF

Sample Information and Analytical Results	
Sample Identification	USTMRFF-MW01
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	03/07/05
Date Received	03/07/05
Date Extracted	03/08/05
Date Analyzed	03/08/05
Dry Weight	
Dilution Factor	1
C_5-C_8 Aliphatics**	< 100 (µg/L)
C_9-C_{12} Aliphatics**	< 100 (µg/L)
C_9-C_{10} Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	100
Surrogate % Recovery - FID	110

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

** = Excludes any surrogates or internal standards.

Lab Info: g128-1474-1d

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: MAYFA-MRFF

Sample Information and Analytical Results	
Sample Identification	USTMRFF-MW02
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	03/07/05
Date Received	03/07/05
Date Extracted	03/08/05
Date Analyzed	03/08/05
Dry Weight	
Dilution Factor	1
C_5-C_8 Aliphatics**	< 100 (µg/L)
C_9-C_{12} Aliphatics**	< 100 (µg/L)
C_9-C_{10} Aromatics**	130 (µg/L)
Surrogate % Recovery - PID	110
Surrogate % Recovery - FID	120

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

** = Excludes any surrogates or internal standards.

Lab Info: g128-1474-3d

Reviewed By: AT

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 12/17/04 PID Initial Calibration Date: 12/17/04

Calibration Ranges and Limits

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

Calibration Concentration Levels

Range	Levels (µg/L)	%RSD or CCC	Method of Quantitation
C_5-C_8 Aliphatics	40	4.8	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C_9-C_{12} Aliphatics	10	0.993	Linear Regression
	250		
	500		
	750		
	1000		
C_9-C_{10} Aromatics	10	6.8	Calibration Factor
	250		
	500		
	750		
	1000		

Calibration Check Date: 03/08/05

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	RPD
C_5-C_8 Aliphatics	2000	200	17.2
C_9-C_{12} Aliphatics	500	50	3.7
C_9-C_{10} Aromatics	500	50	4.6

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 Semivolatiles
by GCMS 625

Client Sample ID: USTMRFF-MW01
Client Project ID: MAYFA-MRFF
Lab Sample ID: G128-1474-1H
Lab Project ID: G128-1474

Analyzed By: MRC
Date Collected: 3/7/2005 12:30
Date Received: 3/7/2005
Date Extracted: 3/8/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	3/8/2005	
Acenaphthylene	BQL	10.0	1.12	1	3/8/2005	
Anthracene	BQL	10.0	1.75	1	3/8/2005	
Benzo[a]anthracene	BQL	10.0	1.36	1	3/8/2005	
Benzo[a]pyrene	BQL	10.0	1.27	1	3/8/2005	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	3/8/2005	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	3/8/2005	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	3/8/2005	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	3/8/2005	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	3/8/2005	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	3/8/2005	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	3/8/2005	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	3/8/2005	
Butylbenzylphthalate	BQL	10.0	1.53	1	3/8/2005	
2-Chloronaphthalene	BQL	10.0	1.25	1	3/8/2005	
2-Chlorophenol	BQL	10.0	4.22	1	3/8/2005	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	3/8/2005	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	3/8/2005	
Chrysene	BQL	10.0	1.11	1	3/8/2005	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	3/8/2005	
Di-n-Butylphthalate	BQL	10.0	1.65	1	3/8/2005	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	3/8/2005	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	3/8/2005	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	3/8/2005	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	3/8/2005	
2,4-Dichlorophenol	BQL	10.0	3.75	1	3/8/2005	
Diethylphthalate	BQL	10.0	1.48	1	3/8/2005	
Dimethylphthalate	BQL	10.0	1.04	1	3/8/2005	
2,4-Dimethylphenol	BQL	10.0	9.25	1	3/8/2005	
Di-n-octylphthalate	BQL	10.0	1.16	1	3/8/2005	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	3/8/2005	
2,4-Dinitrophenol	BQL	50.0	4.20	1	3/8/2005	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	3/8/2005	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	3/8/2005	
Fluoranthene	BQL	10.0	1.41	1	3/8/2005	
Fluorene	BQL	10.0	1.22	1	3/8/2005	
Hexachlorobenzene	BQL	10.0	1.22	1	3/8/2005	
Hexachlorobutadiene	BQL	10.0	1.58	1	3/8/2005	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	3/8/2005	
Hexachloroethane	BQL	10.0	1.58	1	3/8/2005	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	3/8/2005	
Isophorone	BQL	10.0	1.27	1	3/8/2005	

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTMRFF-MW01
Client Project ID: MAYFA-MRFF
Lab Sample ID: G128-1474-1H
Lab Project ID: G128-1474

Analyzed By: MRC
Date Collected: 3/7/2005 12:30
Date Received: 3/7/2005
Date Extracted: 3/8/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Naphthalene	BQL	10.0	1.08	1	3/8/2005	
Nitrobenzene	BQL	10.0	1.32	1	3/8/2005	
2-Nitrophenol	BQL	10.0	3.52	1	3/8/2005	
4-Nitrophenol	BQL	50.0	3.17	1	3/8/2005	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	3/8/2005	
N-Nitrosodiphenylamine	BQL	10.0	1.53	1	3/8/2005	
Pentachlorophenol	BQL	50.0	2.83	1	3/8/2005	
Phenanthrene	BQL	10.0	1.38	1	3/8/2005	
Phenol	BQL	10.0	3.38	1	3/8/2005	
Pyrene	BQL	10.0	2.08	1	3/8/2005	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	3/8/2005	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	3/8/2005	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.9	79
2-Fluorophenol	10	8.1	81
Nitrobenzene-d5	10	8.1	81
Phenol-d6	10	8.3	83
2,4,6-Tribromophenol	5	4.6	91
4-Terphenyl-d14	10	8.9	88

Comments:

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: USTMRFF-MW01
Client Project ID: MAYFA-MRFF
Lab Sample ID: G128-1474-1H
Lab Project ID: G128-1474
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 3/7/2005 12:30
Date Received: 3/7/2005
Date Analyzed: 3/8/2005
Date Extracted: 3/8/2005
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: AF

Results for Semivolatiles by GCMS 625

Client Sample ID: USTMRFF-MW02
Client Project ID: MAYFA-MRFF
Lab Sample ID: G128-1474-3H
Lab Project ID: G128-1474

Analyzed By: MRC
Date Collected: 3/7/2005 11:40
Date Received: 3/7/2005
Date Extracted: 3/8/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	3/8/2005	
Acenaphthylene	BQL	10.0	1.12	1	3/8/2005	
Anthracene	BQL	10.0	1.75	1	3/8/2005	
Benzo[a]anthracene	BQL	10.0	1.36	1	3/8/2005	
Benzo[a]pyrene	BQL	10.0	1.27	1	3/8/2005	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	3/8/2005	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	3/8/2005	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	3/8/2005	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	3/8/2005	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	3/8/2005	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	3/8/2005	
Bis(2-ethylhexyl)phthalate	2.10	10.0	1.33	1	3/8/2005	J
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	3/8/2005	
Butylbenzylphthalate	BQL	10.0	1.53	1	3/8/2005	
2-Chloronaphthalene	BQL	10.0	1.25	1	3/8/2005	
2-Chlorophenol	BQL	10.0	4.22	1	3/8/2005	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	3/8/2005	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	3/8/2005	
Chrysene	BQL	10.0	1.11	1	3/8/2005	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	3/8/2005	
Di-n-Butylphthalate	BQL	10.0	1.65	1	3/8/2005	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	3/8/2005	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	3/8/2005	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	3/8/2005	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	3/8/2005	
2,4-Dichlorophenol	BQL	10.0	3.75	1	3/8/2005	
Diethylphthalate	BQL	10.0	1.48	1	3/8/2005	
Dimethylphthalate	BQL	10.0	1.04	1	3/8/2005	
2,4-Dimethylphenol	BQL	10.0	9.25	1	3/8/2005	
Di-n-octylphthalate	BQL	10.0	1.16	1	3/8/2005	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	3/8/2005	
2,4-Dinitrophenol	BQL	50.0	4.20	1	3/8/2005	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	3/8/2005	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	3/8/2005	
Fluoranthene	BQL	10.0	1.41	1	3/8/2005	
Fluorene	BQL	10.0	1.22	1	3/8/2005	
Hexachlorobenzene	BQL	10.0	1.22	1	3/8/2005	
Hexachlorobutadiene	BQL	10.0	1.58	1	3/8/2005	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	3/8/2005	
Hexachloroethane	BQL	10.0	1.58	1	3/8/2005	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	3/8/2005	
Isophorone	BQL	10.0	1.27	1	3/8/2005	

Results for Semivolatiles by GCMS 625

Client Sample ID: USTMRFF-MW02
Client Project ID: MAYFA-MRFF
Lab Sample ID: G128-1474-3H
Lab Project ID: G128-1474

Analyzed By: MRC
Date Collected: 3/7/2005 11:40
Date Received: 3/7/2005
Date Extracted: 3/8/2005
Matrix: Water

Compound	Result ug/L	Quantitation Limit ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Naphthalene	BQL	10.0	1.08	1	3/8/2005	
Nitrobenzene	BQL	10.0	1.32	1	3/8/2005	
2-Nitrophenol	BQL	10.0	3.52	1	3/8/2005	
4-Nitrophenol	BQL	50.0	3.17	1	3/8/2005	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	3/8/2005	
N-Nitrosodiphenylamine	BQL	10.0	1.53	1	3/8/2005	
Pentachlorophenol	BQL	50.0	2.83	1	3/8/2005	
Phenanthrene	BQL	10.0	1.38	1	3/8/2005	
Phenol	BQL	10.0	3.38	1	3/8/2005	
Pyrene	BQL	10.0	2.08	1	3/8/2005	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	3/8/2005	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	3/8/2005	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.3	73
2-Fluorophenol	10	7.1	71
Nitrobenzene-d5	10	7.5	75
Phenol-d6	10	7.4	74
2,4,6-Tribromophenol	5	4.1	82
4-Terphenyl-d14	10	8.2	82

Comments:

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: USTMRFF-MW02
Client Project ID: MAYFA-MRFF
Lab Sample ID: G128-1474-3H
Lab Project ID: G128-1474
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 3/7/2005 11:40
Date Received: 3/7/2005
Date Analyzed: 3/8/2005
Date Extracted: 3/8/2005
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Trimethylbenzene, Isomer of	6.34			23.2
2	Ethenyldimethylbenzene, Isomer of	8.10			14.1
3	Ethyldimethylbenzene, Isomer of	7.28			6.96
4	Trimethylbenzene, Isomer of	5.97			6.52
5	Unknown	6.96			5.65
6	Unknown	7.06			5.01
7	Unknown	4.63			5
8	Methylpropylbenzene, Isomer of	7.17			4.59
9	Ethylmethylbenzene, Isomer of	6.67			4.58
10	Tetrahydronaphthalene, Isomer of	8.24			4.39

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) Results

by MDEP-EPH

Client Name: Richard Catlin & Associates

Project Name: MAYFA-MRFF

Sample Information and Analytical Results	
Sample Identification	USTMRFF-MW01
Sample Matrix	Water
Date Collected	03/07/05
Date Received	03/07/05
Date Extracted	03/08/05
Date Analyzed	03/08/05
Dry Weight	
Dilution Factor	1:1
C_9-C_{18} Aliphatics*	< 100 (ug/L)
C_{19}-C_{36} Aliphatics*	< 100 (ug/L)
C_{11}-C_{22} Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	88
Aromatic Surrogate % Recovery	79
Fractionation Surrogate 1 % Recovery	110

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G128-1474-1I

Reviewed By:

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & Associates

Project Name: MAYFA-MRFF

Sample Information and Analytical Results	
Sample Identification	USTMRFF-MW02
Sample Matrix	Water
Date Collected	03/07/05
Date Received	03/07/05
Date Extracted	03/08/05
Date Analyzed	03/08/05
Dry Weight	
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 100 (ug/L)
C_{19}-C_{36} Aliphatics*	< 100 (ug/L)
C_{11}-C_{22} Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	94
Aromatic Surrogate % Recovery	86

Comments:

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

Lab info: G128-1474-3I

Reviewed By:

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 03/08/05

Calibration Ranges and Limits

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

Calibration Concentration Levels

Range	Levels (µg/mL)	%RSD or CCC	Method of Quantitation
C_9-C_{18} Aliphatics	6	2.00	Calibration Factor
	30		
	60		
	120		
	240		
C_{19}-C_{36} Aliphatics	8	10.0	Calibration Factor
	40		
	80		
	160		
	320		
C_{11}-C_{22} Aromatics	17	6.1	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 03/08/05

Calibration Check

Range	Levels (µg/mL)	RPD
C_9-C_{18} Aliphatics	120	-1.0
C_{19}-C_{36} Aliphatics	160	5.7
C_{11}-C_{22} Aromatics	340	8.8

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

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

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

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

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

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

% Rec = Percent Recovery

% soilds = Percent Solids

Special Notes:

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

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

MI34.011404.1

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

Chain-of Custody Record & Analytical Request

COC# 44135

Page 1 of 1

Client: CATLIN Eng. & Sci. Project ID: MAYFA - MRFF
Address: 220 OLD DAIRY Contact: Mike E. MASON
Address: Wilm NC 28405 Phone: 910-452-5861
Quote #: DOD 101 Fax:

Date: 3-7-05
Turnaround: 24 HOURS
Job Number: 204-100
P.O. Number: 250304-1

Report To: CATLIN
ATTN: MIKE E. MASON
Invoice To: CATLIN

Sample ID	Date	Time	Matrix	Preservatives: HCL	NA	HCL	HCL	Analyses: 602+MTBE+Xylenes	VPH	625+TICs	EPH	Comments: Please specify any special reporting requirements
												6128-1474
USTMRFF-MW01	3-7-05	1230	GW	✓	✓	✓	✓	✓	✓	✓	✓	
USTMRFF-MW01 Duplicate	↓	1230	↓	✓				✓				24 HOUR TURNAROUND
USTMRFF-MW02	↓	1140	↓	✓	✓	✓	✓	✓	✓	✓	✓	" "
Trip blank								✓				" "
												* PLEASE SEND RESULTS IN EDD FORMAT TO MIKE E. MASON.

Relinquished By	Date	Time	Received By	Date	Time	Temperature
[signature] TCS	3/7/05	1430	[signature]	3/7/05	1430	on ice 5.8°C

State Certification Requested
NC ✓ SC _____ Other _____

SEE REVERSE FOR TERMS AND CONDITIONS

ORIGINAL

PARADIGM ANALYTICAL LABORATORIES, INC.

N.C. Certification #481 S.C. Certification #99029

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

Report Number: G128-1475

Client Project: USTMRFF-

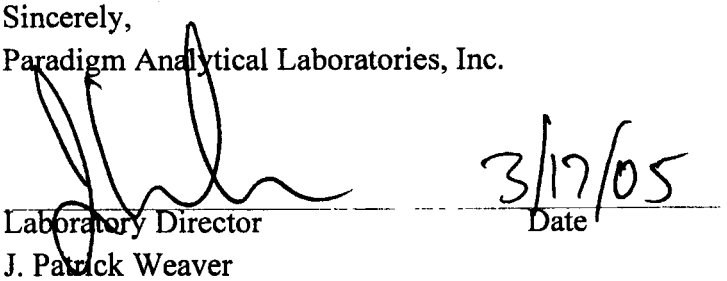
Dear Mr. Mason:

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

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

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

Sincerely,
Paradigm Analytical Laboratories, Inc.



3/17/05

Laboratory Director — Date
J. Patrick Weaver

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-MW01 4-5'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-1A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-04-2005 11:30
Date Received: 3/8/2005
Matrix: Soil
%Solids: 75.8

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.0542**	0.0596	0.00351	1	3/11/2005	J
Benzene	BQL	0.00596	0.00340	1	3/11/2005	
Bromobenzene	BQL	0.00596	0.00293	1	3/11/2005	
Bromochloromethane	BQL	0.00596	0.00348	1	3/11/2005	
Bromodichloromethane	BQL	0.00596	0.00339	1	3/11/2005	
Bromoform	BQL	0.00596	0.00289	1	3/11/2005	
Bromomethane	BQL	0.00596	0.00500	1	3/11/2005	
2-Butanone	**0.00889**	0.0298	0.00344	1	3/11/2005	J
n-Butylbenzene	BQL	0.00596	0.00400	1	3/11/2005	
sec-Butylbenzene	BQL	0.00596	0.00417	1	3/11/2005	
tert-Butylbenzene	BQL	0.00596	0.00414	1	3/11/2005	
Carbon disulfide	BQL	0.00596	0.00314	1	3/11/2005	
Carbon tetrachloride	BQL	0.00596	0.00413	1	3/11/2005	
Chlorobenzene	BQL	0.00596	0.00299	1	3/11/2005	
Chloroethane	BQL	0.00596	0.00375	1	3/11/2005	
Chloroform	BQL	0.00596	0.00299	1	3/11/2005	
Chloromethane	BQL	0.00596	0.00287	1	3/11/2005	
2-Chlorotoluene	BQL	0.00596	0.00355	1	3/11/2005	
4-Chlorotoluene	BQL	0.00596	0.00332	1	3/11/2005	
Dibromochloromethane	BQL	0.00596	0.00267	1	3/11/2005	
1,2-Dibromo-3-chloropropane	BQL	0.00596	0.0126	1	3/11/2005	
Dibromomethane	BQL	0.00596	0.00358	1	3/11/2005	
1,2-Dibromoethane (EDB)	BQL	0.00596	0.00278	1	3/11/2005	
1,2-Dichlorobenzene	BQL	0.00596	0.00287	1	3/11/2005	
1,3-Dichlorobenzene	BQL	0.00596	0.00279	1	3/11/2005	
1,4-Dichlorobenzene	BQL	0.00596	0.00293	1	3/11/2005	
trans-1,4-Dichloro-2-butene	BQL	0.00596	0.0128	1	3/11/2005	
1,1-Dichloroethane	BQL	0.00596	0.00344	1	3/11/2005	
1,1-Dichloroethene	BQL	0.00596	0.00459	1	3/11/2005	
1,2-Dichloroethane	BQL	0.00596	0.00342	1	3/11/2005	
cis-1,2-Dichloroethene	BQL	0.00596	0.00293	1	3/11/2005	
trans-1,2-dichloroethene	BQL	0.00596	0.00388	1	3/11/2005	
1,2-Dichloropropane	BQL	0.00596	0.00305	1	3/11/2005	
1,3-Dichloropropane	BQL	0.00596	0.00273	1	3/11/2005	
2,2-Dichloropropane	BQL	0.00596	0.00379	1	3/11/2005	
1,1-Dichloropropene	BQL	0.00596	0.00431	1	3/11/2005	
cis-1,3-Dichloropropene	BQL	0.00596	0.00332	1	3/11/2005	
trans-1,3-Dichloropropene	BQL	0.00596	0.00338	1	3/11/2005	
Dichlorodifluoromethane	BQL	0.00596	0.00445	1	3/11/2005	
Diisopropyl ether (DIPE)	BQL	0.00596	0.00283	1	3/11/2005	
Ethylbenzene	BQL	0.00596	0.00363	1	3/11/2005	
Hexachlorobutadiene	BQL	0.00596	0.00471	1	3/11/2005	
2-Hexanone	BQL	0.00596	0.00260	1	3/11/2005	
Iodomethane	BQL	0.00596	0.00555	1	3/11/2005	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-MW01 4-5'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-1A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-04-2005 11:30
Date Received: 3/8/2005
Matrix: Soil
%Solids: 75.8

