

FINAL ANNUAL GROUNDWATER MONITORING REPORT

2006-2007

BUILDINGS M-232-236

NCDENR Incident Number: 9593

Marine Corps Base
Camp Lejeune, North Carolina

July 20, 2007

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Contract Number: N62470-04-D-0205
Task Order: 0015

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

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

EXECUTIVE SUMMARY

Buildings M-232 through 236 are located in the Camp Johnson area of Marine Corps Base (MCB) Camp Lejeune along Hayes Street. The buildings are currently utilized as bachelor housing quarters. An updated risk classification and land use form indicates the site is residential with intermediate risk, which is due to the presence of free product at the site.

Five heating oil underground storage tanks (UST; one UST located at each of the associated Buildings M-232 through 236) were excavated and removed from the site in May 1990. Upon excavation, soil samples exhibited petroleum hydrocarbon contamination above the State standards in effect at that time. A 1991 site assessment of the area indicated petroleum constituents were not present at significant concentrations in areas surrounding the former USTs, and no free product was observed in site monitoring wells.

Further site investigation was conducted in 1992. Free product was detected at the site; however, groundwater samples from the site did not show significant contamination. The investigation recommended the excavation of petroleum-impacted soils in the immediate vicinity of the former USTs, free product removal from the site, and groundwater quality monitoring on a biannual basis.

Site groundwater monitoring was conducted by various contractors from 1993 through 2006. Data showed the persistence of free product at the site; however, a downward trend was observed in groundwater contaminant levels. Sovereign could find no evidence that further soil investigation or assessment of the UST basins was conducted.

The current 2006-2007 monitoring period was overseen by Sovereign Consulting Inc. (Sovereign). Monitoring events included quarterly gauging at the 22 site monitoring wells, with events conducted in August 2006, November 2006, January 2007, and April 2007. Semi-annual groundwater sampling was also conducted at the site in August 2006 and January 2007 and included monitoring wells MW05, MW07, MW18, MW21, and MW22.

Free product was observed at the site during each of the four gauging events. Only monitoring well MW19, located in the vicinity of the former UST associated with Building M-235, exhibited measurable free product. Product thicknesses in this well ranged from 0.12 feet to 0.45 feet. Product recovery via hand bailing was conducted after each event. In an effort to address the free product, MCB Camp Lejeune conducted a soil excavation event from April 30 – May 2, 2007 in the MW19 area. Confirmation soil samples from the MW19 soil excavation indicate that contaminants are present above the soil to groundwater (STGW) maximum soil contaminant concentrations (MSCCs), but below the residential and industrial/commercial MSCCs. The compound 4-isopropyltoluene was also detected in the soil samples, for which there are no established MSCCs.

Groundwater sampling results for the 2006-2007 monitoring period show there were no volatile organic compounds (VOCs) detected in groundwater at the site above the North Carolina groundwater quality standards (NCGWQSs). One noncompliant semi-volatile organic compound (SVOC), however, was detected. Monitoring well MW18 exhibited diphenylamine at

an estimated concentration of 1.70 µg/L. This compound does not have an established NCGWQS. Noncompliant C₉-C₂₂ Aromatics concentrations were also detected during the monitoring period in monitoring wells MW18, MW21, and MW22.

In order to move toward the eventual goal of No Further Action status at the site, MCB Camp Lejeune will have to demonstrate that soils in the former UST basins do not contain contamination above applicable MSCCs. Since the site is currently ranked as an intermediate site due to the presence of free product in MW19, soils must meet the lower of the residential or STGW MSCCs. Soil sampling in the vicinity of the former UST basins should be performed, with the exception of the M-235 basin.

To monitor free product and groundwater conditions, Sovereign also recommends continuing gauging and sampling of existing monitoring program wells on a quarterly and semi-annual basis, respectively. Recurrence of free product should be monitored in MW19, and product recovery should be conducted as indicated by the gauging data.

1.0 TITLE PAGE

DATE OF REPORT: July 20, 2007

Facility I.D.: M-232-236

UST Incident Number: 9593

Site Name: M-232-236

Site Location: Camp Johnson, Marine Corps Base Camp Lejeune, North Carolina

Nearest City/Town: Camp Lejeune

County: Onslow

Risk Classification: Low Risk

Land Use Classification: Residential

UST Owner: Commanding Officer- MCB Camp Lejeune

I&E/EMD/EOB

PSC Box 20004

Address: MCB Camp Lejeune, NC 28542-0004

Phone: (910) 451-5068

UST Operator: Same as above

Address: Same as above

Phone: Same as above

Property Owner: Same as above

Address: Same as above

Phone: Same as above

Property Occupant: Same as above

Address: Same as above

Phone: Same as above

Consultant/Contractor: Sovereign Consulting Inc.

Address: 405 Oakmeads Crescent, Suite 1

Virginia Beach, VA 23462

Phone: (757) 456-5093

Release Information

Date Discovered: May 1990

Latitude:

34° 43' 13" N

Longitude:

77° 24' 52" W

Estimated Quantity of Release: Unknown

Cause of Release: Unknown

Source of Release (Piping/UST): USTs and piping

Sizes and contents of UST system(s) from which the release occurred: The former system consisted of five heating oil USTs ranging in capacity from 530 gallons to 550 gallons and associated piping.



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

2.0 INTRODUCTION

The purpose of this report is to summarize data from groundwater gauging and sampling events at Buildings M-232 through M-236 aboard MCB Camp Lejeune, North Carolina. The data was collected during the 2006 - 2007 monitoring period. The project's scope of work entailed four gauging events for 22 site monitoring wells and two groundwater sampling events of six site monitoring wells. The four gauging events were conducted to measure and record the depth to free product (if present) and depth to groundwater. The two sampling events were conducted to analyze the site groundwater for petroleum constituents using USEPA Methods 602 plus xylenes, 625 plus the 10 largest non target peaks, and the MADEP Methods VPH and EPH. Data for Sovereign's 2006 - 2007 monitoring and sampling events are presented in this report.

3.0 SITE HISTORY

Buildings M-232 through M-236 are located along Hayes Street within Camp Johnson, which is aboard MCB Camp Lejeune in Onslow County, North Carolina. The buildings are currently used as bachelors' quarters for military personnel.

A shallow drainage ditch is present between the eastern wall of Buildings M-232 through M-236 and Hayes Street. The nearest mapped surface water bodies are the New River, located approximately 650 feet west of the site, and Northeast Creek, located approximately 850 feet southeast of the site. There are no potable water supply wells located within 1,500 feet of the site.

Five heating oil USTs (one UST located at each of the associated Buildings M-232 through 236) were excavated and removed from the site in May 1990. The USTs ranged in capacity from 530-gallons to 550-gallons and were in service from 1942 to the late 1980s. Upon UST removal, petroleum hydrocarbons were detected in the site soils. To define the extent of soil and groundwater contamination, site assessments were performed in 1991 and 1992.

The 1991 site assessment included soil borings and the installation of 7 shallow aquifer monitoring wells with total depths of approximately 15 feet below ground surface [bgs], and seven intermediate wells with total depths of approximately 30 feet bgs. The wells were installed in pairs. Analysis of soil and groundwater indicated petroleum constituents were not present at significant concentrations in areas surrounding the former USTs, and no free product was observed in site monitoring wells. The report recommended, however, that the UST excavations be remediated to eliminate the potential for future risk. This recommendation was made since previous sampling data indicated the presence of petroleum hydrocarbons in the tank basins.

As a result, additional investigation activities were conducted in 1992. The investigation included the installation of three surficial aquifer monitoring wells, each to total depths of approximately 15 feet bgs. No constituents were detected in groundwater samples collected from the three newly installed wells. Free product, however, was observed in monitoring well MW03 at a thickness of 0.12 foot. No measurable free product was identified in any other site

well. It was recommended to excavate petroleum-impacted soils in the immediate vicinity of the former USTs, conduct free product removal from well MW03 using manual bailing, and monitor groundwater quality on a biannual basis.

Upon review of the available reports, five monitoring wells were reportedly installed at locations adjacent to the former UST locations sometime between April 1998 and August 1999. In addition, Law Engineering and Environmental Services, Inc. (Law) conducted a risk characterization of the site in November 1999. It appears from data review that the wells were most likely installed as part of the risk characterization effort (this report, however, is unavailable for review). A 2000 Law report states that the risk characterization assessment indicated the site warranted classification as an Intermediate Risk based on the presence of measurable free product in monitoring well MW19.

Law continued conducting groundwater monitoring activities in 2000 and 2001. The monitoring program included quarterly well gauging at all site wells and semi-annual groundwater sampling at wells MW03 (identified as MW07), MW05, MW18, MW20, MW21, and MW22. The gauging data from these assessments identified the presence of measurable free product only in monitoring well MW19, at thicknesses ranging from 0.12 foot to 0.61 foot. Free product recovery was conducted, and groundwater sampling data indicated few compounds were present at concentrations above NCGWQSs (none above established GCLs). The assessments concluded that concentrations of detected constituents were generally decreasing over time.

Engineering and Environment, Inc. (EEI) assumed the responsibility of monitoring the site beginning in October 2002. As reported in 2005 and 2006 annual monitoring reports, they conducted a program of quarterly gauging of seven wells from November 2002 through August 2003. EEI did not report measuring free product during any of the four quarters, which included MW19. Reports summarizing the 2002-2003 data were not available for review upon the preparation of this report.

EEI continued site monitoring activities with a new program that began in June 2004. Quarterly well gauging was conducted at 22 site monitoring wells, and semi-annual groundwater samples were obtained from monitoring wells MW05, MW07, MW18, MW20, MW21, and MW22. Free product was observed only in well MW19, which is located in the vicinity of the former UST associated with Building M235, during the 2004-2005 monitoring period. Product thicknesses in MW19 ranged from 0.10 foot to 0.49 foot. Product recovery was conducted via hand bailing. Laboratory analysis of groundwater samples from the two 2004 semi-annual groundwater sampling events indicated no VOC or SVOC concentrations above NCGWQSs. The C₉-C₂₂ Aromatics were present at concentrations slightly above NCGWQSs in wells MW18, MW20, and/or MW21. These wells are located in the immediate vicinity of the three former USTs associated with Buildings M-236, M-233, and M-232. The 2004-2005 gauging data indicate groundwater flow direction varied over time, resulting in limited net movement of groundwater across the site. The report indicated that the potential for migration of dissolved-phase constituents away from the former USTs was limited given site groundwater flow conditions.

EEI continued monitoring activities for the 2005-2006 monitoring period. As with previous programs, quarterly gauging and semi-annual groundwater sampling was conducted. The program began with gauging events in June 2005, September 2005, December 2005, and January 2006, and groundwater sampling events in June and December 2005. Results were summarized in an annual groundwater monitoring report dated January 6, 2006. Product thicknesses were again measured in MW19 in June and December 2005 at 0.45 ft and 0.02 ft, respectively. There were no detections of VOCs or SVOCs during the monitoring period above groundwater standards; however, C₉-C₂₂ Aromatics concentrations were non-compliant. Surficial aquifer groundwater flow continued its variability.

The 2006-2007 monitoring period was overseen by Sovereign. Monitoring events included quarterly gauging at the 22 site monitoring wells, with events conducted in August 2006, November 2006, January 2007, and April 2007. Semi-annual groundwater sampling was also conducted at the site in August 2006 and January 2007 and included monitoring wells MW05, MW07 MW18, MW21, and MW22.

4.0 MONITORING PERIOD ACTIVITIES – 2006-2007

The field program for the 2006-2007 monitoring period consisted of quarterly gauging of 22 monitoring wells and semi annual groundwater sampling of six monitoring wells. Activities were conducted in accordance with NCDENR guidance. Soil excavation activities were also conducted at the site in the vicinity of monitoring well MW19 by Osage of Virginia, Inc. (Osage). For reporting purposes, data from their field event has been incorporated into this annual monitoring report.

One additional item of note concerning monitoring well depths was discovered this period. Sovereign conducted a survey of monitoring well at the site in 2007, which entailed remeasuring well depth and surveying the wells. It was noted that several of the well pairs seemed to have been reversed. For example, original well construction records indicate that the odd numbered monitoring wells from MW01 through MW15 were each screened from about five feet bgs to 15 feet bgs, and the even wells MW02 through MW14 were screened from approximately 20 feet to 30 feet bgs. Sovereign personnel noted that well pair depths for MW03/04, MW05/06, MW09/10 and MW13/14 were opposite of original conditions. At some point in the past, the wells were probably mislabeled. Current maps and data reflect the 2007 surveyed information. Measured well depths are summarized in Table 1.

4.1 WELL GAUGING

All 22 groundwater monitoring wells were included in gauging activities at the site. The monitoring wells were gauged on August 15, 2006; November 2, 2006; January 23, 2007; and April 6, 2007 using an interface probe capable of measuring the depth to water and depth to product (if present) to the nearest 0.01 foot. Gauging data for each well was recorded and is summarized in Tables 2 and 3.

Measurable free product was observed in only monitoring well MW19 at the site in the amounts of 0.12 ft, 0.24 ft, 0.12 ft, and 0.45 ft during the August 2006, November 2006, January 2007, and April 2007 events, respectively. Free product was recovered via hand bailing and processed through the groundwater treatment plant located at Lot 203 on MCB Camp Lejeune. Groundwater elevation data for this well was corrected due to the presence of the free product. The elevation was corrected by adding 80 percent of the product thickness to the calculated groundwater elevation.

Based on the groundwater elevations and contours shown in Figures 3 - 6, each figure shows groundwater entering the site from the northeast, northwest, and southern directions. These directions are consistent with information from previous reports.

4.2 GROUNDWATER SAMPLING

The two groundwater sampling events were conducted in August 2006 and January 2007. For these sampling events, groundwater was collected from six (6) groundwater monitoring wells using low-flow purging and sampling methods; those were monitoring wells MW05, MW07, MW18, MW20, MW21, and MW22.

One duplicate sample was collected during each field event. Samples were collected after water quality indicator parameters (pH, temperature, conductivity, oxidation-reduction potential, dissolved oxygen and turbidity) were recorded and had stabilized and at least one well volume had been purged. Groundwater was transferred from each well to the laboratory-prepared sample bottles via the polyethylene discharge tubing. The samples were kept in an iced cooler and sent under chain of custody to SGS/Paradigm Analytical Laboratories Inc. (SGS) in Wilmington, NC (NC Certification Number 481). At SGS, the samples were analyzed for VOCs using EPA Method 602 plus xylenes, SVOCs via EPA Method 625 plus the 10 largest non-target peaks (TICs), and VPH and EPH via the MADEP Methods.

The laboratory report and chain of custody documentation for the August 2006 and January 2007 sampling events are included in Appendix B, and copies of the field measurements are included in Appendix C. The analytical data for the groundwater sampling events are summarized in Tables 4-7 and depicted in Figures 7-9.

EPA Method 602

There were no VOCs detected in groundwater at the site above the NCGWQSs. Ethylbenzene, toluene, and total xylenes were detected at concentrations well below the groundwater quality standards. Monitoring wells MW05, MW18, MW20, MW21, and MW22 contained ethylbenzene during only the January 2007 event. Toluene was detected in each well sampled. Toluene detections were similarly confined to the January 2007 sampling event with the exception of MW22, which exhibited compliant toluene concentrations during both sampling events. Total xylenes were found in wells MW21 and MW22 during the January 2007 event. Again, there were no detections above the applicable 2L standards.

EPA Method 625

Laboratory analysis detected five SVOCs in the groundwater samples from the site. Acenaphthene was detected in monitoring wells MW18 and MW20 during both the August 2006 and January 2007 sampling events, and MW21 and MW22 exhibited acenaphthene in only January 2007. All detected concentrations were below the NCGWQS of 80 µg/L. Diphenylamine, which does not have an established NCGWQS, was detected one time during the monitoring period in one well, MW18. An estimated concentration of 1.70 µg/L was detected in August 2006. Diphenylamine is used as a fungicide and is an aromatic amine with the structural formula $(C_6H_5)_2NH$ and molecular formula $C_{12}H_{11}N$. A standards comparison can be made with the C_9 - C_{22} Aromatic fraction class since both structures are based on the aromatic benzene ring. When compared to the C_9 - C_{22} Aromatic NCGWQS of 210 µg/L, the detected diphenylamine concentration is well below the 2L standard. Monitoring wells MW18, MW20, MW21, and MW22 exhibited compliant fluorene concentrations during each groundwater sampling event. None of the detected concentrations were above the groundwater quality standard of 280 µg/L. Phenanthrene and naphthalene were also detected in wells MW18, MW21, and MW22; however, none of the detections exceeded the applicable NCGWQSs of 210 µg/L and 21 µg/L.

Although several Tentatively Identified Compounds (TICs) were present, not all TICs are identified and quantitated using individual standards. Additionally, many TICs are reported as compound isomers or unknown because they cannot be identified as specific compounds with match probabilities. When specific compounds were identified, the detected concentration was compared to the NCGWS, if one had been established. For those specific compounds identified during the 2006-2007 sampling events and having an established NCGWQS, no compound was detected above the NCGWQS. Due to the uncertainties associated with TICs, it is impossible to draw any conclusions based upon their presence.

MADEP Methods

Only C_9 - C_{18} Aliphatics and C_9 - C_{22} Aromatics were detected in groundwater samples obtained from the site. Monitoring wells MW18, MW21, and MW22 exhibited compliant C_9 - C_{18} Aliphatics concentrations in August 2006 and January 2007. C_9 - C_{22} Aromatics were reported at concentrations of 520 µg/L and 320 µg/L in MW18 in August 2006 and January 2007, respectively. Monitoring well MW21 contained C_9 - C_{22} Aromatics at 410 µg/L and 550 µg/L, and MW22 contained a concentration of <490 µg/L in August 2006. These concentrations are all above the NCGWQS of 210 µg/L.

Field duplicate samples were collected and laboratory-prepared trip blanks were analyzed for quality control. The trip blanks were analyzed for VOCs only. No VOCs were detected in the trip blanks, and the duplicate sample results were comparable to its counterpart.

Other QC samples were run by the lab as required by the analytical methods. These QC samples include laboratory control spikes, method blanks, prep blanks, etc. The data was validated by reviewing sample holding times, analytical data, internal standards, calibrations, etc. The validation indicated that the data are usable for project purposes.

4.3 SOIL EXCAVATION ACTIVITIES

Free product has been historically documented in MW19 since 1999. In an effort to remove the free phase product, MCB Camp Lejeune abandoned MW19 and conducted a soil excavation of the monitoring well area and former (M-235) UST area from April 30 through May 2, 2007. Osage of Virginia (Osage) removed approximately 41.24 tons of contaminated soil from the subsurface. The excavation was adjacent to and included MW19 and measured approximately 11 feet wide, 28 feet long, and seven feet deep. Figures 10 - 12 show the approximate boundaries of the excavation, and Appendix D contains excavation documentation (photographs and soil disposal manifests). Groundwater was not encountered during excavation activities; therefore, no groundwater samples were obtained.

Osage personnel obtained confirmation soil samples from the sidewalls at the conclusion of the MW19 area excavation. Samples were taken from the 6-7 feet depth interval and analyzed for volatile organic compounds (VOCs, EPA Method 8260), semi-VOCs (EPA Method 8270), and Massachusetts Department of Environmental Protection (MADEP) constituents (MADEP Methods). Tables 8-11 and Figures 10-12 summarize laboratory analytical results from the sampling event, and the following paragraphs briefly discuss the findings. The laboratory analytical report can be found in Appendix B. Osage personnel mixed in one five gallon bucket of ORC[®] powder to the open excavation along with the clean backfill. The excavation was then backfilled to grade and then graded and sodded in order to restore the site to its original condition. Monitoring well MW19 was later reinstalled on June 21, 2007 in its original location and renamed as monitoring well MW23.

EPA Method 8260

A total of 11 VOCs were detected in the soil samples. Ten of the 11 contaminants were detected at concentrations less than their corresponding soil to groundwater (STGW) MSCCs. Those ten compounds were acetone, n-butylbenzene, sec-butylbenzene, tert-butylbenzene, ethylbenzene, isopropylbenzene, naphthalene, n-propyl benzene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene. Note that soil sample 001 exhibited the highest naphthalene concentration, 0.575 mg/kg, which is just slightly below the STGW MSCC of 0.58 mg/kg. The residential MSCC for naphthalene is 0.139 mg/kg. The final compound that was detected, 4-isopropyltoluene, does not have established MSCCs; therefore, any detection is considered noncompliant. The compound 4-isopropyltoluene (synonymous with p-isopropyltoluene and p-cymene; chemical formula C₁₀H₁₄) is a naturally occurring aromatic organic compound. This compound was detected in each soil sample, 001, 002, 003, and 004, at concentrations of 0.372 mg/kg, 0.0612 mg/kg, 0.0475J mg/kg, and 0.656 mg/kg, respectively. When compared to the C₉-C₂₂ Aromatic MSCCs of 34 mg/kg (STGW) and 469 mg/kg (residential), the detected 4-isopropyltoluene concentrations are all well below both values.

EPA Method 8270

The soil samples from the site also exhibited semi-volatile organic compounds. A total of six compounds were detected. Concentrations were all well below the residential MSCCs. Acenaphthene, dibenzofuran, fluorene, and phenanthrene were detected in each

of the soil samples at concentrations which were one and two orders of magnitude below the STGW MSCCs. The compound 2-methylnaphthalene was detected in samples 001 and 004 above the STGW MSCC, but below the residential MSCC. Concentrations were 5.88 mg/kg and 1.98 mg/kg, respectively. Soil samples 002 and 003 contained 2-methylnaphthalene at concentrations less than the STGW MSCC of 1.7 mg/kg. Soil sample 001 exhibited an estimated naphthalene concentration of 0.583 mg/kg as compared to the STGW MSCC of 0.58 mg/kg. The compound was not detected in soil sample 002 and 003 and was detected at an estimated concentration of 0.251 mg/kg in soil sample 004 (less than the STGW MSCC).

MADEP Methods

MADEP constituents were also detected in the soils around MW19. Laboratory analysis detected C₅-C₈ Aliphatics concentrations in soil sample 001 (12 mg/kg), which is below the STGW (lowest) MSCC of 72 mg/kg. All of the soil samples, 001, 002, 003, and 004, contained C₉-C₁₈ Aliphatics at concentrations of 710 mg/kg, 172 mg/kg, 504 mg/kg, and 425 mg/kg, respectively. Again, none of the concentrations were above the STGW or residential MSCCs of 3,300 mg/kg and 9,386 mg/kg. C₁₉-C₃₆ Aliphatics were also detected in each of the soil samples at concentrations well below the residential MSCC of 93,860 mg/kg. C₉-C₂₂ Aromatics concentrations were also detected at the site in soil samples 001, 002, 003, and 04 at concentrations of 368 mg/kg, 69 mg/kg, 221 mg/kg, and 207 mg/kg, respectively. The STGW and residential MSCCs for C₉-C₂₂ Aromatics are 34 mg/kg and 469 mg/kg. All of the detections are above the STGW MSCC, but below the residential MSCC.

5.0 RECEPTOR SURVEY

Sovereign reassessed site conditions and completed an updated risk classification form located in Appendix E. The form indicated the site qualifies as an intermediate risk site with residential land use. There are no water supply wells in the area.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on fieldwork and laboratory analytical data gathered during the 2006-2007 monitoring period, the following conclusions are presented.

1. Previous investigations indicate petroleum constituent concentrations in vadose zone soils at the site have not been fully investigated as of the preparation of this report.
2. Shallow surficial groundwater aquifer flow varies at the site with northeastern, northwestern, and southern components.
3. Free product was observed in monitoring well MW-19 during the monitoring period. The well, associated with the former UST located at M-235, was abandoned and the area excavated from April 30 to May 2, 2007.

4. Soil samples from the MW19 soil excavation indicate that contaminants are present above the STGW MSCCs, but below the residential and industrial/commercial MSCCs. The confirmation soil samples also exhibited 4-isopropyltoluene, which does not have established MSCCs.

5. Groundwater sampling results for the 2006-2007 monitoring period show there were no VOCs detected in groundwater at the site above the NCGWQSs. Diphenylamine, which does not have an established NCGWQS, was detected one time (August 2006) during the monitoring period in one well, MW18, at an estimated concentration of 1.70 µg/L. Noncompliant C₉-C₂₂ Aromatics concentrations were also detected during the monitoring period in monitoring wells MW18, MW21, and MW22.

In order to move toward the eventual goal of No Further Action status at the site, MCB Camp Lejeune will have to demonstrate that soils in the former UST basins do not contain contamination above applicable MSCCs. Since the site is currently ranked as an intermediate site due to the presence of free product in MW19, soils must meet the lower of the residential or STGW MSCCs. Soil sampling in the vicinity of the former UST basins should be performed, with the exception of the M-235 basin.

To monitor free product and groundwater conditions, Sovereign also recommends continuing gauging and sampling of existing monitoring program wells on a quarterly and semi-annual basis, respectively. Recurrence of free product should be monitored in MW19, and product recovery should be conducted as indicated by the gauging data.

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TABLES

TABLE 1
WELL CONSTRUCTION INFORMATION
 Incident Number and Name: 9593, Buildings M-232-236

Monitoring Well	Measured Depth to Bottom from TOC (feet)	Top of Casing Elevation (feet)
USTM-232-236-MW01	17.44	13.99
USTM-232-236-MW02	31.72	13.65
USTM-232-236-MW03	32.47	16.27
USTM-232-236-MW04	17.49	16.11
USTM-232-236-MW05	32.48	12.93
USTM-232-236-MW06	17.23	12.76
USTM-232-236-MW07	17.42	12.58
USTM-232-236-MW08	32.35	12.60
USTM-232-236-MW09	32.25	14.24
USTM-232-236-MW10	17.20	13.70
USTM-232-236-MW11	16.85	10.65
USTM-232-236-MW12	31.70	10.67
USTM-232-236-MW13	32.52	15.75
USTM-232-236-MW14	17.50	15.84
USTM-232-236-MW15	16.81	14.83
USTM-232-236-MW16	16.58	14.88
USTM-232-236-MW17	17.15	14.16
USTM-232-236-MW18	14.70	10.29
USTM-232-236-MW19	14.62	11.15
USTM-232-236-MW20	14.70	11.03
USTM-232-236-MW21	14.51	11.37
USTM-232-236-MW22	14.50	11.31

TOC Elevations taken from January 2007 Sovereign Well Survey Database.
 Note – MW19 abandoned in May 2007 due to soil excavation; replacement well installed June 2007 and named as MW23 – installation data was not available as of the preparation of this report.