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00596	0.00384	1	3/11/2005	
4-Isopropyltoluene	BQL	0.00596	0.00406	1	3/11/2005	
Methylene chloride	BQL	0.0239	0.00341	1	3/11/2005	
4-Methyl-2-pentanone	BQL	0.00596	0.00276	1	3/11/2005	
Methyl-tert-butyl ether (MTBE)	BQL	0.00596	0.00303	1	3/11/2005	
Naphthalene	BQL	0.00596	0.00240	1	3/11/2005	
n-Propyl benzene	BQL	0.00596	0.00383	1	3/11/2005	
Styrene	BQL	0.00596	0.00427	1	3/11/2005	
1,1,1,2-Tetrachloroethane	BQL	0.00596	0.00324	1	3/11/2005	
1,1,2,2-Tetrachloroethane	BQL	0.00596	0.00293	1	3/11/2005	
Tetrachloroethene	BQL	0.00596	0.00376	1	3/11/2005	
Toluene	BQL	0.00596	0.00353	1	3/11/2005	
1,2,3-Trichlorobenzene	BQL	0.00596	0.00261	1	3/11/2005	
1,2,4-Trichlorobenzene	BQL	0.00596	0.00267	1	3/11/2005	
Trichloroethene	BQL	0.00596	0.00372	1	3/11/2005	
1,1,1-Trichloroethane	BQL	0.00596	0.00412	1	3/11/2005	
1,1,2-Trichloroethane	BQL	0.00596	0.00308	1	3/11/2005	
Trichlorofluoromethane	BQL	0.00596	0.00493	1	3/11/2005	
1,2,3-Trichloropropane	BQL	0.00596	0.00316	1	3/11/2005	
1,2,4-Trimethylbenzene	BQL	0.00596	0.00334	1	3/11/2005	
1,3,5-Trimethylbenzene	BQL	0.00596	0.00355	1	3/11/2005	
Vinyl chloride	BQL	0.00596	0.00394	1	3/11/2005	
m-,p-Xylene	BQL	0.0119	0.00676	1	3/11/2005	
o-Xylene	BQL	0.00596	0.00334	1	3/11/2005	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0491	98
1,2-Dichloroethane-d4	0.05	0.0666	133
Toluene-d8	0.05	0.0508	102

Comments:

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

Reviewed By: JTF

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-MW02 1-2'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-2A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-04-2005 13:00
Date Received: 3/8/2005
Matrix: Soil
%Solids: 90.8

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.00720**	0.0434	0.00255	1	3/11/2005	J
Benzene	BQL	0.00434	0.00247	1	3/11/2005	
Bromobenzene	BQL	0.00434	0.00214	1	3/11/2005	
Bromochloromethane	BQL	0.00434	0.00254	1	3/11/2005	
Bromodichloromethane	BQL	0.00434	0.00247	1	3/11/2005	
Bromoform	BQL	0.00434	0.00210	1	3/11/2005	
Bromomethane	BQL	0.00434	0.00364	1	3/11/2005	
2-Butanone	BQL	0.0217	0.00250	1	3/11/2005	
n-Butylbenzene	BQL	0.00434	0.00291	1	3/11/2005	
sec-Butylbenzene	BQL	0.00434	0.00304	1	3/11/2005	
tert-Butylbenzene	BQL	0.00434	0.00301	1	3/11/2005	
Carbon disulfide	BQL	0.00434	0.00228	1	3/11/2005	
Carbon tetrachloride	BQL	0.00434	0.00300	1	3/11/2005	
Chlorobenzene	BQL	0.00434	0.00218	1	3/11/2005	
Chloroethane	BQL	0.00434	0.00273	1	3/11/2005	
Chloroform	BQL	0.00434	0.00218	1	3/11/2005	
Chloromethane	BQL	0.00434	0.00209	1	3/11/2005	
2-Chlorotoluene	BQL	0.00434	0.00259	1	3/11/2005	
4-Chlorotoluene	BQL	0.00434	0.00241	1	3/11/2005	
Dibromochloromethane	BQL	0.00434	0.00194	1	3/11/2005	
1,2-Dibromo-3-chloropropane	BQL	0.00434	0.00920	1	3/11/2005	
Dibromomethane	BQL	0.00434	0.00260	1	3/11/2005	
1,2-Dibromoethane (EDB)	BQL	0.00434	0.00202	1	3/11/2005	
1,2-Dichlorobenzene	BQL	0.00434	0.00209	1	3/11/2005	
1,3-Dichlorobenzene	BQL	0.00434	0.00203	1	3/11/2005	
1,4-Dichlorobenzene	BQL	0.00434	0.00214	1	3/11/2005	
trans-1,4-Dichloro-2-butene	BQL	0.00434	0.00929	1	3/11/2005	
1,1-Dichloroethane	BQL	0.00434	0.00250	1	3/11/2005	
1,1-Dichloroethene	BQL	0.00434	0.00334	1	3/11/2005	
1,2-Dichloroethane	BQL	0.00434	0.00249	1	3/11/2005	
cis-1,2-Dichloroethene	BQL	0.00434	0.00214	1	3/11/2005	
trans-1,2-dichloroethene	BQL	0.00434	0.00282	1	3/11/2005	
1,2-Dichloropropane	BQL	0.00434	0.00222	1	3/11/2005	
1,3-Dichloropropane	BQL	0.00434	0.00199	1	3/11/2005	
2,2-Dichloropropane	BQL	0.00434	0.00276	1	3/11/2005	
1,1-Dichloropropene	BQL	0.00434	0.00313	1	3/11/2005	
cis-1,3-Dichloropropene	BQL	0.00434	0.00241	1	3/11/2005	
trans-1,3-Dichloropropene	BQL	0.00434	0.00246	1	3/11/2005	
Dichlorodifluoromethane	BQL	0.00434	0.00324	1	3/11/2005	
Diisopropyl ether (DIPE)	BQL	0.00434	0.00206	1	3/11/2005	
Ethylbenzene	BQL	0.00434	0.00264	1	3/11/2005	
Hexachlorobutadiene	BQL	0.00434	0.00343	1	3/11/2005	
2-Hexanone	BQL	0.00434	0.00189	1	3/11/2005	
Iodomethane	BQL	0.00434	0.00404	1	3/11/2005	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-MW02 1-2'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-2A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-04-2005 13:00
Date Received: 3/8/2005
Matrix: Soil
%Solids: 90.8

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00434	0.00280	1	3/11/2005	
4-Isopropyltoluene	BQL	0.00434	0.00295	1	3/11/2005	
Methylene chloride	BQL	0.0174	0.00248	1	3/11/2005	
4-Methyl-2-pentanone	BQL	0.00434	0.00201	1	3/11/2005	
Methyl-tert-butyl ether (MTBE)	BQL	0.00434	0.00221	1	3/11/2005	
Naphthalene	BQL	0.00434	0.00175	1	3/11/2005	
n-Propyl benzene	BQL	0.00434	0.00279	1	3/11/2005	
Styrene	BQL	0.00434	0.00311	1	3/11/2005	
1,1,1,2-Tetrachloroethane	BQL	0.00434	0.00236	1	3/11/2005	
1,1,2,2-Tetrachloroethane	BQL	0.00434	0.00214	1	3/11/2005	
Tetrachloroethene	BQL	0.00434	0.00274	1	3/11/2005	
Toluene	BQL	0.00434	0.00257	1	3/11/2005	
1,2,3-Trichlorobenzene	BQL	0.00434	0.00190	1	3/11/2005	
1,2,4-Trichlorobenzene	BQL	0.00434	0.00194	1	3/11/2005	
Trichloroethene	BQL	0.00434	0.00271	1	3/11/2005	
1,1,1-Trichloroethane	BQL	0.00434	0.00300	1	3/11/2005	
1,1,2-Trichloroethane	BQL	0.00434	0.00224	1	3/11/2005	
Trichlorofluoromethane	BQL	0.00434	0.00359	1	3/11/2005	
1,2,3-Trichloropropane	BQL	0.00434	0.00230	1	3/11/2005	
1,2,4-Trimethylbenzene	BQL	0.00434	0.00243	1	3/11/2005	
1,3,5-Trimethylbenzene	BQL	0.00434	0.00259	1	3/11/2005	
Vinyl chloride	BQL	0.00434	0.00287	1	3/11/2005	
m-,p-Xylene	BQL	0.00868	0.00492	1	3/11/2005	
o-Xylene	BQL	0.00434	0.00243	1	3/11/2005	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0482	96
1,2-Dichloroethane-d4	0.05	0.0703	141
Toluene-d8	0.05	0.0505	101

Comments:

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

Reviewed By: JF

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB01 4-6'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-3B
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 15:15
Date Received: 3/8/2005
Matrix: Soil
%Solids: 85.9

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.00613**	0.0487	0.00286	1	3/15/2005	J
Benzene	BQL	0.00487	0.00277	1	3/15/2005	
Bromobenzene	BQL	0.00487	0.00239	1	3/15/2005	
Bromochloromethane	BQL	0.00487	0.00284	1	3/15/2005	
Bromodichloromethane	BQL	0.00487	0.00276	1	3/15/2005	
Bromoform	BQL	0.00487	0.00236	1	3/15/2005	
Bromomethane	BQL	0.00487	0.00408	1	3/15/2005	
2-Butanone	BQL	0.0243	0.00280	1	3/15/2005	
n-Butylbenzene	BQL	0.00487	0.00326	1	3/15/2005	
sec-Butylbenzene	BQL	0.00487	0.00341	1	3/15/2005	
tert-Butylbenzene	BQL	0.00487	0.00338	1	3/15/2005	
Carbon disulfide	BQL	0.00487	0.00256	1	3/15/2005	
Carbon tetrachloride	BQL	0.00487	0.00337	1	3/15/2005	
Chlorobenzene	BQL	0.00487	0.00244	1	3/15/2005	
Chloroethane	BQL	0.00487	0.00306	1	3/15/2005	
Chloroform	BQL	0.00487	0.00244	1	3/15/2005	
Chloromethane	BQL	0.00487	0.00235	1	3/15/2005	
2-Chlorotoluene	BQL	0.00487	0.00290	1	3/15/2005	
4-Chlorotoluene	BQL	0.00487	0.00271	1	3/15/2005	
Dibromochloromethane	BQL	0.00487	0.00218	1	3/15/2005	
1,2-Dibromo-3-chloropropane	BQL	0.00487	0.0103	1	3/15/2005	
Dibromomethane	BQL	0.00487	0.00292	1	3/15/2005	
1,2-Dibromoethane (EDB)	BQL	0.00487	0.00227	1	3/15/2005	
1,2-Dichlorobenzene	BQL	0.00487	0.00235	1	3/15/2005	
1,3-Dichlorobenzene	BQL	0.00487	0.00228	1	3/15/2005	
1,4-Dichlorobenzene	BQL	0.00487	0.00239	1	3/15/2005	
trans-1,4-Dichloro-2-butene	BQL	0.00487	0.0104	1	3/15/2005	
1,1-Dichloroethane	BQL	0.00487	0.00280	1	3/15/2005	
1,1-Dichloroethene	BQL	0.00487	0.00375	1	3/15/2005	
1,2-Dichloroethane	BQL	0.00487	0.00279	1	3/15/2005	
cis-1,2-Dichloroethene	BQL	0.00487	0.00239	1	3/15/2005	
trans-1,2-dichloroethene	BQL	0.00487	0.00316	1	3/15/2005	
1,2-Dichloropropane	BQL	0.00487	0.00249	1	3/15/2005	
1,3-Dichloropropane	BQL	0.00487	0.00223	1	3/15/2005	
2,2-Dichloropropane	BQL	0.00487	0.00310	1	3/15/2005	
1,1-Dichloropropene	BQL	0.00487	0.00351	1	3/15/2005	
cis-1,3-Dichloropropene	BQL	0.00487	0.00271	1	3/15/2005	
trans-1,3-Dichloropropene	BQL	0.00487	0.00275	1	3/15/2005	
Dichlorodifluoromethane	BQL	0.00487	0.00363	1	3/15/2005	
Diisopropyl ether (DIPE)	BQL	0.00487	0.00231	1	3/15/2005	
Ethylbenzene	BQL	0.00487	0.00296	1	3/15/2005	
Hexachlorobutadiene	BQL	0.00487	0.00384	1	3/15/2005	
2-Hexanone	BQL	0.00487	0.00212	1	3/15/2005	
Iodomethane	BQL	0.00487	0.00453	1	3/15/2005	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB01 4-6'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-3B
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 15:15
Date Received: 3/8/2005
Matrix: Soil
%Solids: 85.9

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00487	0.00313	1	3/15/2005	
4-Isopropyltoluene	BQL	0.00487	0.00331	1	3/15/2005	
Methylene chloride	BQL	0.0195	0.00278	1	3/15/2005	
4-Methyl-2-pentanone	BQL	0.00487	0.00225	1	3/15/2005	
Methyl-tert-butyl ether (MTBE)	BQL	0.00487	0.00247	1	3/15/2005	
Naphthalene	BQL	0.00487	0.00196	1	3/15/2005	
n-Propyl benzene	BQL	0.00487	0.00312	1	3/15/2005	
Styrene	BQL	0.00487	0.00348	1	3/15/2005	
1,1,1,2-Tetrachloroethane	BQL	0.00487	0.00265	1	3/15/2005	
1,1,2,2-Tetrachloroethane	BQL	0.00487	0.00239	1	3/15/2005	
Tetrachloroethene	BQL	0.00487	0.00307	1	3/15/2005	
Toluene	BQL	0.00487	0.00288	1	3/15/2005	
1,2,3-Trichlorobenzene	BQL	0.00487	0.00213	1	3/15/2005	
1,2,4-Trichlorobenzene	BQL	0.00487	0.00218	1	3/15/2005	
Trichloroethene	BQL	0.00487	0.00304	1	3/15/2005	
1,1,1-Trichloroethane	BQL	0.00487	0.00336	1	3/15/2005	
1,1,2-Trichloroethane	BQL	0.00487	0.00251	1	3/15/2005	
Trichlorofluoromethane	BQL	0.00487	0.00402	1	3/15/2005	
1,2,3-Trichloropropane	BQL	0.00487	0.00258	1	3/15/2005	
1,2,4-Trimethylbenzene	BQL	0.00487	0.00273	1	3/15/2005	
1,3,5-Trimethylbenzene	BQL	0.00487	0.00290	1	3/15/2005	
Vinyl chloride	BQL	0.00487	0.00321	1	3/15/2005	
m-,p-Xylene	BQL	0.00973	0.00552	1	3/15/2005	
o-Xylene	BQL	0.00487	0.00273	1	3/15/2005	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0497	99
1,2-Dichloroethane-d4	0.05	0.0664	133
Toluene-d8	0.05	0.0514	103

Comments:

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

Reviewed By: AF

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB02 2-4'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-4A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 14:15
Date Received: 3/8/2005
Matrix: Soil
%Solids: 86.1

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.0116**	0.0485	0.00285	1	3/10/2005	J
Benzene	BQL	0.00485	0.00277	1	3/10/2005	
Bromobenzene	BQL	0.00485	0.00239	1	3/10/2005	
Bromochloromethane	BQL	0.00485	0.00283	1	3/10/2005	
Bromodichloromethane	BQL	0.00485	0.00276	1	3/10/2005	
Bromoform	BQL	0.00485	0.00235	1	3/10/2005	
Bromomethane	BQL	0.00485	0.00407	1	3/10/2005	
2-Butanone	BQL	0.0243	0.00280	1	3/10/2005	
n-Butylbenzene	BQL	0.00485	0.00325	1	3/10/2005	
sec-Butylbenzene	BQL	0.00485	0.00340	1	3/10/2005	
tert-Butylbenzene	BQL	0.00485	0.00337	1	3/10/2005	
Carbon disulfide	BQL	0.00485	0.00255	1	3/10/2005	
Carbon tetrachloride	BQL	0.00485	0.00336	1	3/10/2005	
Chlorobenzene	BQL	0.00485	0.00244	1	3/10/2005	
Chloroethane	BQL	0.00485	0.00305	1	3/10/2005	
Chloroform	BQL	0.00485	0.00244	1	3/10/2005	
Chloromethane	BQL	0.00485	0.00234	1	3/10/2005	
2-Chlorotoluene	BQL	0.00485	0.00289	1	3/10/2005	
4-Chlorotoluene	BQL	0.00485	0.00270	1	3/10/2005	
Dibromochloromethane	BQL	0.00485	0.00217	1	3/10/2005	
1,2-Dibromo-3-chloropropane	BQL	0.00485	0.0103	1	3/10/2005	
Dibromomethane	BQL	0.00485	0.00291	1	3/10/2005	
1,2-Dibromoethane (EDB)	BQL	0.00485	0.00226	1	3/10/2005	
1,2-Dichlorobenzene	BQL	0.00485	0.00234	1	3/10/2005	
1,3-Dichlorobenzene	BQL	0.00485	0.00227	1	3/10/2005	
1,4-Dichlorobenzene	BQL	0.00485	0.00239	1	3/10/2005	
trans-1,4-Dichloro-2-butene	BQL	0.00485	0.0104	1	3/10/2005	
1,1-Dichloroethane	BQL	0.00485	0.00280	1	3/10/2005	
1,1-Dichloroethene	BQL	0.00485	0.00374	1	3/10/2005	
1,2-Dichloroethane	BQL	0.00485	0.00279	1	3/10/2005	
cis-1,2-Dichloroethene	BQL	0.00485	0.00239	1	3/10/2005	
trans-1,2-dichloroethene	BQL	0.00485	0.00316	1	3/10/2005	
1,2-Dichloropropane	BQL	0.00485	0.00249	1	3/10/2005	
1,3-Dichloropropane	BQL	0.00485	0.00222	1	3/10/2005	
2,2-Dichloropropane	BQL	0.00485	0.00309	1	3/10/2005	
1,1-Dichloropropene	BQL	0.00485	0.00350	1	3/10/2005	
cis-1,3-Dichloropropene	BQL	0.00485	0.00270	1	3/10/2005	
trans-1,3-Dichloropropene	BQL	0.00485	0.00275	1	3/10/2005	
Dichlorodifluoromethane	BQL	0.00485	0.00362	1	3/10/2005	
Diisopropyl ether (DIPE)	BQL	0.00485	0.00230	1	3/10/2005	
Ethylbenzene	BQL	0.00485	0.00295	1	3/10/2005	
Hexachlorobutadiene	BQL	0.00485	0.00383	1	3/10/2005	
2-Hexanone	BQL	0.00485	0.00212	1	3/10/2005	
Iodomethane	BQL	0.00485	0.00451	1	3/10/2005	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB02 2-4'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-4A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 14:15
Date Received: 3/8/2005
Matrix: Soil
%Solids: 86.1

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00485	0.00313	1	3/10/2005	
4-Isopropyltoluene	BQL	0.00485	0.00330	1	3/10/2005	
Methylene chloride	BQL	0.0194	0.00278	1	3/10/2005	
4-Methyl-2-pentanone	BQL	0.00485	0.00224	1	3/10/2005	
Methyl-tert-butyl ether (MTBE)	BQL	0.00485	0.00247	1	3/10/2005	
Naphthalene	BQL	0.00485	0.00195	1	3/10/2005	
n-Propyl benzene	BQL	0.00485	0.00312	1	3/10/2005	
Styrene	BQL	0.00485	0.00348	1	3/10/2005	
1,1,1,2-Tetrachloroethane	BQL	0.00485	0.00264	1	3/10/2005	
1,1,2,2-Tetrachloroethane	BQL	0.00485	0.00239	1	3/10/2005	
Tetrachloroethene	BQL	0.00485	0.00306	1	3/10/2005	
Toluene	BQL	0.00485	0.00287	1	3/10/2005	
1,2,3-Trichlorobenzene	BQL	0.00485	0.00213	1	3/10/2005	
1,2,4-Trichlorobenzene	BQL	0.00485	0.00217	1	3/10/2005	
Trichloroethene	BQL	0.00485	0.00303	1	3/10/2005	
1,1,1-Trichloroethane	BQL	0.00485	0.00335	1	3/10/2005	
1,1,2-Trichloroethane	BQL	0.00485	0.00250	1	3/10/2005	
Trichlorofluoromethane	BQL	0.00485	0.00401	1	3/10/2005	
1,2,3-Trichloropropane	BQL	0.00485	0.00257	1	3/10/2005	
1,2,4-Trimethylbenzene	BQL	0.00485	0.00272	1	3/10/2005	
1,3,5-Trimethylbenzene	BQL	0.00485	0.00289	1	3/10/2005	
Vinyl chloride	BQL	0.00485	0.00320	1	3/10/2005	
m-,p-Xylene	BQL	0.00971	0.00550	1	3/10/2005	
o-Xylene	BQL	0.00485	0.00272	1	3/10/2005	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0534	107
1,2-Dichloroethane-d4	0.05	0.0685	137
Toluene-d8	0.05	0.0519	104