TABLE 2
GROUNDWATER ELEVATION DATA
2006-2007

Incident Number and Name: 9593, Buildings M-232-236

Monitoring Well	Top of Casing Elevation (feet)	Groundwater Elevation (feet)			
		8/15/2006	11/2/2006	1/23/2007	4/6/2007
USTM-232-236-MW01	13.99	4.07	4.11	6.87	3.73
USTM-232-236-MW02	13.65	2.58	2.55	3.77	2.47
USTM-232-236-MW03	16.27	2.66	2.62	3.42	2.55
USTM-232-236-MW04	16.11	2.91	2.91	5.24	2.64
USTM-232-236-MW05	12.93	2.73	2.60	3.80	2.53
USTM-232-236-MW06	12.76	3.96	4.04	7.20	4.26
USTM-232-236-MW07	12.58	4.33	4.17	7.73	4.87
USTM-232-236-MW08	12.60	2.21	2.24	3.45	2.17
USTM-232-236-MW09	14.24	2.22	2.19	3.31	2.11
USTM-232-236-MW10	13.70	2.40	2.26	4.05	2.29
USTM-232-236-MW11	10.65	2.35	4.25	7.50	1.87
USTM-232-236-MW12	10.67	1.91	1.95	2.72	-2.57
USTM-232-236-MW13	15.75	3.41	2.95	4.22	2.90
USTM-232-236-MW14	15.84	3.62	3.53	5.34	3.37
USTM-232-236-MW15	14.83	2.97	2.93	4.39	2.80
USTM-232-236-MW16	14.88	2.58	2.55	4.18	2.48
USTM-232-236-MW17	14.16	3.08	3.91	8.84	3.11
USTM-232-236-MW18	10.29	1.76	1.71	2.87	1.64
USTM-232-236-MW19 ¹	11.15	2.67	2.72	4.23	2.71
USTM-232-236-MW20	11.03	2.65	2.63	4.05	2.55
USTM-232-236-MW21	11.37	3.11	3.07	5.09	2.94
USTM-232-236-MW22	11.31	3.27	3.31	4.93	2.89

¹Note – Groundwater elevation corrected for the presence of free product by adding 80 percent of the product thickness to the calculated groundwater elevation. The product thickness is multiplied by 80 percent using the assumption that the specific gravity of the product is 0.8.

TABLE 3
PRODUCT THICKNESS DATA
2006-2007

Incident Number and Name: 9593, Buildings M-232-236

Monitoring Well ID	Top of Casing Elevation (feet)	Product Thickness (feet)			
		8/15/2006	11/02/2006	1/23/2007	4/06/2007
USTM-232-236-MW01	13.99	--	--	--	--
USTM-232-236-MW02	13.65	--	--	--	--
USTM-232-236-MW03	16.27	--	--	--	--
USTM-232-236-MW04	16.11	--	--	--	--
USTM-232-236-MW05	12.93	--	--	--	--
USTM-232-236-MW06	12.76	--	--	--	--
USTM-232-236-MW07	12.58	--	--	--	--
USTM-232-236-MW08	12.60	--	--	--	--
USTM-232-236-MW09	14.24	--	--	--	--
USTM-232-236-MW10	13.70	--	--	--	--
USTM-232-236-MW11	10.65	--	--	--	--
USTM-232-236-MW12	10.67	--	--	--	--
USTM-232-236-MW13	15.75	--	--	--	--
USTM-232-236-MW14	15.84	--	--	--	--
USTM-232-236-MW015	14.83	--	--	--	--
USTM-232-236-MW16	14.88	--	--	--	--
USTM-232-236-MW17	14.16	--	--	--	--
USTM-232-236-MW18	10.29	--	--	--	--
USTM-232-236-MW19	11.15	0.12	0.24	0.12	0.45
USTM-232-236-MW20	11.03	--	--	--	--
USTM-232-236-MW21	11.37	--	--	--	--
USTM-232-236-MW22	11.31	--	--	--	--

-- -- No measurable free product present.

TABLE 4
SUMMARY OF GROUNDWATER SAMPLING RESULTS
 2006-2007
 Incident Number and Name: 9593, Buildings M-232-236
Analytical Method: EPA Method 602

Contaminant of Concern			Benzene	Diisopropyl ether (DIPE)	Ethylbenzene	Methyl-tert butyl ether (MTBE)	Toluene	Total Xylenes
Well ID	Sample ID	Date Collected						
USTM-232-236-MW05	USTM-232-236-MW05	8/17/2006 1/23/2007	<1.00 <1.00	<1.00 <1.00	<1.00 0.185J	<2.00 <2.00	<1.00 1.28	<2.00 <2.00
USTM-232-236-MW07	USTM-232-236-MW07	8/17/2006 1/23/2007	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<2.00 <2.00	<1.00 0.537J	<2.00 <2.00
USTM-232-236-MW18	USTM-232-236-MW18	8/16/2006 1/23/2007	<1.00 <1.00	<1.00 <1.00	<1.00 0.333J	<2.00 <2.00	<1.00 0.607J	<2.00 <2.00
USTM-232-236-MW20	USTM-232-236-MW20	8/16/2006 1/23/2007	<1.00 <1.00	<1.00 <1.00	<1.00 0.365J	<2.00 <2.00	<1.00 0.479J	<2.00 <2.00
USTM-232-236-MW21	USTM-232-236-MW21	8/16/2006 1/23/2007	<1.00 <1.00	<1.00 <1.00	<1.00 1.09	<2.00 <2.00	<1.00 0.965J	<2.00 1.02J
USTM-232-236-MW22	USTM-232-236-MW22	8/16/2006 1/23/2007	<1.00 <1.00	<1.00 <1.00	<1.00 0.580J	<2.00 <2.00	0.311 0.867J	<2.00 0.476J
USTM-232-236-Duplicate	USTM-232-236-Duplicate	8/17/2006 1/23/2007	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<2.00 <2.00	<1.00 0.544J	<2.00 <2.00
2L Standard (µg/l)			1	70	550	200	1,000	530
GCL (µg/l)			5,000	70,000	84,500	200,000	257,500	87,500

- Duplicate sample taken from MW07 in August/September 2006 and January 2007.
- All results reported in µg/l
- µg/L =micrograms per liter
- GCL = gross contamination level
- BQL = Below Quantitation Limit
- J = Estimated concentration.
- **BOLD** = detected concentration.

TABLE 5
SUMMARY OF GROUNDWATER SAMPLING RESULTS
 2006-2007
 Incident Number and Name: 9593, Buildings M-232-236
 Analytical Method: EPA Method 625 Plus 10 TICs

Contaminant of Concern			Acenaphthene	Diphenylamine	Fluorene	Naphthalene	Phenanthrene	Tentatively Identified Compounds (TICs)
Well ID	Sample ID	Date Collected						
USTM-232-236-MW05	USTM-232-236-MW05	8/17/2006 1/23/2007	<10.0 <10.0	<10.0 <10.0	<10.0 <10.0	<10.0 <10.0	<10.0 <10.0	185.37 193
USTM-232-236-MW07	USTM-232-236-MW07	8/17/2006 1/23/2007	<10.0 <10.0	<10.0 <10.0	<10.0 <10.0	<10.0 <10.0	<10.0 <10.0	253.53 182
USTM-232-236-MW18	USTM-232-236-MW18	8/16/2006 1/23/2007	7.60J 9.30J	1.70J <10.0	10.8 10.3	<10.0 1.60J	9.80J 8.20J	371.8 362.6
USTM-232-236-MW20	USTM-232-236-MW20	8/16/2006 1/23/2007	1.70J 1.40J	<10.0 <10.0	1.70J 1.60J	<10.0 <10.0	<10.0 <10.0	192.35 196.36
USTM-232-236-MW21	USTM-232-236-MW21	8/16/2006 1/23/2007	<10.0 5.20J	<10.0 <10.0	6.50J 6.60J	2.80J 4.40J	<10.0 6.70J	134.07 381.3
USTM-232-236-MW22	USTM-232-236-MW22	8/16/2006 1/23/2007	<10.0 3.00J	<10.0 <10.0	7.10J 3.40J	4.80J 4.40J	<10.0 3.00J	155.11 310.64
USTM-232-236-Duplicate	USTM-232-236-Duplicate	8/17/2006 1/23/2007	<10.0 <10.0	<10.0 <10.0	<10.0 <10.0	<10.0 <10.0	<10.0 <10.0	40.41 191
2L Standard (µg/l)			80	NE	280	21	210	NA
GCL (µg/l)			2,120	NE	950	15,500	410	NA

- Duplicate sample taken from MW07 in August/September 2006 and January 2007.
- All results reported in µg/L.
- µg/L = microgram per liter
- GCL = Gross contaminant level
- BQL = Below quantitation limit
- J = Estimated concentration
- NA = Not Applicable
- **BOLD** = Detected concentration.
- **BOLD** and shaded = Detected concentration exceeds 2L standard.

TABLE 6
SUMMARY OF GROUNDWATER SAMPLING RESULTS
 2006-2007
 Incident Number and Name: 9593, Buildings M-232-236
Analytical Method: MADEP Method VPH/EPH

Contaminant of Concern			C ₅ -C ₈ Aliphatics	C ₉ -C ₁₂ Aliphatics	C ₉ -C ₁₀ Aromatics	C ₉ -C ₁₈ Aliphatics	C ₁₉ -C ₃₆ Aliphatics	C ₁₁ -C ₂₂ Aromatics
Well ID	Sample ID	Date Collected						
USTM-232-236-MW05	USTM-232-236-MW05	8/17/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<100 <100	<100 <100	<100 <100	<100 <100	<100 <100
USTM-232-236-MW07	USTM-232-236-MW07	8/17/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<100 <100	<100 <100	<100 <100	<100 <100	<100 <100
USTM-232-236-MW18	USTM-232-236-MW18	8/16/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	230 250	130 120	<100 <100	<100 <100	390 200
USTM-232-236-MW20	USTM-232-236-MW20	8/16/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<100 <100	<100 <100	<100 <100	<100 <100	<100 <100
USTM-232-236-MW21	USTM-232-236-MW21	8/16/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	270 300	150 160	<100 <100	<100 <100	260 390
USTM-232-236-MW22	USTM-232-236-MW22	8/16/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	150 170	<100 <100	<100 <100	<100 <100	390 <100
USTM-232-236-Duplicate	USTM-232-236-Duplicate	8/17/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<100 <100	<100 <100	<100 <100	<100 <100	<100 <100

- Duplicate sample from MW07 in August/September 2006 and January 2007.
- All results reported in µg/l
- µg/L =micrograms per liter
- GCL = gross contamination level; Not Established for MADEP constituents.
- **BOLD** = Detected concentration.

¹Samples collected in August 2006 for VPH analyses were extracted and analyzed out of holding time. They were recollected on September 19, 2006 and rerun within holding time on September 20, 2006. See laboratory reports for additional information.

TABLE 7
SUMMARY OF GROUNDWATER SAMPLING RESULTS
 2006-2007

Incident Number and Name: 9593, Buildings M-232-236

Analytical Method: MADEP Method VPH/EPH as compared to NCGWQS

Contaminant of Concern →			C ₅ -C ₈ Aliphatics	C ₉ -C ₁₈ Aliphatics	C ₉ -C ₂₂ Aromatics	C ₁₉ -C ₃₆ Aliphatics
Well ID	Sample ID	Date Collected				
USTM-232-236-MW05	USTM-232-236-MW05	8/17/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<200 <200	<200 <200	<100 <100
USTM-232-236-MW07	USTM-232-236-MW07	8/17/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<200 <200	<200 <200	<100 <100
USTM-232-236-MW18	USTM-232-236-MW18	8/16/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<330 <350	520 320	<100 <100
USTM-232-236-MW20	USTM-232-236-MW20	8/16/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<200 <200	<200 <200	<100 <100
USTM-232-236-MW21	USTM-232-236-MW21	8/16/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<370 <400	410 550	<100 <100
USTM-232-236-MW22	USTM-232-236-MW22	8/16/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<250 <270	<490 <200	<100 <100
USTM-232-236-Duplicate	USTM-232-236-Duplicate	8/17/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<200 <200	<200 <200	<100 <100
2L Standard (µg/l)			420	4,200	210	42,000

- Duplicate sample from MW07 in August/September 2006 and January 2007.
- All results reported in µg/l
- µg/L = micrograms per liter
- GCL = gross contamination level; Not Established for MADEP constituents.
- **BOLD** = Detected concentration
- **BOLD** and shaded = Detected concentration exceeds 2L Standard

¹Samples collected in August 2006 for VPH analyses were extracted and analyzed out of holding time. They were recollected on September 19, 2006 and rerun within holding time on September 20, 2006. See laboratory reports for additional information.

TABLE 8
SUMMARY OF SOIL SAMPLING RESULTS
 2006-2007

Incident Number and Name: 9593, Buildings M-232-236

Analytical Method: EPA Method 8260

Sample ID	Contaminant of Concern →		Acetone	Benzene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Diisopropyl ether (DIPE)	Ethylbenzene	Isopropylbenzene	4-Isopropylbenzene	Methyl-tert-Butyl-ether (MTBE)	Naphthalene	n-Propyl benzene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Total Xylenes	All Other Compounds
	Date Collected	Sample Depth (ft BGS)																	
USTM235-S001	5/2/2007	6'8"	BQL	BQL	0.419	0.635	0.0316J	BQL	0.0411J	0.134	0.372	BQL	0.575	0.286	BQL	0.775	0.0969J	BQL	BQL
USTM235-S002	5/2/2007	7'	0.0126J	BQL	BQL	0.108	0.0106	BQL	0.0215	0.0493	0.0612	BQL	0.139	BQL	BQL	0.0124	0.00533J	BQL	BQL
USTM235-S003	5/2/2007	6'10"	BQL	BQL	0.289	0.353	0.0180J	BQL	BQL	0.0394J	0.0475J	BQL	BQL	0.073	BQL	BQL	BQL	BQL	BQL
USTM235-S004	5/2/2007	6'8"	BQL	BQL	0.107	0.0849	BQL	BQL	0.0628	0.073	0.0656	BQL	0.307	0.0736	BQL	0.0645	BQL	BQL	BQL
Soil to groundwater MSCC (mg/kg)			2.8	0.0056	4.3	3.3	3.4	0.37	4.6	1.7	NE	0.92	0.58	1.7	7.3	7.5	7.3	5	Varies
Residential MSCC (mg/kg)			1,564	18	626	626	626	156	1,560	1,564	NE	213	313	626	3,200	782	782	3,129	Varies
Industrial/Commercial MSCC (mg/kg)			40,880	164	16,350	16,350	16,350	4,088	40,000	40,880	NE	1,908	8,176	16,350	82,000	20,440	20,440	81,760	Varies

- All results in mg/kg
- mg/kg = milligrams per kilogram
- MSCC = Maximum Soil Contaminant Concentration
- ND = Not Detected
- NE = Not Established
- J = indicates an estimated value
- BOLD** = detected concentration

TABLE 9
SUMMARY OF SOIL SAMPLING RESULTS
 2006-2007

Incident Number and Name: 9593, Buildings M-232-236

Analytical Method: EPA Method 8270

Sample ID	Contaminant of Concern →		Acenaphthene	Dibenzofuran	Fluorene	2-Methylnaphthalene	Naphthalene	Phenanthrene	All Other Compounds
	Date Collected	Sample Depth (ft BGS)							
USTM235-S001	5/2/2007	6'8"	0.543 J	0.814	1.41	5.88	0.583 J	1.89	BQL
USTM235-S002	5/2/2007	7'	0.148 J	0.239 J	0.409 J	1.37	BQL	0.687	BQL
USTM235-S003	5/2/2007	6'10"	0.180 J	0.260 J	0.520	0.145 J	BQL	0.953	BQL
USTM235-S004	5/2/2007	6'8"	0.0915 J	0.143 J	0.274 J	1.98	0.251 J	0.457	BQL
Soil to groundwater MSCC (mg/kg)			8.2	4.7	44	1.7	0.58	60	Varies
Residential MSCC (mg/kg)			940	62	620	63	313	469	Varies
Industrial/Commercial MSCC (mg/kg)			24,000	1635	16,400	1,635	8,176	12,264	Varies

- All results in mg/kg
- mg/kg = milligrams per kilogram
- MSCC = Maximum Soil Contaminant Concentration
- ND = Not Detected
- NE = Not Established
- J = indicates an estimated value
- **BOLD** = detected concentration

TABLE 10
SUMMARY OF SOIL SAMPLING RESULTS
 2006-2007

Incident Number and Name: 9593, Buildings M-232-236

Analytical Method: MADEP Method VPH/EPH

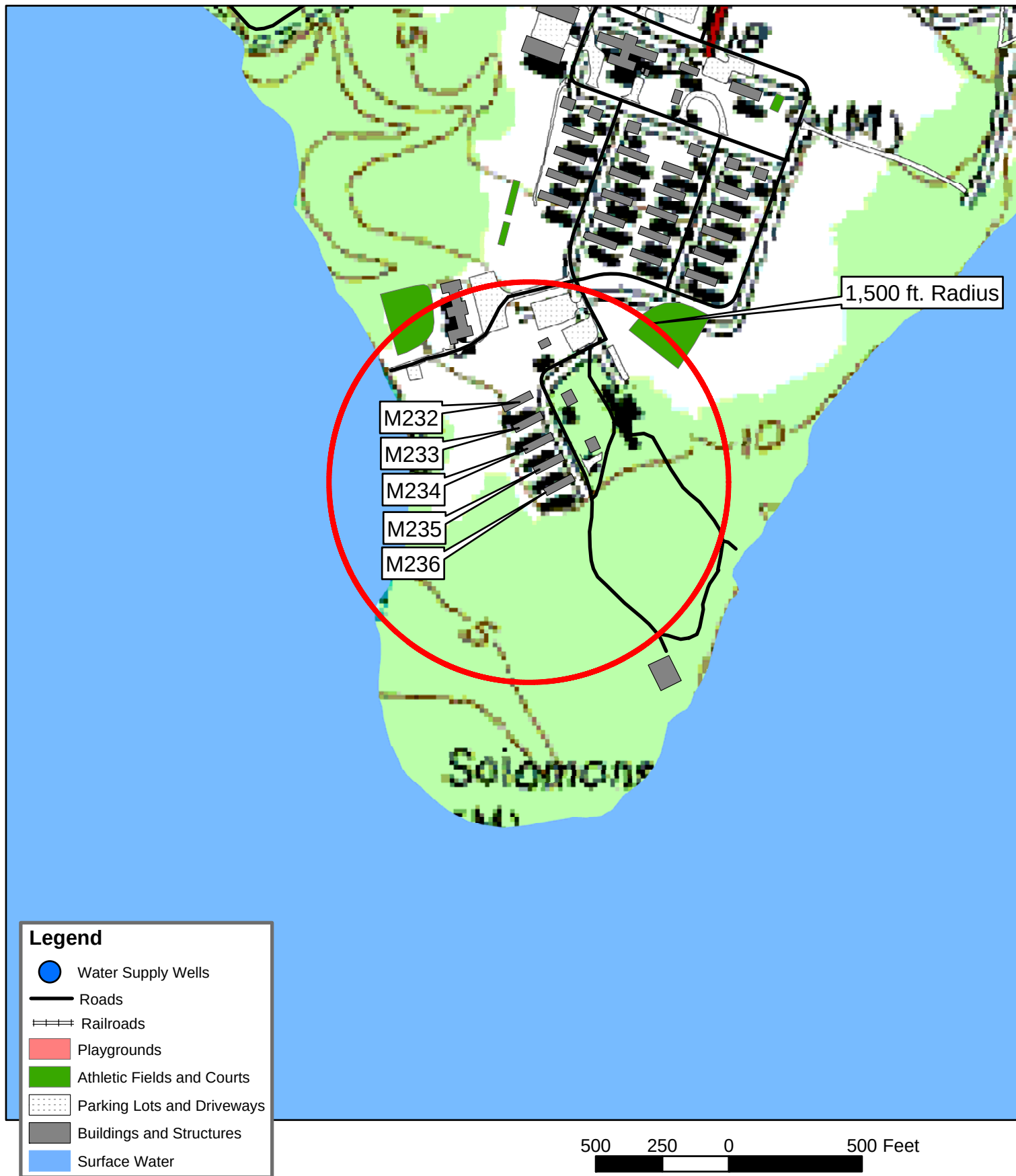
Contaminant of Concern →			C ₅ -C ₈ Aliphatics	C ₉ -C ₁₂ Aliphatics	C ₉ -C ₁₀ Aromatics	C ₉ -C ₁₈ Aliphatics	C ₁₉ -C ₃₆ Aliphatics	C ₁₁ -C ₂₂ Aromatics
Sample ID	Date Collected	Sample Depth (ft BGS)						
USTM235-S001	5/2/2007	6'8"	12	110	68	600	39	300
USTM235-S002	5/2/2007	7'	<10	42	19	130	10	50
USTM235-S003	5/2/2007	6'10"	<10	54	31	450	34	190
USTM235-S004	5/2/2007	6'8"	<10	65	37	360	36	170

TABLE 11
Analytical Method: MADEP Method VPH/EPH as compared to NCDENR MSCCs

Contaminant of Concern →			C ₅ -C ₈ Aliphatics	C ₉ -C ₁₈ Aliphatics	C ₁₉ -C ₃₆ Aliphatics	C ₉ -C ₂₂ Aromatics
Sample ID	Date Collected	Sample Depth (ft BGS)				
USTM235-S001	5/2/2007	6'8"	12	710	39	368
USTM235-S002	5/2/2007	7'	<10	172	10	69
USTM235-S003	5/2/2007	6'10"	<10	504	34	221
USTM235-S004	5/2/2007	6'8"	<10	425	36	207
Soil to Groundwater MSCC (mg/kg)			72	3,300	##	34
Residential MSCC (mg/kg)			939	9,386	93,860	469
Industrial/Commercial MSCC (mg/kg)			24,528	245,280	#	12,264

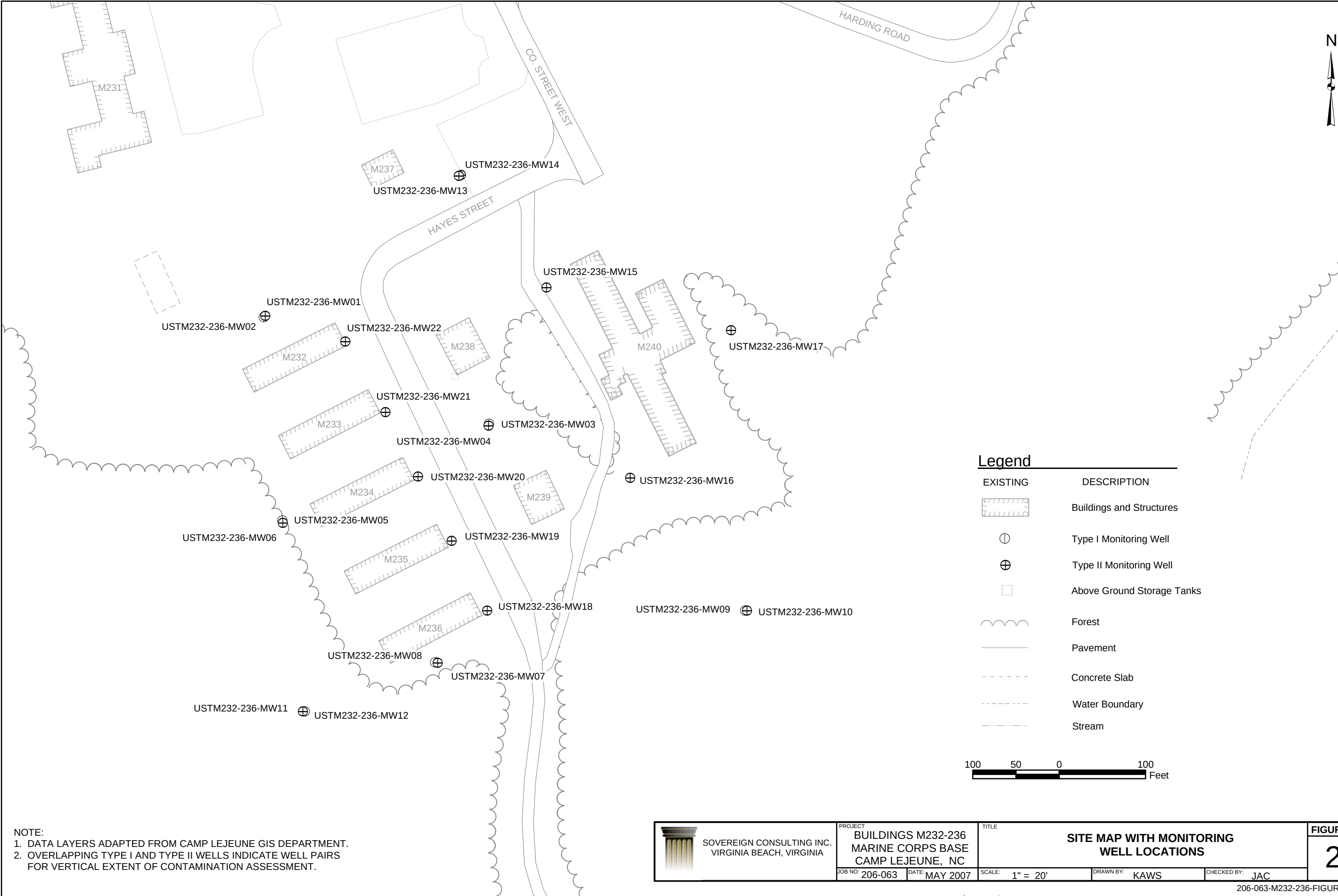
- All results reported in mg/kg
- mg/kg = milligrams per kilogram
- MSCC = Maximum Soil Contaminant Concentration
- <# = less than the reporting limit
- # = Health Based Level >100%
- ## = Considered immobile
- **BOLD** = detected concentration