Comments:

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

Reviewed By: JF

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB03 4-8'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-5A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 13:00
Date Received: 3/8/2005
Matrix: Soil
%Solids: 84.2

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.0152**	0.0501	0.00294	1	3/10/2005	J
Benzene	BQL	0.00501	0.00285	1	3/10/2005	
Bromobenzene	BQL	0.00501	0.00246	1	3/10/2005	
Bromochloromethane	BQL	0.00501	0.00292	1	3/10/2005	
Bromodichloromethane	BQL	0.00501	0.00284	1	3/10/2005	
Bromoform	BQL	0.00501	0.00242	1	3/10/2005	
Bromomethane	BQL	0.00501	0.00420	1	3/10/2005	
2-Butanone	BQL	0.0250	0.00288	1	3/10/2005	
n-Butylbenzene	BQL	0.00501	0.00336	1	3/10/2005	
sec-Butylbenzene	BQL	0.00501	0.00351	1	3/10/2005	
tert-Butylbenzene	BQL	0.00501	0.00348	1	3/10/2005	
Carbon disulfide	BQL	0.00501	0.00263	1	3/10/2005	
Carbon tetrachloride	BQL	0.00501	0.00347	1	3/10/2005	
Chlorobenzene	BQL	0.00501	0.00251	1	3/10/2005	
Chloroethane	BQL	0.00501	0.00315	1	3/10/2005	
Chloroform	BQL	0.00501	0.00251	1	3/10/2005	
Chloromethane	BQL	0.00501	0.00241	1	3/10/2005	
2-Chlorotoluene	BQL	0.00501	0.00298	1	3/10/2005	
4-Chlorotoluene	BQL	0.00501	0.00278	1	3/10/2005	
Dibromochloromethane	BQL	0.00501	0.00224	1	3/10/2005	
1,2-Dibromo-3-chloropropane	BQL	0.00501	0.0106	1	3/10/2005	
Dibromomethane	BQL	0.00501	0.00300	1	3/10/2005	
1,2-Dibromoethane (EDB)	BQL	0.00501	0.00233	1	3/10/2005	
1,2-Dichlorobenzene	BQL	0.00501	0.00241	1	3/10/2005	
1,3-Dichlorobenzene	BQL	0.00501	0.00234	1	3/10/2005	
1,4-Dichlorobenzene	BQL	0.00501	0.00246	1	3/10/2005	
trans-1,4-Dichloro-2-butene	BQL	0.00501	0.0107	1	3/10/2005	
1,1-Dichloroethane	BQL	0.00501	0.00288	1	3/10/2005	
1,1-Dichloroethene	BQL	0.00501	0.00386	1	3/10/2005	
1,2-Dichloroethane	BQL	0.00501	0.00287	1	3/10/2005	
cis-1,2-Dichloroethene	BQL	0.00501	0.00246	1	3/10/2005	
trans-1,2-dichloroethene	BQL	0.00501	0.00326	1	3/10/2005	
1,2-Dichloropropane	BQL	0.00501	0.00256	1	3/10/2005	
1,3-Dichloropropane	BQL	0.00501	0.00229	1	3/10/2005	
2,2-Dichloropropane	BQL	0.00501	0.00319	1	3/10/2005	
1,1-Dichloropropene	BQL	0.00501	0.00362	1	3/10/2005	
cis-1,3-Dichloropropene	BQL	0.00501	0.00278	1	3/10/2005	
trans-1,3-Dichloropropene	BQL	0.00501	0.00283	1	3/10/2005	
Dichlorodifluoromethane	BQL	0.00501	0.00374	1	3/10/2005	
Diisopropyl ether (DIPE)	BQL	0.00501	0.00237	1	3/10/2005	
Ethylbenzene	BQL	0.00501	0.00304	1	3/10/2005	
Hexachlorobutadiene	BQL	0.00501	0.00396	1	3/10/2005	
2-Hexanone	BQL	0.00501	0.00218	1	3/10/2005	
Iodomethane	BQL	0.00501	0.00466	1	3/10/2005	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB03 4-8'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-5A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 13:00
Date Received: 3/8/2005
Matrix: Soil
%Solids: 84.2

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00501	0.00323	1	3/10/2005	
4-Isopropyltoluene	BQL	0.00501	0.00341	1	3/10/2005	
Methylene chloride	BQL	0.0200	0.00286	1	3/10/2005	
4-Methyl-2-pentanone	BQL	0.00501	0.00231	1	3/10/2005	
Methyl-tert-butyl ether (MTBE)	BQL	0.00501	0.00254	1	3/10/2005	
Naphthalene	BQL	0.00501	0.00201	1	3/10/2005	
n-Propyl benzene	BQL	0.00501	0.00322	1	3/10/2005	
Styrene	BQL	0.00501	0.00359	1	3/10/2005	
1,1,1,2-Tetrachloroethane	BQL	0.00501	0.00272	1	3/10/2005	
1,1,2,2-Tetrachloroethane	BQL	0.00501	0.00246	1	3/10/2005	
Tetrachloroethene	BQL	0.00501	0.00316	1	3/10/2005	
Toluene	BQL	0.00501	0.00296	1	3/10/2005	
1,2,3-Trichlorobenzene	BQL	0.00501	0.00219	1	3/10/2005	
1,2,4-Trichlorobenzene	BQL	0.00501	0.00224	1	3/10/2005	
Trichloroethene	BQL	0.00501	0.00313	1	3/10/2005	
1,1,1-Trichloroethane	BQL	0.00501	0.00346	1	3/10/2005	
1,1,2-Trichloroethane	BQL	0.00501	0.00258	1	3/10/2005	
Trichlorofluoromethane	BQL	0.00501	0.00414	1	3/10/2005	
1,2,3-Trichloropropane	BQL	0.00501	0.00265	1	3/10/2005	
1,2,4-Trimethylbenzene	BQL	0.00501	0.00280	1	3/10/2005	
1,3,5-Trimethylbenzene	BQL	0.00501	0.00298	1	3/10/2005	
Vinyl chloride	BQL	0.00501	0.00331	1	3/10/2005	
m-,p-Xylene	BQL	0.0100	0.00568	1	3/10/2005	
o-Xylene	BQL	0.00501	0.00280	1	3/10/2005	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0537	107
1,2-Dichloroethane-d4	0.05	0.0672	134
Toluene-d8	0.05	0.0514	103

Comments:

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

Reviewed By: JF

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB04 2-4'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-6A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 14:00
Date Received: 3/8/2005
Matrix: Soil
%Solids: 88.5

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.00438**	0.0502	0.00295	1	3/10/2005	J
Benzene	BQL	0.00502	0.00286	1	3/10/2005	
Bromobenzene	BQL	0.00502	0.00247	1	3/10/2005	
Bromochloromethane	BQL	0.00502	0.00293	1	3/10/2005	
Bromodichloromethane	BQL	0.00502	0.00285	1	3/10/2005	
Bromoform	BQL	0.00502	0.00243	1	3/10/2005	
Bromomethane	BQL	0.00502	0.00421	1	3/10/2005	
2-Butanone	BQL	0.0251	0.00289	1	3/10/2005	
n-Butylbenzene	BQL	0.00502	0.00337	1	3/10/2005	
sec-Butylbenzene	BQL	0.00502	0.00352	1	3/10/2005	
tert-Butylbenzene	BQL	0.00502	0.00349	1	3/10/2005	
Carbon disulfide	BQL	0.00502	0.00264	1	3/10/2005	
Carbon tetrachloride	BQL	0.00502	0.00348	1	3/10/2005	
Chlorobenzene	BQL	0.00502	0.00252	1	3/10/2005	
Chloroethane	BQL	0.00502	0.00316	1	3/10/2005	
Chloroform	BQL	0.00502	0.00252	1	3/10/2005	
Chloromethane	BQL	0.00502	0.00242	1	3/10/2005	
2-Chlorotoluene	BQL	0.00502	0.00299	1	3/10/2005	
4-Chlorotoluene	BQL	0.00502	0.00279	1	3/10/2005	
Dibromochloromethane	BQL	0.00502	0.00225	1	3/10/2005	
1,2-Dibromo-3-chloropropane	BQL	0.00502	0.0107	1	3/10/2005	
Dibromomethane	BQL	0.00502	0.00301	1	3/10/2005	
1,2-Dibromoethane (EDB)	BQL	0.00502	0.00234	1	3/10/2005	
1,2-Dichlorobenzene	BQL	0.00502	0.00242	1	3/10/2005	
1,3-Dichlorobenzene	BQL	0.00502	0.00235	1	3/10/2005	
1,4-Dichlorobenzene	BQL	0.00502	0.00247	1	3/10/2005	
trans-1,4-Dichloro-2-butene	BQL	0.00502	0.0108	1	3/10/2005	
1,1-Dichloroethane	BQL	0.00502	0.00289	1	3/10/2005	
1,1-Dichloroethene	BQL	0.00502	0.00387	1	3/10/2005	
1,2-Dichloroethane	BQL	0.00502	0.00288	1	3/10/2005	
cis-1,2-Dichloroethene	BQL	0.00502	0.00247	1	3/10/2005	
trans-1,2-dichloroethene	BQL	0.00502	0.00327	1	3/10/2005	
1,2-Dichloropropane	BQL	0.00502	0.00257	1	3/10/2005	
1,3-Dichloropropane	BQL	0.00502	0.00230	1	3/10/2005	
2,2-Dichloropropane	BQL	0.00502	0.00320	1	3/10/2005	
1,1-Dichloropropene	BQL	0.00502	0.00363	1	3/10/2005	
cis-1,3-Dichloropropene	BQL	0.00502	0.00279	1	3/10/2005	
trans-1,3-Dichloropropene	BQL	0.00502	0.00284	1	3/10/2005	
Dichlorodifluoromethane	BQL	0.00502	0.00375	1	3/10/2005	
Diisopropyl ether (DIPE)	BQL	0.00502	0.00238	1	3/10/2005	
Ethylbenzene	BQL	0.00502	0.00306	1	3/10/2005	
Hexachlorobutadiene	BQL	0.00502	0.00397	1	3/10/2005	
2-Hexanone	BQL	0.00502	0.00219	1	3/10/2005	
Iodomethane	BQL	0.00502	0.00467	1	3/10/2005	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB04 2-4'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-6A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 14:00
Date Received: 3/8/2005
Matrix: Soil
%Solids: 88.5

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00502	0.00324	1	3/10/2005	
4-Isopropyltoluene	BQL	0.00502	0.00342	1	3/10/2005	
Methylene chloride	BQL	0.0201	0.00287	1	3/10/2005	
4-Methyl-2-pentanone	BQL	0.00502	0.00232	1	3/10/2005	
Methyl-tert-butyl ether (MTBE)	BQL	0.00502	0.00255	1	3/10/2005	
Naphthalene	BQL	0.00502	0.00202	1	3/10/2005	
n-Propyl benzene	BQL	0.00502	0.00323	1	3/10/2005	
Styrene	BQL	0.00502	0.00360	1	3/10/2005	
1,1,1,2-Tetrachloroethane	BQL	0.00502	0.00273	1	3/10/2005	
1,1,2,2-Tetrachloroethane	BQL	0.00502	0.00247	1	3/10/2005	
Tetrachloroethene	BQL	0.00502	0.00317	1	3/10/2005	
Toluene	BQL	0.00502	0.00297	1	3/10/2005	
1,2,3-Trichlorobenzene	BQL	0.00502	0.00220	1	3/10/2005	
1,2,4-Trichlorobenzene	BQL	0.00502	0.00225	1	3/10/2005	
Trichloroethene	BQL	0.00502	0.00314	1	3/10/2005	
1,1,1-Trichloroethane	BQL	0.00502	0.00347	1	3/10/2005	
1,1,2-Trichloroethane	BQL	0.00502	0.00259	1	3/10/2005	
Trichlorofluoromethane	BQL	0.00502	0.00415	1	3/10/2005	
1,2,3-Trichloropropane	BQL	0.00502	0.00266	1	3/10/2005	
1,2,4-Trimethylbenzene	BQL	0.00502	0.00281	1	3/10/2005	
1,3,5-Trimethylbenzene	BQL	0.00502	0.00299	1	3/10/2005	
Vinyl chloride	BQL	0.00502	0.00332	1	3/10/2005	
m-,p-Xylene	BQL	0.0100	0.00570	1	3/10/2005	
o-Xylene	BQL	0.00502	0.00281	1	3/10/2005	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.052	104
1,2-Dichloroethane-d4	0.05	0.0674	135
Toluene-d8	0.05	0.052	104

Comments:

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

Reviewed By: JTF

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB05 4-6'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-7A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 13:30
Date Received: 3/8/2005
Matrix: Soil
%Solids: 88.8

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.0224**	0.0431	0.00253	1	3/11/2005	J
Benzene	BQL	0.00431	0.00245	1	3/11/2005	
Bromobenzene	BQL	0.00431	0.00212	1	3/11/2005	
Bromochloromethane	BQL	0.00431	0.00252	1	3/11/2005	
Bromodichloromethane	BQL	0.00431	0.00245	1	3/11/2005	
Bromoform	BQL	0.00431	0.00208	1	3/11/2005	
Bromomethane	BQL	0.00431	0.00361	1	3/11/2005	
2-Butanone	**0.00489**	0.0215	0.00248	1	3/11/2005	J
n-Butylbenzene	BQL	0.00431	0.00289	1	3/11/2005	
sec-Butylbenzene	BQL	0.00431	0.00301	1	3/11/2005	
tert-Butylbenzene	BQL	0.00431	0.00299	1	3/11/2005	
Carbon disulfide	BQL	0.00431	0.00227	1	3/11/2005	
Carbon tetrachloride	BQL	0.00431	0.00298	1	3/11/2005	
Chlorobenzene	BQL	0.00431	0.00216	1	3/11/2005	
Chloroethane	BQL	0.00431	0.00270	1	3/11/2005	
Chloroform	BQL	0.00431	0.00216	1	3/11/2005	
Chloromethane	BQL	0.00431	0.00208	1	3/11/2005	
2-Chlorotoluene	BQL	0.00431	0.00257	1	3/11/2005	
4-Chlorotoluene	BQL	0.00431	0.00239	1	3/11/2005	
Dibromochloromethane	BQL	0.00431	0.00193	1	3/11/2005	
1,2-Dibromo-3-chloropropane	BQL	0.00431	0.00913	1	3/11/2005	
Dibromomethane	BQL	0.00431	0.00258	1	3/11/2005	
1,2-Dibromoethane (EDB)	BQL	0.00431	0.00201	1	3/11/2005	
1,2-Dichlorobenzene	BQL	0.00431	0.00208	1	3/11/2005	
1,3-Dichlorobenzene	BQL	0.00431	0.00202	1	3/11/2005	
1,4-Dichlorobenzene	BQL	0.00431	0.00212	1	3/11/2005	
trans-1,4-Dichloro-2-butene	BQL	0.00431	0.00922	1	3/11/2005	
1,1-Dichloroethane	BQL	0.00431	0.00248	1	3/11/2005	
1,1-Dichloroethene	BQL	0.00431	0.00332	1	3/11/2005	
1,2-Dichloroethane	BQL	0.00431	0.00247	1	3/11/2005	
cis-1,2-Dichloroethene	BQL	0.00431	0.00212	1	3/11/2005	
trans-1,2-dichloroethene	BQL	0.00431	0.00280	1	3/11/2005	
1,2-Dichloropropane	BQL	0.00431	0.00221	1	3/11/2005	
1,3-Dichloropropane	BQL	0.00431	0.00197	1	3/11/2005	
2,2-Dichloropropane	BQL	0.00431	0.00274	1	3/11/2005	
1,1-Dichloropropene	BQL	0.00431	0.00311	1	3/11/2005	
cis-1,3-Dichloropropene	BQL	0.00431	0.00239	1	3/11/2005	
trans-1,3-Dichloropropene	BQL	0.00431	0.00244	1	3/11/2005	
Dichlorodifluoromethane	BQL	0.00431	0.00321	1	3/11/2005	
Diisopropyl ether (DIPE)	BQL	0.00431	0.00204	1	3/11/2005	
Ethylbenzene	BQL	0.00431	0.00262	1	3/11/2005	
Hexachlorobutadiene	BQL	0.00431	0.00340	1	3/11/2005	
2-Hexanone	BQL	0.00431	0.00188	1	3/11/2005	
Iodomethane	BQL	0.00431	0.00401	1	3/11/2005	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB05 4-6'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-7A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 13:30
Date Received: 3/8/2005
Matrix: Soil
%Solids: 88.8

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00431	0.00277	1	3/11/2005	
4-Isopropyltoluene	BQL	0.00431	0.00293	1	3/11/2005	
Methylene chloride	BQL	0.0172	0.00246	1	3/11/2005	
4-Methyl-2-pentanone	BQL	0.00431	0.00199	1	3/11/2005	
Methyl-tert-butyl ether (MTBE)	BQL	0.00431	0.00219	1	3/11/2005	
Naphthalene	**0.00312**	0.00431	0.00173	1	3/11/2005	J
n-Propyl benzene	BQL	0.00431	0.00276	1	3/11/2005	
Styrene	BQL	0.00431	0.00308	1	3/11/2005	
1,1,1,2-Tetrachloroethane	BQL	0.00431	0.00234	1	3/11/2005	
1,1,2,2-Tetrachloroethane	BQL	0.00431	0.00212	1	3/11/2005	
Tetrachloroethene	BQL	0.00431	0.00271	1	3/11/2005	
Toluene	BQL	0.00431	0.00255	1	3/11/2005	
1,2,3-Trichlorobenzene	BQL	0.00431	0.00189	1	3/11/2005	
1,2,4-Trichlorobenzene	BQL	0.00431	0.00193	1	3/11/2005	
Trichloroethene	BQL	0.00431	0.00269	1	3/11/2005	
1,1,1-Trichloroethane	BQL	0.00431	0.00297	1	3/11/2005	
1,1,2-Trichloroethane	BQL	0.00431	0.00222	1	3/11/2005	
Trichlorofluoromethane	BQL	0.00431	0.00356	1	3/11/2005	
1,2,3-Trichloropropane	BQL	0.00431	0.00228	1	3/11/2005	
1,2,4-Trimethylbenzene	BQL	0.00431	0.00241	1	3/11/2005	
1,3,5-Trimethylbenzene	BQL	0.00431	0.00257	1	3/11/2005	
Vinyl chloride	BQL	0.00431	0.00284	1	3/11/2005	
m-,p-Xylene	BQL	0.00861	0.00488	1	3/11/2005	
o-Xylene	BQL	0.00431	0.00241	1	3/11/2005	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0483	97
1,2-Dichloroethane-d4	0.05	0.0684	137
Toluene-d8	0.05	0.0504	101

Comments:

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

Reviewed By: AF

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB06 4-6'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-8A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 13:20
Date Received: 3/8/2005
Matrix: Soil
%Solids: 77.7

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.0130**	0.0559	0.00329	1	3/10/2005	J
Benzene	BQL	0.00559	0.00319	1	3/10/2005	
Bromobenzene	BQL	0.00559	0.00275	1	3/10/2005	
Bromochloromethane	BQL	0.00559	0.00327	1	3/10/2005	
Bromodichloromethane	BQL	0.00559	0.00318	1	3/10/2005	
Bromoform	BQL	0.00559	0.00271	1	3/10/2005	
Bromomethane	BQL	0.00559	0.00469	1	3/10/2005	
2-Butanone	BQL	0.0280	0.00322	1	3/10/2005	
n-Butylbenzene	BQL	0.00559	0.00375	1	3/10/2005	
sec-Butylbenzene	BQL	0.00559	0.00392	1	3/10/2005	
tert-Butylbenzene	BQL	0.00559	0.00388	1	3/10/2005	
Carbon disulfide	BQL	0.00559	0.00294	1	3/10/2005	
Carbon tetrachloride	BQL	0.00559	0.00387	1	3/10/2005	
Chlorobenzene	BQL	0.00559	0.00281	1	3/10/2005	
Chloroethane	BQL	0.00559	0.00351	1	3/10/2005	
Chloroform	BQL	0.00559	0.00281	1	3/10/2005	
Chloromethane	BQL	0.00559	0.00270	1	3/10/2005	
2-Chlorotoluene	BQL	0.00559	0.00333	1	3/10/2005	
4-Chlorotoluene	BQL	0.00559	0.00311	1	3/10/2005	
Dibromochloromethane	BQL	0.00559	0.00251	1	3/10/2005	
1,2-Dibromo-3-chloropropane	BQL	0.00559	0.0119	1	3/10/2005	
Dibromomethane	BQL	0.00559	0.00336	1	3/10/2005	
1,2-Dibromoethane (EDB)	BQL	0.00559	0.00261	1	3/10/2005	
1,2-Dichlorobenzene	BQL	0.00559	0.00270	1	3/10/2005	
1,3-Dichlorobenzene	BQL	0.00559	0.00262	1	3/10/2005	
1,4-Dichlorobenzene	BQL	0.00559	0.00275	1	3/10/2005	
trans-1,4-Dichloro-2-butene	BQL	0.00559	0.0120	1	3/10/2005	
1,1-Dichloroethane	BQL	0.00559	0.00322	1	3/10/2005	
1,1-Dichloroethene	BQL	0.00559	0.00431	1	3/10/2005	
1,2-Dichloroethane	BQL	0.00559	0.00321	1	3/10/2005	
cis-1,2-Dichloroethene	BQL	0.00559	0.00275	1	3/10/2005	
trans-1,2-dichloroethene	BQL	0.00559	0.00364	1	3/10/2005	
1,2-Dichloropropane	BQL	0.00559	0.00286	1	3/10/2005	
1,3-Dichloropropane	BQL	0.00559	0.00256	1	3/10/2005	
2,2-Dichloropropane	BQL	0.00559	0.00356	1	3/10/2005	
1,1-Dichloropropene	BQL	0.00559	0.00404	1	3/10/2005	
cis-1,3-Dichloropropene	BQL	0.00559	0.00311	1	3/10/2005	
trans-1,3-Dichloropropene	BQL	0.00559	0.00317	1	3/10/2005	
Dichlorodifluoromethane	BQL	0.00559	0.00417	1	3/10/2005	
Diisopropyl ether (DIPE)	BQL	0.00559	0.00265	1	3/10/2005	
Ethylbenzene	BQL	0.00559	0.00340	1	3/10/2005	
Hexachlorobutadiene	BQL	0.00559	0.00442	1	3/10/2005	
2-Hexanone	BQL	0.00559	0.00244	1	3/10/2005	
Iodomethane	BQL	0.00559	0.00520	1	3/10/2005	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB06 4-6'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-8A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 13:20
Date Received: 3/8/2005
Matrix: Soil
%Solids: 77.7

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00559	0.00360	1	3/10/2005	
4-Isopropyltoluene	BQL	0.00559	0.00380	1	3/10/2005	
Methylene chloride	BQL	0.0224	0.00320	1	3/10/2005	
4-Methyl-2-pentanone	BQL	0.00559	0.00258	1	3/10/2005	
Methyl-tert-butyl ether (MTBE)	BQL	0.00559	0.00284	1	3/10/2005	
Naphthalene	BQL	0.00559	0.00225	1	3/10/2005	
n-Propyl benzene	BQL	0.00559	0.00359	1	3/10/2005	
Styrene	BQL	0.00559	0.00400	1	3/10/2005	
1,1,1,2-Tetrachloroethane	BQL	0.00559	0.00304	1	3/10/2005	
1,1,2,2-Tetrachloroethane	BQL	0.00559	0.00275	1	3/10/2005	
Tetrachloroethene	BQL	0.00559	0.00352	1	3/10/2005	
Toluene	BQL	0.00559	0.00331	1	3/10/2005	
1,2,3-Trichlorobenzene	BQL	0.00559	0.00245	1	3/10/2005	
1,2,4-Trichlorobenzene	BQL	0.00559	0.00251	1	3/10/2005	
Trichloroethene	BQL	0.00559	0.00349	1	3/10/2005	
1,1,1-Trichloroethane	BQL	0.00559	0.00386	1	3/10/2005	
1,1,2-Trichloroethane	BQL	0.00559	0.00289	1	3/10/2005	
Trichlorofluoromethane	BQL	0.00559	0.00462	1	3/10/2005	
1,2,3-Trichloropropane	BQL	0.00559	0.00296	1	3/10/2005	
1,2,4-Trimethylbenzene	BQL	0.00559	0.00313	1	3/10/2005	
1,3,5-Trimethylbenzene	BQL	0.00559	0.00333	1	3/10/2005	
Vinyl chloride	BQL	0.00559	0.00369	1	3/10/2005	
m-,p-Xylene	BQL	0.0112	0.00634	1	3/10/2005	
o-Xylene	BQL	0.00559	0.00313	1	3/10/2005	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0509	102
1,2-Dichloroethane-d4	0.05	0.0658	132
Toluene-d8	0.05	0.0517	103

Comments:

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

Reviewed By: JF

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB07 2-4'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-9A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 15:00
Date Received: 3/8/2005
Matrix: Soil
%Solids: 90.9

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.0148**	0.0468	0.00275	1	3/10/2005	J
Benzene	BQL	0.00468	0.00267	1	3/10/2005	
Bromobenzene	BQL	0.00468	0.00230	1	3/10/2005	
Bromochloromethane	BQL	0.00468	0.00273	1	3/10/2005	
Bromodichloromethane	BQL	0.00468	0.00266	1	3/10/2005	
Bromoform	BQL	0.00468	0.00226	1	3/10/2005	
Bromomethane	BQL	0.00468	0.00392	1	3/10/2005	
2-Butanone	BQL	0.0234	0.00269	1	3/10/2005	
n-Butylbenzene	BQL	0.00468	0.00313	1	3/10/2005	
sec-Butylbenzene	BQL	0.00468	0.00327	1	3/10/2005	
tert-Butylbenzene	BQL	0.00468	0.00325	1	3/10/2005	
Carbon disulfide	BQL	0.00468	0.00246	1	3/10/2005	
Carbon tetrachloride	BQL	0.00468	0.00324	1	3/10/2005	
Chlorobenzene	BQL	0.00468	0.00235	1	3/10/2005	
Chloroethane	BQL	0.00468	0.00294	1	3/10/2005	
Chloroform	BQL	0.00468	0.00235	1	3/10/2005	
Chloromethane	BQL	0.00468	0.00225	1	3/10/2005	
2-Chlorotoluene	BQL	0.00468	0.00279	1	3/10/2005	
4-Chlorotoluene	BQL	0.00468	0.00260	1	3/10/2005	
Dibromochloromethane	BQL	0.00468	0.00210	1	3/10/2005	
1,2-Dibromo-3-chloropropane	BQL	0.00468	0.00992	1	3/10/2005	
Dibromomethane	BQL	0.00468	0.00281	1	3/10/2005	
1,2-Dibromoethane (EDB)	BQL	0.00468	0.00218	1	3/10/2005	
1,2-Dichlorobenzene	BQL	0.00468	0.00225	1	3/10/2005	
1,3-Dichlorobenzene	BQL	0.00468	0.00219	1	3/10/2005	
1,4-Dichlorobenzene	BQL	0.00468	0.00230	1	3/10/2005	
trans-1,4-Dichloro-2-butene	BQL	0.00468	0.0100	1	3/10/2005	
1,1-Dichloroethane	BQL	0.00468	0.00269	1	3/10/2005	
1,1-Dichloroethene	BQL	0.00468	0.00360	1	3/10/2005	
1,2-Dichloroethane	BQL	0.00468	0.00269	1	3/10/2005	
cis-1,2-Dichloroethene	BQL	0.00468	0.00230	1	3/10/2005	
trans-1,2-dichloroethene	BQL	0.00468	0.00304	1	3/10/2005	
1,2-Dichloropropane	BQL	0.00468	0.00240	1	3/10/2005	
1,3-Dichloropropane	BQL	0.00468	0.00214	1	3/10/2005	
2,2-Dichloropropane	BQL	0.00468	0.00298	1	3/10/2005	
1,1-Dichloropropene	BQL	0.00468	0.00338	1	3/10/2005	
cis-1,3-Dichloropropene	BQL	0.00468	0.00260	1	3/10/2005	
trans-1,3-Dichloropropene	BQL	0.00468	0.00265	1	3/10/2005	
Dichlorodifluoromethane	BQL	0.00468	0.00349	1	3/10/2005	
Diisopropyl ether (DIPE)	BQL	0.00468	0.00222	1	3/10/2005	
Ethylbenzene	BQL	0.00468	0.00284	1	3/10/2005	
Hexachlorobutadiene	BQL	0.00468	0.00370	1	3/10/2005	
2-Hexanone	BQL	0.00468	0.00204	1	3/10/2005	
Iodomethane	BQL	0.00468	0.00435	1	3/10/2005	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB07 2-4'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-9A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 15:00
Date Received: 3/8/2005
Matrix: Soil
%Solids: 90.9

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00468	0.00301	1	3/10/2005	
4-Isopropyltoluene	BQL	0.00468	0.00318	1	3/10/2005	
Methylene chloride	BQL	0.0187	0.00268	1	3/10/2005	
4-Methyl-2-pentanone	BQL	0.00468	0.00216	1	3/10/2005	
Methyl-tert-butyl ether (MTBE)	BQL	0.00468	0.00238	1	3/10/2005	
Naphthalene	BQL	0.00468	0.00188	1	3/10/2005	
n-Propyl benzene	BQL	0.00468	0.00300	1	3/10/2005	
Styrene	BQL	0.00468	0.00335	1	3/10/2005	
1,1,1,2-Tetrachloroethane	BQL	0.00468	0.00255	1	3/10/2005	
1,1,2,2-Tetrachloroethane	BQL	0.00468	0.00230	1	3/10/2005	
Tetrachloroethene	BQL	0.00468	0.00295	1	3/10/2005	
Toluene	BQL	0.00468	0.00277	1	3/10/2005	
1,2,3-Trichlorobenzene	BQL	0.00468	0.00205	1	3/10/2005	
1,2,4-Trichlorobenzene	BQL	0.00468	0.00210	1	3/10/2005	
Trichloroethene	BQL	0.00468	0.00292	1	3/10/2005	
1,1,1-Trichloroethane	BQL	0.00468	0.00323	1	3/10/2005	
1,1,2-Trichloroethane	BQL	0.00468	0.00241	1	3/10/2005	
Trichlorofluoromethane	BQL	0.00468	0.00386	1	3/10/2005	
1,2,3-Trichloropropane	BQL	0.00468	0.00248	1	3/10/2005	
1,2,4-Trimethylbenzene	BQL	0.00468	0.00262	1	3/10/2005	
1,3,5-Trimethylbenzene	BQL	0.00468	0.00279	1	3/10/2005	
Vinyl chloride	BQL	0.00468	0.00309	1	3/10/2005	
m-,p-Xylene	BQL	0.00936	0.00531	1	3/10/2005	
o-Xylene	BQL	0.00468	0.00262	1	3/10/2005	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0474	95
1,2-Dichloroethane-d4	0.05	0.0689	138
Toluene-d8	0.05	0.0491	98

Comments:

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

Reviewed By: AF

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB08 4-6'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-10A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 15:40
Date Received: 3/8/2005
Matrix: Soil
%Solids: 83.8

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	BQL	0.0503	0.00296	1	3/11/2005	
Benzene	BQL	0.00503	0.00287	1	3/11/2005	
Bromobenzene	BQL	0.00503	0.00248	1	3/11/2005	
Bromochloromethane	BQL	0.00503	0.00294	1	3/11/2005	
Bromodichloromethane	BQL	0.00503	0.00286	1	3/11/2005	
Bromoform	BQL	0.00503	0.00243	1	3/11/2005	
Bromomethane	BQL	0.00503	0.00422	1	3/11/2005	
2-Butanone	BQL	0.0252	0.00290	1	3/11/2005	
n-Butylbenzene	BQL	0.00503	0.00337	1	3/11/2005	
sec-Butylbenzene	**0.0110**	0.00503	0.00352	1	3/11/2005	
tert-Butylbenzene	BQL	0.00503	0.00349	1	3/11/2005	
Carbon disulfide	BQL	0.00503	0.00265	1	3/11/2005	
Carbon tetrachloride	BQL	0.00503	0.00348	1	3/11/2005	
Chlorobenzene	BQL	0.00503	0.00253	1	3/11/2005	
Chloroethane	BQL	0.00503	0.00316	1	3/11/2005	
Chloroform	BQL	0.00503	0.00253	1	3/11/2005	
Chloromethane	BQL	0.00503	0.00242	1	3/11/2005	
2-Chlorotoluene	BQL	0.00503	0.00300	1	3/11/2005	
4-Chlorotoluene	BQL	0.00503	0.00280	1	3/11/2005	
Dibromochloromethane	BQL	0.00503	0.00225	1	3/11/2005	
1,2-Dibromo-3-chloropropane	BQL	0.00503	0.0107	1	3/11/2005	
Dibromomethane	BQL	0.00503	0.00302	1	3/11/2005	
1,2-Dibromoethane (EDB)	BQL	0.00503	0.00234	1	3/11/2005	
1,2-Dichlorobenzene	BQL	0.00503	0.00242	1	3/11/2005	
1,3-Dichlorobenzene	BQL	0.00503	0.00235	1	3/11/2005	
1,4-Dichlorobenzene	BQL	0.00503	0.00248	1	3/11/2005	
trans-1,4-Dichloro-2-butene	BQL	0.00503	0.0108	1	3/11/2005	
1,1-Dichloroethane	BQL	0.00503	0.00290	1	3/11/2005	
1,1-Dichloroethene	BQL	0.00503	0.00387	1	3/11/2005	
1,2-Dichloroethane	BQL	0.00503	0.00289	1	3/11/2005	
cis-1,2-Dichloroethene	BQL	0.00503	0.00248	1	3/11/2005	
trans-1,2-dichloroethene	BQL	0.00503	0.00327	1	3/11/2005	
1,2-Dichloropropane	BQL	0.00503	0.00258	1	3/11/2005	
1,3-Dichloropropane	BQL	0.00503	0.00230	1	3/11/2005	
2,2-Dichloropropane	BQL	0.00503	0.00320	1	3/11/2005	
1,1-Dichloropropene	BQL	0.00503	0.00363	1	3/11/2005	
cis-1,3-Dichloropropene	BQL	0.00503	0.00280	1	3/11/2005	
trans-1,3-Dichloropropene	BQL	0.00503	0.00285	1	3/11/2005	
Dichlorodifluoromethane	BQL	0.00503	0.00375	1	3/11/2005	
Diisopropyl ether (DIPE)	BQL	0.00503	0.00238	1	3/11/2005	
Ethylbenzene	BQL	0.00503	0.00306	1	3/11/2005	
Hexachlorobutadiene	BQL	0.00503	0.00397	1	3/11/2005	
2-Hexanone	BQL	0.00503	0.00219	1	3/11/2005	
Iodomethane	BQL	0.00503	0.00468	1	3/11/2005	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-SB08 4-6'
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-10A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 15:40
Date Received: 3/8/2005
Matrix: Soil
%Solids: 83.8

Report Name / Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00503	0.00324	1	3/11/2005	
4-Isopropyltoluene	BQL	0.00503	0.00342	1	3/11/2005	
Methylene chloride	BQL	0.0201	0.00288	1	3/11/2005	
4-Methyl-2-pentanone	BQL	0.00503	0.00232	1	3/11/2005	
Methyl-tert-butyl ether (MTBE)	BQL	0.00503	0.00256	1	3/11/2005	
Naphthalene	**0.0541**	0.00503	0.00202	1	3/11/2005	
n-Propyl benzene	BQL	0.00503	0.00323	1	3/11/2005	
Styrene	BQL	0.00503	0.00360	1	3/11/2005	
1,1,1,2-Tetrachloroethane	BQL	0.00503	0.00274	1	3/11/2005	
1,1,2,2-Tetrachloroethane	BQL	0.00503	0.00248	1	3/11/2005	
Tetrachloroethene	BQL	0.00503	0.00317	1	3/11/2005	
Toluene	BQL	0.00503	0.00298	1	3/11/2005	
1,2,3-Trichlorobenzene	BQL	0.00503	0.00220	1	3/11/2005	
1,2,4-Trichlorobenzene	BQL	0.00503	0.00225	1	3/11/2005	
Trichloroethene	BQL	0.00503	0.00314	1	3/11/2005	
1,1,1-Trichloroethane	BQL	0.00503	0.00347	1	3/11/2005	
1,1,2-Trichloroethane	BQL	0.00503	0.00260	1	3/11/2005	
Trichlorofluoromethane	BQL	0.00503	0.00416	1	3/11/2005	
1,2,3-Trichloropropane	BQL	0.00503	0.00267	1	3/11/2005	
1,2,4-Trimethylbenzene	BQL	0.00503	0.00282	1	3/11/2005	
1,3,5-Trimethylbenzene	**0.0311**	0.00503	0.00300	1	3/11/2005	
Vinyl chloride	BQL	0.00503	0.00332	1	3/11/2005	
m-,p-Xylene	BQL	0.0101	0.00570	1	3/11/2005	
o-Xylene	BQL	0.00503	0.00282	1	3/11/2005	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0493	99
1,2-Dichloroethane-d4	0.05	0.067	134
Toluene-d8	0.05	0.0502	100

Comments:

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

Reviewed By: JTF

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-MW01 4-5' Duplicate
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-11A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 11:30
Date Received: 3/8/2005
Matrix: Soil
%Solids: 75.8

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**0.0585**	0.0666	0.00392	1	3/10/2005	J
Benzene	BQL	0.00666	0.00380	1	3/10/2005	
Bromobenzene	BQL	0.00666	0.00328	1	3/10/2005	
Bromochloromethane	BQL	0.00666	0.00389	1	3/10/2005	
Bromodichloromethane	BQL	0.00666	0.00378	1	3/10/2005	
Bromoform	BQL	0.00666	0.00322	1	3/10/2005	
Bromomethane	BQL	0.00666	0.00558	1	3/10/2005	
2-Butanone	**0.00892**	0.0333	0.00384	1	3/10/2005	J
n-Butylbenzene	BQL	0.00666	0.00446	1	3/10/2005	
sec-Butylbenzene	BQL	0.00666	0.00466	1	3/10/2005	
tert-Butylbenzene	BQL	0.00666	0.00462	1	3/10/2005	
Carbon disulfide	BQL	0.00666	0.00350	1	3/10/2005	
Carbon tetrachloride	BQL	0.00666	0.00461	1	3/10/2005	
Chlorobenzene	BQL	0.00666	0.00334	1	3/10/2005	
Chloroethane	BQL	0.00666	0.00418	1	3/10/2005	
Chloroform	BQL	0.00666	0.00334	1	3/10/2005	
Chloromethane	BQL	0.00666	0.00321	1	3/10/2005	
2-Chlorotoluene	BQL	0.00666	0.00397	1	3/10/2005	
4-Chlorotoluene	BQL	0.00666	0.00370	1	3/10/2005	
Dibromochloromethane	BQL	0.00666	0.00298	1	3/10/2005	
1,2-Dibromo-3-chloropropane	BQL	0.00666	0.0141	1	3/10/2005	
Dibromomethane	BQL	0.00666	0.00400	1	3/10/2005	
1,2-Dibromoethane (EDB)	BQL	0.00666	0.00310	1	3/10/2005	
1,2-Dichlorobenzene	BQL	0.00666	0.00321	1	3/10/2005	
1,3-Dichlorobenzene	BQL	0.00666	0.00312	1	3/10/2005	
1,4-Dichlorobenzene	BQL	0.00666	0.00328	1	3/10/2005	
trans-1,4-Dichloro-2-butene	BQL	0.00666	0.0143	1	3/10/2005	
1,1-Dichloroethane	BQL	0.00666	0.00384	1	3/10/2005	
1,1-Dichloroethene	BQL	0.00666	0.00513	1	3/10/2005	
1,2-Dichloroethane	BQL	0.00666	0.00382	1	3/10/2005	
cis-1,2-Dichloroethene	BQL	0.00666	0.00328	1	3/10/2005	
trans-1,2-dichloroethene	BQL	0.00666	0.00433	1	3/10/2005	
1,2-Dichloropropane	BQL	0.00666	0.00341	1	3/10/2005	
1,3-Dichloropropane	BQL	0.00666	0.00305	1	3/10/2005	
2,2-Dichloropropane	BQL	0.00666	0.00424	1	3/10/2005	
1,1-Dichloropropene	BQL	0.00666	0.00481	1	3/10/2005	
cis-1,3-Dichloropropene	BQL	0.00666	0.00370	1	3/10/2005	
trans-1,3-Dichloropropene	BQL	0.00666	0.00377	1	3/10/2005	
Dichlorodifluoromethane	BQL	0.00666	0.00497	1	3/10/2005	
Diisopropyl ether (DIPE)	BQL	0.00666	0.00316	1	3/10/2005	
Ethylbenzene	BQL	0.00666	0.00405	1	3/10/2005	
Hexachlorobutadiene	BQL	0.00666	0.00526	1	3/10/2005	
2-Hexanone	BQL	0.00666	0.00291	1	3/10/2005	
Iodomethane	BQL	0.00666	0.00620	1	3/10/2005	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTMRFF-MW01 4-5' Duplicate
Client Project ID: USTMRFF-
Lab Sample ID G128-1475-11A
Lab Project ID: G128-1475
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 03-07-2005 11:30
Date Received: 3/8/2005
Matrix: Soil
%Solids: 75.8