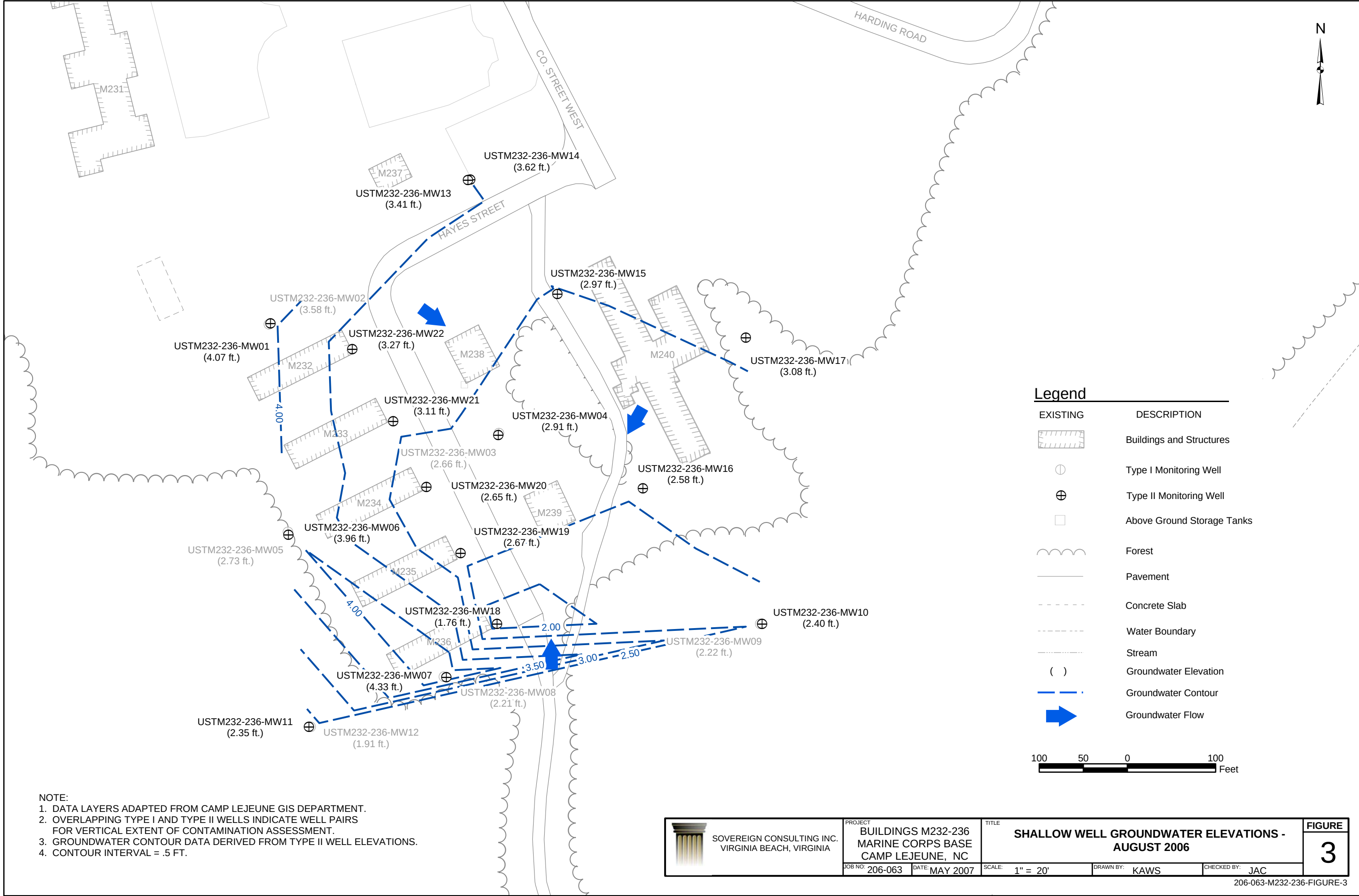
FIGURES

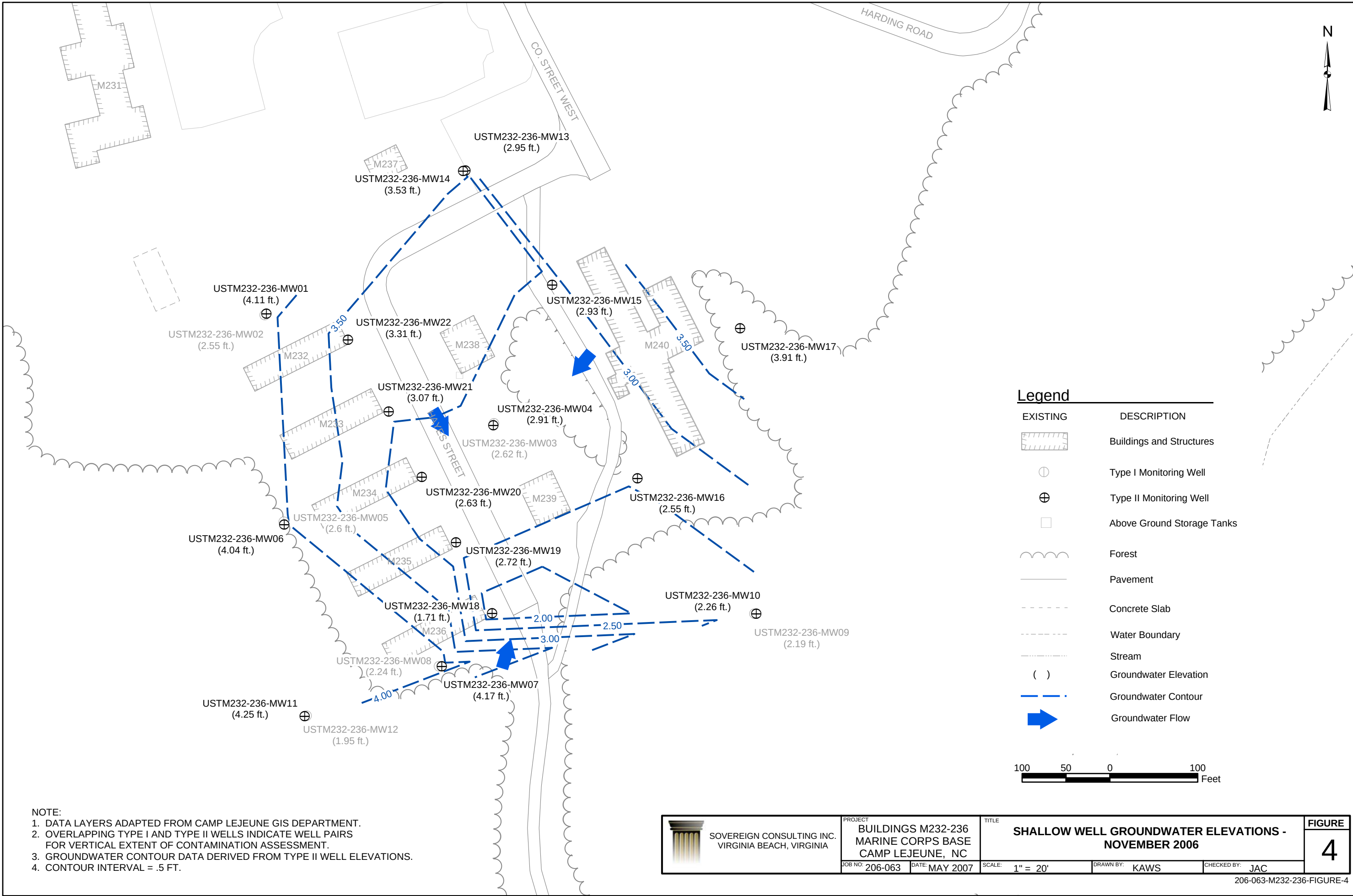


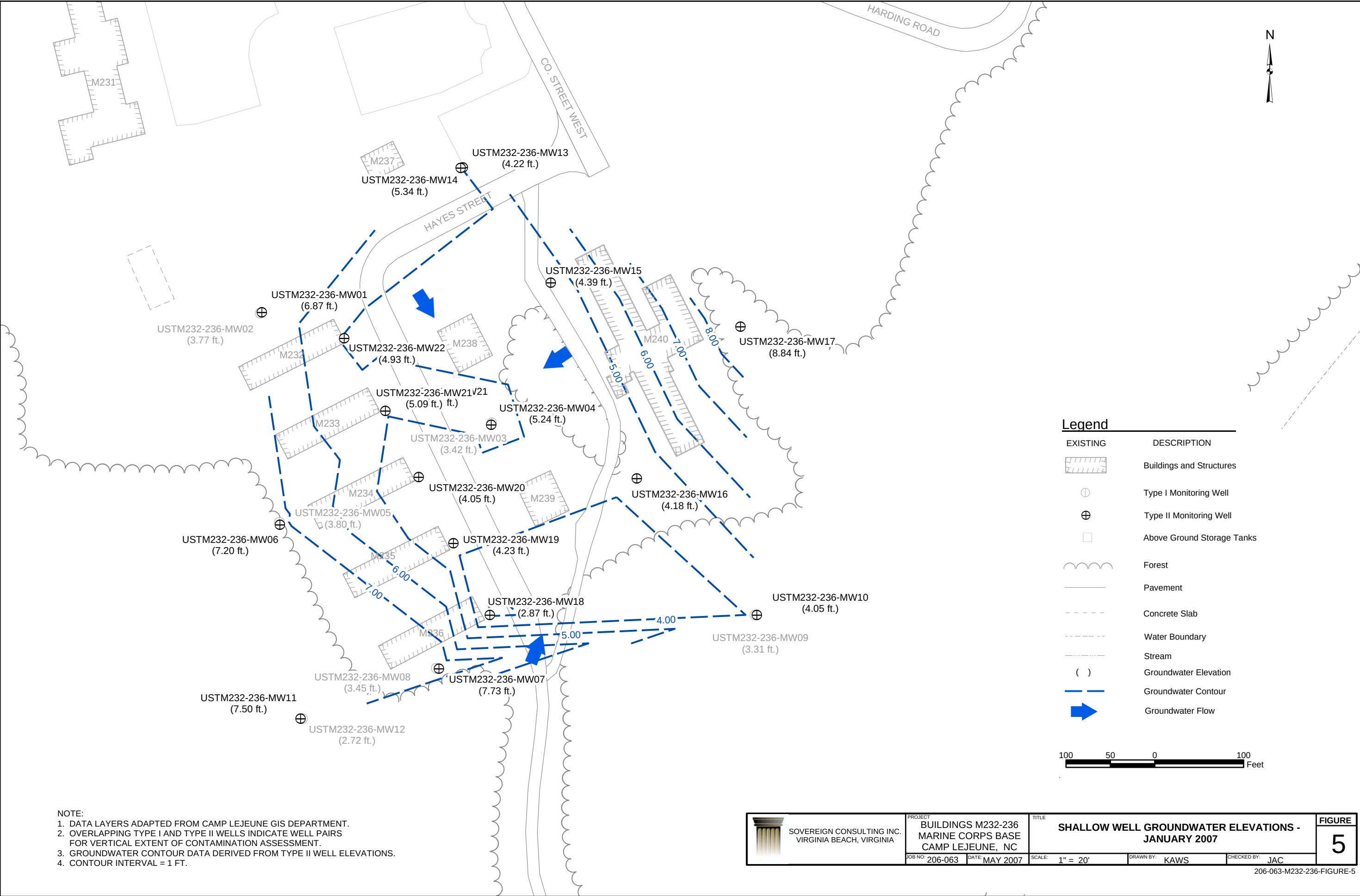
Data Sources: Data Layers provided by MCB Camp Lejeune GIS Office.

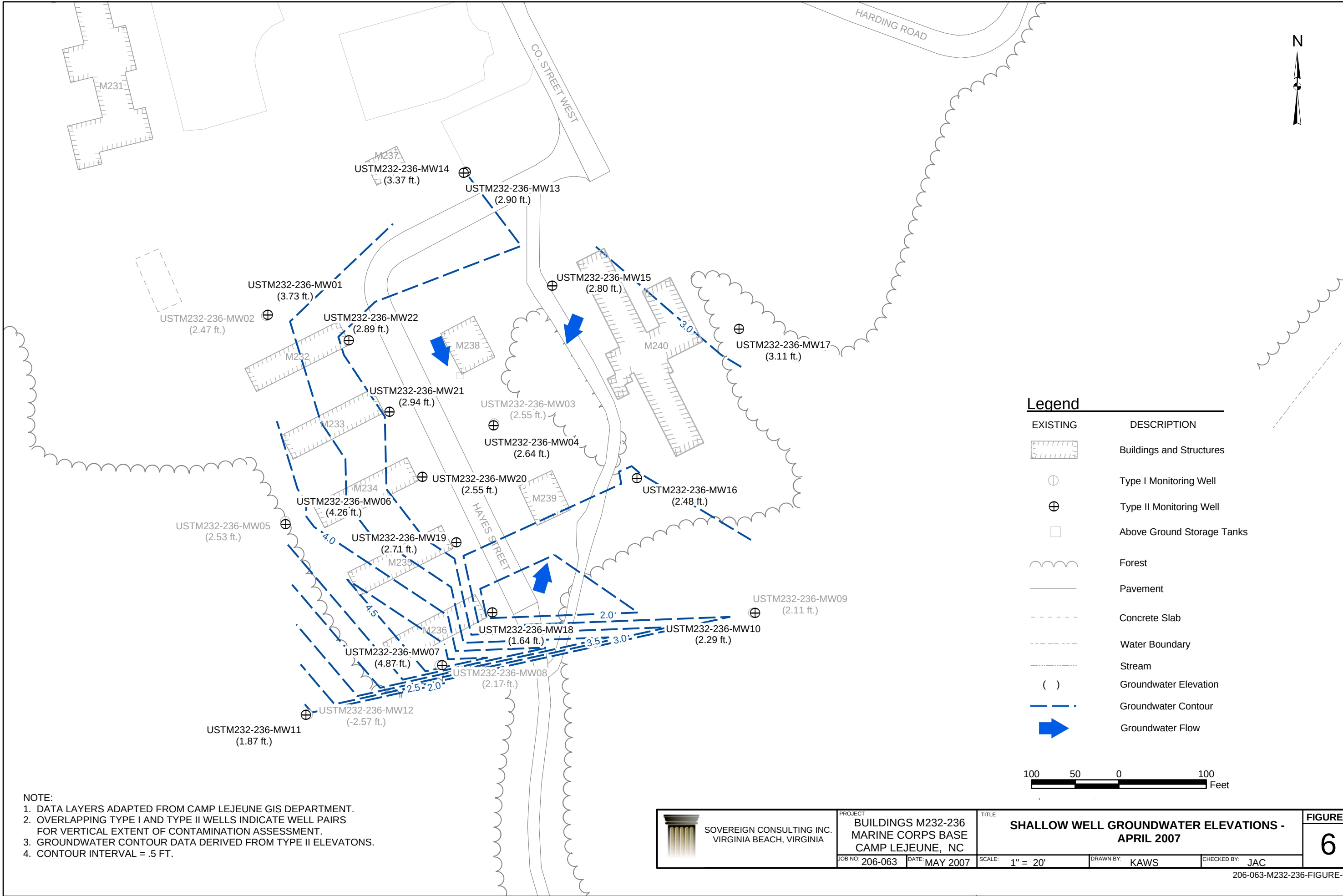
 SOVEREIGN CONSULTING INC. VIRGINIA BEACH, VIRGINIA	PROJECT BUILDINGS M232-236 MARINE CORPS BASE CAMP LEJEUNE, NC		TITLE GENERAL VICINITY TOPOGRAPHIC SITE MAP			FIGURE
	JOB NO. 206-063	DATE MAY 2007	SCALE AS SHOWN	DRAWN BY KAWS	CHECKED BY JAC	1

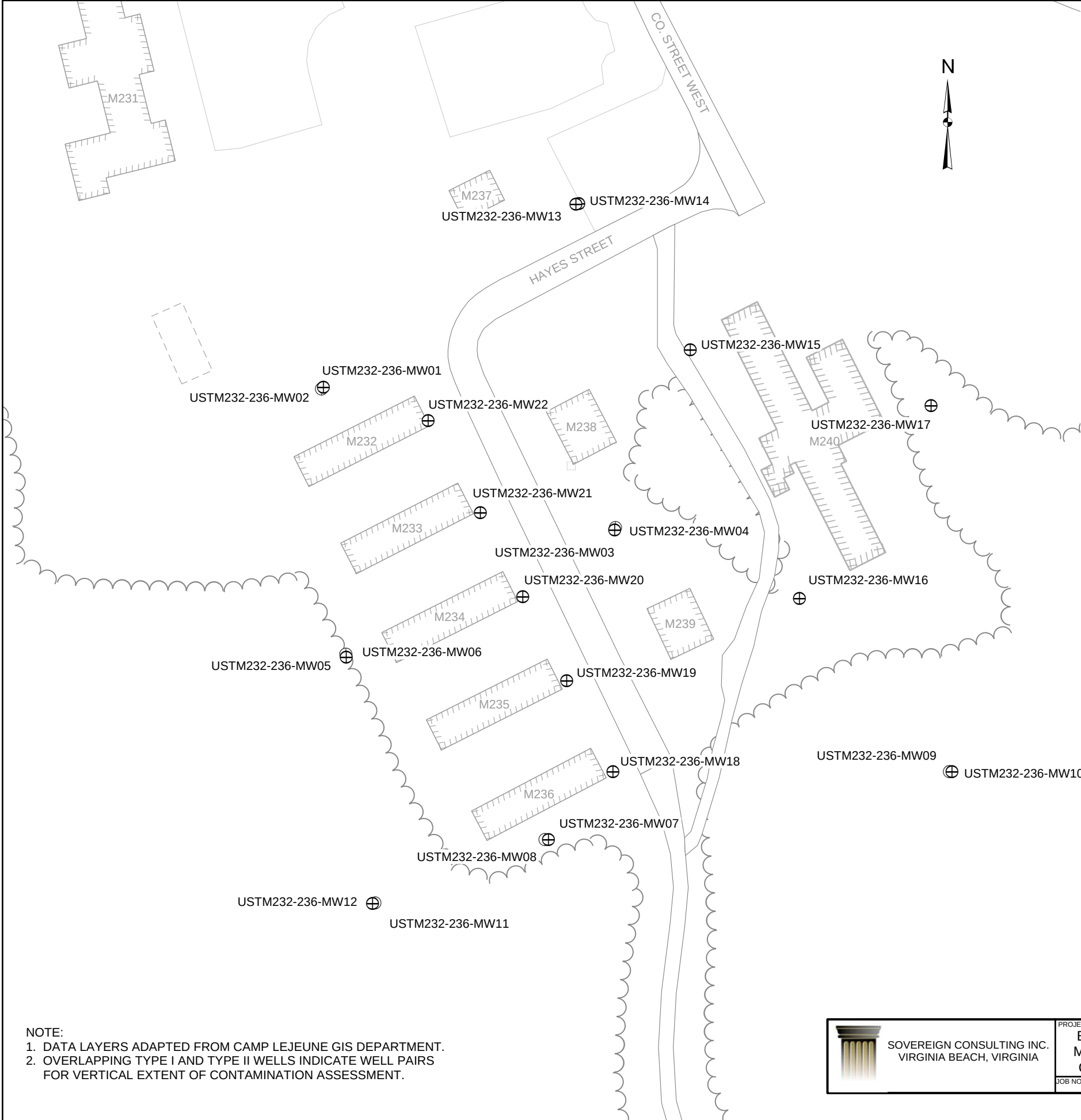












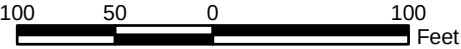
Contaminant of Concern →			C ₅ -C ₈ Aliphatics	C ₉ -C ₁₈ Aliphatics	C ₉ -C ₂₂ Aromatics	C ₁₉ -C ₃₆ Aliphatics
Well ID	Sample ID	Date Collected				
USTM-232-236-MW05	USTM-232-236-MW05	8/17/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<200 <200	<200 <200	<100 <100
USTM-232-236-MW07	USTM-232-236-MW07	8/17/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<200 <200	<200 <200	<100 <100
USTM-232-236-MW18	USTM-232-236-MW18	8/16/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<330 <350	520 320	<100 <100
USTM-232-236-MW20	USTM-232-236-MW20	8/16/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<200 <200	<200 <200	<100 <100
USTM-232-236-MW21	USTM-232-236-MW21	8/16/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<370 <400	410 550	<100 <100
USTM-232-236-MW22	USTM-232-236-MW22	8/16/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<250 <270	<490 <200	<100 <100
USTM-232-236-Duplicate	USTM-232-236-Duplicate	8/17/2006 & 9/19/2006 ¹ 1/23/2007	<100 <100	<200 <200	<200 <200	<100 <100
2L Standard (µg/l)			420	4,200	210	42,000

- Duplicate sample from MW07 in August/September 2006 and January 2007.
- All results reported in µg/l
- µg/L =micrograms per liter
- GCL = gross contamination level; Not Established for MADEP constituents.
- **BOLD** = Detected concentration
- **BOLD** and **shaded** detected concentration exceeds 2L Standard

¹Samples collected in August 2006 for VPH analyses were extracted and analyzed out of holding time. They were recollected on September 19, 2006 and rerun within holding time on September 20, 2006. See laboratory reports for additional information.

Legend

EXISTING	DESCRIPTION
	Buildings and Structures
	Type I Monitoring Well
	Type II Monitoring Well
	Above Ground Storage Tanks
	Forest
	Pavement
	Concrete Slab
	Water Boundary
	Stream



NOTE:
1. DATA LAYERS ADAPTED FROM CAMP LEJEUNE GIS DEPARTMENT.
2. OVERLAPPING TYPE I AND TYPE II WELLS INDICATE WELL PAIRS FOR VERTICAL EXTENT OF CONTAMINATION ASSESSMENT.

SOVEREIGN CONSULTING INC.
VIRGINIA BEACH, VIRGINIA

PROJECT
BUILDINGS M232-236
MARINE CORPS BASE
CAMP LEJEUNE, NC

JOB NO: 206-063

DATE: MAY 2007

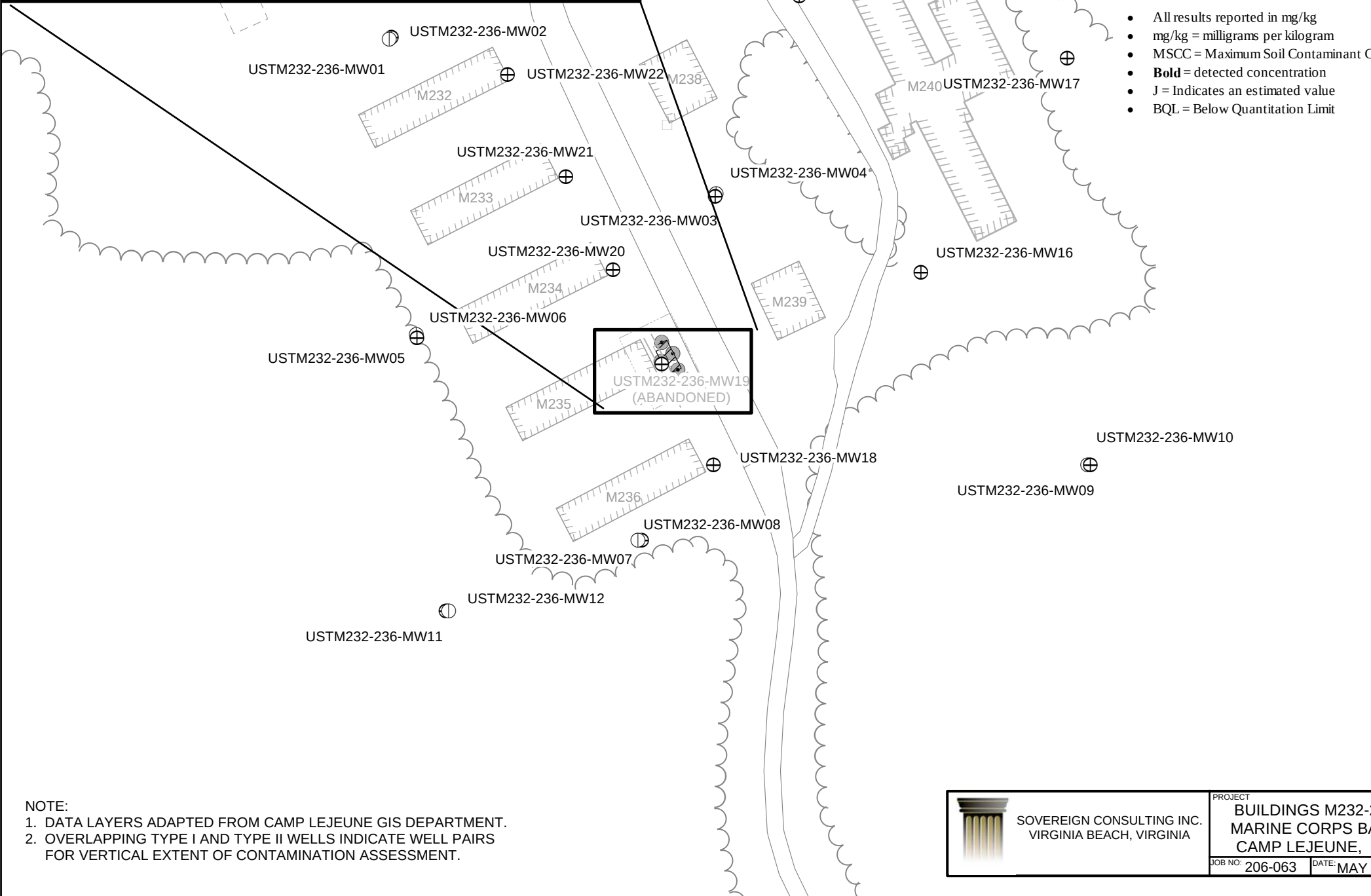
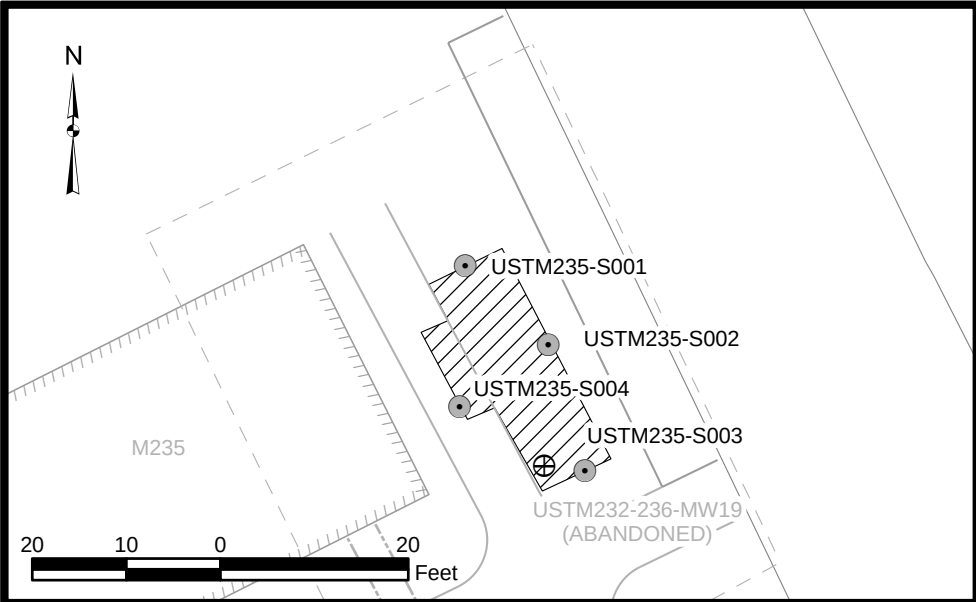
TITLE
SITE MAP WITH 2006-2007 GROUNDWATER
RESULTS - MADEP METHOD VPH/EPH
AS COMPARED TO NCGWQS

SCALE: 1" = 20'

DRAWN BY: KAWS

CHECKED BY: JAC

FIGURE
9



Analytical Method: EPA Method 8270

Contaminant of Concern →			Acenaphthene	Dibenzofuran	Fluorene	2-Methylnaphthalene	Naphthalene	Phenanthrene	All Other Compounds
Sample ID	Date Collected	Sample Depth (ft BGS)							
USTM235-S001	5/2/2007	6'8"	0.543 J	0.814	1.41	5.88	0.583 J	1.89	BQL
USTM235-S002	5/2/2007	7"	0.148 J	0.239 J	0.409 J	1.37	BQL	0.687	BQL
USTM235-S003	5/2/2007	6'10"	0.180 J	0.260 J	0.52	0.145 J	BQL	0.953	BQL
USTM235-S004	5/2/2007	6'8"	0.0915 J	0.143 J	0.274 J	1.98	0.251 J	0.457	BQL
Soil to groundwater MSCC (mg/kg)			8.2	4.7	44	1.7	0.58	60	Varies
Residential MSCC (mg/kg)			940	62	620	63	313	469	Varies
Industrial/Commercial MSCC (mg/kg)			24,000	1635	16,400	1,635	8,176	12,264	Varies

- All results reported in mg/kg
- mg/kg = milligrams per kilogram
- MSCC = Maximum Soil Contaminant Concentration
- **Bold** = detected concentration
- J = Indicates an estimated value
- BQL = Below Quantitation Limit

Legend

EXISTING	DESCRIPTION
	Buildings and Structures
	Type I Monitoring Well
	Type II Monitoring Well
	Soil Sample Location
	Above Ground Storage Tanks
	Forest
	Pavement
	Concrete Slab
	Water Boundary
	Stream
	M235 AREA BOUNDARY
	EXCAVATION BOUNDARY

NOTE:
1. DATA LAYERS ADAPTED FROM CAMP LEJEUNE GIS DEPARTMENT.
2. OVERLAPPING TYPE I AND TYPE II WELLS INDICATE WELL PAIRS FOR VERTICAL EXTENT OF CONTAMINATION ASSESSMENT.

SOVEREIGN CONSULTING INC.
VIRGINIA BEACH, VIRGINIA

PROJECT

BUILDINGS M232-236
MARINE CORPS BASE
CAMP LEJEUNE, NC

TITLE

SITE MAP WITH M235 EXCAVATION LIMITS,
SOIL SAMPLE LOCATIONS AND LABORATORY
RESULTS - EPA METHOD 8270

JOB NO: 206-063

DATE: MAY 2007

SCALE: 1" = 100'

DRAWN BY: KAWS

CHECKED BY: JAC

FIGURE

11

APPENDIX A

HISTORICAL DATA Free Product Data Summary Over Time Groundwater Quality Data Over Time

Groundwater Quality Analytical Data Over Time
Site M232-236

Volatile Organic Compounds (ug/L)	NCGWQS	GCL	MW-1	MW-2	MW-3		MW-4	MW-5										MW-6	
			Nov 1991	Nov 1991	Nov 1991	Oct 2000 (1)	Apr 2000 (1)	Nov 1991	Nov 1991	Oct 2000	Apr 2001	Jun 2004	Dec 2004	Jun 2005	Dec 2005	Aug 2006	Jan 2007	Nov 1991	
			(8010/8020)	(8010/8020)	(8010/8020)	(6210D)	(6210D)	(8010/8020)	(8010/8020)	(6210D)	(6210D)	(602)	(602)	(602)	(602)	(602)	(602)	(8010/8020)	
Benzene	1	5,000	na	na	na	na	na	na	na	na	na	na	na	na	na	<1.00	<1.00	na	
Diisopropyl ether (DIPE)	70	70,000	na	na	na	na	na	na	na	na	na	na	na	na	na	<1.00	<1.00	na	
Methyl-tert butyl ether (MTBE)	200	200,000	na	na	na	na	na	na	na	na	na	na	na	na	na	<2.00	<2.00	na	
n-Butylbenzene	70	6,900	na	na	na	ND	ND	na	na	ND	ND	na	na	na	na	na	na	na	
sec-Butylbenzene	70	8,500	na	na	na	ND	ND	na	na	ND	ND	na	na	na	na	na	na	na	
tert-Butylbenzene	70	15,000	na	na	na	ND	ND	na	na	ND	ND	na	na	na	na	na	na	na	
Chloroform	70	70,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	na	na	na	na	na	ND	
Ethylbenzene	550	84,500	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.00	<1.00	<1.00	<1.00	<1.00	0.185J	ND	
Isopropylbenzene	70	25,000	na	na	na	ND	ND	na	na	ND	ND	na	na	na	na	na	na	na	
4-Isopropyltoluene	RL	NE	na	na	na	ND	ND	na	na	ND	ND	na	na	na	na	na	na	na	
Naphthalene	21	15,500	na	na	na	ND	ND	na	na	ND	ND	na	na	na	na	na	na	na	
n-Propyl benzene	70	30,000	na	na	na	ND	ND	na	na	ND	ND	na	na	na	na	na	na	na	
Tetrachloroethene	0.7	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	na	na	na	na	na	na	ND	
Toluene	1,000	257,500	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.00	<1.00	<1.00	1.13	<1.00	1.28	1.0	
1,2,4-Trimethylbenzene	350	28,500	na	na	na	ND	ND	na	na	ND	ND	na	na	na	na	na	na	na	
1,3,5-Trimethylbenzene	350	25,000	na	na	na	ND	ND	na	na	ND	ND	na	na	na	na	na	na	na	
Total Xylenes	530	87,500	ND	ND	ND	ND	ND	ND	ND	ND	ND	<4.00	<4.00	0.726J	<4.00	<2.00	<2.00	ND	
Semi-Volatile Organic Compounds (ug/L)			(8100)	na	(8100)	(625)	(625)	na	(8100)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	na	
Acenaphthene	80	2,120	ND	na	ND	ND	ND	na	ND	ND	ND	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	
Acenaphthylene	210	1,965	ND	na	ND	na	na	na	ND	na	na	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	
Bis(2-ethylhexyl)phthalate	2.5	2,500	na	na	na	ND	ND	na	na	ND	ND	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	
Diethylphthalate	5,000	NE	na	na	na	na	na	na	na	na	ND	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	
Fluorene	280	950	ND	na	ND	ND	ND	na	ND	ND	ND	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	
Naphthalene	21	15,500	ND	na	ND	ND	ND	na	ND	ND	ND	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	
Phenanthrene	210	410	ND	na	2900	ND	ND	na	ND	ND	ND	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	
TICs (total)			na	na	na	1024J	585J	na	na	ND	ND	10J	NR	19.53J	NR	185.37	193	na	
MADEP VPH+EPH (ug/L)																			
C5-C8 Aliphatics	420	NE	na	na	na	na	na	na	na	na	na	na	na	na	na	<100	<100	na	
C9-C18 Aliphatics	4,200	NE	na	na	na	760	690	na	na	ND	ND	<200	<200	<200	<200	<200	<200	na	
C19-C36 Aliphatics	42,000	NE	na	na	na	200	140	na	na	ND	ND	<100	<100	<100	<100	<100	<100	na	
C9-C22 Aromatics	210	NE	na	na	na	440	430	na	na	ND	ND	<200	<200	<200	<200	<200	<200	na	

J: Estimated concentration below reporting limits or estimated concentration for TIC quantitations

na: Not Analyzed; compound not quantitated in the analytic suite specified for the sample, or not reported in source document summary tables

ND: Not Detected; compound quantitated and not detected; detection limit not specified in source document summary table

NR: None Reported; no TICs were identified in the sample

<#: Analyte not detected at the indicated detection limit

GCL: Gross Contamination Level

NE: Not Established; a GCL has not been established for the analyte

NCGWQS: North Carolina Groundwater Quality Standard

RL: Reporting Limit; a NCGWQS has not been established for the compound; therefore, the NCGWQS is set at the reporting limit

TICs (total): Tentatively identified Compound; sum of all TICs; all TIC concentrations are estimated

ug/L: micrograms per liter

(Non-Sovereign) Historical data taken by reference from 1/2006 EEI Annual Monitoring Report, Table 4-3

(1) Identified as MW-7 in source document.

Bold type indicates analyte detection**Shaded area in bold indicates analyte detection at a concentration above the NCGWQS**

Groundwater Quality Analytical Data Over Time
Site M232-236

Volatile Organic Compounds (ug/L)	NCGWQS	GCL	MW-7												MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15
			Nov 1991	June Primary	2004 Dup	Dec Primary	2004 Dup	June Primary	2005 Dup	Dec Primary	2005 Dup	Aug 2006	Jan 2007	Nov 1991	Nov 1991	Nov 1991	Nov 1991	Nov 1991	Nov 1991	Nov 1991	Nov 1991	Dec 1992
			(8010/8020)	(602)	(602)	(602)	(602)	(602)	(602)	(602)	(602)	(602)	(602)	(8010/8020)	(8010/8020)	(8010/8020)	(8010/8020)	(8010/8020)	(8010/8020)	(8010/8020)	(8010/8020)	(601/602)
Benzene	1	5,000	na	na	na	na	na	na	na	na	na	<1.00	<1.00	na	na	na	na	na	na	na	na	na
Diisopropyl ether (DIPE)	70	70,000	na	na	na	na	na	na	na	na	na	<1.00	<1.00	na	na	na	na	na	na	na	na	na
Methyl-tert butyl ether (MTBE)	200	200,000	na	na	na	na	na	na	na	na	na	<2.00	<2.00	na	na	na	na	na	na	na	na	na
n-Butylbenzene	70	6,900	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
sec-Butylbenzene	70	8,500	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
tert-Butylbenzene	70	15,000	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Chloroform	70	70,000	ND	na	na	na	na	na	na	na	na	na	na	ND	ND	ND	ND	4.0	ND	ND	ND	ND
Ethylbenzene	550	84,500	ND	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	ND	2.0	ND	ND	ND	ND	ND	ND
Isopropylbenzene	70	25,000	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
4-Isopropyltoluene	RL	NE	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Naphthalene	21	15,500	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
n-Propyl benzene	70	30,000	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Tetrachloroethene	0.7	700	ND	na	na	na	na	na	na	na	na	na	na	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1,000	257,500	ND	<1.00	<1.00	0.808J	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	0.537J	ND	ND	8.0	2.0	2.0	ND	ND	ND	ND
1,2,4-Trimethylbenzene	350	28,500	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
1,3,5-Trimethylbenzene	350	25,000	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Total Xylenes	530	87,500	ND	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<2.00	<2.00	ND	ND	15.0	ND	ND	ND	ND	4.0	ND
Semi-Volatile Organic Compounds (ug/L)			na	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	na	na	na	na	na	na	na	na	na
Acenaphthene	80	2,120	na	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	na	na	na	na	na	na	na	na
Acenaphthylene	210	1,965	na	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	na	na	na	na	na	na	na	na
Bis(2-ethylhexyl)phthalate	2.5	2,500	na	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	na	na	na	na	na	na	na	na
Diethylphthalate	5,000	NE	na	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	na	na	na	na	na	na	na	na
Fluorene	280	950	na	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	na	na	na	na	na	na	na	na
Naphthalene	21	15,500	na	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	na	na	na	na	na	na	na	na
Phenanthrene	210	410	na	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	na	na	na	na	na	na	na	na
TICs (total)			na	20J	13J	NR	NR	4.12J	20.48J	NR	NR	253.53	182	na	na	na	na	na	na	na	na	na
MADEP VPH+EPH (ug/L)																						
C5-C8 Aliphatics	420	NE	na	na	na	na	na	na	na	na	na	<100	<100	na	na	na	na	na	na	na	na	na
C9-C18 Aliphatics	4,200	NE	na	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	na	na	na	na	na	na	na	na	na
C19-C36 Aliphatics	42,000	NE	na	<100	<100	600	<100	<100	<100	600	<100	<100	<100	na	na	na	na	na	na	na	na	na
C9-C22 Aromatics	210	NE	na	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	na	na	na	na	na	na	na	na	na

J: Estimated concentration below reporting limits or estimated concentration for TIC quantitations

na: Not Analyzed; compound not quantitated in the analytic suite specified for the sample, or not reported in source document summary tables

ND: Not Detected; compound quantitated and not detected; detection limit not specified in source document summary table

NR: None Reported; no TICs were identified in the sample

<#: Analyte not detected at the indicated detection limit

GCL: Gross Contamination Level

NE: Not Established; a GCL has not been established for the analyte

NCGWQS: North Carolina Groundwater Quality Standard

RL: Reporting Limit; a NCGWQS has not be established for the compound; therefore, the NCGWQS is set at the reporting limit

TICs (total): Tentatively identified Compound; sum of all TICs; all TIC concentrations are estimated

ug/L: micrograms per liter

(Non-Sovereign) Historical data taken by reference from 1/2006 EEI Annual Monitoring Report, Table 4-3

Bold type indicates analyte detection**Shaded area in bold indicates analyte detection at a concentration above the NCGWQS**

Page 3 of 4
Groundwater Quality Analytical Data Over Time
Site M232-236

Volatile Organic Compounds (ug/L)	NCGWQS	GCL	MW-16		MW-17		MW-18								MW-20							
			Dec 1992	Dec 1992	Aug 1999	Oct 2000	Apr 2001	Jun 2004	Dec 2004	Jan 2005	Dec 2005	Aug 2006 ⁽²⁾	Jan 2007	Aug 1999	Oct 2000	Apr 2001	Jun 2004	Dec 2004	Jun 2005	Dec 2005	Aug 2006	Jan 2007
			(601/602)	(601/602)	(602)	(6210D)	(6210D)	(602)	(602)	(602)	(602)	(602)	(602)	(602)	(6210D)	(6210D)	(602)	(602)	(602)	(602)	(602)	(602)
Benzene	1	5,000	na	na	na	na	na	na	na	na	na	<1.00	<1.00	na	na	na	na	na	na	na	<1.00	<1.00
Diisopropyl ether (DIPE)	70	70,000	na	na	na	na	na	na	na	na	na	<1.00	<1.00	na	na	na	na	na	na	na	<1.00	<1.00
Methyl-tert butyl ether (MTBE)	200	200,000	na	na	na	na	na	na	na	na	na	<2.00	<2.00	na	na	na	na	na	na	na	<2.00	<2.00
n-Butylbenzene	70	6,900	na	na	na	ND	10	na	na	na	na	na	na	na	2	2	na	na	na	na	na	na
sec-Butylbenzene	70	8,500	na	na	na	4	6	na	na	na	na	na	na	na	ND	ND	na	na	na	na	na	na
tert-Butylbenzene	70	15,000	na	na	na	0.7	0.7	na	na	na	na	na	na	na	ND	ND	na	na	na	na	na	na
Chloroform	70	70,000	ND	ND	na	ND	ND	na	na	na	na	na	na	na	na	ND	ND	na	na	na	na	na
Ethylbenzene	550	84,500	ND	ND	ND	ND	0.8	<1.00	<1.00	<1.00	<1.00	<1.00	0.333J	7	ND	ND	<1.00	<1.00	<1.00	<1.00	<1.00	0.365J
Isopropylbenzene	70	25,000	na	na	na	ND	2	na	na	na	na	na	na	na	ND	ND	na	na	na	na	na	na
4-Isopropyltoluene	RL	NE	na	na	na	na	0.5	na	na	na	na	na	na	na	ND	ND	na	na	na	na	na	na
Naphthalene	21	15,500	na	na	na	3	5	na	na	na	na	na	na	na	1	1	na	na	na	na	na	na
n-Propyl benzene	70	30,000	na	na	na	ND	1	na	na	na	na	na	na	na	0.7	0.6	na	na	na	na	na	na
Tetrachloroethene	0.7	700	ND	ND	na	ND	ND	na	na	na	na	na	na	na	ND	ND	na	na	na	na	na	na
Toluene	1,000	257,500	ND	ND	ND	ND	0.443J	<1.00	<1.00	1.43	<1.00	<1.00	0.607J	ND	ND	ND	0.497J	0.498J	<1.00	1.01	<1.00	0.479J
1,2,4-Trimethylbenzene	350	28,500	na	na	na	ND	ND	na	na	na	na	na	na	na	ND	ND	na	na	na	na	na	na
1,3,5-Trimethylbenzene	350	25,000	na	na	na	0.5	ND	na	na	na	na	na	na	na	ND	ND	na	na	na	na	na	na
Total Xylenes	530	87,500	ND	ND	ND	ND	1.458J	0.826J	<4.00	<4.00	<2.00	<2.00	ND	ND	ND	ND	<4.00	0.622J	<4.00	<4.00	<2.00	<2.00
Semi-Volatile Organic Compounds (ug/L)			na	na	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)
Acenaphthene	80	2,120	na	na	ND	ND	ND	6.50J	2.80J	8.40J	5.50J	7.60J	9.30J	3	ND	ND	1.80J	<10.0	1.70J	<10.0	1.70J	1.40J
Acenaphthylene	210	1,965	na	na	na	na	na	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	na	na	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Bis(2-ethylhexyl)phthalate	2.5	2,500	na	na	159	ND	ND	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	ND	ND	ND	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Diethylphthalate	5,000	NE	na	na	na	na	na	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	na	na	ND	<10.0	2.90J	<10.0	<10.0	<10.0	<10.0
Fluorene	280	950	na	na	ND	12	12	9.40J	4.70J	9.70J	7.40J	10.8	10.3	4	ND	ND	2.10J	1.30J	1.80J	1.40J	1.70J	1.60J
Naphthalene	21	15,500	na	na	6	ND	ND	2.70J	<10.0	2.20J	<10.0	<10.0	1.60J	ND	ND	ND	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Phenanthrene	210	410	na	na	ND	11	ND	8.80J	4.90J	8.90J	7.00J	9.80J	8.20J	5	ND	ND	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
TICs (total)			na	na	19J	222J	203J	109.6J	72.47J	126.51J	114.21J	371.8	362.6	92J	5.4J	3.8J	11J	NR	12.17J	NR	192.35	196.36
MADEP VPH+EPH (ug/L)																						
C5-C8 Aliphatics	420	NE	na	na	na	na	na	na	na	na	na	<100	<100	na	na	na	na	na	na	na	<100	<100
C9-C18 Aliphatics	4,200	NE	na	na	21	630	430	200	210	<200	130	<330	<350	260	120	na	<200	<200	<200	<200	<200	<200
C19-C36 Aliphatics	42,000	NE	na	na	ND	ND	ND	<100	<100	<100	<100	<100	<100	ND	ND	ND	<100	<100	<100	<100	<100	<100
C9-C22 Aromatics	210	NE	na	na	15	280	270	570	310	430	420	520	320	170	ND	ND	<200	<200	<200	<200	<200	<200

J: Estimated concentration below reporting limits or estimated concentration for TIC quantitations
na: Not Analyzed; compound not quantitated in the analytic suite specified for the sample, or not reported in source document summary tables
ND: Not Detected; compound quantitated and not detected; detection limit not specified in source document summary table
NR: None Reported; no TICs were identified in the sample
<#: Analyte not detected at the indicated detection limit
GCL: Gross Contamination Level
NE: Not Established; a GCL has not been established for the analyte
NCGWQS: North Carolina Groundwater Quality Standard
RL: Reporting Limit; a NCGWQS has not be established for the compound; therefore, the NCGWQS is set at the reporting limit
TICs (total): Tentatively identified Compound; sum of all TICs; all TIC concentrations are estimated
ug/L: micrograms per liter
(Non-Sovereign) Historical data taken by reference from 1/2006 EEI Annual Monitoring Report, Table 4-3
⁽²⁾ Diphenylamine detected once in MW18 in August 2006 at a concentration of 1.70J; no established 2L standards or GCLs.
Bold type indicates analyte detection
Shaded area in bold indicates analyte detection at a concentration above the NCGWQS

Volatile Organic Compounds (ug/L)	NCGWQS	GCL	MW-21										MW-22									
			Aug 1999	Oct 2000	Apr 2001	Jun 2004	Dec 2004	Jun 2005	Dec 2005	Aug 2006	Jan 2007	Aug 1999	Oct 2000	Apr 2001	Jun 2004	Dec 2004	Jun 2005	Dec 2005	Aug 2006	Jan 2007	Dup Aug 2006	Dup Jan 2007
			(602)	(6210D)	(6210D)	(602)	(602)	(602)	(602)	(602)	(602)	(602)	(6210D)	(6210D)	(602)	(602)	(602)	(602)	(602)	(602)	(602)	(602)
Benzene	1	5,000	na	na	na	na	na	na	na	<1.00	<1.00	na	na	na	na	na	na	na	na	<1.00	<1.00	<1.00
Diisopropyl ether (DIPE)	70	70,000	na	na	na	na	na	na	na	<1.00	<1.00	na	na	na	na	na	na	na	na	<1.00	<1.00	<1.00
Methyl-tert butyl ether (MTBE)	200	200,000	na	na	na	na	na	na	na	<2.00	<2.00	na	na	na	na	na	na	na	na	<2.00	<2.00	<2.00
n-Butylbenzene	70	6,900	na	4	4	na	na	na	na	na	na	na	ND	1	na	na	na	na	na	na	na	na
sec-Butylbenzene	70	8,500	na	6	6	na	na	na	na	na	na	na	3	1	na	na	na	na	na	na	na	na
tert-Butylbenzene	70	15,000	na	ND	0.6	na	na	na	na	na	na	na	0.8	ND	na	na	na	na	na	na	na	na
Chloroform	70	70,000	na	ND	ND	na	na	na	na	na	na	na	ND	ND	na	na	na	na	na	na	na	na
Ethylbenzene	550	84,500	ND	0.7	1	0.720J	0.845J	0.470J	1.62	<1.00	1.09	ND	1	ND	0.617J	<1.00	<1.00	<1.00	<1.00	0.580J	<1.00	<1.00
Isopropylbenzene	70	25,000	na	2	3	na	na	na	na	na	na	na	3	1	na	na	na	na	na	na	na	na
4-Isopropyltoluene	RL	NE	na	2	3	na	na	na	na	na	na	na	2	0.8	na	na	na	na	na	na	na	na
Naphthalene	21	15,500	na	8	7	na	na	na	na	na	na	na	24	11	na	na	na	na	na	na	na	na
n-Propyl benzene	70	30,000	na	5	6	na	na	na	na	na	na	na	5	2	na	na	na	na	na	na	na	na
Tetrachloroethene	0.7	700	na	ND	0.6	na	na	na	na	na	na	na	ND	ND	na	na	na	na	na	na	na	na
Toluene	1,000	257,500	ND	ND	ND	0.655J	0.869J	0.992J	1.64	<1.00	0.965J	ND	ND	ND	<1.00	0.396J	0.465J	1.2	0.311	0.867J	<1.00	0.544J
1,2,4-Trimethylbenzene	350	28,500	na	11	14	na	na	na	na	na	na	na	22	9	na	na	na	na	na	na	na	na
1,3,5-Trimethylbenzene	350	25,000	na	3	5	na	na	na	na	na	na	na	4	1	na	na	na	na	na	na	na	na
Total Xylenes	530	87,500	ND	ND	ND	1.514J	2.364J	2.364J	<4.00	<2.00	1.02J	ND	ND	ND	<4.00	0.638J	<4.00	<4.00	<2.00	0.476J	<2.00	<2.00
Semi-Volatile Organic Compounds (ug/L)			(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)
Acenaphthene	80	2,120	ND	ND	ND	2.20J	2.20J	5.00J	3.20J	<10.0	5.20J	2	ND	ND	3.20J	<10.0	1.30J	2.20J	<10.0	3.00J	<10.0	<10.0
Acenaphthylene	210	1,965	na	na	na	<10.0	<10.0	1.20J	<10.0	<10.0	na	na	na	na	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Bis(2-ethylhexyl)phthalate	2.5	2,500	6	ND	ND	<10.0	<10.0	4.90J	<10.0	<10.0	<10.0	283	ND	ND	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Diethylphthalate	5,000	NE	na	na	ND	<10.0	15.5	<10.0	<10.0	<10.0	<10.0	na	na	ND	<10.0	4.60J	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Fluorene	280	950	2	ND	ND	3.40J	3.50J	6.30J	5.70J	6.50J	6.60J	3	ND	ND	4.50J	1.60J	1.40J	3.30J	7.10J	3.40J	<10.0	<10.0
Naphthalene	21	15,500	ND	ND	ND	4.60J	3.10J	6.70J	5.50J	2.80J	4.40J	8	14	13	7.80J	2.30J	2.60J	4.90J	4.80J	4.40J	<10.0	<10.0
Phenanthrene	210	410	2	ND	ND	2.60J	3.10J	5.20J	3.60J	<10.0	6.70J	1	ND	ND	3.30J	<10.0	<10.0	3.00J	<10.0	3.00J	<10.0	<10.0
TICs (total)			84J	5170J	430J	100J	116.69J	150.3J	228.11J	134.07	381.3	118J	380J	369J	117J	32.8J	12.2J	189.48J	155.11	310.64	40.41	191
MADEP VPH+EPH (ug/L)																						
C5-C8 Aliphatics	420	NE	na	na	na	na	na	na	na	<100	<100	na	na	na	na	na	na	na	<100	<100	<100	<100
C9-C18 Aliphatics	4,200	NE	110	460	520	130	300	<200	100	<370	<400	150	420	340	120	<200	<200	<200	<250	<270	<200	<200
C19-C38 Aliphatics	42,000	NE	ND	ND	ND	<100	<100	<100	<100	<100	<100	ND	ND	ND	<100	<100	<100	<100	<100	<100	<100	<100
C9-C22 Aromatics	210	NE	72	250	440	360	200	160	300	410	550	96	340	310	<200	240	<200	250	<490	<200	<200	<200

J: Estimated concentration below reporting limits or estimated concentration for TIC quantitations

na: Not Analyzed; compound not quantitated in the analytic suite specified for the sample, or not reported in source document summary tables

ND: Not Detected; compound quantitated and not detected; detection limit not specified in source document summary table

NR: None Reported; no TICs were identified in the sample

<#: Analyte not detected at the indicated detection limit

GCL: Gross Contamination Level

NE: Not Established; a GCL has not been established for the analyte

NCGWQS: North Carolina Groundwater Quality Standard

RL: Reporting Limit; a NCGWQS has not been established for the compound; therefore, the NCGWQS is set at the reporting limit

TICs (total): Tentatively identified Compound; sum of all TICs; all TIC concentrations are estimated

ug/L: micrograms per liter

(Non-Sovereign) Historical data taken by reference from 1/2006 EEI Annual Monitoring Report, Table 4-3

Bold type indicates analyte detection

Shaded area in bold indicates analyte detection at a concentration above the NCGWQS

APPENDIX B

LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTATION FROM 2006 AND 2007 SAMPLING EVENTS



Mr. Chris Murray
Sovereign Consulting
405 Oakmeads Crescent
Suite 1
Virginia Beach VA 23462
Report Number: G650-74
Client Project: NV015

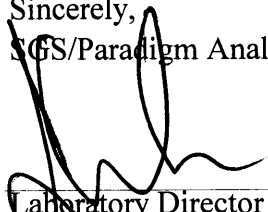
Dear Mr. Murray:

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

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

Thank you for using SGS/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,
SGS/Paradigm Analytical Laboratories, Inc.



Laboratory Director
J. Patrick Weaver

9/15/2006
Date



Results for Volatiles

by GC 602

Client Sample ID: USTM232-236-MW05

Analyzed By: CLP

Client Project ID: NV015

Date Collected: 8/17/2006 12:05

Lab Sample ID: G650-74-1A

Date Received: 8/18/2006

Lab Project ID: G650-74

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	8/28/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	8/28/2006	
Ethylbenzene	BQL	1.00	0.172	1	8/28/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	8/28/2006	
Toluene	BQL	1.00	0.159	1	8/28/2006	
m/p-Xylene	BQL	2.00	0.326	1	8/28/2006	
o-Xylene	BQL	2.00	0.285	1	8/28/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.0	103

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.



Results for Volatiles

by GC 602

Client Sample ID: USTM232-236-MW07

Analyzed By: CLP

Client Project ID: NV015

Date Collected: 8/17/2006 9:30

Lab Sample ID: G650-74-2A

Date Received: 8/18/2006

Lab Project ID: G650-74

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	8/28/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	8/28/2006	
Ethylbenzene	BQL	1.00	0.172	1	8/28/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	8/28/2006	
Toluene	BQL	1.00	0.159	1	8/28/2006	
m/p-Xylene	BQL	2.00	0.326	1	8/28/2006	
o-Xylene	BQL	2.00	0.285	1	8/28/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.8	102

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.



Results for Volatiles

by GC 602

Client Sample ID: USTM232-236-MW18

Analyzed By: CLP

Client Project ID: NV015

Date Collected: 8/16/2006 11:10

Lab Sample ID: G650-74-3A

Date Received: 8/18/2006

Lab Project ID: G650-74

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	8/28/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	8/28/2006	
Ethylbenzene	BQL	1.00	0.172	1	8/28/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	8/28/2006	
Toluene	BQL	1.00	0.159	1	8/28/2006	
m/p-Xylene	BQL	2.00	0.326	1	8/28/2006	
o-Xylene	BQL	2.00	0.285	1	8/28/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.1	103

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.