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00666	0.00429	1	3/10/2005	
4-Isopropyltoluene	BQL	0.00666	0.00453	1	3/10/2005	
Methylene chloride	BQL	0.0267	0.00381	1	3/10/2005	
4-Methyl-2-pentanone	BQL	0.00666	0.00308	1	3/10/2005	
Methyl-tert-butyl ether (MTBE)	BQL	0.00666	0.00338	1	3/10/2005	
Naphthalene	BQL	0.00666	0.00268	1	3/10/2005	
n-Propyl benzene	BQL	0.00666	0.00428	1	3/10/2005	
Styrene	BQL	0.00666	0.00477	1	3/10/2005	
1,1,1,2-Tetrachloroethane	BQL	0.00666	0.00362	1	3/10/2005	
1,1,2,2-Tetrachloroethane	BQL	0.00666	0.00328	1	3/10/2005	
Tetrachloroethene	BQL	0.00666	0.00420	1	3/10/2005	
Toluene	BQL	0.00666	0.00394	1	3/10/2005	
1,2,3-Trichlorobenzene	BQL	0.00666	0.00292	1	3/10/2005	
1,2,4-Trichlorobenzene	BQL	0.00666	0.00298	1	3/10/2005	
Trichloroethene	BQL	0.00666	0.00416	1	3/10/2005	
1,1,1-Trichloroethane	BQL	0.00666	0.00460	1	3/10/2005	
1,1,2-Trichloroethane	BQL	0.00666	0.00344	1	3/10/2005	
Trichlorofluoromethane	BQL	0.00666	0.00550	1	3/10/2005	
1,2,3-Trichloropropane	BQL	0.00666	0.00353	1	3/10/2005	
1,2,4-Trimethylbenzene	BQL	0.00666	0.00373	1	3/10/2005	
1,3,5-Trimethylbenzene	BQL	0.00666	0.00397	1	3/10/2005	
Vinyl chloride	BQL	0.00666	0.00440	1	3/10/2005	
m-,p-Xylene	BQL	0.0133	0.00756	1	3/10/2005	
o-Xylene	BQL	0.00666	0.00373	1	3/10/2005	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	0.05	0.0498	100
1,2-Dichloroethane-d4	0.05	0.0686	137
Toluene-d8	0.05	0.0514	103

Comments:

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

Reviewed By: JTF

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-MW01 4-5'
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/04/05
Date Received	03/08/05
Date Extracted	03/04/05
Date Analyzed	03/12/05
Dry Weight	76
Dilution Factor	1
C_5-C_8 Aliphatics**	< 10 (mg/Kg)
C_9-C_{12} Aliphatics**	< 10 (mg/Kg)
C_9-C_{10} Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	97
Surrogate % Recovery - FID	95

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

** = Excludes any surrogates or internal standards.

Lab Info: g128-1475-1d

Reviewed By: AF

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-MW02 1-2'
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/04/05
Date Received	03/08/05
Date Extracted	03/04/05
Date Analyzed	03/12/05
Dry Weight	91
Dilution Factor	1
C_5-C_8 Aliphatics**	< 10 (mg/Kg)
C_9-C_{12} Aliphatics**	< 10 (mg/Kg)
C_9-C_{10} Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	95
Surrogate % Recovery - FID	94

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

** = Excludes any surrogates or internal standards.

Lab Info: g128-1475-2d

Reviewed By: AF

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB01 4-6'
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/07/05
Date Analyzed	03/12/05
Dry Weight	86
Dilution Factor	1
C_5-C_8 Aliphatics**	< 10 (mg/Kg)
C_9-C_{12} Aliphatics**	< 10 (mg/Kg)
C_9-C_{10} Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	94
Surrogate % Recovery - FID	92

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

** = Excludes any surrogates or internal standards.

Lab Info: g128-1475-3d

Reviewed By: AF

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB02 2-4'
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/07/05
Date Analyzed	03/12/05
Dry Weight	86
Dilution Factor	1
C_5-C_8 Aliphatics**	< 10 (mg/Kg)
C_9-C_{12} Aliphatics**	< 10 (mg/Kg)
C_8-C_{10} Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	94
Surrogate % Recovery - FID	92

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

** = Excludes any surrogates or internal standards.

Lab Info: g128-1475-4d

Reviewed By: AF

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB03 4-8'
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/07/05
Date Analyzed	03/12/05
Dry Weight	84
Dilution Factor	1
C_5-C_8 Aliphatics**	< 10 (mg/Kg)
C_9-C_{12} Aliphatics**	< 10 (mg/Kg)
C_9-C_{10} Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	95
Surrogate % Recovery - FID	93

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

** = Excludes any surrogates or internal standards.

Lab Info: g128-1475-5d

Reviewed By: AF

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB04 2-4'
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/07/05
Date Analyzed	03/12/05
Dry Weight	89
Dilution Factor	1
C_5-C_8 Aliphatics**	< 10 (mg/Kg)
C_9-C_{12} Aliphatics**	< 10 (mg/Kg)
C_9-C_{10} Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	95
Surrogate % Recovery - FID	92

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

** = Excludes any surrogates or internal standards.

Lab Info: g128-1475-6d

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB05 4-6'
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/07/05
Date Analyzed	03/12/05
Dry Weight	89
Dilution Factor	1
C_5-C_8 Aliphatics**	< 10 (mg/Kg)
C_9-C_{12} Aliphatics**	< 10 (mg/Kg)
C_9-C_{10} Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	97
Surrogate % Recovery - FID	99

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

** = Excludes any surrogates or internal standards.

Lab Info: g128-1475-7d

Reviewed By:

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB06 4-6'
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/07/05
Date Analyzed	03/12/05
Dry Weight	78
Dilution Factor	1
C_5-C_8 Aliphatics**	< 10 (mg/Kg)
C_9-C_{12} Aliphatics**	< 10 (mg/Kg)
C_9-C_{10} Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	97
Surrogate % Recovery - FID	95

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

** = Excludes any surrogates or internal standards.

Lab Info: g128-1475-8d

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB07 2-4'
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/07/05
Date Analyzed	03/15/05
Dry Weight	91
Dilution Factor	1
C_5-C_8 Aliphatics**	< 10 (mg/Kg)
C_9-C_{12} Aliphatics**	< 10 (mg/Kg)
C_9-C_{10} Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	93
Surrogate % Recovery - FID	93

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

** = Excludes any surrogates or internal standards.

Lab Info: g128-1475-9d

Reviewed By: AF

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB08 4-6'
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/07/05
Date Analyzed	03/15/05
Dry Weight	84
Dilution Factor	10
C_5-C_8 Aliphatics**	< 10 (mg/Kg)
C_9-C_{12} Aliphatics**	19 (mg/Kg)
C_9-C_{10} Aromatics**	31 (mg/Kg)
Surrogate % Recovery - PID	110
Surrogate % Recovery - FID	140***

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

** = Excludes any surrogates or internal standards.

***= High surrogate recovery due to matrix interference

Lab Info: G128-1475-10D

Reviewed By: AF

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 12/17/04 PID Initial Calibration Date: 12/17/04

Calibration Ranges and Limits

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

Calibration Concentration Levels

Range	Levels (µg/L)	%RSD or CCC	Method of Quantitation
C_5-C_8 Aliphatics	40	4.8	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C_9-C_{12} Aliphatics	10	0.993	Linear Regression
	250		
	500		
	750		
	1000		
C_9-C_{10} Aromatics	10	6.8	Calibration Factor
	250		
	500		
	750		
	1000		

Calibration Check Date: 03/11/05

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	RPD
C_5-C_8 Aliphatics	2000	200	-6.4
C_9-C_{12} Aliphatics	500	50	-5.2
C_9-C_{10} Aromatics	500	50	-4.7

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: 12/17/04 PID Initial Calibration Date: 12/17/04

Calibration Ranges and Limits

Range	MDL (07/15/2004) (µg/L)	ML (µg/L)	RL (µg/L)	RL (mg/Kg)
C_5-C_8 Aliphatics	4.4	14	100	1
C_9-C_{12} Aliphatics	3.4	11	100	1
C_9-C_{10} Aromatics	0.13	0.41	100	1

Calibration Concentration Levels

Range	Levels (µg/L)	%RSD or CCC	Method of Quantitation
C_5-C_8 Aliphatics	40	4.8	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C_9-C_{12} Aliphatics	10	0.993	Linear Regression
	250		
	500		
	750		
	1000		
C_9-C_{10} Aromatics	10	6.8	Calibration Factor
	250		
	500		
	750		
	1000		

Calibration Check Date: 03/14/05

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	RPD
C_5-C_8 Aliphatics	2000	200	3.0
C_9-C_{12} Aliphatics	500	50	-0.1
C_9-C_{10} Aromatics	500	50	-3.5

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

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 12/17/04 PID Initial Calibration Date: 12/17/04

Calibration Ranges and Limits

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

Calibration Concentration Levels

Range	Levels (µg/L)	%RSD or CCC	Method of Quantitation
C_5-C_8 Aliphatics	40	4.8	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C_9-C_{12} Aliphatics	10	0.993	Linear Regression
	250		
	500		
	750		
	1000		
C_9-C_{10} Aromatics	10	6.8	Calibration Factor
	250		
	500		
	750		
	1000		

Calibration Check Date: 03/14/05

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	RPD
C_5-C_8 Aliphatics	2000	200	3.0
C_9-C_{12} Aliphatics	500	50	-0.1
C_9-C_{10} Aromatics	500	50	-3.5

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

Results for Semivolatiles by GCMS 8270

Client Sample ID: USTMRFF-MW01 4-5'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-1I
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/4/2005 11:30
Date Received: 3/8/2005
Date Extracted: 3/15/2005
Matrix: Soil
% Solids: 75.8

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.428	0.061	1	3/15/2005	
Acenaphthylene	BQL	0.428	0.057	1	3/15/2005	
Anthracene	BQL	0.428	0.062	1	3/15/2005	
Benzo[a]anthracene	BQL	0.428	0.074	1	3/15/2005	
Benzo[a]pyrene	BQL	0.428	0.066	1	3/15/2005	
Benzo[b]fluoranthene	BQL	0.428	0.075	1	3/15/2005	
Benzo[g,h,i]perylene	BQL	0.428	0.117	1	3/15/2005	
Benzo[k]fluoranthene	BQL	0.428	0.083	1	3/15/2005	
Benzoic Acid	2.96	0.857	0.857	1	3/15/2005	
Bis(2-chloroethoxy)methane	BQL	0.428	0.064	1	3/15/2005	
Bis(2-chloroethyl)ether	BQL	0.428	0.052	1	3/15/2005	
Bis(2-chloroisopropyl)ether	BQL	0.428	0.054	1	3/15/2005	
Bis(2-ethylhexyl)phthalate	BQL	0.428	0.057	1	3/15/2005	
4-bromophenyl phenyl ether	BQL	0.428	0.072	1	3/15/2005	
Butylbenzylphthalate	BQL	0.428	0.066	1	3/15/2005	
2-Chloronaphthalene	BQL	0.428	0.067	1	3/15/2005	
2-Chlorophenol	BQL	0.428	0.134	1	3/15/2005	
4-Chloro-3-methylphenol	BQL	0.428	0.134	1	3/15/2005	
4-Chloroaniline	BQL	2.14	0.326	1	3/15/2005	
4-Chlorophenyl phenyl ether	BQL	0.428	0.063	1	3/15/2005	
Chrysene	BQL	0.428	0.046	1	3/15/2005	
Dibenzo[a,h]anthracene	BQL	0.428	0.120	1	3/15/2005	
Dibenzofuran	BQL	0.428	0.078	1	3/15/2005	
Di-n-Butylphthalate	BQL	0.428	0.051	1	3/15/2005	
1,2-Dichlorobenzene	BQL	0.428	0.048	1	3/15/2005	
1,3-Dichlorobenzene	BQL	0.428	0.047	1	3/15/2005	
1,4-Dichlorobenzene	BQL	0.428	0.048	1	3/15/2005	
3,3'-Dichlorobenzidine	BQL	0.857	0.108	1	3/15/2005	
2,4-Dichlorophenol	BQL	0.428	0.154	1	3/15/2005	
Diethylphthalate	BQL	0.428	0.055	1	3/15/2005	
Dimethylphthalate	BQL	0.428	0.052	1	3/15/2005	
2,4-Dimethylphenol	BQL	0.428	0.306	1	3/15/2005	
Di-n-octylphthalate	BQL	0.428	0.071	1	3/15/2005	
4,6-Dinitro-2-methylphenol	BQL	2.14	0.252	1	3/15/2005	
2,4-Dinitrophenol	BQL	2.14	0.943	1	3/15/2005	
2,4-Dinitrotoluene	BQL	0.428	0.056	1	3/15/2005	
2,6-Dinitrotoluene	BQL	0.428	0.078	1	3/15/2005	
Fluoranthene	BQL	0.428	0.060	1	3/15/2005	
Fluorene	BQL	0.428	0.053	1	3/15/2005	
Hexachlorobenzene	BQL	0.428	0.066	1	3/15/2005	
Hexachlorobutadiene	BQL	0.428	0.069	1	3/15/2005	
Hexachlorocyclopentadiene	BQL	0.857	0.044	1	3/15/2005	

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-MW01 4-5'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-1I
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/4/2005 11:30
Date Received: 3/8/2005
Date Extracted: 3/15/2005
Matrix: Soil
% Solids: 75.8

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Hexachloroethane	BQL	0.428	0.039	1	3/15/2005	
Indeno(1,2,3-c,d)pyrene	BQL	0.428	0.110	1	3/15/2005	
Isophorone	BQL	0.428	0.063	1	3/15/2005	
2-Methylnaphthalene	BQL	0.428	0.125	1	3/15/2005	
2-Methylphenol	BQL	0.428	0.151	1	3/15/2005	
3- & 4-Methylphenol	BQL	0.428	0.145	1	3/15/2005	
Naphthalene	BQL	0.428	0.035	1	3/15/2005	
2-Nitroaniline	BQL	0.428	0.067	1	3/15/2005	
3-Nitroaniline	BQL	2.14	0.441	1	3/15/2005	
4-Nitroaniline	BQL	2.14	0.132	1	3/15/2005	
Nitrobenzene	BQL	0.428	0.058	1	3/15/2005	
2-Nitrophenol	BQL	0.428	0.133	1	3/15/2005	
4-Nitrophenol	BQL	2.14	0.119	1	3/15/2005	
N-Nitrosodi-n-propylamine	BQL	0.428	0.054	1	3/15/2005	
N-Nitrosodiphenylamine	BQL	0.428	0.042	1	3/15/2005	
Pentachlorophenol	BQL	2.14	0.112	1	3/15/2005	
Phenanthrene	BQL	0.428	0.049	1	3/15/2005	
Phenol	BQL	0.428	0.117	1	3/15/2005	
Pyrene	BQL	0.428	0.082	1	3/15/2005	
1,2,4-Trichlorobenzene	BQL	0.428	0.054	1	3/15/2005	
2,4,5-Trichlorophenol	BQL	0.428	0.166	1	3/15/2005	
2,4,6-Trichlorophenol	BQL	0.428	0.152	1	3/15/2005	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.5	85
2-Fluorophenol	10	9.1	91
Nitrobenzene-d5	10	9	90
Phenol-d6	10	8.8	88
2,4,6-Tribromophenol	5	4.8	96
4-Terphenyl-d14	10	9.1	91

Comments:

Flags:

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

Reviewed By: JF

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-MW02 1-2'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-2J
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/4/2005 13:00
Date Received: 3/8/2005
Date Extracted: 3/16/2005
Matrix: Soil
% Solids: 90.83

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.355	0.051	1	3/16/2005	
Acenaphthylene	BQL	0.355	0.047	1	3/16/2005	
Anthracene	BQL	0.355	0.052	1	3/16/2005	
Benzo[a]anthracene	BQL	0.355	0.061	1	3/16/2005	
Benzo[a]pyrene	BQL	0.355	0.054	1	3/16/2005	
Benzo[b]fluoranthene	BQL	0.355	0.062	1	3/16/2005	
Benzo[g,h,i]perylene	BQL	0.355	0.097	1	3/16/2005	
Benzo[k]fluoranthene	BQL	0.355	0.069	1	3/16/2005	
Benzoic Acid	BQL	0.710	0.710	1	3/16/2005	
Bis(2-chloroethoxy)methane	BQL	0.355	0.053	1	3/16/2005	
Bis(2-chloroethyl)ether	BQL	0.355	0.043	1	3/16/2005	
Bis(2-chloroisopropyl)ether	BQL	0.355	0.044	1	3/16/2005	
Bis(2-ethylhexyl)phthalate	BQL	0.355	0.048	1	3/16/2005	
4-bromophenyl phenyl ether	BQL	0.355	0.060	1	3/16/2005	
Butylbenzylphthalate	BQL	0.355	0.055	1	3/16/2005	
2-Chloronaphthalene	BQL	0.355	0.056	1	3/16/2005	
2-Chlorophenol	BQL	0.355	0.111	1	3/16/2005	
4-Chloro-3-methylphenol	BQL	0.355	0.111	1	3/16/2005	
4-Chloroaniline	BQL	1.78	0.271	1	3/16/2005	
4-Chlorophenyl phenyl ether	BQL	0.355	0.052	1	3/16/2005	
Chrysene	BQL	0.355	0.038	1	3/16/2005	
Dibenzo[a,h]anthracene	BQL	0.355	0.099	1	3/16/2005	
Dibenzofuran	BQL	0.355	0.065	1	3/16/2005	
Di-n-Butylphthalate	BQL	0.355	0.042	1	3/16/2005	
1,2-Dichlorobenzene	BQL	0.355	0.039	1	3/16/2005	
1,3-Dichlorobenzene	BQL	0.355	0.039	1	3/16/2005	
1,4-Dichlorobenzene	BQL	0.355	0.040	1	3/16/2005	
3,3'-Dichlorobenzidine	BQL	0.710	0.090	1	3/16/2005	
2,4-Dichlorophenol	BQL	0.355	0.128	1	3/16/2005	
Diethylphthalate	BQL	0.355	0.046	1	3/16/2005	
Dimethylphthalate	BQL	0.355	0.043	1	3/16/2005	
2,4-Dimethylphenol	BQL	0.355	0.254	1	3/16/2005	
Di-n-octylphthalate	BQL	0.355	0.059	1	3/16/2005	
4,6-Dinitro-2-methylphenol	BQL	1.78	0.209	1	3/16/2005	
2,4-Dinitrophenol	BQL	1.78	0.782	1	3/16/2005	
2,4-Dinitrotoluene	BQL	0.355	0.046	1	3/16/2005	
2,6-Dinitrotoluene	BQL	0.355	0.065	1	3/16/2005	
Fluoranthene	BQL	0.355	0.050	1	3/16/2005	
Fluorene	BQL	0.355	0.044	1	3/16/2005	
Hexachlorobenzene	BQL	0.355	0.055	1	3/16/2005	
Hexachlorobutadiene	BQL	0.355	0.057	1	3/16/2005	
Hexachlorocyclopentadiene	BQL	0.710	0.037	1	3/16/2005	