Results for Volatiles

by GC 602

Client Sample ID: USTM232-236-MW20

Analyzed By: CLP

Client Project ID: NV015

Date Collected: 8/16/2006 13:40

Lab Sample ID: G650-74-4A

Date Received: 8/18/2006

Lab Project ID: G650-74

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	8/29/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	8/29/2006	
Ethylbenzene	BQL	1.00	0.172	1	8/29/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	8/29/2006	
Toluene	BQL	1.00	0.159	1	8/29/2006	
m/p-Xylene	BQL	2.00	0.326	1	8/29/2006	
o-Xylene	BQL	2.00	0.285	1	8/29/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.0	103

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.



Results for Volatiles

by GC 602

Client Sample ID: USTM232-236-MW21

Analyzed By: CLP

Client Project ID: NV015

Date Collected: 8/16/2006 16:50

Lab Sample ID: G650-74-5A

Date Received: 8/18/2006

Lab Project ID: G650-74

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	8/29/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	8/29/2006	
Ethylbenzene	BQL	1.00	0.172	1	8/29/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	8/29/2006	
Toluene	BQL	1.00	0.159	1	8/29/2006	
m/p-Xylene	BQL	2.00	0.326	1	8/29/2006	
o-Xylene	BQL	2.00	0.285	1	8/29/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.2	103

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.



Results for Volatiles

by GC 602

Client Sample ID: USTM232-236-MW22

Analyzed By: CLP

Client Project ID: NV015

Date Collected: 8/16/2006 17:30

Lab Sample ID: G650-74-6A

Date Received: 8/18/2006

Lab Project ID: G650-74

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	8/29/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	8/29/2006	
Ethylbenzene	BQL	1.00	0.172	1	8/29/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	8/29/2006	
Toluene	0.311	1.00	0.159	1	8/29/2006	
m/p-Xylene	BQL	2.00	0.326	1	8/29/2006	
o-Xylene	BQL	2.00	0.285	1	8/29/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.8	105

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.



Results for Volatiles

by GC 602

Client Sample ID: USTM232-236-Duplicate

Analyzed By: CLP

Client Project ID: NV015

Date Collected: 1/0/1900 0:00

Lab Sample ID: G650-74-7A

Date Received: 8/18/2006

Lab Project ID: G650-74

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	8/29/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	8/29/2006	
Ethylbenzene	BQL	1.00	0.172	1	8/29/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	8/29/2006	
Toluene	BQL	1.00	0.159	1	8/29/2006	
m/p-Xylene	BQL	2.00	0.326	1	8/29/2006	
o-Xylene	BQL	2.00	0.285	1	8/29/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.7	102

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 
GC_LIMS_v3.0



Results for Volatiles
by GC 602

Client Sample ID: Trip Blanks
Client Project ID: NV015
Lab Sample ID: G650-74-8A
Lab Project ID: G650-74

Analyzed By: CLP
Date Collected: 8/17/2006 0:00
Date Received: 8/18/2006
Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	8/28/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	8/28/2006	
Ethylbenzene	BQL	1.00	0.172	1	8/28/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	8/28/2006	
Toluene	BQL	1.00	0.159	1	8/28/2006	
m/p-Xylene	BQL	2.00	0.326	1	8/28/2006	
o-Xylene	BQL	2.00	0.285	1	8/28/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.7	102

Comments:

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

**Results for Volatiles**

by GC 602

Client Sample ID: Method Blank

Analyzed By: CLP

Client Project ID:

Date Collected:

Lab Sample ID: VBLK3082806A

Date Received:

Lab Project ID:

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	8/28/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	8/28/2006	
Ethylbenzene	BQL	1.00	0.172	1	8/28/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	8/28/2006	
Toluene	BQL	1.00	0.159	1	8/28/2006	
m/p-Xylene	BQL	2.00	0.326	1	8/28/2006	
o-Xylene	BQL	2.00	0.285	1	8/28/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.1	103

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.



Control Limits for QC Check / Laboratory Control Spike

Method: 602 Spike[ppb]: 10
 Instrument : gc3
 Filename : 082806\005r0101.txt

Compound	ppb	Q(%)	QC Limits		P _s (%)	LCS Limits	
			Lower	Upper		Lower	Upper
Benzene	9.5	94.6	77.0	123.0	95	39	150
Chlorobenzene	9.4	93.6	80.5	119.5	94	55	135
1,2-Dichlorobenzene	9.4	93.7	68.0	132.0	94	37	154
1,3-Dichlorobenzene	9.3	92.5	72.5	127.5	93	50	141
1,4-Dichlorobenzene	9.3	93.2	69.5	130.5	93	42	143
• Diisopropyl ether	9.4	93.7	43.1	156.9	94	30	170
Ethylbenzene	9.8	97.9	63.0	137.0	98	32	160
• MTBE	9.5	94.7	46.8	153.2	95	35	165
Toluene	9.4	94.1	77.5	127.0	94	46	148
• m,p-Xylene	19.2	96.2	11.2	188.8	96	D	239
• o-Xylene	9.6	96.0	47.6	152.4	96	36	164

Flags :

- + = out of QC limits.
- = lab generated limits.
- D = Detected

Reviewed by: *RS*



Control Limits for MS-MSD

Method: **602** Spike[ppb]: **10**
 Instrument : gc3
 Sample : 082806\017r0101.txt
 MS : 082806\019r0101.txt
 MSD : 082806\020r0101.txt

Compound	µg/L			P(%)		P Limits	
	Sam.	MS	MSD	MS	MSD	Lower	Upper
Benzene	26.3	36.5	36.9	102	106	39	150
Chlorobenzene	ND	9.9	9.9	98	98	55	135
1,2-Dichlorobenzene	ND	9.8	9.9	97	98	37	154
1,3-Dichlorobenzene	ND	9.7	9.7	95	95	50	141
1,4-Dichlorobenzene	ND	9.5	9.5	86	86	42	143
• Diisopropyl ether	10.3	20.3	20.6	100	103	30	170
Ethylbenzene	1.6	12.5	12.4	108	108	32	160
• MTBE	11.4	21.3	21.7	98	103	35	165
Toluene	ND	10.3	10.3	97	97	46	148
• m,p-Xylene	ND	21.1	21.0	104	103	D	239
• o-Xylene	1.4	10.6	10.6	92	92	36	164

Flags :

+ = out of QC limits.
 • = lab generated limits.
 D = Detected
 ND = None Detected

Reviewed by: *PS*



Results for Volatiles

by GC 602

Client Sample ID: Method Blank
 Client Project ID:
 Lab Sample ID: VBLK3082806B
 Lab Project ID:

Analyzed By: CLP
 Date Collected:
 Date Received:
 Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	8/28/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	8/28/2006	
Ethylbenzene	BQL	1.00	0.172	1	8/28/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	8/28/2006	
Toluene	BQL	1.00	0.159	1	8/28/2006	
m/p-Xylene	BQL	2.00	0.326	1	8/28/2006	
o-Xylene	BQL	2.00	0.285	1	8/28/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.0	103

Comments:

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



Control Limits for QC Check / Laboratory Control Spike

Method: 602 Spike[ppb]: 10
 Instrument : gc3
 Filename : 082806\023r0101.txt

Compound	ppb	Q(%)	QC Limits		P _s (%)	LCS Limits	
			Lower	Upper		Lower	Upper
Benzene	10.4	103.7	77.0	123.0	104	39	150
Chlorobenzene	10.3	103.0	80.5	119.5	103	55	135
1,2-Dichlorobenzene	10.4	103.9	68.0	132.0	104	37	154
1,3-Dichlorobenzene	10.2	102.0	72.5	127.5	102	50	141
1,4-Dichlorobenzene	10.3	103.1	69.5	130.5	103	42	143
• Diisopropyl ether	10.4	103.8	43.1	156.9	104	30	170
Ethylbenzene	10.8	108.0	63.0	137.0	108	32	160
• MTBE	10.4	103.7	46.8	153.2	104	35	165
Toluene	10.4	103.6	77.5	127.0	104	46	148
• m,p-Xylene	21.2	105.9	11.2	188.8	106	D	239
• o-Xylene	10.6	105.9	47.6	152.4	106	36	164

Flags :

- + = out of QC limits.
- ♦ = lab generated limits.
- D = Detected

Reviewed by: *RM*



Control Limits for MS-MSD

Method: **602** Spike[ppb]: **10**
 Instrument : gc3
 Sample : 082806\035r0101.txt
 MS : 082806\037r0101.txt
 MSD : 082806\038r0101.txt

Compound	µg/L			P(%)		P Limits	
	Sam.	MS	MSD	MS	MSD	Lower	Upper
Benzene	2.9	13.8	13.7	109	108	39	150
Chlorobenzene	ND	10.6	10.5	106	105	55	135
1,2-Dichlorobenzene	ND	10.5	10.4	105	104	37	154
1,3-Dichlorobenzene	ND	10.4	10.3	104	103	50	141
1,4-Dichlorobenzene	ND	10.2	10.2	101	100	42	143
• Diisopropyl ether	ND	11.5	11.3	106	105	30	170
Ethylbenzene	ND	11.4	11.3	114	113	32	160
• MTBE	4.1	14.7	14.6	106	105	35	165
Toluene	ND	11.5	11.3	108	106	46	148
• m,p-Xylene	ND	22.8	22.6	111	110	D	239
• o-Xylene	ND	11.5	11.1	113	109	36	164

Flags :

+ = out of QC limits.
 ♦ = lab generated limits.
 D = Detected
 ND = None Detected

Reviewed by: *lp*



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW05
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	08/17/06
Date Received	08/18/06
Date Extracted	09/07/06
Date Analyzed	09/07/06
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	110
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.

Note: Sample analyzed outside of 14 day holding time.

Lab Info: g650-74-1e

Reviewed By: EW



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW07
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	08/17/06
Date Received	08/18/06
Date Extracted	09/07/06
Date Analyzed	09/07/06
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	110
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.

Note: Sample analyzed outside of 14 day holding time.

Lab Info: g650-74-2e

Reviewed By: RL



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

 Client Name: Sovereign Consulting

 Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW18
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	08/16/06
Date Received	08/18/06
Date Extracted	09/07/06
Date Analyzed	09/07/06
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	230 (µg/L)
C ₉ -C ₁₀ Aromatics**	140 (µg/L)
Surrogate % Recovery - PID	120
Surrogate % Recovery - FID	130

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

** = Excludes any surrogates or internal standards.

Note: Sample analyzed outside of 14 day holding time.

Lab Info: g650-74-3e

 Reviewed By: SW



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW20
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	08/16/06
Date Received	08/18/06
Date Extracted	09/07/06
Date Analyzed	09/07/06
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	120
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.

Note: Sample analyzed outside of 14 day holding time.

Lab Info: g650-74-4e

Reviewed By: RM



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW21
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	08/16/06
Date Received	08/18/06
Date Extracted	09/07/06
Date Analyzed	09/07/06
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	170 (µg/L)
C ₉ -C ₁₀ Aromatics**	< 100 (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.

Note: Sample analyzed outside of 14 day holding time.

Lab Info: g650-74-5e

Reviewed By: RS



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

 Client Name: Sovereign Consulting

 Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW22
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	08/16/06
Date Received	08/18/06
Date Extracted	09/07/06
Date Analyzed	09/07/06
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	170 (µg/L)
C ₉ -C ₁₀ Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	110
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.

Note: Sample analyzed outside of 14 day holding time.

Lab Info: g650-74-6e

 Reviewed By: RS



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

 Client Name: Sovereign Consulting

 Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-Duplicate
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	
Date Received	08/18/06
Date Extracted	09/07/06
Date Analyzed	09/07/06
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	120
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.

Note: Sample analyzed outside of 14 day holding time.

Lab Info: g650-74-7f

 Reviewed By: gwl



Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 09/01/06PID Initial Calibration Date: 09/01/06

Calibration Ranges and Limits

Range	MDL (07/15/2004) (µg/L)	ML (µg/L)	RL (µg/L) (mg/Kg)
C ₅ -C ₈ Aliphatics	4.4	14	100 10
C ₉ -C ₁₂ Aliphatics	3.4	11	100 10
C ₉ -C ₁₀ Aromatics	0.13	0.41	100 10

Calibration Concentration Levels

Range	Levels (µg/L)	%RSD or CCC	Method of Quantitation
C ₅ -C ₈ Aliphatics	40	8.7	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C ₉ -C ₁₂ Aliphatics	10	0.99	Linear Regression
	250		
	500		
	750		
	1000		
C ₉ -C ₁₀ Aromatics	10	0.99	Linear Regression
	250		
	500		
	750		
	1000		

Calibration Check Date: 09/06/06

Calibration Check

Range	Levels (µg/L) (mg/Kg)	RPD
C ₅ -C ₈ Aliphatics	2000 200	-6.5
C ₉ -C ₁₂ Aliphatics	500 50	-23.3
C ₉ -C ₁₀ Aromatics	500 50	-17.1

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW05
Sample Matrix	Water
Date Collected	08/17/06
Date Received	08/18/06
Date Extracted	08/30/06
Date Analyzed	09/06/06
Dry Weight	
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₆ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	73
Aromatic Surrogate % Recovery	79

Comments:

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

Lab info: G650-74-11

Reviewed By:



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW07
Sample Matrix	Water
Date Collected	08/17/06
Date Received	08/18/06
Date Extracted	08/30/06
Date Analyzed	09/06/06
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	85
Aromatic Surrogate % Recovery	81

Comments:

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

Lab info: G650-74-2I

Reviewed By: Py



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW18
Sample Matrix	Water
Date Collected	08/16/06
Date Received	08/18/06
Date Extracted	08/30/06
Date Analyzed	09/12/06
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*	390 (ug/L)
Aliphatic Surrogate % Recovery	81
Aromatic Surrogate % Recovery	78
Fractionation Surrogate 1 % Recovery	69

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-74-3I

Reviewed By: RV



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW20
Sample Matrix	Water
Date Collected	08/16/06
Date Received	08/18/06
Date Extracted	08/30/06
Date Analyzed	09/12/06
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	78
Aromatic Surrogate % Recovery	72
Fractionation Surrogate 1 % Recovery	71

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-74-4I

Reviewed By: RLD



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW21
Sample Matrix	Water
Date Collected	08/16/06
Date Received	08/18/06
Date Extracted	08/30/06
Date Analyzed	09/12/06
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*	260 (ug/L)
Aliphatic Surrogate % Recovery	79
Aromatic Surrogate % Recovery	76
Fractionation Surrogate 1 % Recovery	73

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-74-5I

Reviewed By: RL



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW22
Sample Matrix	Water
Date Collected	08/16/06
Date Received	08/18/06
Date Extracted	08/30/06
Date Analyzed	09/12/06
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*	390 (ug/L)
Aliphatic Surrogate % Recovery	81
Aromatic Surrogate % Recovery	76
Fractionation Surrogate 1 % Recovery	68

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-74-6I

Reviewed By: PL



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-Duplicate
Sample Matrix	Water
Date Collected	
Date Received	08/18/06
Date Extracted	08/30/06
Date Analyzed	09/06/06
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	87
Aromatic Surrogate % Recovery	80

Comments:

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

Lab info: G650-74-71

Reviewed By: SW



Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 05/31/06

Calibration Ranges and Limits

Range	MDL (2/2004) (µg/L)	ML (µg/L)	RL (µg/L) (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	5.30	Calibration Factor
	30		
	60		
	120		
	240		
C ₁₉ -C ₃₆ Aliphatics	8	6.4	Calibration Factor
	40		
	80		
	160		
	320		
C ₁₁ -C ₂₂ Aromatics	17	10.4	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 09/06/06

Calibration Check

Range	Levels (µg/mL)	RPD
C ₉ -C ₁₈ Aliphatics	120	1.2
C ₁₉ -C ₃₆ Aliphatics	160	3.8
C ₁₁ -C ₂₂ Aromatics	340	-17.9

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve



Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information
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Initial Calibration Date: 05/31/06**Calibration Ranges and Limits**

Range	MDL (2/2004) (µg/L)	ML (µg/L)	RL (µg/L) (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	5.30	Calibration Factor
	30		
	60		
	120		
	240		
C ₁₉ -C ₃₆ Aliphatics	8	6.4	Calibration Factor
	40		
	80		
	160		
	320		
C ₁₁ -C ₂₂ Aromatics	17	10.4	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 09/12/06**Calibration Check**

Range	Levels (µg/mL)	RPD
C ₉ -C ₁₈ Aliphatics	120	-21.5
C ₁₉ -C ₃₆ Aliphatics	160	-19.9
C ₁₁ -C ₂₂ Aromatics	340	-6.7

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve



Results for Semivolatiles by GCMS 625

Client Sample ID: USTM232-236-MW05
 Client Project ID: NV015
 Lab Sample ID: G650-74-1H
 Lab Project ID: G650-74

Analyzed By: DCS
 Date Collected: 8/17/2006 12:05
 Date Received: 8/18/2006
 Date Extracted: 8/23/2006
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	8/31/2006	
Acenaphthylene	BQL	10.0	1.12	1	8/31/2006	
Anthracene	BQL	10.0	1.75	1	8/31/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	8/31/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	8/31/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	8/31/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	8/31/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	8/31/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	8/31/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	8/31/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	8/31/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	8/31/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	8/31/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	8/31/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	8/31/2006	
2-Chlorophenol	BQL	10.0	4.22	1	8/31/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	8/31/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	8/31/2006	
Chrysene	BQL	10.0	1.11	1	8/31/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	8/31/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	8/31/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	8/31/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	8/31/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	8/31/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	8/31/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	8/31/2006	
Diethylphthalate	BQL	10.0	1.48	1	8/31/2006	
Dimethylphthalate	BQL	10.0	1.04	1	8/31/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	8/31/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	8/31/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	8/31/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	8/31/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	8/31/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	8/31/2006	
Diphenylamine *	BQL	10.0	1.53	1	8/31/2006	
Fluoranthene	BQL	10.0	1.41	1	8/31/2006	
Fluorene	BQL	10.0	1.22	1	8/31/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	8/31/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	8/31/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	8/31/2006	
Hexachloroethane	BQL	10.0	1.58	1	8/31/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	8/31/2006	
Isophorone	BQL	10.0	1.27	1	8/31/2006	
Naphthalene	BQL	10.0	1.08	1	8/31/2006	



Results for Semivolatiles by GCMS 625

Client Sample ID: USTM232-236-MW05
 Client Project ID: NV015
 Lab Sample ID: G650-74-1H
 Lab Project ID: G650-74

Analyzed By: DCS
 Date Collected: 8/17/2006 12:05
 Date Received: 8/18/2006
 Date Extracted: 8/23/2006
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	8/31/2006	
2-Nitrophenol	BQL	10.0	3.52	1	8/31/2006	
4-Nitrophenol	BQL	50.0	3.17	1	8/31/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	8/31/2006	
Pentachlorophenol	BQL	50.0	2.83	1	8/31/2006	
Phenanthrene	BQL	10.0	1.38	1	8/31/2006	
Phenol	BQL	10.0	3.38	1	8/31/2006	
Pyrene	BQL	10.0	2.08	1	8/31/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	8/31/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	8/31/2006	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8	80		
2-Fluorophenol		10	8.1	81		
Nitrobenzene-d5		10	8.2	82		
Phenol-d6		10	9.4	94		
2,4,6-Tribromophenol		10	9.4	94		
4-Terphenyl-d14		10	10.4	104		

Comments:

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

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: USTM232-236-MW07

Client Project ID: NV015

Lab Sample ID: G650-74-2H

Lab Project ID: G650-74

Sample Wt/Vol: 500 ML

Dilution: 1

Analyzed By: DCS

Date Collected: 8/17/2006 9:30

Date Received: 8/18/2006

Date Extracted: 8/23/2006

Date Analyzed: 8/31/2006

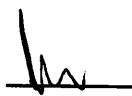
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	11.30			179
2	Unknown	11.74			6.37
3					
4					
5					
6					
7					
8					
9					
10					

Comment:

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

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

Reviewed by: 



Results for Semivolatiles by GCMS 625

Client Sample ID: USTM232-236-MW07

Client Project ID: NV015

Lab Sample ID: G650-74-2H

Lab Project ID: G650-74

Analyzed By: DCS

Date Collected: 8/17/2006 9:30

Date Received: 8/18/2006

Date Extracted: 8/23/2006

Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	8/31/2006	
Acenaphthylene	BQL	10.0	1.12	1	8/31/2006	
Anthracene	BQL	10.0	1.75	1	8/31/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	8/31/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	8/31/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	8/31/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	8/31/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	8/31/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	8/31/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	8/31/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	8/31/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	8/31/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	8/31/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	8/31/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	8/31/2006	
2-Chlorophenol	BQL	10.0	4.22	1	8/31/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	8/31/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	8/31/2006	
Chrysene	BQL	10.0	1.11	1	8/31/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	8/31/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	8/31/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	8/31/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	8/31/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	8/31/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	8/31/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	8/31/2006	
Diethylphthalate	BQL	10.0	1.48	1	8/31/2006	
Dimethylphthalate	BQL	10.0	1.04	1	8/31/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	8/31/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	8/31/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	8/31/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	8/31/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	8/31/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	8/31/2006	
Diphenylamine *	BQL	10.0	1.53	1	8/31/2006	
Fluoranthene	BQL	10.0	1.41	1	8/31/2006	
Fluorene	BQL	10.0	1.22	1	8/31/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	8/31/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	8/31/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	8/31/2006	
Hexachloroethane	BQL	10.0	1.58	1	8/31/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	8/31/2006	
Isophorone	BQL	10.0	1.27	1	8/31/2006	
Naphthalene	BQL	10.0	1.08	1	8/31/2006	



**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW07
 Client Project ID: NV015
 Lab Sample ID: G650-74-2H
 Lab Project ID: G650-74

Analyzed By: DCS
 Date Collected: 8/17/2006 9:30
 Date Received: 8/18/2006
 Date Extracted: 8/23/2006
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	8/31/2006	
2-Nitrophenol	BQL	10.0	3.52	1	8/31/2006	
4-Nitrophenol	BQL	50.0	3.17	1	8/31/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	8/31/2006	
Pentachlorophenol	BQL	50.0	2.83	1	8/31/2006	
Phenanthrene	BQL	10.0	1.38	1	8/31/2006	
Phenol	BQL	10.0	3.38	1	8/31/2006	
Pyrene	BQL	10.0	2.08	1	8/31/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	8/31/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	8/31/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.2	82
2-Fluorophenol	10	8	80
Nitrobenzene-d5	10	8.3	83
Phenol-d6	10	9.2	92
2,4,6-Tribromophenol	10	8.6	86
4-Terphenyl-d14	10	11.3	113

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: *CS*



Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTM232-236-MW05

Client Project ID: NV015

Lab Sample ID: G650-74-1H

Lab Project ID: G650-74

Sample Wt/Vol: 500 ML

Dilution: 1

Analyzed By: DCS

Date Collected: 8/17/2006 12:05

Date Received: 8/18/2006

Date Extracted: 8/23/2006

Date Analyzed: 8/31/2006

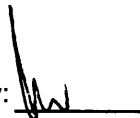
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	11.31			204
2	Unknown	4.34			17.4
3	Unknown	11.73			11.5
4	Benzene, (1-methylethyl)-	5.36	000098-82-8	91	9.87
5	Unknown	7.40			6.33
6	Unknown	7.44			4.43
7					
8					
9					
10					

Comment:

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

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

Reviewed by: 



**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW18
 Client Project ID: NV015
 Lab Sample ID: G650-74-3H
 Lab Project ID: G650-74

Analyzed By: DCS
 Date Collected: 8/16/2006 11:10
 Date Received: 8/18/2006
 Date Extracted: 8/23/2006
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	7.60	10.0	1.22	1	8/31/2006	J
Acenaphthylene	BQL	10.0	1.12	1	8/31/2006	
Anthracene	BQL	10.0	1.75	1	8/31/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	8/31/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	8/31/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	8/31/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	8/31/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	8/31/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	8/31/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	8/31/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	8/31/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	8/31/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	8/31/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	8/31/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	8/31/2006	
2-Chlorophenol	BQL	10.0	4.22	1	8/31/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	8/31/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	8/31/2006	
Chrysene	BQL	10.0	1.11	1	8/31/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	8/31/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	8/31/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	8/31/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	8/31/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	8/31/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	8/31/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	8/31/2006	
Diethylphthalate	BQL	10.0	1.48	1	8/31/2006	
Dimethylphthalate	BQL	10.0	1.04	1	8/31/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	8/31/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	8/31/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	8/31/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	8/31/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	8/31/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	8/31/2006	
Diphenylamine *	1.70	10.0	1.53	1	8/31/2006	J
Fluoranthene	BQL	10.0	1.41	1	8/31/2006	
Fluorene	10.8	10.0	1.22	1	8/31/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	8/31/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	8/31/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	8/31/2006	
Hexachloroethane	BQL	10.0	1.58	1	8/31/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	8/31/2006	
Isophorone	BQL	10.0	1.27	1	8/31/2006	
Naphthalene	BQL	10.0	1.08	1	8/31/2006	



Results for Semivolatiles by GCMS 625

Client Sample ID: USTM232-236-MW18
 Client Project ID: NV015
 Lab Sample ID: G650-74-3H
 Lab Project ID: G650-74

Analyzed By: DCS
 Date Collected: 8/16/2006 11:10
 Date Received: 8/18/2006
 Date Extracted: 8/23/2006
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	8/31/2006	
2-Nitrophenol	BQL	10.0	3.52	1	8/31/2006	
4-Nitrophenol	BQL	50.0	3.17	1	8/31/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	8/31/2006	
Pentachlorophenol	BQL	50.0	2.83	1	8/31/2006	
Phenanthrene	9.80	10.0	1.38	1	8/31/2006	J
Phenol	BQL	10.0	3.38	1	8/31/2006	
Pyrene	BQL	10.0	2.08	1	8/31/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	8/31/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	8/31/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.2	82
2-Fluorophenol	10	8.6	86
Nitrobenzene-d5	10	8.6	86
Phenol-d6	10	9.7	97
2,4,6-Tribromophenol	10	9.5	95
4-Terphenyl-d14	10	10.7	107

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: *red*



Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTM232-236-MW18
 Client Project ID: NV015
 Lab Sample ID: G650-74-3H
 Lab Project ID: G650-74
 Sample Wt/Vol: 500 ML
 Dilution: 1

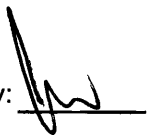
Analyzed By: DCS
 Date Collected: 8/16/2006 11:10
 Date Received: 8/18/2006
 Date Extracted: 8/23/2006
 Date Analyzed: 8/31/2006
 Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	11.31			161
2	Toluene	3.29	000108-88-3	94	60.6
3	Indane	6.73	000496-11-7	94	43.7
4	Indan, 1-methyl-	8.00	000767-58-8	94	25.4
5	Aromatic, Unknown	9.44			19.3
6	Aromatic, Unknown	8.49			14.8
7	Unknown	4.34			13
8	Benzene, (2-methyl-1-propenyl)-	7.26	000768-49-0	95	11.6
9	Unknown	12.13			11.3
10	Benzene, 1,3-diethyl-	6.86	000141-93-5	94	11.1

Comment:

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

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

Reviewed by: 



Results for Semivolatiles by GCMS 625

Client Sample ID: USTM232-236-MW20
Client Project ID: NV015
Lab Sample ID: G650-74-4H
Lab Project ID: G650-74

Analyzed By: DCS
Date Collected: 8/16/2006 13:40
Date Received: 8/18/2006
Date Extracted: 8/23/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	1.70	10.0	1.22	1	8/31/2006	J
Acenaphthylene	BQL	10.0	1.12	1	8/31/2006	
Anthracene	BQL	10.0	1.75	1	8/31/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	8/31/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	8/31/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	8/31/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	8/31/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	8/31/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	8/31/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	8/31/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	8/31/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	8/31/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	8/31/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	8/31/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	8/31/2006	
2-Chlorophenol	BQL	10.0	4.22	1	8/31/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	8/31/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	8/31/2006	
Chrysene	BQL	10.0	1.11	1	8/31/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	8/31/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	8/31/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	8/31/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	8/31/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	8/31/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	8/31/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	8/31/2006	
Diethylphthalate	BQL	10.0	1.48	1	8/31/2006	
Dimethylphthalate	BQL	10.0	1.04	1	8/31/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	8/31/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	8/31/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	8/31/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	8/31/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	8/31/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	8/31/2006	
Diphenylamine *	BQL	10.0	1.53	1	8/31/2006	
Fluoranthene	BQL	10.0	1.41	1	8/31/2006	
Fluorene	1.70	10.0	1.22	1	8/31/2006	J
Hexachlorobenzene	BQL	10.0	1.22	1	8/31/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	8/31/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	8/31/2006	
Hexachloroethane	BQL	10.0	1.58	1	8/31/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	8/31/2006	
Isophorone	BQL	10.0	1.27	1	8/31/2006	
Naphthalene	BQL	10.0	1.08	1	8/31/2006	



Results for Semivolatiles by GCMS 625

Client Sample ID: USTM232-236-MW20
 Client Project ID: NV015
 Lab Sample ID: G650-74-4H
 Lab Project ID: G650-74

Analyzed By: DCS
 Date Collected: 8/16/2006 13:40
 Date Received: 8/18/2006
 Date Extracted: 8/23/2006
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	8/31/2006	
2-Nitrophenol	BQL	10.0	3.52	1	8/31/2006	
4-Nitrophenol	BQL	50.0	3.17	1	8/31/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	8/31/2006	
Pentachlorophenol	BQL	50.0	2.83	1	8/31/2006	
Phenanthrene	BQL	10.0	1.38	1	8/31/2006	
Phenol	BQL	10.0	3.38	1	8/31/2006	
Pyrene	BQL	10.0	2.08	1	8/31/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	8/31/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	8/31/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.2	82
2-Fluorophenol	10	7.9	79
Nitrobenzene-d5	10	8.3	83
Phenol-d6	10	9.2	92
2,4,6-Tribromophenol	10	9	90
4-Terphenyl-d14	10	10.9	109

Comments:

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

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: USTM232-236-MW20

Client Project ID: NV015

Lab Sample ID: G650-74-4H

Lab Project ID: G650-74

Sample Wt/Vol: 500 ML

Dilution: 1

Analyzed By: DCS

Date Collected: 8/16/2006 13:40

Date Received: 8/18/2006

Date Extracted: 8/23/2006

Date Analyzed: 8/31/2006

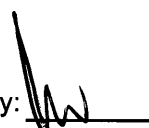
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	11.30			185
2	Unknown	11.73			7.35
3					
4					
5					
6					
7					
8					
9					
10					

Comment:

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

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

Reviewed by: 



Results for Semivolatiles by GCMS 625

Client Sample ID: USTM232-236-MW21
Client Project ID: NV015
Lab Sample ID: G650-74-5H
Lab Project ID: G650-74

Analyzed By: EAW
Date Collected: 8/16/2006 16:50
Date Received: 8/18/2006
Date Extracted: 8/23/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	8/31/2006	
Acenaphthylene	BQL	10.0	1.12	1	8/31/2006	
Anthracene	BQL	10.0	1.75	1	8/31/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	8/31/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	8/31/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	8/31/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	8/31/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	8/31/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	8/31/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	8/31/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	8/31/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	8/31/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	8/31/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	8/31/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	8/31/2006	
2-Chlorophenol	BQL	10.0	4.22	1	8/31/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	8/31/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	8/31/2006	
Chrysene	BQL	10.0	1.11	1	8/31/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	8/31/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	8/31/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	8/31/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	8/31/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	8/31/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	8/31/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	8/31/2006	
Diethylphthalate	BQL	10.0	1.48	1	8/31/2006	
Dimethylphthalate	BQL	10.0	1.04	1	8/31/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	8/31/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	8/31/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	8/31/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	8/31/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	8/31/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	8/31/2006	
Diphenylamine *	BQL	10.0	1.53	1	8/31/2006	
Fluoranthene	BQL	10.0	1.41	1	8/31/2006	
Fluorene	6.50	10.0	1.22	1	8/31/2006	J
Hexachlorobenzene	BQL	10.0	1.22	1	8/31/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	8/31/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	8/31/2006	
Hexachloroethane	BQL	10.0	1.58	1	8/31/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	8/31/2006	
Isophorone	BQL	10.0	1.27	1	8/31/2006	
Naphthalene	2.80	10.0	1.08	1	8/31/2006	J



Results for Semivolatiles by GCMS 625

Client Sample ID: USTM232-236-MW21
 Client Project ID: NV015
 Lab Sample ID: G650-74-5H
 Lab Project ID: G650-74

Analyzed By: EAW
 Date Collected: 8/16/2006 16:50
 Date Received: 8/18/2006
 Date Extracted: 8/23/2006
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	8/31/2006	
2-Nitrophenol	BQL	10.0	3.52	1	8/31/2006	
4-Nitrophenol	BQL	50.0	3.17	1	8/31/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	8/31/2006	
Pentachlorophenol	BQL	50.0	2.83	1	8/31/2006	
Phenanthrene	BQL	10.0	1.38	1	8/31/2006	
Phenol	BQL	10.0	3.38	1	8/31/2006	
Pyrene	BQL	10.0	2.08	1	8/31/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	8/31/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	8/31/2006	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	7.1	71		
2-Fluorophenol		10	6.4	64		
Nitrobenzene-d5		10	6.2	62		
Phenol-d6		10	6	60		
2,4,6-Tribromophenol		10	8.8	88		
4-Terphenyl-d14		10	10.2	102		

Comments:

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

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: USTM232-236-MW21

Client Project ID: NV015

Lab Sample ID: G650-74-5H

Lab Project ID: G650-74

Sample Wt/Vol: 500 ML

Dilution: 1

Analyzed By: EAW

Date Collected: 8/16/2006 16:50

Date Received: 8/18/2006

Date Extracted: 8/23/2006

Date Analyzed: 8/31/2006

Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Naphthalene, 2,3-dimethyl-	11.30	000581-40-8	98	26.7
2	Naphthalene, 1,7-dimethyl-	11.17	000575-37-1	98	19.6
3	Ketone, Unknown	3.19			17.7
4	Ketone, Unknown	4.95			15.4
5	Naphthalene, 2,7-dimethyl-	11.34	000582-16-1	97	13.1
6	Unknown	8.66			10.3
7	Naphthalene, 2,3-dimethyl-	11.48	000581-40-8	98	8.88
8	Naphthalene, 1-ethyl-	11.07	001127-76-0	94	8.47
9	Naphthalene, 1,6,7-trimethyl-	12.37	002245-38-7	94	7.27
10	Naphthalene, 1,4-dimethyl-	11.61	000571-58-4	97	6.65

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: EAW



Results for Semivolatiles by GCMS 625

Client Sample ID: USTM232-236-MW22
Client Project ID: NV015
Lab Sample ID: G650-74-6H
Lab Project ID: G650-74

Analyzed By: EAW
Date Collected: 8/16/2006 17:30
Date Received: 8/18/2006
Date Extracted: 8/23/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	8/31/2006	
Acenaphthylene	BQL	10.0	1.12	1	8/31/2006	
Anthracene	BQL	10.0	1.75	1	8/31/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	8/31/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	8/31/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	8/31/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	8/31/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	8/31/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	8/31/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	8/31/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	8/31/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	8/31/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	8/31/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	8/31/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	8/31/2006	
2-Chlorophenol	BQL	10.0	4.22	1	8/31/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	8/31/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	8/31/2006	
Chrysene	BQL	10.0	1.11	1	8/31/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	8/31/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	8/31/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	8/31/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	8/31/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	8/31/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	8/31/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	8/31/2006	
Diethylphthalate	BQL	10.0	1.48	1	8/31/2006	
Dimethylphthalate	BQL	10.0	1.04	1	8/31/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	8/31/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	8/31/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	8/31/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	8/31/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	8/31/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	8/31/2006	
Diphenylamine *	BQL	10.0	1.53	1	8/31/2006	
Fluoranthene	BQL	10.0	1.41	1	8/31/2006	
Fluorene	7.10	10.0	1.22	1	8/31/2006	J
Hexachlorobenzene	BQL	10.0	1.22	1	8/31/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	8/31/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	8/31/2006	
Hexachloroethane	BQL	10.0	1.58	1	8/31/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	8/31/2006	
Isophorone	BQL	10.0	1.27	1	8/31/2006	
Naphthalene	4.80	10.0	1.08	1	8/31/2006	J



Results for Semivolatiles by GCMS 625

Client Sample ID: USTM232-236-MW22
 Client Project ID: NV015
 Lab Sample ID: G650-74-6H
 Lab Project ID: G650-74

Analyzed By: EAW
 Date Collected: 8/16/2006 17:30
 Date Received: 8/18/2006
 Date Extracted: 8/23/2006
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	8/31/2006	
2-Nitrophenol	BQL	10.0	3.52	1	8/31/2006	
4-Nitrophenol	BQL	50.0	3.17	1	8/31/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	8/31/2006	
Pentachlorophenol	BQL	50.0	2.83	1	8/31/2006	
Phenanthrene	BQL	10.0	1.38	1	8/31/2006	
Phenol	BQL	10.0	3.38	1	8/31/2006	
Pyrene	BQL	10.0	2.08	1	8/31/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	8/31/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	8/31/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.9	79
2-Fluorophenol	10	7.2	72
Nitrobenzene-d5	10	7.1	71
Phenol-d6	10	6.5	65
2,4,6-Tribromophenol	10	9.6	96
4-Terphenyl-d14	10	11	110

Comments:

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

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: USTM232-236-MW22

Client Project ID: NV015

Lab Sample ID: G650-74-6H

Lab Project ID: G650-74

Sample Wt/Vol: 500 ML

Dilution: 1

Analyzed By: EAW

Date Collected: 8/16/2006 17:30

Date Received: 8/18/2006

Date Extracted: 8/23/2006

Date Analyzed: 8/31/2006

Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Naphthalene, 2,6-dimethyl-	11.30	000581-42-0	97	35
2	Ketone, Unknown	4.95			17
3	Ketone, Unknown	3.19			16.8
4	Naphthalene, 2,7-dimethyl-	11.17	000582-16-1	97	15
5	Unknown	8.66			14.8
6	Naphthalene, 1,7-dimethyl-	11.34	000575-37-1	98	14
7	Naphthalene, 2,3-dimethyl-	11.48	000581-40-8	97	12.2
8	Naphthalene, 1-ethyl-	11.07	001127-76-0	94	11.3
9	Benzene, 1,2,3-trimethyl-	6.88	000526-73-8	95	9.69
10	Naphthalene, 2,3,6-trimethyl-	12.37	000829-26-5	98	9.32

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: EW



**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-Duplicate
Client Project ID: NV015
Lab Sample ID: G650-74-7H
Lab Project ID: G650-74

Analyzed By: EAW
Date Collected: 8/18/2006
Date Received: 8/18/2006
Date Extracted: 8/23/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	8/31/2006	
Acenaphthylene	BQL	10.0	1.12	1	8/31/2006	
Anthracene	BQL	10.0	1.75	1	8/31/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	8/31/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	8/31/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	8/31/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	8/31/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	8/31/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	8/31/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	8/31/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	8/31/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	8/31/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	8/31/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	8/31/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	8/31/2006	
2-Chlorophenol	BQL	10.0	4.22	1	8/31/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	8/31/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	8/31/2006	
Chrysene	BQL	10.0	1.11	1	8/31/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	8/31/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	8/31/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	8/31/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	8/31/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	8/31/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	8/31/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	8/31/2006	
Diethylphthalate	BQL	10.0	1.48	1	8/31/2006	
Dimethylphthalate	BQL	10.0	1.04	1	8/31/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	8/31/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	8/31/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	8/31/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	8/31/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	8/31/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	8/31/2006	
Diphenylamine *	BQL	10.0	1.53	1	8/31/2006	
Fluoranthene	BQL	10.0	1.41	1	8/31/2006	
Fluorene	BQL	10.0	1.22	1	8/31/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	8/31/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	8/31/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	8/31/2006	
Hexachloroethane	BQL	10.0	1.58	1	8/31/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	8/31/2006	
Isophorone	BQL	10.0	1.27	1	8/31/2006	
Naphthalene	BQL	10.0	1.08	1	8/31/2006	



Results for Semivolatiles by GCMS 625

Client Sample ID: USTM232-236-Duplicate
 Client Project ID: NV015
 Lab Sample ID: G650-74-7H
 Lab Project ID: G650-74

Analyzed By: EAW
 Date Collected:
 Date Received: 8/18/2006
 Date Extracted: 8/23/2006
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	8/31/2006	
2-Nitrophenol	BQL	10.0	3.52	1	8/31/2006	
4-Nitrophenol	BQL	50.0	3.17	1	8/31/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	8/31/2006	
Pentachlorophenol	BQL	50.0	2.83	1	8/31/2006	
Phenanthrene	BQL	10.0	1.38	1	8/31/2006	
Phenol	BQL	10.0	3.38	1	8/31/2006	
Pyrene	BQL	10.0	2.08	1	8/31/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	8/31/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	8/31/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.7	77
2-Fluorophenol	10	6.8	68
Nitrobenzene-d5	10	6.6	66
Phenol-d6	10	6.2	62
2,4,6-Tribromophenol	10	8.1	81
4-Terphenyl-d14	10	11.9	119

Comments:

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

Flags:

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

Reviewed By: Y201



Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTM232-236-Duplicate
 Client Project ID: NV015
 Lab Sample ID: G650-74-7H
 Lab Project ID: G650-74
 Sample Wt/Vol: 500 ML
 Dilution: 1

Analyzed By: EAW
 Date Collected:
 Date Received: 8/18/2006
 Date Extracted: 8/23/2006
 Date Analyzed: 8/31/2006
 Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Ketone, Unknown	3.18			21.5
2	Unknown	4.95			14.1
3	Unknown	5.18			4.81
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: *EW*



Locations Nationwide

- Alaska
- Louisiana
- New Jersey
- West Virginia
- Hawaii
- Maryland
- North Carolina

www.us.sgs.com

053911

[illegible]



Mr. Chris Murray
Sovereign Consulting
405 Oakmeads Crescent
Suite 1
Virginia Beach VA 23462
Report Number: G650-82
Client Project: NV015

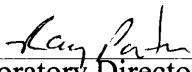
Dear Mr. Murray:

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

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

Thank you for using SGS/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,
SGS/Paradigm Analytical Laboratories, Inc.


Laboratory Director
J. Patrick Weaver

9/21/2006
Date



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

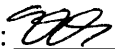
Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW05
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	09/19/06
Date Received	09/20/06
Date Extracted	09/20/06
Date Analyzed	09/20/06
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	99
Surrogate % Recovery - FID	100

* = 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: g650-82-1a

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW07
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	09/19/06
Date Received	09/20/06
Date Extracted	09/20/06
Date Analyzed	09/20/06
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	92
Surrogate % Recovery - FID	98

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

** = Excludes any surrogates or internal standards.

Lab Info: g650-82-2a

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

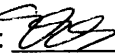
Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW18
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	09/19/06
Date Received	09/20/06
Date Extracted	09/20/06
Date Analyzed	09/20/06
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	230 (µg/L)
C ₉ -C ₁₀ Aromatics**	130 (µg/L)
Surrogate % Recovery - PID	97
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: g650-82-3a

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

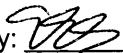
Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW20
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	09/19/06
Date Received	09/20/06
Date Extracted	09/20/06
Date Analyzed	09/20/06
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₀ Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	96
Surrogate % Recovery - FID	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: g650-82-4a

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

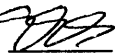
Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW21
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	09/19/06
Date Received	09/20/06
Date Extracted	09/20/06
Date Analyzed	09/20/06
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	270 (µg/L)
C ₉ -C ₁₀ Aromatics**	150 (µg/L)
Surrogate % Recovery - PID	96
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: g650-82-5a

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-M22
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	09/19/06
Date Received	09/20/06
Date Extracted	09/20/06
Date Analyzed	09/20/06
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	150 (µg/L)
C ₉ -C ₁₀ Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	94
Surrogate % Recovery - FID	100

* = 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: g650-82-6a

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

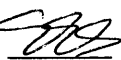
Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-DUPLICATE
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	09/19/06
Date Received	09/20/06
Date Extracted	09/20/06
Date Analyzed	09/20/06
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	95
Surrogate % Recovery - FID	100

* = 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: g650-82-7a

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

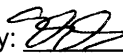
Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	Trip Blank
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	09/19/06
Date Received	09/20/06
Date Extracted	09/20/06
Date Analyzed	09/20/06
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₀ Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	96
Surrogate % Recovery - FID	100

* = 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: g650-82-8a

Reviewed By: 



Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 09/01/06PID Initial Calibration Date: 09/01/06

Calibration Ranges and Limits

Range	MDL (07/15/2004) (µg/L)	ML (µg/L)	RL (µg/L) (mg/Kg)	
C ₅ -C ₈ Aliphatics	4.4	14	100	10
C ₉ -C ₁₂ Aliphatics	3.4	11	100	10
C ₉ -C ₁₀ Aromatics	0.13	0.41	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	%RSD or CCC	Method of Quantitation
C ₅ -C ₈ Aliphatics	40	8.7	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C ₉ -C ₁₂ Aliphatics	10	0.99	Linear Regression
	250		
	500		
	750		
	1000		
C ₉ -C ₁₀ Aromatics	10	0.99	Linear Regression
	250		
	500		
	750		
	1000		

Calibration Check Date: 09/20/06

Calibration Check

Range	Levels (µg/L) (mg/Kg)		RPD
C ₅ -C ₈ Aliphatics	2000	200	10.2
C ₉ -C ₁₂ Aliphatics	500	50	-5.3
C ₉ -C ₁₀ Aromatics	500	50	-0.4

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 (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

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

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

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

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

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

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

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

- 1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.
- 2) Uncertainty for all reported data is less than or equal to 30 percent.

Mr. Chris Murray
Sovereign Consulting
405 Oakmeads Crescent
Suite 1
Virginia Beach VA 23462
Report Number: G650-102
Client Project: NV015

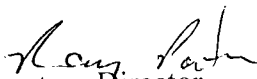
Dear Mr. Murray:

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

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

Thank you for using SGS/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,
SGS/Paradigm Analytical Laboratories, Inc.


Laboratory Director
J. Patrick Weaver

2/2/2007
Date

Results for Volatiles

by GC 602

Client Sample ID: USTM232-236-MW05

Analyzed By: RSB

Client Project ID: NV015

Date Collected: 1/23/2007 9:40

Lab Sample ID: G650-102-1A

Date Received: 1/24/2007

Lab Project ID: G650-102

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	1/31/2007	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	1/31/2007	
Ethylbenzene	0.185	1.00	0.172	1	1/31/2007	J
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	1/31/2007	
Toluene	1.28	1.00	0.159	1	1/31/2007	
m/p-Xylene	BQL	2.00	0.326	1	1/31/2007	
o-Xylene	BQL	2.00	0.285	1	1/31/2007	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.5	101

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: USTM232-236-MW07

Analyzed By: RSB

Client Project ID: NV015

Date Collected: 1/23/2007 13:55

Lab Sample ID: G650-102-2A

Date Received: 1/24/2007

Lab Project ID: G650-102

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	1/31/2007	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	1/31/2007	
Ethylbenzene	BQL	1.00	0.172	1	1/31/2007	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	1/31/2007	
Toluene	0.537	1.00	0.159	1	1/31/2007	J
m/p-Xylene	BQL	2.00	0.326	1	1/31/2007	
o-Xylene	BQL	2.00	0.285	1	1/31/2007	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.7	102

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: USTM232-236-MW18

Analyzed By: RSB

Client Project ID: NV015

Date Collected: 1/23/2007 13:00

Lab Sample ID: G650-102-3A

Date Received: 1/24/2007

Lab Project ID: G650-102

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	1/31/2007	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	1/31/2007	
Ethylbenzene	0.333	1.00	0.172	1	1/31/2007	J
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	1/31/2007	
Toluene	0.607	1.00	0.159	1	1/31/2007	J
m/p-Xylene	BQL	2.00	0.326	1	1/31/2007	
o-Xylene	BQL	2.00	0.285	1	1/31/2007	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.1	103

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: USTM232-236-MW20

Analyzed By: RSB

Client Project ID: NV015

Date Collected: 1/23/2007 12:10

Lab Sample ID: G650-102-4A

Date Received: 1/24/2007

Lab Project ID: G650-102

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	1/31/2007	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	1/31/2007	
Ethylbenzene	0.365	1.00	0.172	1	1/31/2007	J
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	1/31/2007	
Toluene	0.479	1.00	0.159	1	1/31/2007	J
m/p-Xylene	BQL	2.00	0.326	1	1/31/2007	
o-Xylene	BQL	2.00	0.285	1	1/31/2007	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.9	102

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: USTM232-236-MW21

Analyzed By: RSB

Client Project ID: NV015

Date Collected: 1/23/2007 11:23

Lab Sample ID: G650-102-5A

Date Received: 1/24/2007

Lab Project ID: G650-102

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	1/31/2007	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	1/31/2007	
Ethylbenzene	1.09	1.00	0.172	1	1/31/2007	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	1/31/2007	
Toluene	0.965	1.00	0.159	1	1/31/2007	J
m/p-Xylene	1.02	2.00	0.326	1	1/31/2007	J
o-Xylene	BQL	2.00	0.285	1	1/31/2007	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.1	103

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: USTM232-236-MW22

Analyzed By: RSB

Client Project ID: NV015

Date Collected: 1/23/2007 10:37

Lab Sample ID: G650-102-6A

Date Received: 1/24/2007

Lab Project ID: G650-102

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	1/31/2007	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	1/31/2007	
Ethylbenzene	0.580	1.00	0.172	1	1/31/2007	J
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	1/31/2007	
Toluene	0.867	1.00	0.159	1	1/31/2007	J
m/p-Xylene	0.476	2.00	0.326	1	1/31/2007	J
o-Xylene	BQL	2.00	0.285	1	1/31/2007	

Surrogate Spike Recoveries**Spike
Added****Spike
Result****Percent
Recovery**

Trifluorotoluene

40

41.1

103

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: USTM232-236-Duplicate

Analyzed By: RSB

Client Project ID: NV015

Date Collected: 1/23/2007 0:00

Lab Sample ID: G650-102-7A

Date Received: 1/24/2007

Lab Project ID: G650-102

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	1/31/2007	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	1/31/2007	
Ethylbenzene	BQL	1.00	0.172	1	1/31/2007	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	1/31/2007	
Toluene	0.544	1.00	0.159	1	1/31/2007	J
m/p-Xylene	BQL	2.00	0.326	1	1/31/2007	
o-Xylene	BQL	2.00	0.285	1	1/31/2007	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.7	102

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: hmm

Results for Volatiles

by GC 602

Client Sample ID: Trip Blanks

Analyzed By: RSB

Client Project ID: NV015

Date Collected: 1/23/2007

Lab Sample ID: G650-102-8A

Date Received: 1/24/2007

Lab Project ID: G650-102

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	1/31/2007	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	1/31/2007	
Ethylbenzene	BQL	1.00	0.172	1	1/31/2007	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	1/31/2007	
Toluene	BQL	1.00	0.159	1	1/31/2007	
m/p-Xylene	BQL	2.00	0.326	1	1/31/2007	
o-Xylene	BQL	2.00	0.285	1	1/31/2007	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.6	101

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: Method Blank
 Client Project ID:
 Lab Sample ID: VBLK3013107A
 Lab Project ID:

Analyzed By: RSB
 Date Collected:
 Date Received:
 Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	1/31/2007	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	1/31/2007	
Ethylbenzene	BQL	1.00	0.172	1	1/31/2007	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	1/31/2007	
Toluene	BQL	1.00	0.159	1	1/31/2007	
m/p-Xylene	BQL	2.00	0.326	1	1/31/2007	
o-Xylene	BQL	2.00	0.285	1	1/31/2007	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.7	102

Comments:

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

Results for Volatiles

by GC 602

Client Sample ID: Method Blank
 Client Project ID:
 Lab Sample ID: VBLK3013107B
 Lab Project ID:

Analyzed By: RSB
 Date Collected:
 Date Received:
 Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.198	1	1/31/2007	
Diisopropyl ether (DIPE)	BQL	1.00	0.157	1	1/31/2007	
Ethylbenzene	BQL	1.00	0.172	1	1/31/2007	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.405	1	1/31/2007	
Toluene	BQL	1.00	0.159	1	1/31/2007	
m/p-Xylene	BQL	2.00	0.326	1	1/31/2007	
o-Xylene	BQL	2.00	0.285	1	1/31/2007	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.7	102

Comments:

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

Summary Results for Laboratory Control Spike

Method: 602

Filename : 013107/003R

Compound	SA	Result	Rec	LCS Limits	
	ug/L	ug/L	(%)	Lower	Upper
Benzene	10.0	11.1	110.7	39	150
Chlorobenzene	10.0	10.9	109.4	55	135
1,2-Dichlorobenzene	20.0	22.4	112.2	37	154
1,3-Dichlorobenzene	10.0	10.9	109.4	50	141
1,4-Dichlorobenzene	20.0	22.0	110.0	42	143
• Diisopropyl ether	10.0	10.3	103.1	30	170
Ethylbenzene	10.0	11.2	112.2	32	160
• MTBE	20.0	21.8	109.2	35	165
Toluene	10.0	11.1	110.9	46	148
• m,p-Xylene	20.0	22.4	111.9	0	239
• o-Xylene	20.0	22.1	110.6	36	164

Flags :

- + = out of QC limits.
- = lab generated limits.
- D = Detected
- SA = Spiked Amount

Summary Results for Laboratory Control Spike**Method: 602****Filename : 013107/004R**

	SA	Result	Rec	LCS Limits	
Compound	ug/L	ug/L	(%)	Lower	Upper
Benzene	10.0	11.0	109.7	39	150
Chlorobenzene	10.0	10.9	108.7	55	135
1,2-Dichlorobenzene	20.0	22.3	111.3	37	154
1,3-Dichlorobenzene	10.0	10.9	108.6	50	141
1,4-Dichlorobenzene	20.0	21.7	108.6	42	143
• Diisopropyl ether	10.0	10.3	103.0	30	170
Ethylbenzene	10.0	11.2	111.5	32	160
• MTBE	20.0	21.6	107.8	35	165
Toluene	10.0	11.0	110.0	46	148
• m,p-Xylene	20.0	22.3	111.4	0	239
• o-Xylene	20.0	22.0	110.1	36	164