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-MW02 1-2'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-2J
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/4/2005 13:00
Date Received: 3/8/2005
Date Extracted: 3/16/2005
Matrix: Soil
% Solids: 90.83

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Hexachloroethane	BQL	0.355	0.032	1	3/16/2005	
Indeno(1,2,3-c,d)pyrene	BQL	0.355	0.091	1	3/16/2005	
Isophorone	BQL	0.355	0.052	1	3/16/2005	
2-Methylnaphthalene	BQL	0.355	0.104	1	3/16/2005	
2-Methylphenol	BQL	0.355	0.125	1	3/16/2005	
3- & 4-Methylphenol	BQL	0.355	0.120	1	3/16/2005	
Naphthalene	BQL	0.355	0.029	1	3/16/2005	
2-Nitroaniline	BQL	0.355	0.056	1	3/16/2005	
3-Nitroaniline	BQL	1.78	0.366	1	3/16/2005	
4-Nitroaniline	BQL	1.78	0.109	1	3/16/2005	
Nitrobenzene	BQL	0.355	0.048	1	3/16/2005	
2-Nitrophenol	BQL	0.355	0.110	1	3/16/2005	
4-Nitrophenol	BQL	1.78	0.098	1	3/16/2005	
N-Nitrosodi-n-propylamine	BQL	0.355	0.045	1	3/16/2005	
N-Nitrosodiphenylamine	BQL	0.355	0.035	1	3/16/2005	
Pentachlorophenol	BQL	1.78	0.093	1	3/16/2005	
Phenanthrene	BQL	0.355	0.041	1	3/16/2005	
Phenol	BQL	0.355	0.097	1	3/16/2005	
Pyrene	BQL	0.355	0.068	1	3/16/2005	
1,2,4-Trichlorobenzene	BQL	0.355	0.044	1	3/16/2005	
2,4,5-Trichlorophenol	BQL	0.355	0.137	1	3/16/2005	
2,4,6-Trichlorophenol	BQL	0.355	0.126	1	3/16/2005	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	9.7	97
2-Fluorophenol	10	9.4	94
Nitrobenzene-d5	10	9.5	95
Phenol-d6	10	9.6	96
2,4,6-Tribromophenol	5	5.1	102
4-Terphenyl-d14	10	11	110

Comments:

Flags:

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

Reviewed By: AF

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-SB01 4-6'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-3J
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 15:15
Date Received: 3/8/2005
Date Extracted: 3/16/2005
Matrix: Soil
% Solids: 85.9

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.373	0.053	1	3/16/2005	
Acenaphthylene	BQL	0.373	0.050	1	3/16/2005	
Anthracene	BQL	0.373	0.054	1	3/16/2005	
Benzo[a]anthracene	BQL	0.373	0.065	1	3/16/2005	
Benzo[a]pyrene	BQL	0.373	0.057	1	3/16/2005	
Benzo[b]fluoranthene	BQL	0.373	0.065	1	3/16/2005	
Benzo[g,h,i]perylene	BQL	0.373	0.102	1	3/16/2005	
Benzo[k]fluoranthene	BQL	0.373	0.072	1	3/16/2005	
Benzoic Acid	BQL	0.746	0.746	1	3/16/2005	
Bis(2-chloroethoxy)methane	BQL	0.373	0.056	1	3/16/2005	
Bis(2-chloroethyl)ether	BQL	0.373	0.045	1	3/16/2005	
Bis(2-chloroisopropyl)ether	BQL	0.373	0.047	1	3/16/2005	
Bis(2-ethylhexyl)phthalate	BQL	0.373	0.050	1	3/16/2005	
4-bromophenyl phenyl ether	BQL	0.373	0.063	1	3/16/2005	
Butylbenzylphthalate	BQL	0.373	0.058	1	3/16/2005	
2-Chloronaphthalene	BQL	0.373	0.059	1	3/16/2005	
2-Chlorophenol	BQL	0.373	0.117	1	3/16/2005	
4-Chloro-3-methylphenol	BQL	0.373	0.116	1	3/16/2005	
4-Chloroaniline	BQL	1.87	0.284	1	3/16/2005	
4-Chlorophenyl phenyl ether	BQL	0.373	0.055	1	3/16/2005	
Chrysene	BQL	0.373	0.040	1	3/16/2005	
Dibenzo[a,h]anthracene	BQL	0.373	0.105	1	3/16/2005	
Dibenzofuran	BQL	0.373	0.068	1	3/16/2005	
Di-n-Butylphthalate	BQL	0.373	0.044	1	3/16/2005	
1,2-Dichlorobenzene	BQL	0.373	0.041	1	3/16/2005	
1,3-Dichlorobenzene	BQL	0.373	0.041	1	3/16/2005	
1,4-Dichlorobenzene	BQL	0.373	0.042	1	3/16/2005	
3,3'-Dichlorobenzidine	BQL	0.746	0.094	1	3/16/2005	
2,4-Dichlorophenol	BQL	0.373	0.134	1	3/16/2005	
Diethylphthalate	BQL	0.373	0.048	1	3/16/2005	
Dimethylphthalate	BQL	0.373	0.045	1	3/16/2005	
2,4-Dimethylphenol	BQL	0.373	0.267	1	3/16/2005	
Di-n-octylphthalate	BQL	0.373	0.062	1	3/16/2005	
4,6-Dinitro-2-methylphenol	BQL	1.87	0.220	1	3/16/2005	
2,4-Dinitrophenol	BQL	1.87	0.822	1	3/16/2005	
2,4-Dinitrotoluene	BQL	0.373	0.049	1	3/16/2005	
2,6-Dinitrotoluene	BQL	0.373	0.068	1	3/16/2005	
Fluoranthene	BQL	0.373	0.052	1	3/16/2005	
Fluorene	BQL	0.373	0.046	1	3/16/2005	
Hexachlorobenzene	BQL	0.373	0.058	1	3/16/2005	
Hexachlorobutadiene	BQL	0.373	0.060	1	3/16/2005	
Hexachlorocyclopentadiene	BQL	0.746	0.038	1	3/16/2005	

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-SB01 4-6'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-3J
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 15:15
Date Received: 3/8/2005
Date Extracted: 3/16/2005
Matrix: Soil
% Solids: 85.9

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Hexachloroethane	BQL	0.373	0.034	1	3/16/2005	
Indeno(1,2,3-c,d)pyrene	BQL	0.373	0.096	1	3/16/2005	
Isophorone	BQL	0.373	0.055	1	3/16/2005	
2-Methylnaphthalene	BQL	0.373	0.109	1	3/16/2005	
2-Methylphenol	BQL	0.373	0.131	1	3/16/2005	
3- & 4-Methylphenol	BQL	0.373	0.127	1	3/16/2005	
Naphthalene	BQL	0.373	0.030	1	3/16/2005	
2-Nitroaniline	BQL	0.373	0.059	1	3/16/2005	
3-Nitroaniline	BQL	1.87	0.384	1	3/16/2005	
4-Nitroaniline	BQL	1.87	0.115	1	3/16/2005	
Nitrobenzene	BQL	0.373	0.050	1	3/16/2005	
2-Nitrophenol	BQL	0.373	0.116	1	3/16/2005	
4-Nitrophenol	BQL	1.87	0.103	1	3/16/2005	
N-Nitrosodi-n-propylamine	BQL	0.373	0.047	1	3/16/2005	
N-Nitrosodiphenylamine	BQL	0.373	0.037	1	3/16/2005	
Pentachlorophenol	BQL	1.87	0.097	1	3/16/2005	
Phenanthrene	BQL	0.373	0.043	1	3/16/2005	
Phenol	BQL	0.373	0.102	1	3/16/2005	
Pyrene	BQL	0.373	0.072	1	3/16/2005	
1,2,4-Trichlorobenzene	BQL	0.373	0.047	1	3/16/2005	
2,4,5-Trichlorophenol	BQL	0.373	0.144	1	3/16/2005	
2,4,6-Trichlorophenol	BQL	0.373	0.133	1	3/16/2005	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	9.8	98
2-Fluorophenol	10	9.6	96
Nitrobenzene-d5	10	9.7	97
Phenol-d6	10	9.7	97
2,4,6-Tribromophenol	5	5.1	101
4-Terphenyl-d14	10	11.3	113

Comments:

Flags:

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

Reviewed By: AF

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-SB02 2-4'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-4J
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 14:15
Date Received: 3/8/2005
Date Extracted: 3/16/2005
Matrix: Soil
% Solids: 86.12

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.368	0.053	1	3/16/2005	
Acenaphthylene	BQL	0.368	0.049	1	3/16/2005	
Anthracene	BQL	0.368	0.053	1	3/16/2005	
Benzo[a]anthracene	BQL	0.368	0.064	1	3/16/2005	
Benzo[a]pyrene	BQL	0.368	0.056	1	3/16/2005	
Benzo[b]fluoranthene	BQL	0.368	0.064	1	3/16/2005	
Benzo[g,h,i]perylene	BQL	0.368	0.100	1	3/16/2005	
Benzo[k]fluoranthene	BQL	0.368	0.071	1	3/16/2005	
Benzoic Acid	BQL	0.736	0.736	1	3/16/2005	
Bis(2-chloroethoxy)methane	BQL	0.368	0.055	1	3/16/2005	
Bis(2-chloroethyl)ether	BQL	0.368	0.045	1	3/16/2005	
Bis(2-chloroisopropyl)ether	BQL	0.368	0.046	1	3/16/2005	
Bis(2-ethylhexyl)phthalate	BQL	0.368	0.049	1	3/16/2005	
4-bromophenyl phenyl ether	BQL	0.368	0.062	1	3/16/2005	
Butylbenzylphthalate	BQL	0.368	0.057	1	3/16/2005	
2-Chloronaphthalene	BQL	0.368	0.058	1	3/16/2005	
2-Chlorophenol	BQL	0.368	0.115	1	3/16/2005	
4-Chloro-3-methylphenol	BQL	0.368	0.115	1	3/16/2005	
4-Chloroaniline	BQL	1.84	0.280	1	3/16/2005	
4-Chlorophenyl phenyl ether	BQL	0.368	0.054	1	3/16/2005	
Chrysene	BQL	0.368	0.040	1	3/16/2005	
Dibenzo[a,h]anthracene	BQL	0.368	0.103	1	3/16/2005	
Dibenzofuran	BQL	0.368	0.067	1	3/16/2005	
Di-n-Butylphthalate	BQL	0.368	0.044	1	3/16/2005	
1,2-Dichlorobenzene	BQL	0.368	0.041	1	3/16/2005	
1,3-Dichlorobenzene	BQL	0.368	0.040	1	3/16/2005	
1,4-Dichlorobenzene	BQL	0.368	0.042	1	3/16/2005	
3,3'-Dichlorobenzidine	BQL	0.736	0.093	1	3/16/2005	
2,4-Dichlorophenol	BQL	0.368	0.132	1	3/16/2005	
Diethylphthalate	BQL	0.368	0.048	1	3/16/2005	
Dimethylphthalate	BQL	0.368	0.045	1	3/16/2005	
2,4-Dimethylphenol	BQL	0.368	0.263	1	3/16/2005	
Di-n-octylphthalate	BQL	0.368	0.061	1	3/16/2005	
4,6-Dinitro-2-methylphenol	BQL	1.84	0.217	1	3/16/2005	
2,4-Dinitrophenol	BQL	1.84	0.810	1	3/16/2005	
2,4-Dinitrotoluene	BQL	0.368	0.048	1	3/16/2005	
2,6-Dinitrotoluene	BQL	0.368	0.067	1	3/16/2005	
Fluoranthene	**0.059**	0.368	0.052	1	3/16/2005	J
Fluorene	BQL	0.368	0.046	1	3/16/2005	
Hexachlorobenzene	BQL	0.368	0.057	1	3/16/2005	
Hexachlorobutadiene	BQL	0.368	0.059	1	3/16/2005	
Hexachlorocyclopentadiene	BQL	0.736	0.038	1	3/16/2005	

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-SB02 2-4'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-4J
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 14:15
Date Received: 3/8/2005
Date Extracted: 3/16/2005
Matrix: Soil
% Solids: 86.12

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Hexachloroethane	BQL	0.368	0.033	1	3/16/2005	
Indeno(1,2,3-c,d)pyrene	BQL	0.368	0.094	1	3/16/2005	
Isophorone	BQL	0.368	0.054	1	3/16/2005	
2-Methylnaphthalene	BQL	0.368	0.107	1	3/16/2005	
2-Methylphenol	BQL	0.368	0.130	1	3/16/2005	
3- & 4-Methylphenol	BQL	0.368	0.125	1	3/16/2005	
Naphthalene	BQL	0.368	0.030	1	3/16/2005	
2-Nitroaniline	BQL	0.368	0.058	1	3/16/2005	
3-Nitroaniline	BQL	1.84	0.379	1	3/16/2005	
4-Nitroaniline	BQL	1.84	0.113	1	3/16/2005	
Nitrobenzene	BQL	0.368	0.050	1	3/16/2005	
2-Nitrophenol	BQL	0.368	0.114	1	3/16/2005	
4-Nitrophenol	BQL	1.84	0.102	1	3/16/2005	
N-Nitrosodi-n-propylamine	BQL	0.368	0.047	1	3/16/2005	
N-Nitrosodiphenylamine	BQL	0.368	0.036	1	3/16/2005	
Pentachlorophenol	BQL	1.84	0.096	1	3/16/2005	
Phenanthrene	BQL	0.368	0.042	1	3/16/2005	
Phenol	BQL	0.368	0.101	1	3/16/2005	
Pyrene	BQL	0.368	0.071	1	3/16/2005	
1,2,4-Trichlorobenzene	BQL	0.368	0.046	1	3/16/2005	
2,4,5-Trichlorophenol	BQL	0.368	0.142	1	3/16/2005	
2,4,6-Trichlorophenol	BQL	0.368	0.131	1	3/16/2005	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.3	83
2-Fluorophenol	10	8.4	84
Nitrobenzene-d5	10	8.3	83
Phenol-d6	10	8.4	84
2,4,6-Tribromophenol	5	4.1	82
4-Terphenyl-d14	10	9.4	94

Comments:

Flags:

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

Reviewed By: 

Results for Semivolatiles by GCMS 8270

Client Sample ID: USTMRFF-SB03 4-8'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-5I
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 13:00
Date Received: 3/8/2005
Date Extracted: 3/15/2005
Matrix: Soil
% Solids: 84.18

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.369	0.053	1	3/15/2005	
Acenaphthylene	BQL	0.369	0.049	1	3/15/2005	
Anthracene	BQL	0.369	0.054	1	3/15/2005	
Benzo[a]anthracene	BQL	0.369	0.064	1	3/15/2005	
Benzo[a]pyrene	BQL	0.369	0.057	1	3/15/2005	
Benzo[b]fluoranthene	BQL	0.369	0.065	1	3/15/2005	
Benzo[g,h,i]perylene	BQL	0.369	0.101	1	3/15/2005	
Benzo[k]fluoranthene	BQL	0.369	0.071	1	3/15/2005	
Benzoic Acid	**2.63**	0.739	0.739	1	3/15/2005	
Bis(2-chloroethoxy)methane	BQL	0.369	0.055	1	3/15/2005	
Bis(2-chloroethyl)ether	BQL	0.369	0.045	1	3/15/2005	
Bis(2-chloroisopropyl)ether	BQL	0.369	0.046	1	3/15/2005	
Bis(2-ethylhexyl)phthalate	BQL	0.369	0.050	1	3/15/2005	
4-bromophenyl phenyl ether	BQL	0.369	0.062	1	3/15/2005	
Butylbenzylphthalate	BQL	0.369	0.057	1	3/15/2005	
2-Chloronaphthalene	BQL	0.369	0.058	1	3/15/2005	
2-Chlorophenol	BQL	0.369	0.116	1	3/15/2005	
4-Chloro-3-methylphenol	BQL	0.369	0.115	1	3/15/2005	
4-Chloroaniline	BQL	1.85	0.282	1	3/15/2005	
4-Chlorophenyl phenyl ether	BQL	0.369	0.054	1	3/15/2005	
Chrysene	BQL	0.369	0.040	1	3/15/2005	
Dibenzo[a,h]anthracene	BQL	0.369	0.103	1	3/15/2005	
Dibenzofuran	BQL	0.369	0.067	1	3/15/2005	
Di-n-Butylphthalate	BQL	0.369	0.044	1	3/15/2005	
1,2-Dichlorobenzene	BQL	0.369	0.041	1	3/15/2005	
1,3-Dichlorobenzene	BQL	0.369	0.040	1	3/15/2005	
1,4-Dichlorobenzene	BQL	0.369	0.042	1	3/15/2005	
3,3'-Dichlorobenzidine	BQL	0.739	0.093	1	3/15/2005	
2,4-Dichlorophenol	BQL	0.369	0.133	1	3/15/2005	
Diethylphthalate	BQL	0.369	0.048	1	3/15/2005	
Dimethylphthalate	BQL	0.369	0.045	1	3/15/2005	
2,4-Dimethylphenol	BQL	0.369	0.264	1	3/15/2005	
Di-n-octylphthalate	BQL	0.369	0.061	1	3/15/2005	
4,6-Dinitro-2-methylphenol	BQL	1.85	0.218	1	3/15/2005	
2,4-Dinitrophenol	BQL	1.85	0.814	1	3/15/2005	
2,4-Dinitrotoluene	BQL	0.369	0.048	1	3/15/2005	
2,6-Dinitrotoluene	BQL	0.369	0.067	1	3/15/2005	
Fluoranthene	BQL	0.369	0.052	1	3/15/2005	
Fluorene	BQL	0.369	0.046	1	3/15/2005	
Hexachlorobenzene	BQL	0.369	0.057	1	3/15/2005	
Hexachlorobutadiene	BQL	0.369	0.059	1	3/15/2005	
Hexachlorocyclopentadiene	BQL	0.739	0.038	1	3/15/2005	

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-SB03 4-8'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-5I
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 13:00
Date Received: 3/8/2005
Date Extracted: 3/15/2005
Matrix: Soil
% Solids: 84.18

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Hexachloroethane	BQL	0.369	0.033	1	3/15/2005	
Indeno(1,2,3-c,d)pyrene	BQL	0.369	0.095	1	3/15/2005	
Isophorone	BQL	0.369	0.054	1	3/15/2005	
2-Methylnaphthalene	BQL	0.369	0.108	1	3/15/2005	
2-Methylphenol	BQL	0.369	0.130	1	3/15/2005	
3- & 4-Methylphenol	BQL	0.369	0.125	1	3/15/2005	
Naphthalene	BQL	0.369	0.030	1	3/15/2005	
2-Nitroaniline	BQL	0.369	0.058	1	3/15/2005	
3-Nitroaniline	BQL	1.85	0.381	1	3/15/2005	
4-Nitroaniline	BQL	1.85	0.114	1	3/15/2005	
Nitrobenzene	BQL	0.369	0.050	1	3/15/2005	
2-Nitrophenol	BQL	0.369	0.115	1	3/15/2005	
4-Nitrophenol	BQL	1.85	0.102	1	3/15/2005	
N-Nitrosodi-n-propylamine	BQL	0.369	0.047	1	3/15/2005	
N-Nitrosodiphenylamine	BQL	0.369	0.036	1	3/15/2005	
Pentachlorophenol	BQL	1.85	0.096	1	3/15/2005	
Phenanthrene	BQL	0.369	0.042	1	3/15/2005	
Phenol	BQL	0.369	0.101	1	3/15/2005	
Pyrene	BQL	0.369	0.071	1	3/15/2005	
1,2,4-Trichlorobenzene	BQL	0.369	0.046	1	3/15/2005	
2,4,5-Trichlorophenol	BQL	0.369	0.143	1	3/15/2005	
2,4,6-Trichlorophenol	BQL	0.369	0.132	1	3/15/2005	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.6	86
2-Fluorophenol	10	9.3	93
Nitrobenzene-d5	10	9	90
Phenol-d6	10	8.9	89
2,4,6-Tribromophenol	5	4.8	96
4-Terphenyl-d14	10	9.1	91

Comments:

Flags:

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

Reviewed By: AF

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-SB04 2-4'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-6I
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 14:00
Date Received: 3/8/2005
Date Extracted: 3/15/2005
Matrix: Soil
% Solids: 88.53

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.350	0.050	1	3/15/2005	
Acenaphthylene	BQL	0.350	0.047	1	3/15/2005	
Anthracene	BQL	0.350	0.051	1	3/15/2005	
Benzo[a]anthracene	BQL	0.350	0.061	1	3/15/2005	
Benzo[a]pyrene	BQL	0.350	0.054	1	3/15/2005	
Benzo[b]fluoranthene	BQL	0.350	0.061	1	3/15/2005	
Benzo[g,h,i]perylene	BQL	0.350	0.095	1	3/15/2005	
Benzo[k]fluoranthene	BQL	0.350	0.068	1	3/15/2005	
Benzoic Acid	BQL	0.701	0.701	1	3/15/2005	
Bis(2-chloroethoxy)methane	BQL	0.350	0.052	1	3/15/2005	
Bis(2-chloroethyl)ether	BQL	0.350	0.042	1	3/15/2005	
Bis(2-chloroisopropyl)ether	BQL	0.350	0.044	1	3/15/2005	
Bis(2-ethylhexyl)phthalate	BQL	0.350	0.047	1	3/15/2005	
4-bromophenyl phenyl ether	BQL	0.350	0.059	1	3/15/2005	
Butylbenzylphthalate	BQL	0.350	0.054	1	3/15/2005	
2-Chloronaphthalene	BQL	0.350	0.055	1	3/15/2005	
2-Chlorophenol	BQL	0.350	0.110	1	3/15/2005	
4-Chloro-3-methylphenol	BQL	0.350	0.109	1	3/15/2005	
4-Chloroaniline	BQL	1.75	0.267	1	3/15/2005	
4-Chlorophenyl phenyl ether	BQL	0.350	0.052	1	3/15/2005	
Chrysene	BQL	0.350	0.038	1	3/15/2005	
Dibenzo[a,h]anthracene	BQL	0.350	0.098	1	3/15/2005	
Dibenzofuran	BQL	0.350	0.064	1	3/15/2005	
Di-n-Butylphthalate	BQL	0.350	0.042	1	3/15/2005	
1,2-Dichlorobenzene	BQL	0.350	0.039	1	3/15/2005	
1,3-Dichlorobenzene	BQL	0.350	0.038	1	3/15/2005	
1,4-Dichlorobenzene	BQL	0.350	0.040	1	3/15/2005	
3,3'-Dichlorobenzidine	BQL	0.701	0.088	1	3/15/2005	
2,4-Dichlorophenol	BQL	0.350	0.126	1	3/15/2005	
Diethylphthalate	BQL	0.350	0.045	1	3/15/2005	
Dimethylphthalate	BQL	0.350	0.042	1	3/15/2005	
2,4-Dimethylphenol	BQL	0.350	0.251	1	3/15/2005	
Di-n-octylphthalate	BQL	0.350	0.058	1	3/15/2005	
4,6-Dinitro-2-methylphenol	BQL	1.75	0.206	1	3/15/2005	
2,4-Dinitrophenol	BQL	1.75	0.771	1	3/15/2005	
2,4-Dinitrotoluene	BQL	0.350	0.046	1	3/15/2005	
2,6-Dinitrotoluene	BQL	0.350	0.064	1	3/15/2005	
Fluoranthene	BQL	0.350	0.049	1	3/15/2005	
Fluorene	BQL	0.350	0.043	1	3/15/2005	
Hexachlorobenzene	BQL	0.350	0.054	1	3/15/2005	
Hexachlorobutadiene	BQL	0.350	0.056	1	3/15/2005	
Hexachlorocyclopentadiene	BQL	0.701	0.036	1	3/15/2005	

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-SB04 2-4'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-6I
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 14:00
Date Received: 3/8/2005
Date Extracted: 3/15/2005
Matrix: Soil
% Solids: 88.53

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Hexachloroethane	BQL	0.350	0.032	1	3/15/2005	
Indeno(1,2,3-c,d)pyrene	BQL	0.350	0.090	1	3/15/2005	
Isophorone	BQL	0.350	0.052	1	3/15/2005	
2-Methylnaphthalene	BQL	0.350	0.102	1	3/15/2005	
2-Methylphenol	BQL	0.350	0.123	1	3/15/2005	
3- & 4-Methylphenol	BQL	0.350	0.119	1	3/15/2005	
Naphthalene	BQL	0.350	0.028	1	3/15/2005	
2-Nitroaniline	BQL	0.350	0.055	1	3/15/2005	
3-Nitroaniline	BQL	1.75	0.361	1	3/15/2005	
4-Nitroaniline	BQL	1.75	0.108	1	3/15/2005	
Nitrobenzene	BQL	0.350	0.047	1	3/15/2005	
2-Nitrophenol	BQL	0.350	0.109	1	3/15/2005	
4-Nitrophenol	BQL	1.75	0.097	1	3/15/2005	
N-Nitrosodi-n-propylamine	BQL	0.350	0.045	1	3/15/2005	
N-Nitrosodiphenylamine	BQL	0.350	0.034	1	3/15/2005	
Pentachlorophenol	BQL	1.75	0.091	1	3/15/2005	
Phenanthrene	BQL	0.350	0.040	1	3/15/2005	
Phenol	BQL	0.350	0.096	1	3/15/2005	
Pyrene	BQL	0.350	0.067	1	3/15/2005	
1,2,4-Trichlorobenzene	BQL	0.350	0.044	1	3/15/2005	
2,4,5-Trichlorophenol	BQL	0.350	0.136	1	3/15/2005	
2,4,6-Trichlorophenol	BQL	0.350	0.125	1	3/15/2005	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	9.4	94
2-Fluorophenol	10	9.2	92
Nitrobenzene-d5	10	9	90
Phenol-d6	10	9.2	92
2,4,6-Tribromophenol	5	4.7	94
4-Terphenyl-d14	10	9.9	99

Comments:

Flags:

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

Reviewed By: 

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-SB05 4-6'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-7J
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 13:30
Date Received: 3/8/2005
Date Extracted: 3/16/2005
Matrix: Soil
% Solids: 88.76

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	**0.081**	0.336	0.048	1	3/16/2005	J
Acenaphthylene	**0.114**	0.336	0.045	1	3/16/2005	J
Anthracene	BQL	0.336	0.049	1	3/16/2005	
Benzo[a]anthracene	BQL	0.336	0.058	1	3/16/2005	
Benzo[a]pyrene	BQL	0.336	0.051	1	3/16/2005	
Benzo[b]fluoranthene	BQL	0.336	0.059	1	3/16/2005	
Benzo[g,h,i]perylene	BQL	0.336	0.091	1	3/16/2005	
Benzo[k]fluoranthene	BQL	0.336	0.065	1	3/16/2005	
Benzoic Acid	BQL	0.672	0.672	1	3/16/2005	
Bis(2-chloroethoxy)methane	BQL	0.336	0.050	1	3/16/2005	
Bis(2-chloroethyl)ether	BQL	0.336	0.041	1	3/16/2005	
Bis(2-chloroisopropyl)ether	BQL	0.336	0.042	1	3/16/2005	
Bis(2-ethylhexyl)phthalate	**0.279**	0.336	0.045	1	3/16/2005	J
4-bromophenyl phenyl ether	BQL	0.336	0.057	1	3/16/2005	
Butylbenzylphthalate	BQL	0.336	0.052	1	3/16/2005	
2-Chloronaphthalene	BQL	0.336	0.053	1	3/16/2005	
2-Chlorophenol	BQL	0.336	0.105	1	3/16/2005	
4-Chloro-3-methylphenol	BQL	0.336	0.105	1	3/16/2005	
4-Chloroaniline	BQL	1.68	0.256	1	3/16/2005	
4-Chlorophenyl phenyl ether	BQL	0.336	0.049	1	3/16/2005	
Chrysene	**0.054**	0.336	0.036	1	3/16/2005	J
Dibenzo[a,h]anthracene	BQL	0.336	0.094	1	3/16/2005	
Dibenzofuran	BQL	0.336	0.061	1	3/16/2005	
Di-n-Butylphthalate	BQL	0.336	0.040	1	3/16/2005	
1,2-Dichlorobenzene	BQL	0.336	0.037	1	3/16/2005	
1,3-Dichlorobenzene	BQL	0.336	0.037	1	3/16/2005	
1,4-Dichlorobenzene	BQL	0.336	0.038	1	3/16/2005	
3,3'-Dichlorobenzidine	BQL	0.672	0.085	1	3/16/2005	
2,4-Dichlorophenol	BQL	0.336	0.121	1	3/16/2005	
Diethylphthalate	BQL	0.336	0.043	1	3/16/2005	
Dimethylphthalate	BQL	0.336	0.041	1	3/16/2005	
2,4-Dimethylphenol	BQL	0.336	0.240	1	3/16/2005	
Di-n-octylphthalate	BQL	0.336	0.055	1	3/16/2005	
4,6-Dinitro-2-methylphenol	BQL	1.68	0.198	1	3/16/2005	
2,4-Dinitrophenol	BQL	1.68	0.740	1	3/16/2005	
2,4-Dinitrotoluene	BQL	0.336	0.044	1	3/16/2005	
2,6-Dinitrotoluene	BQL	0.336	0.061	1	3/16/2005	
Fluoranthene	BQL	0.336	0.047	1	3/16/2005	
Fluorene	**0.057**	0.336	0.042	1	3/16/2005	J
Hexachlorobenzene	BQL	0.336	0.052	1	3/16/2005	
Hexachlorobutadiene	BQL	0.336	0.054	1	3/16/2005	
Hexachlorocyclopentadiene	BQL	0.672	0.035	1	3/16/2005	

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-SB05 4-6'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-7J
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 13:30
Date Received: 3/8/2005
Date Extracted: 3/16/2005
Matrix: Soil
% Solids: 88.76

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Hexachloroethane	BQL	0.336	0.030	1	3/16/2005	
Indeno(1,2,3-c,d)pyrene	BQL	0.336	0.086	1	3/16/2005	
Isophorone	BQL	0.336	0.049	1	3/16/2005	
2-Methylnaphthalene	BQL	0.336	0.098	1	3/16/2005	
2-Methylphenol	BQL	0.336	0.118	1	3/16/2005	
3- & 4-Methylphenol	BQL	0.336	0.114	1	3/16/2005	
Naphthalene	**0.071**	0.336	0.027	1	3/16/2005	J
2-Nitroaniline	BQL	0.336	0.053	1	3/16/2005	
3-Nitroaniline	BQL	1.68	0.346	1	3/16/2005	
4-Nitroaniline	BQL	1.68	0.103	1	3/16/2005	
Nitrobenzene	BQL	0.336	0.045	1	3/16/2005	
2-Nitrophenol	BQL	0.336	0.104	1	3/16/2005	
4-Nitrophenol	BQL	1.68	0.093	1	3/16/2005	
N-Nitrosodi-n-propylamine	BQL	0.336	0.043	1	3/16/2005	
N-Nitrosodiphenylamine	BQL	0.336	0.033	1	3/16/2005	
Pentachlorophenol	BQL	1.68	0.088	1	3/16/2005	
Phenanthrene	BQL	0.336	0.038	1	3/16/2005	
Phenol	BQL	0.336	0.092	1	3/16/2005	
Pyrene	**0.077**	0.336	0.065	1	3/16/2005	J
1,2,4-Trichlorobenzene	BQL	0.336	0.042	1	3/16/2005	
2,4,5-Trichlorophenol	BQL	0.336	0.130	1	3/16/2005	
2,4,6-Trichlorophenol	BQL	0.336	0.120	1	3/16/2005	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	9	90
2-Fluorophenol	10	9.3	93
Nitrobenzene-d5	10	9.8	98
Phenol-d6	10	9.3	93
2,4,6-Tribromophenol	5	5.4	109
4-Terphenyl-d14	10	10.7	107

Comments:

Flags:

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

Reviewed By: AF

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-SB06 4-6'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-8I
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 13:20
Date Received: 3/8/2005
Date Extracted: 3/15/2005
Matrix: Soil
% Solids: 77.73

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.394	0.056	1	3/15/2005	
Acenaphthylene	BQL	0.394	0.052	1	3/15/2005	
Anthracene	BQL	0.394	0.057	1	3/15/2005	
Benzo[a]anthracene	BQL	0.394	0.068	1	3/15/2005	
Benzo[a]pyrene	BQL	0.394	0.060	1	3/15/2005	
Benzo[b]fluoranthene	BQL	0.394	0.069	1	3/15/2005	
Benzo[g,h,i]perylene	BQL	0.394	0.107	1	3/15/2005	
Benzo[k]fluoranthene	BQL	0.394	0.076	1	3/15/2005	
Benzoic Acid	BQL	0.788	0.788	1	3/15/2005	
Bis(2-chloroethoxy)methane	BQL	0.394	0.059	1	3/15/2005	
Bis(2-chloroethyl)ether	BQL	0.394	0.048	1	3/15/2005	
Bis(2-chloroisopropyl)ether	BQL	0.394	0.049	1	3/15/2005	
Bis(2-ethylhexyl)phthalate	BQL	0.394	0.053	1	3/15/2005	
4-bromophenyl phenyl ether	BQL	0.394	0.067	1	3/15/2005	
Butylbenzylphthalate	BQL	0.394	0.061	1	3/15/2005	
2-Chloronaphthalene	BQL	0.394	0.062	1	3/15/2005	
2-Chlorophenol	BQL	0.394	0.123	1	3/15/2005	
4-Chloro-3-methylphenol	BQL	0.394	0.123	1	3/15/2005	
4-Chloroaniline	BQL	1.97	0.300	1	3/15/2005	
4-Chlorophenyl phenyl ether	BQL	0.394	0.058	1	3/15/2005	
Chrysene	BQL	0.394	0.043	1	3/15/2005	
Dibenzo[a,h]anthracene	BQL	0.394	0.110	1	3/15/2005	
Dibenzofuran	BQL	0.394	0.072	1	3/15/2005	
Di-n-Butylphthalate	BQL	0.394	0.047	1	3/15/2005	
1,2-Dichlorobenzene	BQL	0.394	0.044	1	3/15/2005	
1,3-Dichlorobenzene	BQL	0.394	0.043	1	3/15/2005	
1,4-Dichlorobenzene	BQL	0.394	0.045	1	3/15/2005	
3,3'-Dichlorobenzidine	BQL	0.788	0.099	1	3/15/2005	
2,4-Dichlorophenol	BQL	0.394	0.142	1	3/15/2005	
Diethylphthalate	BQL	0.394	0.051	1	3/15/2005	
Dimethylphthalate	BQL	0.394	0.048	1	3/15/2005	
2,4-Dimethylphenol	BQL	0.394	0.282	1	3/15/2005	
Di-n-octylphthalate	BQL	0.394	0.065	1	3/15/2005	
4,6-Dinitro-2-methylphenol	BQL	1.97	0.232	1	3/15/2005	
2,4-Dinitrophenol	BQL	1.97	0.868	1	3/15/2005	
2,4-Dinitrotoluene	BQL	0.394	0.051	1	3/15/2005	
2,6-Dinitrotoluene	BQL	0.394	0.072	1	3/15/2005	
Fluoranthene	BQL	0.394	0.055	1	3/15/2005	
Fluorene	BQL	0.394	0.049	1	3/15/2005	
Hexachlorobenzene	BQL	0.394	0.061	1	3/15/2005	
Hexachlorobutadiene	BQL	0.394	0.063	1	3/15/2005	
Hexachlorocyclopentadiene	BQL	0.788	0.041	1	3/15/2005	

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-SB06 4-6'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-8I
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 13:20
Date Received: 3/8/2005
Date Extracted: 3/15/2005
Matrix: Soil
% Solids: 77.73

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Hexachloroethane	BQL	0.394	0.036	1	3/15/2005	
Indeno(1,2,3-c,d)pyrene	BQL	0.394	0.101	1	3/15/2005	
Isophorone	BQL	0.394	0.058	1	3/15/2005	
2-Methylnaphthalene	BQL	0.394	0.115	1	3/15/2005	
2-Methylphenol	BQL	0.394	0.139	1	3/15/2005	
3- & 4-Methylphenol	BQL	0.394	0.134	1	3/15/2005	
Naphthalene	BQL	0.394	0.032	1	3/15/2005	
2-Nitroaniline	BQL	0.394	0.062	1	3/15/2005	
3-Nitroaniline	BQL	1.97	0.406	1	3/15/2005	
4-Nitroaniline	BQL	1.97	0.121	1	3/15/2005	
Nitrobenzene	BQL	0.394	0.053	1	3/15/2005	
2-Nitrophenol	BQL	0.394	0.122	1	3/15/2005	
4-Nitrophenol	BQL	1.97	0.109	1	3/15/2005	
N-Nitrosodi-n-propylamine	BQL	0.394	0.050	1	3/15/2005	
N-Nitrosodiphenylamine	BQL	0.394	0.039	1	3/15/2005	
Pentachlorophenol	BQL	1.97	0.103	1	3/15/2005	
Phenanthrene	BQL	0.394	0.045	1	3/15/2005	
Phenol	BQL	0.394	0.108	1	3/15/2005	
Pyrene	BQL	0.394	0.076	1	3/15/2005	
1,2,4-Trichlorobenzene	BQL	0.394	0.049	1	3/15/2005	
2,4,5-Trichlorophenol	BQL	0.394	0.153	1	3/15/2005	
2,4,6-Trichlorophenol	BQL	0.394	0.140	1	3/15/2005	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.9	89
2-Fluorophenol	10	8.9	89
Nitrobenzene-d5	10	8.7	87
Phenol-d6	10	8.9	89
2,4,6-Tribromophenol	5	4.9	99
4-Terphenyl-d14	10	9.7	97

Comments:

Flags:

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

Reviewed By: AF

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-SB07 2-4'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-9I
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 15:00
Date Received: 3/8/2005
Date Extracted: 3/15/2005
Matrix: Soil
% Solids: 90.88

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.337	0.048	1	3/15/2005	
Acenaphthylene	BQL	0.337	0.045	1	3/15/2005	
Anthracene	BQL	0.337	0.049	1	3/15/2005	
Benzo[a]anthracene	BQL	0.337	0.058	1	3/15/2005	
Benzo[a]pyrene	BQL	0.337	0.052	1	3/15/2005	
Benzo[b]fluoranthene	BQL	0.337	0.059	1	3/15/2005	
Benzo[g,h,i]perylene	BQL	0.337	0.092	1	3/15/2005	
Benzo[k]fluoranthene	BQL	0.337	0.065	1	3/15/2005	
Benzoic Acid	BQL	0.673	0.673	1	3/15/2005	
Bis(2-chloroethoxy)methane	BQL	0.337	0.050	1	3/15/2005	
Bis(2-chloroethyl)ether	BQL	0.337	0.041	1	3/15/2005	
Bis(2-chloroisopropyl)ether	BQL	0.337	0.042	1	3/15/2005	
Bis(2-ethylhexyl)phthalate	BQL	0.337	0.045	1	3/15/2005	
4-bromophenyl phenyl ether	BQL	0.337	0.057	1	3/15/2005	
Butylbenzylphthalate	BQL	0.337	0.052	1	3/15/2005	
2-Chloronaphthalene	BQL	0.337	0.053	1	3/15/2005	
2-Chlorophenol	BQL	0.337	0.105	1	3/15/2005	
4-Chloro-3-methylphenol	BQL	0.337	0.105	1	3/15/2005	
4-Chloroaniline	BQL	1.68	0.256	1	3/15/2005	
4-Chlorophenyl phenyl ether	BQL	0.337	0.050	1	3/15/2005	
Chrysene	BQL	0.337	0.036	1	3/15/2005	
Dibenzo[a,h]anthracene	BQL	0.337	0.094	1	3/15/2005	
Dibenzofuran	BQL	0.337	0.061	1	3/15/2005	
Di-n-Butylphthalate	BQL	0.337	0.040	1	3/15/2005	
1,2-Dichlorobenzene	BQL	0.337	0.037	1	3/15/2005	
1,3-Dichlorobenzene	BQL	0.337	0.037	1	3/15/2005	
1,4-Dichlorobenzene	BQL	0.337	0.038	1	3/15/2005	
3,3'-Dichlorobenzidine	BQL	0.673	0.085	1	3/15/2005	
2,4-Dichlorophenol	BQL	0.337	0.121	1	3/15/2005	
Diethylphthalate	BQL	0.337	0.043	1	3/15/2005	
Dimethylphthalate	BQL	0.337	0.041	1	3/15/2005	
2,4-Dimethylphenol	BQL	0.337	0.241	1	3/15/2005	
Di-n-octylphthalate	BQL	0.337	0.056	1	3/15/2005	
4,6-Dinitro-2-methylphenol	BQL	1.68	0.198	1	3/15/2005	
2,4-Dinitrophenol	BQL	1.68	0.741	1	3/15/2005	
2,4-Dinitrotoluene	BQL	0.337	0.044	1	3/15/2005	
2,6-Dinitrotoluene	BQL	0.337	0.061	1	3/15/2005	
Fluoranthene	BQL	0.337	0.047	1	3/15/2005	
Fluorene	BQL	0.337	0.042	1	3/15/2005	
Hexachlorobenzene	BQL	0.337	0.052	1	3/15/2005	
Hexachlorobutadiene	BQL	0.337	0.054	1	3/15/2005	
Hexachlorocyclopentadiene	BQL	0.673	0.035	1	3/15/2005	