Flags :

- + = out of QC limits.
- = lab generated limits.
- D = Detected
- SA = Spiked Amount

Summary Results for MS-MSD

Method: 602

Sample : 013107/017F::013107/017R

MS : 013107/019F::013107/019R

MSD : 013107/020F::013107/020R

Compound	SA	µg/L			REC(%)		REC Limits	
		Sam.	MS	MSD	MS	MSD	Lower	Upper
Benzene	10.0	5.8	12.0	10.4	120	120	39	150
Chlorobenzene	10.0	ND	11.1	9.2	111	111	55	135
1,2-Dichlorobenzene	10.0	ND	22.4	19.0	224 +	224 +	37	154
1,3-Dichlorobenzene	10.0	ND	11.0	9.2	110	110	50	141
1,4-Dichlorobenzene	10.0	ND	21.6	18.1	216 +	216 +	42	143
• Diisopropyl ether	10.0	1.4	10.6	8.9	106	106	30	170
Ethylbenzene	10.0	ND	11.3	9.4	113	113	32	160
• MTBE	20.0	20.3	23.3	20.2	117	117	35	165
Toluene	10.0	ND	11.4	9.6	114	114	46	148
• m,p-Xylene	20.0	ND	22.8	19.0	114	114	D	239
• o-Xylene	20.0	4.5	18.5	14.6	93	93	36	164

Flags :

- + = out of QC limits.
- = lab generated limits.
- D = Detected
- ND = None Detected
- SA= Spike Added

Summary Results for Laboratory Control Spike

Method: 602

Filename : 013107/022R

Compound	SA	Result	Rec	LCS Limits	
	ug/L	ug/L	(%)	Lower	Upper
Benzene	10.0	10.8	108.0	39	150
Chlorobenzene	10.0	10.7	106.8	55	135
1,2-Dichlorobenzene	20.0	22.1	110.4	37	154
1,3-Dichlorobenzene	10.0	10.7	106.8	50	141
1,4-Dichlorobenzene	20.0	21.3	106.6	42	143
• Diisopropyl ether	10.0	10.1	101.4	30	170
Ethylbenzene	10.0	10.9	109.4	32	160
• MTBE	20.0	21.3	106.3	35	165
Toluene	10.0	10.8	108.3	46	148
• m,p-Xylene	20.0	21.9	109.4	0	239
• o-Xylene	20.0	21.8	108.8	36	164

Flags :

- + = out of QC limits.
- ♦ = lab generated limits.
- D = Detected
- SA = Spiked Amount

Summary Results for Laboratory Control Spike

Method: 602

Filename : 013107/023R

Compound	SA	Result	Rec	LCS Limits	
	ug/L	ug/L	(%)	Lower	Upper
Benzene	10.0	10.5	105.3	39	150
Chlorobenzene	10.0	10.5	104.6	55	135
1,2-Dichlorobenzene	20.0	21.3	106.7	37	154
1,3-Dichlorobenzene	10.0	10.4	103.9	50	141
1,4-Dichlorobenzene	20.0	20.8	104.1	42	143
• Diisopropyl ether	10.0	10.1	100.8	30	170
Ethylbenzene	10.0	10.7	107.2	32	160
• MTBE	20.0	20.9	104.5	35	165
Toluene	10.0	10.6	106.0	46	148
• m,p-Xylene	20.0	21.4	106.8	0	239
• o-Xylene	20.0	21.3	106.4	36	164

Flags :

- + = out of QC limits.
- = lab generated limits.
- D = Detected
- SA = Spiked Amount

Summary Results for MS-MSD

Method: 602

Sample : 013107/035F::013107/035R

MS : 013107/037F::013107/037R

MSD : 013107/038F::013107/038R

		µg/L			REC(%)		REC Limits	
Compound	SA	Sam.	MS	MSD	MS	MSD	Lower	Upper
Benzene	10.0	ND	11.1	11.3	111	111	39	150
Chlorobenzene	10.0	ND	10.9	11.2	109	109	55	135
1,2-Dichlorobenzene	10.0	ND	21.9	22.6	219 +	219 +	37	154
1,3-Dichlorobenzene	10.0	ND	10.8	11.0	108	108	50	141
1,4-Dichlorobenzene	10.0	ND	21.7	22.1	217 +	217 +	42	143
• Diisopropyl ether	10.0	ND	10.5	10.7	105	105	30	170
Ethylbenzene	10.0	ND	11.2	11.4	112	112	32	160
• MTBE	20.0	ND	21.9	22.2	109	109	35	165
Toluene	10.0	ND	11.2	11.3	112	112	46	148
• m,p-Xylene	20.0	ND	22.3	22.7	111	111	D	239
• o-Xylene	20.0	ND	22.0	22.5	110	110	36	164

Flags :

+ = out of QC limits.

• = lab generated limits.

D = Detected

ND = None Detected

SA= Spike Added

VPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Sovereign ConsultingProject Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW05
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	01/23/07
Date Received	01/24/07
Date Extracted	01/25/07
Date Analyzed	01/25/07
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₀ Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	96
Surrogate % Recovery - FID	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: g650-102-1d

Reviewed By: fm

VPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Sovereign ConsultingProject Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW07
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	01/23/07
Date Received	01/24/07
Date Extracted	01/25/07
Date Analyzed	01/25/07
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₀ Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	98
Surrogate % Recovery - FID	97

* = 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: g650-102-2d

Reviewed By: fm

VPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Sovereign ConsultingProject Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW18
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	01/23/07
Date Received	01/24/07
Date Extracted	01/25/07
Date Analyzed	01/25/07
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	250 (µg/L)
C ₉ -C ₁₀ Aromatics**	120 (µg/L)
Surrogate % Recovery - PID	110
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: g650-102-3d

Reviewed By: RM

VPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Sovereign ConsultingProject Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW20
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	01/23/07
Date Received	01/24/07
Date Extracted	01/25/07
Date Analyzed	01/25/07
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	100

* = 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: g650-102-4d

Reviewed By: AMR

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

 Client Name: Sovereign Consulting

 Project Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW21
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	01/23/07
Date Received	01/24/07
Date Extracted	01/25/07
Date Analyzed	01/25/07
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	300 (µg/L)
C ₉ -C ₁₀ Aromatics**	160 (µg/L)
Surrogate % Recovery - PID	100
Surrogate % Recovery - FID	100

* = 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: g650-102-5d

 Reviewed By: AME

VPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Sovereign ConsultingProject Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW22
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	01/23/07
Date Received	01/24/07
Date Extracted	01/25/07
Date Analyzed	01/25/07
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	170 (µg/L)
C ₉ -C ₁₀ Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	97
Surrogate % Recovery - FID	97

* = 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: g650-102-6d

Reviewed By: me

VPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Sovereign ConsultingProject Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-Duplicate
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	01/23/07
Date Received	01/24/07
Date Extracted	01/25/07
Date Analyzed	01/25/07
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	99
Surrogate % Recovery - FID	97

* = 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: g650-102-7d

Reviewed By: AME

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 01/03/07PID Initial Calibration Date: 01/03/07

Calibration Ranges and Limits

Range	MDL (07/15/2004) (µg/L)	ML (µg/L)	RL (µg/L) (mg/Kg)
C ₅ -C ₈ Aliphatics	4.4	14	100 10
C ₉ -C ₁₂ Aliphatics	3.4	11	100 10
C ₉ -C ₁₀ Aromatics	0.13	0.41	100 10

Calibration Concentration Levels

Range	Levels (µg/L)	%RSD or CCC	Method of Quantitation
C ₅ -C ₈ Aliphatics	40	9.7	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C ₉ -C ₁₂ Aliphatics	10	15.00	Calibration Factor
	250		
	500		
	750		
	1000		
C ₉ -C ₁₀ Aromatics	10	23.10	Calibration Factor
	250		
	500		
	750		
	1000		

Calibration Check Date: 01/25/07

Calibration Check

Range	Levels (mg/Kg) (µg/L)	RPD
C ₅ -C ₈ Aliphatics	2000 200	9.6
C ₉ -C ₁₂ Aliphatics	500 50	5.9
C ₉ -C ₁₀ Aromatics	500 50	6.1

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign ConsultingProject Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW05
Sample Matrix	Water
Date Collected	01/23/07
Date Received	01/24/07
Date Extracted	01/26/07
Date Analyzed	01/29/07
Dry Weight	
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₆ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	73
Aromatic Surrogate % Recovery	67

Comments:

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

Lab info: G650-102-1K

Reviewed By: Paul

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign ConsultingProject Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW07
Sample Matrix	Water
Date Collected	01/23/07
Date Received	01/24/07
Date Extracted	01/26/07
Date Analyzed	01/29/07
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	72
Aromatic Surrogate % Recovery	65

Comments:

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

Lab info: G650-102-2I

Reviewed By: fm

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign ConsultingProject Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW18
Sample Matrix	Water
Date Collected	01/23/07
Date Received	01/24/07
Date Extracted	01/26/07
Date Analyzed	01/29/07
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*	200 (ug/L)
Aliphatic Surrogate % Recovery	75
Aromatic Surrogate % Recovery	65
Fractionation Surrogate 1 % Recovery	64

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-102-3I

Reviewed By: PAAL

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign ConsultingProject Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW20
Sample Matrix	Water
Date Collected	01/23/07
Date Received	01/24/07
Date Extracted	01/26/07
Date Analyzed	01/29/07
Dry Weight	
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₆ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	77
Aromatic Surrogate % Recovery	72

Comments:

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

Lab info: G650-102-4I

Reviewed By: RM

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign ConsultingProject Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW21
Sample Matrix	Water
Date Collected	01/23/07
Date Received	01/24/07
Date Extracted	01/26/07
Date Analyzed	01/30/07
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*	390 (ug/L)
Aliphatic Surrogate % Recovery	61
Aromatic Surrogate % Recovery	64
Fractionation Surrogate 1 % Recovery	72

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-102-5I

Reviewed By: fm

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign ConsultingProject Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-MW22
Sample Matrix	Water
Date Collected	01/23/07
Date Received	01/24/07
Date Extracted	01/26/07
Date Analyzed	01/29/07
Dry Weight	
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₆ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	73
Aromatic Surrogate % Recovery	63

Comments:

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

Lab info: G650-102-6I

Reviewed By: RL

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign ConsultingProject Name: NV015

Sample Information and Analytical Results	
Sample Identification	USTM232-236-Duplicate
Sample Matrix	Water
Date Collected	01/23/07
Date Received	01/24/07
Date Extracted	01/26/07
Date Analyzed	01/29/07
Dry Weight	
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₆ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	76
Aromatic Surrogate % Recovery	69

Comments:

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

Lab info: G650-102-7I

Reviewed By: RL

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 12/14/06

Calibration Ranges and Limits

Range	MDL (2/2004) (µg/L)	ML (µg/L)	RL (µg/L) (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	1.00	Linear Regression
	30		
	60		
	120		
	240		
C ₁₉ -C ₃₆ Aliphatics	8	1.0	Linear Regression
	40		
	80		
	160		
	320		
C ₁₁ -C ₂₂ Aromatics	17	1	Linear Regression
	85		
	170		
	340		
	680		

Calibration Check Date: 01/29/07

Calibration Check

Range	Levels (µg/mL)	RPD
C ₉ -C ₁₈ Aliphatics	120	-0.1
C ₁₉ -C ₃₆ Aliphatics	160	0.6
C ₁₁ -C ₂₂ Aromatics	340	-6.0

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: USTM232-236-MW05
 Client Project ID: NV015
 Lab Sample ID: G650-102-1H
 Lab Project ID: G650-102

Analyzed By: EAW
 Date Collected: 1/23/2007 9:40
 Date Received: 1/24/2007
 Date Extracted: 1/25/2007
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	1/27/2007	
Acenaphthylene	BQL	10.0	1.12	1	1/27/2007	
Anthracene	BQL	10.0	1.75	1	1/27/2007	
Benzo[a]anthracene	BQL	10.0	1.36	1	1/27/2007	
Benzo[a]pyrene	BQL	10.0	1.27	1	1/27/2007	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	1/27/2007	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	1/27/2007	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	1/27/2007	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	1/27/2007	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	1/27/2007	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	1/27/2007	
Butylbenzylphthalate	BQL	10.0	1.53	1	1/27/2007	
2-Chloronaphthalene	BQL	10.0	1.25	1	1/27/2007	
2-Chlorophenol	BQL	10.0	4.22	1	1/27/2007	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	1/27/2007	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	1/27/2007	
Chrysene	BQL	10.0	1.11	1	1/27/2007	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	1/27/2007	
Di-n-Butylphthalate	BQL	10.0	1.65	1	1/27/2007	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	1/27/2007	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	1/27/2007	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	1/27/2007	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	1/27/2007	
2,4-Dichlorophenol	BQL	10.0	3.75	1	1/27/2007	
Diethylphthalate	BQL	10.0	1.48	1	1/27/2007	
Dimethylphthalate	BQL	10.0	1.04	1	1/27/2007	
2,4-Dimethylphenol	BQL	10.0	9.25	1	1/27/2007	
Di-n-octylphthalate	BQL	10.0	1.16	1	1/27/2007	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	1/27/2007	
2,4-Dinitrophenol	BQL	50.0	4.20	1	1/27/2007	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	1/27/2007	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	1/27/2007	
Diphenylamine *	BQL	10.0	1.53	1	1/27/2007	
Fluoranthene	BQL	10.0	1.41	1	1/27/2007	
Fluorene	BQL	10.0	1.22	1	1/27/2007	
Hexachlorobenzene	BQL	10.0	1.22	1	1/27/2007	
Hexachlorobutadiene	BQL	10.0	1.58	1	1/27/2007	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	1/27/2007	
Hexachloroethane	BQL	10.0	1.58	1	1/27/2007	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	1/27/2007	
Isophorone	BQL	10.0	1.27	1	1/27/2007	
Naphthalene	BQL	10.0	1.08	1	1/27/2007	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW05
 Client Project ID: NV015
 Lab Sample ID: G650-102-1H
 Lab Project ID: G650-102

Analyzed By: EAW
 Date Collected: 1/23/2007 9:40
 Date Received: 1/24/2007
 Date Extracted: 1/25/2007
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	1/27/2007	
2-Nitrophenol	BQL	10.0	3.52	1	1/27/2007	
4-Nitrophenol	BQL	50.0	3.17	1	1/27/2007	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	1/27/2007	
Pentachlorophenol	BQL	50.0	2.83	1	1/27/2007	
Phenanthrene	BQL	10.0	1.38	1	1/27/2007	
Phenol	BQL	10.0	3.38	1	1/27/2007	
Pyrene	BQL	10.0	2.08	1	1/27/2007	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	1/27/2007	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	1/27/2007	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.4	84		
2-Fluorophenol		10	7.7	77		
Nitrobenzene-d5		10	8.4	84		
Phenol-d6		10	7.5	75		
2,4,6-Tribromophenol		10	7.6	76		
4-Terphenyl-d14		10	9.6	96		

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: frs

Results of Library Search for Semivolatile Compounds*by GCMS*

Client Sample ID: USTM232-236-MW05

Client Project ID: NV015

Lab Sample ID: G650-102-1H

Lab Project ID: G650-102

Sample Wt/Vol: 500 ML

Dilution: 1

Analyzed By: EAW

Date Collected: 1/23/2007 9:40

Date Received: 1/24/2007

Date Extracted: 1/25/2007

Date Analyzed: 1/27/2007

Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	10.95			193
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: *pm*

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW07
 Client Project ID: NV015
 Lab Sample ID: G650-102-2H
 Lab Project ID: G650-102

Analyzed By: EAW
 Date Collected: 1/23/2007 13:55
 Date Received: 1/24/2007
 Date Extracted: 1/25/2007
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	1/27/2007	
Acenaphthylene	BQL	10.0	1.12	1	1/27/2007	
Anthracene	BQL	10.0	1.75	1	1/27/2007	
Benzo[a]anthracene	BQL	10.0	1.36	1	1/27/2007	
Benzo[a]pyrene	BQL	10.0	1.27	1	1/27/2007	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	1/27/2007	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	1/27/2007	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	1/27/2007	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	1/27/2007	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	1/27/2007	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	1/27/2007	
Butylbenzylphthalate	BQL	10.0	1.53	1	1/27/2007	
2-Chloronaphthalene	BQL	10.0	1.25	1	1/27/2007	
2-Chlorophenol	BQL	10.0	4.22	1	1/27/2007	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	1/27/2007	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	1/27/2007	
Chrysene	BQL	10.0	1.11	1	1/27/2007	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	1/27/2007	
Di-n-Butylphthalate	BQL	10.0	1.65	1	1/27/2007	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	1/27/2007	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	1/27/2007	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	1/27/2007	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	1/27/2007	
2,4-Dichlorophenol	BQL	10.0	3.75	1	1/27/2007	
Diethylphthalate	BQL	10.0	1.48	1	1/27/2007	
Dimethylphthalate	BQL	10.0	1.04	1	1/27/2007	
2,4-Dimethylphenol	BQL	10.0	9.25	1	1/27/2007	
Di-n-octylphthalate	BQL	10.0	1.16	1	1/27/2007	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	1/27/2007	
2,4-Dinitrophenol	BQL	50.0	4.20	1	1/27/2007	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	1/27/2007	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	1/27/2007	
Diphenylamine *	BQL	10.0	1.53	1	1/27/2007	
Fluoranthene	BQL	10.0	1.41	1	1/27/2007	
Fluorene	BQL	10.0	1.22	1	1/27/2007	
Hexachlorobenzene	BQL	10.0	1.22	1	1/27/2007	
Hexachlorobutadiene	BQL	10.0	1.58	1	1/27/2007	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	1/27/2007	
Hexachloroethane	BQL	10.0	1.58	1	1/27/2007	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	1/27/2007	
Isophorone	BQL	10.0	1.27	1	1/27/2007	
Naphthalene	BQL	10.0	1.08	1	1/27/2007	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW07
 Client Project ID: NV015
 Lab Sample ID: G650-102-2H
 Lab Project ID: G650-102

Analyzed By: EAW
 Date Collected: 1/23/2007 13:55
 Date Received: 1/24/2007
 Date Extracted: 1/25/2007
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	1/27/2007	
2-Nitrophenol	BQL	10.0	3.52	1	1/27/2007	
4-Nitrophenol	BQL	50.0	3.17	1	1/27/2007	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	1/27/2007	
Pentachlorophenol	BQL	50.0	2.83	1	1/27/2007	
Phenanthrene	BQL	10.0	1.38	1	1/27/2007	
Phenol	BQL	10.0	3.38	1	1/27/2007	
Pyrene	BQL	10.0	2.08	1	1/27/2007	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	1/27/2007	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	1/27/2007	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.4	84		
2-Fluorophenol		10	8.1	81		
Nitrobenzene-d5		10	8.4	84		
Phenol-d6		10	7.6	76		
2,4,6-Tribromophenol		10	7.9	79		
4-Terphenyl-d14		10	10.7	107		

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: Rue

Results of Library Search for Semivolatile Compounds*by GCMS*

Client Sample ID: USTM232-236-MW07

Client Project ID: NV015

Lab Sample ID: G650-102-2H

Lab Project ID: G650-102

Sample Wt/Vol: 500 ML

Dilution: 1

Analyzed By: EAW

Date Collected: 1/23/2007 13:55

Date Received: 1/24/2007

Date Extracted: 1/25/2007

Date Analyzed: 1/27/2007

Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	10.95			182
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: AME

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW18

Client Project ID: NV015

Lab Sample ID: G650-102-3H

Lab Project ID: G650-102

Analyzed By: EAW

Date Collected: 1/23/2007 13:00

Date Received: 1/24/2007

Date Extracted: 1/25/2007

Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	9.30	10.0	1.22	1	1/27/2007	J
Acenaphthylene	BQL	10.0	1.12	1	1/27/2007	
Anthracene	BQL	10.0	1.75	1	1/27/2007	
Benzo[a]anthracene	BQL	10.0	1.36	1	1/27/2007	
Benzo[a]pyrene	BQL	10.0	1.27	1	1/27/2007	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	1/27/2007	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	1/27/2007	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	1/27/2007	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	1/27/2007	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	1/27/2007	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	1/27/2007	
Butylbenzylphthalate	BQL	10.0	1.53	1	1/27/2007	
2-Chloronaphthalene	BQL	10.0	1.25	1	1/27/2007	
2-Chlorophenol	BQL	10.0	4.22	1	1/27/2007	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	1/27/2007	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	1/27/2007	
Chrysene	BQL	10.0	1.11	1	1/27/2007	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	1/27/2007	
Di-n-Butylphthalate	BQL	10.0	1.65	1	1/27/2007	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	1/27/2007	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	1/27/2007	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	1/27/2007	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	1/27/2007	
2,4-Dichlorophenol	BQL	10.0	3.75	1	1/27/2007	
Diethylphthalate	BQL	10.0	1.48	1	1/27/2007	
Dimethylphthalate	BQL	10.0	1.04	1	1/27/2007	
2,4-Dimethylphenol	BQL	10.0	9.25	1	1/27/2007	
Di-n-octylphthalate	BQL	10.0	1.16	1	1/27/2007	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	1/27/2007	
2,4-Dinitrophenol	BQL	50.0	4.20	1	1/27/2007	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	1/27/2007	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	1/27/2007	
Diphenylamine *	BQL	10.0	1.53	1	1/27/2007	
Fluoranthene	BQL	10.0	1.41	1	1/27/2007	
Fluorene	10.3	10.0	1.22	1	1/27/2007	
Hexachlorobenzene	BQL	10.0	1.22	1	1/27/2007	
Hexachlorobutadiene	BQL	10.0	1.58	1	1/27/2007	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	1/27/2007	
Hexachloroethane	BQL	10.0	1.58	1	1/27/2007	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	1/27/2007	
Isophorone	BQL	10.0	1.27	1	1/27/2007	
Naphthalene	1.60	10.0	1.08	1	1/27/2007	J

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW18
 Client Project ID: NV015
 Lab Sample ID: G650-102-3H
 Lab Project ID: G650-102

Analyzed By: EAW
 Date Collected: 1/23/2007 13:00
 Date Received: 1/24/2007
 Date Extracted: 1/25/2007
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	1/27/2007	
2-Nitrophenol	BQL	10.0	3.52	1	1/27/2007	
4-Nitrophenol	BQL	50.0	3.17	1	1/27/2007	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	1/27/2007	
Pentachlorophenol	BQL	50.0	2.83	1	1/27/2007	
Phenanthrene	8.20	10.0	1.38	1	1/27/2007	J
Phenol	BQL	10.0	3.38	1	1/27/2007	
Pyrene	BQL	10.0	2.08	1	1/27/2007	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	1/27/2007	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	1/27/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.8	88
2-Fluorophenol	10	8.5	85
Nitrobenzene-d5	10	9	90
Phenol-d6	10	8.2	82
2,4,6-Tribromophenol	10	8.7	87
4-Terphenyl-d14	10	12.6	126

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: AME

Results of Library Search for Semivolatile Compounds*by GCMS*

Client Sample ID: USTM232-236-MW18

Client Project ID: NV015

Lab Sample ID: G650-102-3H

Lab Project ID: G650-102

Sample Wt/Vol: 500 ML

Dilution: 1

Analyzed By: EAW

Date Collected: 1/23/2007 13:00

Date Received: 1/24/2007

Date Extracted: 1/25/2007

Date Analyzed: 1/27/2007

Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	10.95			196
2	Aromatic, Unknown	6.39			32.6
3	Benzene, 2-ethenyl-1,4-dimethyl-	7.64	002039-89-6	91	30.5
4	Naphthalene, 1,2,3,4-tetrahydro-6-methyl-	9.08	001680-51-9	94	25.7
5	1H-Indene, 2,3-dihydro-1,6-dimethyl-	8.13	017059-48-2	94	18.8
6	Naphthalene, 1-(2-propenyl)-	11.74	002489-86-3	90	14.9
7	Benzene, 1,2-diethyl-	6.53	000135-01-3	97	11.8
8	Naphthalene, 1,2,3,4-tetrahydro-6,7-dimethyl-	9.98	001076-61-5	93	11
9	Naphthalene, 1,3-dimethyl-	10.26	000575-41-7	94	10.7
10	Naphthalene, 1,2,3,4-tetrahydro-2-methyl-	8.35	003877-19-8	93	10.6

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: AME

Results for Semivolatiles by GCMS 625

Client Sample ID: USTM232-236-MW20
 Client Project ID: NV015
 Lab Sample ID: G650-102-4H
 Lab Project ID: G650-102

Analyzed By: EAW
 Date Collected: 1/23/2007 12:10
 Date Received: 1/24/2007
 Date Extracted: 1/25/2007
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	1.40	10.0	1.22	1	1/27/2007	J
Acenaphthylene	BQL	10.0	1.12	1	1/27/2007	
Anthracene	BQL	10.0	1.75	1	1/27/2007	
Benzo[a]anthracene	BQL	10.0	1.36	1	1/27/2007	
Benzo[a]pyrene	BQL	10.0	1.27	1	1/27/2007	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	1/27/2007	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	1/27/2007	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	1/27/2007	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	1/27/2007	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	1/27/2007	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	1/27/2007	
Butylbenzylphthalate	BQL	10.0	1.53	1	1/27/2007	
2-Chloronaphthalene	BQL	10.0	1.25	1	1/27/2007	
2-Chlorophenol	BQL	10.0	4.22	1	1/27/2007	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	1/27/2007	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	1/27/2007	
Chrysene	BQL	10.0	1.11	1	1/27/2007	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	1/27/2007	
Di-n-Butylphthalate	BQL	10.0	1.65	1	1/27/2007	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	1/27/2007	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	1/27/2007	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	1/27/2007	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	1/27/2007	
2,4-Dichlorophenol	BQL	10.0	3.75	1	1/27/2007	
Diethylphthalate	BQL	10.0	1.48	1	1/27/2007	
Dimethylphthalate	BQL	10.0	1.04	1	1/27/2007	
2,4-Dimethylphenol	BQL	10.0	9.25	1	1/27/2007	
Di-n-octylphthalate	BQL	10.0	1.16	1	1/27/2007	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	1/27/2007	
2,4-Dinitrophenol	BQL	50.0	4.20	1	1/27/2007	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	1/27/2007	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	1/27/2007	
Diphenylamine *	BQL	10.0	1.53	1	1/27/2007	
Fluoranthene	BQL	10.0	1.41	1	1/27/2007	
Fluorene	1.60	10.0	1.22	1	1/27/2007	J
Hexachlorobenzene	BQL	10.0	1.22	1	1/27/2007	
Hexachlorobutadiene	BQL	10.0	1.58	1	1/27/2007	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	1/27/2007	
Hexachloroethane	BQL	10.0	1.58	1	1/27/2007	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	1/27/2007	
Isophorone	BQL	10.0	1.27	1	1/27/2007	
Naphthalene	BQL	10.0	1.08	1	1/27/2007	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW20
 Client Project ID: NV015
 Lab Sample ID: G650-102-4H
 Lab Project ID: G650-102