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-SB07 2-4'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-9I
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 15:00
Date Received: 3/8/2005
Date Extracted: 3/15/2005
Matrix: Soil
% Solids: 90.88

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Hexachloroethane	BQL	0.337	0.030	1	3/15/2005	
Indeno(1,2,3-c,d)pyrene	BQL	0.337	0.086	1	3/15/2005	
Isophorone	BQL	0.337	0.050	1	3/15/2005	
2-Methylnaphthalene	BQL	0.337	0.098	1	3/15/2005	
2-Methylphenol	BQL	0.337	0.118	1	3/15/2005	
3- & 4-Methylphenol	BQL	0.337	0.114	1	3/15/2005	
Naphthalene	BQL	0.337	0.027	1	3/15/2005	
2-Nitroaniline	BQL	0.337	0.053	1	3/15/2005	
3-Nitroaniline	BQL	1.68	0.347	1	3/15/2005	
4-Nitroaniline	BQL	1.68	0.104	1	3/15/2005	
Nitrobenzene	BQL	0.337	0.045	1	3/15/2005	
2-Nitrophenol	BQL	0.337	0.104	1	3/15/2005	
4-Nitrophenol	BQL	1.68	0.093	1	3/15/2005	
N-Nitrosodi-n-propylamine	BQL	0.337	0.043	1	3/15/2005	
N-Nitrosodiphenylamine	BQL	0.337	0.033	1	3/15/2005	
Pentachlorophenol	BQL	1.68	0.088	1	3/15/2005	
Phenanthrene	BQL	0.337	0.038	1	3/15/2005	
Phenol	BQL	0.337	0.092	1	3/15/2005	
Pyrene	BQL	0.337	0.065	1	3/15/2005	
1,2,4-Trichlorobenzene	BQL	0.337	0.042	1	3/15/2005	
2,4,5-Trichlorophenol	BQL	0.337	0.130	1	3/15/2005	
2,4,6-Trichlorophenol	BQL	0.337	0.120	1	3/15/2005	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.7	87
2-Fluorophenol	10	7.7	77
Nitrobenzene-d5	10	8.4	84
Phenol-d6	10	8.4	84
2,4,6-Tribromophenol	5	4.9	97
4-Terphenyl-d14	10	10.5	105

Comments:

Flags:

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

Reviewed By: AF

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTMRFF-SB08 4-6'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-10I
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 15:40
Date Received: 3/8/2005
Date Extracted: 3/15/2005
Matrix: Soil
% Solids: 83.8

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	0.104	0.386	0.055	1	3/15/2005	J
Acenaphthylene	BQL	0.386	0.051	1	3/15/2005	
Anthracene	BQL	0.386	0.056	1	3/15/2005	
Benzo[a]anthracene	BQL	0.386	0.067	1	3/15/2005	
Benzo[a]pyrene	BQL	0.386	0.059	1	3/15/2005	
Benzo[b]fluoranthene	BQL	0.386	0.068	1	3/15/2005	
Benzo[g,h,i]perylene	BQL	0.386	0.105	1	3/15/2005	
Benzo[k]fluoranthene	BQL	0.386	0.075	1	3/15/2005	
Benzoic Acid	BQL	0.772	0.772	1	3/15/2005	
Bis(2-chloroethoxy)methane	BQL	0.386	0.058	1	3/15/2005	
Bis(2-chloroethyl)ether	BQL	0.386	0.047	1	3/15/2005	
Bis(2-chloroisopropyl)ether	BQL	0.386	0.048	1	3/15/2005	
Bis(2-ethylhexyl)phthalate	BQL	0.386	0.052	1	3/15/2005	
4-bromophenyl phenyl ether	BQL	0.386	0.065	1	3/15/2005	
Butylbenzylphthalate	BQL	0.386	0.059	1	3/15/2005	
2-Chloronaphthalene	BQL	0.386	0.061	1	3/15/2005	
2-Chlorophenol	BQL	0.386	0.121	1	3/15/2005	
4-Chloro-3-methylphenol	BQL	0.386	0.120	1	3/15/2005	
4-Chloroaniline	BQL	1.93	0.294	1	3/15/2005	
4-Chlorophenyl phenyl ether	BQL	0.386	0.057	1	3/15/2005	
Chrysene	BQL	0.386	0.042	1	3/15/2005	
Dibenzo[a,h]anthracene	BQL	0.386	0.108	1	3/15/2005	
Dibenzofuran	BQL	0.386	0.070	1	3/15/2005	
Di-n-Butylphthalate	BQL	0.386	0.046	1	3/15/2005	
1,2-Dichlorobenzene	BQL	0.386	0.043	1	3/15/2005	
1,3-Dichlorobenzene	BQL	0.386	0.042	1	3/15/2005	
1,4-Dichlorobenzene	BQL	0.386	0.044	1	3/15/2005	
3,3'-Dichlorobenzidine	BQL	0.772	0.097	1	3/15/2005	
2,4-Dichlorophenol	BQL	0.386	0.139	1	3/15/2005	
Diethylphthalate	BQL	0.386	0.050	1	3/15/2005	
Dimethylphthalate	BQL	0.386	0.047	1	3/15/2005	
2,4-Dimethylphenol	BQL	0.386	0.276	1	3/15/2005	
Di-n-octylphthalate	BQL	0.386	0.064	1	3/15/2005	
4,6-Dinitro-2-methylphenol	BQL	1.93	0.227	1	3/15/2005	
2,4-Dinitrophenol	BQL	1.93	0.850	1	3/15/2005	
2,4-Dinitrotoluene	BQL	0.386	0.050	1	3/15/2005	
2,6-Dinitrotoluene	BQL	0.386	0.070	1	3/15/2005	
Fluoranthene	BQL	0.386	0.054	1	3/15/2005	
Fluorene	BQL	0.386	0.048	1	3/15/2005	
Hexachlorobenzene	BQL	0.386	0.059	1	3/15/2005	
Hexachlorobutadiene	BQL	0.386	0.062	1	3/15/2005	
Hexachlorocyclopentadiene	BQL	0.772	0.040	1	3/15/2005	

Results for Semivolatiles by GCMS 8270

Client Sample ID: USTMRFF-SB08 4-6'
Client Project ID: USTMRFF-
Lab Sample ID: G128-1475-10I
Lab Project ID: G128-1475
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 3/7/2005 15:40
Date Received: 3/8/2005
Date Extracted: 3/15/2005
Matrix: Soil
% Solids: 83.8

Compound	Result mg/Kg	Quantitation Limit mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Hexachloroethane	BQL	0.386	0.035	1	3/15/2005	
Indeno(1,2,3-c,d)pyrene	BQL	0.386	0.099	1	3/15/2005	
Isophorone	BQL	0.386	0.057	1	3/15/2005	
2-Methylnaphthalene	**2.14**	0.386	0.113	1	3/15/2005	
2-Methylphenol	BQL	0.386	0.136	1	3/15/2005	
3- & 4-Methylphenol	BQL	0.386	0.131	1	3/15/2005	
Naphthalene	**0.486**	0.386	0.031	1	3/15/2005	
2-Nitroaniline	BQL	0.386	0.061	1	3/15/2005	
3-Nitroaniline	BQL	1.93	0.398	1	3/15/2005	
4-Nitroaniline	BQL	1.93	0.119	1	3/15/2005	
Nitrobenzene	BQL	0.386	0.052	1	3/15/2005	
2-Nitrophenol	BQL	0.386	0.120	1	3/15/2005	
4-Nitrophenol	BQL	1.93	0.107	1	3/15/2005	
N-Nitrosodi-n-propylamine	BQL	0.386	0.049	1	3/15/2005	
N-Nitrosodiphenylamine	BQL	0.386	0.038	1	3/15/2005	
Pentachlorophenol	BQL	1.93	0.101	1	3/15/2005	
Phenanthrene	BQL	0.386	0.044	1	3/15/2005	
Phenol	BQL	0.386	0.106	1	3/15/2005	
Pyrene	BQL	0.386	0.074	1	3/15/2005	
1,2,4-Trichlorobenzene	BQL	0.386	0.048	1	3/15/2005	
2,4,5-Trichlorophenol	BQL	0.386	0.149	1	3/15/2005	
2,4,6-Trichlorophenol	BQL	0.386	0.137	1	3/15/2005	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	6.9	69
2-Fluorophenol	10	8.7	87
Nitrobenzene-d5	10	10.8	108
Phenol-d6	10	8.7	87
2,4,6-Tribromophenol	5	5.3	105
4-Terphenyl-d14	10	10	100

Comments:

Flags:

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

Reviewed By: AT

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-MW01 4-5'
Sample Matrix	Soil
Date Collected	03/04/05
Date Received	03/08/05
Date Extracted	03/11/05
Date Analyzed	03/14/05
Dry Weight	75.8
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 10 (mg/Kg)
C_{19}-C_{36} Aliphatics*	< 10 (mg/Kg)
C_{11}-C_{22} Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	92
Aromatic Surrogate % Recovery	78

Comments:

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

Lab info: G128-1475-1H

Reviewed By: AF

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-MW02 1-2'
Sample Matrix	Soil
Date Collected	03/04/05
Date Received	03/08/05
Date Extracted	03/11/05
Date Analyzed	03/14/05
Dry Weight	90.8
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 10 (mg/Kg)
C_{19}-C_{36} Aliphatics*	< 10 (mg/Kg)
C_{11}-C_{22} Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	99
Aromatic Surrogate % Recovery	88

Comments:

* = Excludes any surrogates or internal standards.

Sample did not require fractionation.

Lab info: G128-1475-2H

Reviewed By: AF

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB01 4-6'
Sample Matrix	Soil
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/11/05
Date Analyzed	03/14/05
Dry Weight	85.9
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 10 (mg/Kg)
C_{19}-C_{36} Aliphatics*	< 10 (mg/Kg)
C_{11}-C_{22} Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	110
Aromatic Surrogate % Recovery	96

Comments:

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

Lab info: G128-1475-3H

Reviewed By: AF

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB02 2-4'
Sample Matrix	Soil
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/11/05
Date Analyzed	03/16/05
Dry Weight	86.1
Dilution Factor	1:1
C_9-C_{18} Aliphatics*	< 10 (mg/Kg)
C_{19}-C_{36} Aliphatics*	< 10 (mg/Kg)
C_{11}-C_{22} Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	110
Aromatic Surrogate % Recovery	100
Fractionation Surrogate 1 % Recovery	62

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G128-1475-4H

Reviewed By: AF

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB03 4-8'
Sample Matrix	Soil
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/11/05
Date Analyzed	03/15/05
Dry Weight	84.2
Dilution Factor	1:1
C_9-C_{18} Aliphatics*	< 10 (mg/Kg)
C_{19}-C_{36} Aliphatics*	< 10 (mg/Kg)
C_{11}-C_{22} Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	100
Aromatic Surrogate % Recovery	82
Fractionation Surrogate 1 % Recovery	120

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G128-1475-5H

Reviewed By: BF

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB04 2-4'
Sample Matrix	Soil
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/11/05
Date Analyzed	03/16/05
Dry Weight	88.5
Dilution Factor	1:1
C_9-C_{18} Aliphatics*	< 10 (mg/Kg)
C_{19}-C_{36} Aliphatics*	< 10 (mg/Kg)
C_{11}-C_{22} Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	120
Aromatic Surrogate % Recovery	98
Fractionation Surrogate 1 % Recovery	58

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G128-1475-6H

Reviewed By: AF

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB05 4-6'
Sample Matrix	Soil
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/11/05
Date Analyzed	03/15/05
Dry Weight	88.8
Dilution Factor	10:1
C_9-C_{18} Aliphatics*	1500 (mg/Kg)
C_{19}-C_{36} Aliphatics*	1700 (mg/Kg)
C_{11}-C_{22} Aromatics*	690 (mg/Kg)
Aliphatic Surrogate % Recovery	NA
Aromatic Surrogate % Recovery	85
Fractionation Surrogate 1 % Recovery	67

Comments:

* = Excludes any surrogates or internal standards.

NA = Not applicable, surrogate diluted out.

Lab info: G128-1475-7H

Reviewed By: AF

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB06 4-6'
Sample Matrix	Soil
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/11/05
Date Analyzed	03/16/05
Dry Weight	77.7
Dilution Factor	1:1
C_9-C_{18} Aliphatics*	< 10 (mg/Kg)
C_{19}-C_{36} Aliphatics*	< 10 (mg/Kg)
C_{11}-C_{22} Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	110
Aromatic Surrogate % Recovery	65
Fractionation Surrogate 1 % Recovery	46

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G128-1475-8H

Reviewed By: BF

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB07 2-4'
Sample Matrix	Soil
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/11/05
Date Analyzed	03/15/05
Dry Weight	90.9
Dilution Factor	1:1
C_9-C_{18} Aliphatics*	< 10 (mg/Kg)
C_{19}-C_{36} Aliphatics*	100 (mg/Kg)
C_{11}-C_{22} Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	100
Aromatic Surrogate % Recovery	91
Fractionation Surrogate 1 % Recovery	57

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G128-1475-9H

Reviewed By: JF

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Richard Catlin & Associates

Project Name: USTMRFF-

Sample Information and Analytical Results	
Sample Identification	USTMRFF-SB08 4-6'
Sample Matrix	Soil
Date Collected	03/07/05
Date Received	03/08/05
Date Extracted	03/11/05
Date Analyzed	03/15/05
Dry Weight	83.8
Dilution Factor	1:1
C_9-C_{18} Aliphatics*	2600 (mg/Kg)
C_{19}-C_{36} Aliphatics*	< 10 (mg/Kg)
C_{11}-C_{22} Aromatics*	140 (mg/Kg)
Aliphatic Surrogate % Recovery	100
Aromatic Surrogate % Recovery	94
Fractionation Surrogate 1 % Recovery	56

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G128-1475-10H

Reviewed By: AF

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 03/14/05

Calibration Ranges and Limits

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

Calibration Concentration Levels

Range	Levels (µg/mL)	%RSD or CCC	Method of Quantitation
C_9-C_{18} Aliphatics	6	8.10	Calibration Factor
	30		
	60		
	120		
	240		
C_{19}-C_{36} Aliphatics	8	5.1	Calibration Factor
	40		
	80		
	160		
	320		
C_{11}-C_{22} Aromatics	17	9.5	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 03/15/05

Calibration Check

Range	Levels (µg/mL)	RPD
C_9-C_{18} Aliphatics	120	7.7
C_{19}-C_{36} Aliphatics	160	5.3
C_{11}-C_{22} Aromatics	340	5.7

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: 03/14/05

Calibration Ranges and Limits

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

Calibration Concentration Levels

Range	Levels (µg/mL)	%RSD or CCC	Method of Quantitation
C_9-C_{18} Aliphatics	6	8.10	Calibration Factor
	30		
	60		
	120		
	240		
C_{19}-C_{36} Aliphatics	8	5.1	Calibration Factor
	40		
	80		
	160		
	320		
C_{11}-C_{22} Aromatics	17	9.5	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 03/16/05

Calibration Check

Range	Levels (µg/mL)	RPD
C_9-C_{18} Aliphatics	120	9.6
C_{19}-C_{36} Aliphatics	160	6.0
C_{11}-C_{22} Aromatics	340	-7.8

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: 03/14/05

Calibration Ranges and Limits

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

Calibration Concentration Levels

Range	Levels (µg/mL)	%RSD or CCC	Method of Quantitation
C_9-C_{18} Aliphatics	6	8.10	Calibration Factor
	30		
	60		
	120		
	240		
C_{19}-C_{36} Aliphatics	8	5.1	Calibration Factor
	40		
	80		
	160		
	320		
C_{11}-C_{22} Aromatics	17	9.5	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 03/14/05

Calibration Check

Range	Levels (µg/mL)	RPD
C_9-C_{18} Aliphatics	120	10.3
C_{19}-C_{36} Aliphatics	160	7.9
C_{11}-C_{22} Aromatics	340	8.7

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

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

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

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

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

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

% Rec = Percent Recovery

% soilds = Percent Solids

Special Notes:

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

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

MI34.011404.1

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

Chain-of Custody Record & Analytical Request

COC# 44176

Page 1 of 2

Client: CATLIN ENG. & SCI. Project ID: USTMRFF - Date: 3-8-05 Report To: EDD & WRITTEN TO MIKE G. MANOW

Address: 220 OLD DAIRY RD Contact: STEVE TYLER Turnaround: 5 WORKING DAYS

Address: WILM NC 28405 Phone: 452-5861 Job Number: 204-100

Quote #: DOD 1001 Fax: 250304-01 P.O. Number: 250304-01 Invoice To: CATLIN

Sample ID	Date	Time	Matrix	Preservatives	Analyses: EPA 8260B	VPH	EPA 8270C	EPH	Comments: Please specify any special reporting requirements
USTMRFF - MW01 4-5'	3-4-05	1130	soil		✓	✓	✓	✓	G128-1475
" MW02 1-2'	3-4-05	1300			✓	✓	✓	✓	
" SB01 4-6'	3-7-05	1515			✓	✓	✓	✓	5 DAY TURNAROUND
" SB02 2-4'		1415			✓	✓	✓	✓	
" SB03 4-8'		1300			✓	✓	✓	✓	
" SB04 2-4'		1400			✓	✓	✓	✓	
" SB05 4-6'		1330			✓	✓	✓	✓	
" SB06 4-6'		1320			✓	✓	✓	✓	
" SB07 2-4'		1500			✓	✓	✓	✓	
" SB08 4-6'		1540			✓	✓	✓	✓	

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
[signature]	3-8-05	10:05	[signature]	3/8/05	1005	3.1°C	NC ✓ SC ____ Other ____
							SEE REVERSE FOR TERMS AND CONDITIONS

ORIGINAL

PARADIGM ANALYTICAL LABORATORIES, INC.

N.C. CERTIFICATION #481

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

Chain-of Custody Record & Analytical Request

COC# 44175

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Client: CATLIN Eng. & Sci
Address: 220 Old Dairy Rd
Address: Wilm NC 28405
Quote #: DOD 101

Project ID: USTMRFF-
Contact: Steve Tyler
Phone: 452-5861
Fax:

Date: 3-8-05
Turnaround: 5 working Days
Job Number: 204-100
P.O. Number: 250304-01

Report To: EDD + written to Mike E. Mason
Invoice To: CATLIN

Sample ID	Date	Time	Matrix	Preservatives	Analyses: EPA 8260B	Comments: Please specify any special reporting requirements
USTMRFF-MW01 4-5' Duplicate	3-7-05	1130	Soil		✓	5 Day
						G128-1475

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
Tom Stott	3-7-05	10:05	Matt C	3/8/05	1005	3.1°C	NC ✓ SC ____ Other ____

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