Analyzed By: EAW
 Date Collected: 1/23/2007 12:10
 Date Received: 1/24/2007
 Date Extracted: 1/25/2007
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	1/27/2007	
2-Nitrophenol	BQL	10.0	3.52	1	1/27/2007	
4-Nitrophenol	BQL	50.0	3.17	1	1/27/2007	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	1/27/2007	
Pentachlorophenol	BQL	50.0	2.83	1	1/27/2007	
Phenanthrene	BQL	10.0	1.38	1	1/27/2007	
Phenol	BQL	10.0	3.38	1	1/27/2007	
Pyrene	BQL	10.0	2.08	1	1/27/2007	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	1/27/2007	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	1/27/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.6	86
2-Fluorophenol	10	8.2	82
Nitrobenzene-d5	10	8.7	87
Phenol-d6	10	7.8	78
2,4,6-Tribromophenol	10	8.5	85
4-Terphenyl-d14	10	12.2	122

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: lu

Results of Library Search for Semivolatile Compounds*by GCMS*

Client Sample ID: USTM232-236-MW20

Client Project ID: NV015

Lab Sample ID: G650-102-4H

Lab Project ID: G650-102

Sample Wt/Vol: 500 ML

Dilution: 1

Analyzed By: EAW

Date Collected: 1/23/2007 12:10

Date Received: 1/24/2007

Date Extracted: 1/25/2007

Date Analyzed: 1/27/2007

Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	10.95			185
2	Unknown	5.32			6.73
3	Cyclohexane, 1,2-dichloro-, trans-	6.81	000822-86-6	90	4.63
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: *me*

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW21
 Client Project ID: NV015
 Lab Sample ID: G650-102-5H
 Lab Project ID: G650-102

Analyzed By: EAW
 Date Collected: 1/23/2007 11:23
 Date Received: 1/24/2007
 Date Extracted: 1/25/2007
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	5.20	10.0	1.22	1	1/27/2007	J
Acenaphthylene	BQL	10.0	1.12	1	1/27/2007	
Anthracene	BQL	10.0	1.75	1	1/27/2007	
Benzo[a]anthracene	BQL	10.0	1.36	1	1/27/2007	
Benzo[a]pyrene	BQL	10.0	1.27	1	1/27/2007	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	1/27/2007	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	1/27/2007	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	1/27/2007	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	1/27/2007	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	1/27/2007	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	1/27/2007	
Butylbenzylphthalate	BQL	10.0	1.53	1	1/27/2007	
2-Chloronaphthalene	BQL	10.0	1.25	1	1/27/2007	
2-Chlorophenol	BQL	10.0	4.22	1	1/27/2007	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	1/27/2007	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	1/27/2007	
Chrysene	BQL	10.0	1.11	1	1/27/2007	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	1/27/2007	
Di-n-Butylphthalate	BQL	10.0	1.65	1	1/27/2007	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	1/27/2007	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	1/27/2007	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	1/27/2007	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	1/27/2007	
2,4-Dichlorophenol	BQL	10.0	3.75	1	1/27/2007	
Diethylphthalate	BQL	10.0	1.48	1	1/27/2007	
Dimethylphthalate	BQL	10.0	1.04	1	1/27/2007	
2,4-Dimethylphenol	BQL	10.0	9.25	1	1/27/2007	
Di-n-octylphthalate	BQL	10.0	1.16	1	1/27/2007	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	1/27/2007	
2,4-Dinitrophenol	BQL	50.0	4.20	1	1/27/2007	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	1/27/2007	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	1/27/2007	
Diphenylamine *	BQL	10.0	1.53	1	1/27/2007	
Fluoranthene	BQL	10.0	1.41	1	1/27/2007	
Fluorene	6.60	10.0	1.22	1	1/27/2007	J
Hexachlorobenzene	BQL	10.0	1.22	1	1/27/2007	
Hexachlorobutadiene	BQL	10.0	1.58	1	1/27/2007	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	1/27/2007	
Hexachloroethane	BQL	10.0	1.58	1	1/27/2007	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	1/27/2007	
Isophorone	BQL	10.0	1.27	1	1/27/2007	
Naphthalene	4.40	10.0	1.08	1	1/27/2007	J

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW21
 Client Project ID: NV015
 Lab Sample ID: G650-102-5H
 Lab Project ID: G650-102

Analyzed By: EAW
 Date Collected: 1/23/2007 11:23
 Date Received: 1/24/2007
 Date Extracted: 1/25/2007
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	1/27/2007	
2-Nitrophenol	BQL	10.0	3.52	1	1/27/2007	
4-Nitrophenol	BQL	50.0	3.17	1	1/27/2007	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	1/27/2007	
Pentachlorophenol	BQL	50.0	2.83	1	1/27/2007	
Phenanthrene	6.70	10.0	1.38	1	1/27/2007	J
Phenol	BQL	10.0	3.38	1	1/27/2007	
Pyrene	BQL	10.0	2.08	1	1/27/2007	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	1/27/2007	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	1/27/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8	80
2-Fluorophenol	10	7.1	71
Nitrobenzene-d5	10	7.8	78
Phenol-d6	10	7	70
2,4,6-Tribromophenol	10	7.7	77
4-Terphenyl-d14	10	11.7	117

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: me

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTM232-236-MW21
 Client Project ID: NV015
 Lab Sample ID: G650-102-5H
 Lab Project ID: G650-102
 Sample Wt/Vol: 500 ML
 Dilution: 1

Analyzed By: EAW
 Date Collected: 1/23/2007 11:23
 Date Received: 1/24/2007
 Date Extracted: 1/25/2007
 Date Analyzed: 1/27/2007
 Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	10.95			162
2	Naphthalene, 1,3-dimethyl-	10.26	000575-41-7	97	59.9
3	Naphthalene, 2,7-dimethyl-	10.30	000582-16-1	97	29.8
4	Naphthalene, 1,3-dimethyl-	10.44	000575-41-7	97	27.1
5	Naphthalene, 1,7-dimethyl-	10.14	000575-37-1	97	23.6
6	Naphthalene, 1-ethyl-	10.04	001127-76-0	95	21.2
7	Naphthalene, 2,3-dimethyl-	10.56	000581-40-8	97	15.6
8	Naphthalene, 2,3,6-trimethyl-	11.36	000829-26-5	95	14.5
9	Benzene, 1,2-diethyl-	6.63	000135-01-3	94	14.1
10	Aromatic, Unknown	7.66			13.5

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: AME

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW22

Client Project ID: NV015

Lab Sample ID: G650-102-6H

Lab Project ID: G650-102

Analyzed By: EAW

Date Collected: 1/23/2007 10:37

Date Received: 1/24/2007

Date Extracted: 1/25/2007

Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	3.00	10.0	1.22	1	1/27/2007	J
Acenaphthylene	BQL	10.0	1.12	1	1/27/2007	
Anthracene	BQL	10.0	1.75	1	1/27/2007	
Benzo[a]anthracene	BQL	10.0	1.36	1	1/27/2007	
Benzo[a]pyrene	BQL	10.0	1.27	1	1/27/2007	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	1/27/2007	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	1/27/2007	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	1/27/2007	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	1/27/2007	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	1/27/2007	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	1/27/2007	
Butylbenzylphthalate	BQL	10.0	1.53	1	1/27/2007	
2-Chloronaphthalene	BQL	10.0	1.25	1	1/27/2007	
2-Chlorophenol	BQL	10.0	4.22	1	1/27/2007	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	1/27/2007	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	1/27/2007	
Chrysene	BQL	10.0	1.11	1	1/27/2007	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	1/27/2007	
Di-n-Butylphthalate	BQL	10.0	1.65	1	1/27/2007	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	1/27/2007	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	1/27/2007	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	1/27/2007	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	1/27/2007	
2,4-Dichlorophenol	BQL	10.0	3.75	1	1/27/2007	
Diethylphthalate	BQL	10.0	1.48	1	1/27/2007	
Dimethylphthalate	BQL	10.0	1.04	1	1/27/2007	
2,4-Dimethylphenol	BQL	10.0	9.25	1	1/27/2007	
Di-n-octylphthalate	BQL	10.0	1.16	1	1/27/2007	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	1/27/2007	
2,4-Dinitrophenol	BQL	50.0	4.20	1	1/27/2007	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	1/27/2007	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	1/27/2007	
Diphenylamine *	BQL	10.0	1.53	1	1/27/2007	
Fluoranthene	BQL	10.0	1.41	1	1/27/2007	
Fluorene	3.40	10.0	1.22	1	1/27/2007	J
Hexachlorobenzene	BQL	10.0	1.22	1	1/27/2007	
Hexachlorobutadiene	BQL	10.0	1.58	1	1/27/2007	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	1/27/2007	
Hexachloroethane	BQL	10.0	1.58	1	1/27/2007	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	1/27/2007	
Isophorone	BQL	10.0	1.27	1	1/27/2007	
Naphthalene	4.40	10.0	1.08	1	1/27/2007	J

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW22
 Client Project ID: NV015
 Lab Sample ID: G650-102-6H
 Lab Project ID: G650-102

Analyzed By: EAW
 Date Collected: 1/23/2007 10:37
 Date Received: 1/24/2007
 Date Extracted: 1/25/2007
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	1/27/2007	
2-Nitrophenol	BQL	10.0	3.52	1	1/27/2007	
4-Nitrophenol	BQL	50.0	3.17	1	1/27/2007	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	1/27/2007	
Pentachlorophenol	BQL	50.0	2.83	1	1/27/2007	
Phenanthrene	3.00	10.0	1.38	1	1/27/2007	J
Phenol	BQL	10.0	3.38	1	1/27/2007	
Pyrene	BQL	10.0	2.08	1	1/27/2007	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	1/27/2007	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	1/27/2007	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.6	86		
2-Fluorophenol		10	7.9	79		
Nitrobenzene-d5		10	8.6	86		
Phenol-d6		10	7.7	77		
2,4,6-Tribromophenol		10	8.4	84		
4-Terphenyl-d14		10	11.7	117		

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: AML

Results of Library Search for Semivolatile Compounds*by GCMS*

Client Sample ID: USTM232-236-MW22

Client Project ID: NV015

Lab Sample ID: G650-102-6H

Lab Project ID: G650-102

Sample Wt/Vol: 500 ML

Dilution: 1

Analyzed By: EAW

Date Collected: 1/23/2007 10:37

Date Received: 1/24/2007

Date Extracted: 1/25/2007

Date Analyzed: 1/27/2007

Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	10.95			185
2	Naphthalene, 1,6-dimethyl-	10.26	000575-43-9	97	32.4
3	Benzene, 1-methyl-2-(1-methylethyl)-	7.67	000527-84-4	96	16.4
4	Naphthalene, 2,7-dimethyl-	10.30	000582-16-1	97	15.9
5	Naphthalene, 2,7-dimethyl-	10.13	000582-16-1	97	15
6	Naphthalene, 1,3-dimethyl-	10.43	000575-41-7	97	13.2
7	Naphthalene, 1-ethyl-	10.03	001127-76-0	97	10.5
8	Benzene, 1,2,3-trimethyl-	5.91	000526-73-8	94	8.33
9	Benzene, 1,2,3,4-tetramethyl-	7.33	000488-23-3	97	7.3
10	Aromatic, Unknown	7.79			6.61

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: *rmc*

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-Duplicate
 Client Project ID: NV015
 Lab Sample ID: G650-102-7H
 Lab Project ID: G650-102

Analyzed By: EAW
 Date Collected: 1/23/2007 0:00
 Date Received: 1/24/2007
 Date Extracted: 1/25/2007
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	1/27/2007	
Acenaphthylene	BQL	10.0	1.12	1	1/27/2007	
Anthracene	BQL	10.0	1.75	1	1/27/2007	
Benzo[a]anthracene	BQL	10.0	1.36	1	1/27/2007	
Benzo[a]pyrene	BQL	10.0	1.27	1	1/27/2007	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	1/27/2007	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	1/27/2007	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	1/27/2007	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	1/27/2007	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	1/27/2007	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	1/27/2007	
Butylbenzylphthalate	BQL	10.0	1.53	1	1/27/2007	
2-Chloronaphthalene	BQL	10.0	1.25	1	1/27/2007	
2-Chlorophenol	BQL	10.0	4.22	1	1/27/2007	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	1/27/2007	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	1/27/2007	
Chrysene	BQL	10.0	1.11	1	1/27/2007	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	1/27/2007	
Di-n-Butylphthalate	BQL	10.0	1.65	1	1/27/2007	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	1/27/2007	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	1/27/2007	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	1/27/2007	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	1/27/2007	
2,4-Dichlorophenol	BQL	10.0	3.75	1	1/27/2007	
Diethylphthalate	BQL	10.0	1.48	1	1/27/2007	
Dimethylphthalate	BQL	10.0	1.04	1	1/27/2007	
2,4-Dimethylphenol	BQL	10.0	9.25	1	1/27/2007	
Di-n-octylphthalate	BQL	10.0	1.16	1	1/27/2007	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	1/27/2007	
2,4-Dinitrophenol	BQL	50.0	4.20	1	1/27/2007	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	1/27/2007	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	1/27/2007	
Diphenylamine *	BQL	10.0	1.53	1	1/27/2007	
Fluoranthene	BQL	10.0	1.41	1	1/27/2007	
Fluorene	BQL	10.0	1.22	1	1/27/2007	
Hexachlorobenzene	BQL	10.0	1.22	1	1/27/2007	
Hexachlorobutadiene	BQL	10.0	1.58	1	1/27/2007	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	1/27/2007	
Hexachloroethane	BQL	10.0	1.58	1	1/27/2007	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	1/27/2007	
Isophorone	BQL	10.0	1.27	1	1/27/2007	
Naphthalene	BQL	10.0	1.08	1	1/27/2007	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-Duplicate
 Client Project ID: NV015
 Lab Sample ID: G650-102-7H
 Lab Project ID: G650-102

Analyzed By: EAW
 Date Collected: 1/23/2007 0:00
 Date Received: 1/24/2007
 Date Extracted: 1/25/2007
 Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	1/27/2007	
2-Nitrophenol	BQL	10.0	3.52	1	1/27/2007	
4-Nitrophenol	BQL	50.0	3.17	1	1/27/2007	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	1/27/2007	
Pentachlorophenol	BQL	50.0	2.83	1	1/27/2007	
Phenanthrene	BQL	10.0	1.38	1	1/27/2007	
Phenol	BQL	10.0	3.38	1	1/27/2007	
Pyrene	BQL	10.0	2.08	1	1/27/2007	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	1/27/2007	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	1/27/2007	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.5	85		
2-Fluorophenol		10	7.8	78		
Nitrobenzene-d5		10	8.4	84		
Phenol-d6		10	7.6	76		
2,4,6-Tribromophenol		10	7.4	74		
4-Terphenyl-d14		10	11.8	118		

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: EAW

Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: USTM232-236-Duplicate
Client Project ID: NV015
Lab Sample ID: G650-102-7H
Lab Project ID: G650-102
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: EAW
Date Collected: 1/23/2007 0:00
Date Received: 1/24/2007
Date Extracted: 1/25/2007
Date Analyzed: 1/27/2007
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	10.95			175
2	1-Propene, 1,1,2-trichloro-	5.32	021400-25-9	90	16
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: RNA

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB7175
Lab Project ID:

Analyzed By: EAW
Date Collected:
Date Received:
Date Extracted: 1/25/2007
Matrix: WATER

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	1/27/2007	
Acenaphthylene	BQL	10.0	1.12	1	1/27/2007	
Anthracene	BQL	10.0	1.75	1	1/27/2007	
Benzo[a]anthracene	BQL	10.0	1.36	1	1/27/2007	
Benzo[a]pyrene	BQL	10.0	1.27	1	1/27/2007	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	1/27/2007	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	1/27/2007	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	1/27/2007	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	1/27/2007	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	1/27/2007	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	1/27/2007	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	1/27/2007	
Butylbenzylphthalate	BQL	10.0	1.53	1	1/27/2007	
2-Chloronaphthalene	BQL	10.0	1.25	1	1/27/2007	
2-Chlorophenol	BQL	10.0	4.22	1	1/27/2007	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	1/27/2007	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	1/27/2007	
Chrysene	BQL	10.0	1.11	1	1/27/2007	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	1/27/2007	
Di-n-Butylphthalate	BQL	10.0	1.65	1	1/27/2007	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	1/27/2007	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	1/27/2007	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	1/27/2007	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	1/27/2007	
2,4-Dichlorophenol	BQL	10.0	3.75	1	1/27/2007	
Diethylphthalate	BQL	10.0	1.48	1	1/27/2007	
Dimethylphthalate	BQL	10.0	1.04	1	1/27/2007	
2,4-Dimethylphenol	BQL	10.0	9.25	1	1/27/2007	
Di-n-octylphthalate	BQL	10.0	1.16	1	1/27/2007	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	1/27/2007	
2,4-Dinitrophenol	BQL	50.0	4.20	1	1/27/2007	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	1/27/2007	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	1/27/2007	
Diphenylamine *	BQL	10.0	1.53	1	1/27/2007	
Fluoranthene	BQL	10.0	1.41	1	1/27/2007	
Fluorene	BQL	10.0	1.22	1	1/27/2007	
Hexachlorobenzene	BQL	10.0	1.22	1	1/27/2007	
Hexachlorobutadiene	BQL	10.0	1.58	1	1/27/2007	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	1/27/2007	
Hexachloroethane	BQL	10.0	1.58	1	1/27/2007	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	1/27/2007	
Isophorone	BQL	10.0	1.27	1	1/27/2007	
Naphthalene	BQL	10.0	1.08	1	1/27/2007	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: Method Blank
 Client Project ID:
 Lab Sample ID: PB7175
 Lab Project ID:

Analyzed By: EAW
 Date Collected:
 Date Received:
 Date Extracted: 1/25/2007
 Matrix: WATER

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	1/27/2007	
2-Nitrophenol	BQL	10.0	3.52	1	1/27/2007	
4-Nitrophenol	BQL	50.0	3.17	1	1/27/2007	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	1/27/2007	
Pentachlorophenol	BQL	50.0	2.83	1	1/27/2007	
Phenanthrene	BQL	10.0	1.38	1	1/27/2007	
Phenol	BQL	10.0	3.38	1	1/27/2007	
Pyrene	BQL	10.0	2.08	1	1/27/2007	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	1/27/2007	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	1/27/2007	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.2	82
2-Fluorophenol	10	7.2	72
Nitrobenzene-d5	10	8.4	84
Phenol-d6	10	7.5	75
2,4,6-Tribromophenol	10	8.4	84
4-Terphenyl-d14	10	10.3	103

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: rmr

Results For Matrix Spike / Matrix Spike Duplicate and Laboratory Control Standard (MS/MSD/LCS)
by GCMS

Client Sample ID: Batch QC

Date Collected:

Client Project ID:

Date Received:

Lab Sample ID: Batch-7175-MS/MSD/LCS

Date Extracted: 01/25/07

Lab Project ID: G650-102-1

Date Analyzed: 01/27/07

Matrix: WATER

Analyzed By: EAW

Prep Method: 3520

Dilution: 1

	Sample Amount (µg/L)	MS Spike (µg/L)	MS Conc. (µg/L)	MS Spike % Rec.	MSD Spike (µg/L)	MSD Conc. (µg/L)	MSD Conc. % Rec.	RPD	QC Limits	
									RPD	% Rec.
Acenaphthylene	BQL	213	218	103	213	227	107.0	4.11	30	62.0-119
4-Chloro-3-methylphenol	BQL	213	192	90.2	213	202	94.9	5.08	30	67.0-109
2-Chlorophenol	BQL	213	182	85.4	213	188	88.3	3.34	30	59.0-95.0
1,4-Dichlorobenzene	BQL	213	128	60.1	213	133	62.6	4.07	30	29.0-86.0
2,4-Dinitrotoluene	BQL	213	223	105*	213	231	108*	3.38	30	63.0-103
N-Nitrosodi-n-propylamine	BQL	213	230	108*	213	234	110*	1.92	30	67.0-107
4-Nitrophenol	BQL	213	189	88.9	213	199	93.6	5.15	30	49.0-146
Pentachlorophenol	BQL	213	169	79.6	213	172	80.9	1.62	30	43.0-106
Phenol	BQL	213	181	84.9	213	188	88.3	3.93	30	61.0-100
Pyrene	BQL	213	216	101	213	224	105.0	3.97	30	41.0-123
1,2,4-Trichlorobenzene	BQL	213	165	77.6	213	175	82.1	5.64	30	41.0-96.0

	Spiked Amount (µg/L)	LCS Conc. (µg/L)	LCS Spike %	QC Limits % Rec.
Acenaphthylene	100	100	100	72.9-127
4-Chloro-3-methylphenol	100	90.3	90.3	61.6-113
2-Chlorophenol	100	88.9	88.9	52.3-104
1,4-Dichlorobenzene	100	70.1	70.1	27.3-85.0
2,4-Dinitrotoluene	100	101	101	66.5-117
N-Nitrosodi-n-propylamine	100	108	108	54.4-119
4-Nitrophenol	100	89.1	89.1	32.4-150
Pentachlorophenol	100	76.3	76.3	23.9-115
Phenol	100	87.8	87.8	54.5-106
Pyrene	100	102	102	63.5-126
1,2,4-Trichlorobenzene	100	83.5	83.5	49.1-98.5

Comments:

Concentrations reflect the spiked sample amounts.

Flags:

* = Out of limits.

NA = Not applicable.

Reviewed By: fm

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

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

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

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

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

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

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

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

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

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



Locations Nationwide

- Alaska
- Louisiana
- New Jersey
- West Virginia
- Hawaii
- Maryland
- North Carolina

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APPENDIX C

FIELD DATA

GROUNDWATER MONITORING WELL GAUGING DATA
MCB Camp LeJeune and New River MCAS

SITE: M232-236

Date: 8/15/06

Gauged By: TE

WELL ID NUMBER	DEPTH TO BOTTOM MEASURED FROM TCC		TIME OF GAUGING	Depth to Water From Top of Casing	Depth to LNAPL from Top of Casing	LNAPL THICKNESS	Comments
	Installed	Measured					
USTM232-236-MW01	1991	17.44	1110	9.92			2" Well Casing
USTM232-236-MW02	1991	31.72	1108	11.07			DATA PLATE - 30' well
USTM232-236-MW03	1991	32.47	1050	13.61			DATA PLATE INDICATES FOR 10 - 30' well
USTM232-236-MW04	1991	17.49	1048	13.20			DATA PLATE INDICATES MW2 - 15' well
USTM232-236-MW05	1991	17.30	1158	10.20			DATA PLATE INDICATES 30'
USTM232-236-MW06	1991	17.23	1201	8.80			DATA PLATE INDICATES MW3 - 15'
USTM232-236-MW07	1991	17.50	1145	8.25			DATA PLATE INDICATES MW4 -
USTM232-236-MW08	1991	1143	32.35	10.39			DATA PLATE - 30' well
USTM232-236-MW09	1991	32.25	1035	12.02			
USTM232-236-MW10	1991	17.20	1036	11.30			
USTM232-236-MW11	1991	16.85	1216	8.30			
USTM232-236-MW12	1991	31.70	1218	8.76			Broken Casing
USTM232-236-MW13	1991	32.52	1009	12.34			
USTM232-236-MW14	1991	17.50	12.22	12.22			
USTM232-236-MW15	1992	16.81	1019	11.86			
USTM232-236-MW16	1992	16.58	1010	12.30			(M) WELL CAP
USTM232-236-MW17	1992	17.15	1023	11.08			
USTM232-236-MW18	1999	14.70	1132	8.53			1" Well Casing Broken well cover
USTM232-236-MW19	1999	14.62	1125	8.58	8.46	0.12	1" Well Casing PROBLEM - ODOOR
USTM232-236-MW20	1999	14.70	1121	8.38			1" Well Casing
USTM232-236-MW21		14.51	1119	8.26			1" Well Casing
USTM232-236-MW22		13.32	1117	8.04			1" Well Casing

GROUNDWATER MONITORING WELL GAUGING DATA
MCB Camp LeJeune and New River MCAS

SITE: M232-236

Date: 11/2/20

Gauged By: TE

WELL ID NUMBER	DEPTH TO BOTTOM MEASURED FROM TOC		TIME OF GAUGING	Depth to Water From Top of Casing	Depth to LNAPL from Top of Casing	LNAPL THICKNESS	Comments
	Installed	Measured					
USTM232-236-MW01		17.44	1330	9.88			
USTM232-236-MW02		31.72	1331	11.10			
USTM232-236-MW03		32.47	1304	13.65			
USTM232-236-MW04		17.49	1305	13.20			
USTM232-236-MW05		32.48	1321	10.33			
USTM232-236-MW06		17.23	1322	8.72			
USTM232-236-MW07		17.42	1308	8.41			
USTM232-236-MW08		32.35	1329	10.36			
USTM232-236-MW09		32.25	1338	12.05			
USTM232-236-MW10		17.20	1337	11.44			
USTM232-236-MW11		16.85	1315	6.40			
USTM232-236-MW12		31.70	1316	8.72			
USTM232-236-MW13		32.52	1300	12.80			
USTM232-236-MW14		17.50	1303	12.31			
USTM232-236-MW15		16.81	1403	11.90			
USTM232-236-MW16		16.58	1407	12.33			
USTM232-236-MW17		17.15	1336	10.25			
USTM232-236-MW18		14.70	1245	8.58			
USTM232-236-MW19		14.62	1247	8.62	8.38	0.24	
USTM232-236-MW20		14.70	1249	8.40			
USTM232-236-MW21		14.50	1253	8.30			
USTM232-236-MW22		14.50	1255	8.00			

GROUNDWATER MONITORING WELL GAUGING DATA
MCB Camp LeJeune and New River MCAS

SITE: M232-236

Date: 1/23/2007

Gauged By: TE

WELL ID NUMBER	DEPTH TO BOTTOM MEASURED FROM TOC		TIME OF GAUGING	Depth to Water From Top of Casing	Depth to LNAPL from Top of Casing	LNAPL THICKNESS	Comments
	Installed	Measured					
USTM232-236-MW01		17.44	0810	7.12			
USTM232-236-MW02		31.72	0811	9.88			
USTM232-236-MW03		32.47	0801	12.85			
USTM232-236-MW04		17.49	0802	10.87			
USTM232-236-MW05		32.48	0730	9.13			
USTM232-236-MW06		17.23	0731	5.54			
USTM232-236-MW07		17.42	0747	4.85			
USTM232-236-MW08		32.35	0748	9.15			
USTM232-236-MW09		32.25	0757	10.93			
USTM232-236-MW10		17.20	0758	9.65			
USTM232-236-MW11		16.85	1018	3.15			1/24/07
USTM232-236-MW12		31.70	1019	7.95			1/24/07
USTM232-236-MW13		32.52	0807	11.53			
USTM232-236-MW14		17.50	0808	10.50			
USTM232-236-MW15		16.81	0805	10.44			
USTM232-236-MW16		16.58	0759	10.70			
USTM232-236-MW17		17.15	0755	5.32			
USTM232-236-MW18		14.70	0744	7.42			
USTM232-236-MW19		14.62	0742	7.02	6.90	0.12	
USTM232-236-MW20		14.70	0740	6.98			
USTM232-236-MW21		14.50	0736	6.88			
USTM232-236-MW22		14.50	0735	6.38			

SITE: M232/6
DATE: 06 April 2007
Gauged By: SF

[illegible]

37.00 (224)

Project Number: _____
Project Name: _____ M232-236
Date: _____ 8/17/06
Weather: _____

Well ID: MW07
Sample ID: USTM232-236-MW07
Well Condition: Leak

Protective Casing Diameter (inch): _____

Inner Casing Diameter (inch): 2" (0.163)

Water Column (feet): 9.77
Casing Volume (gal): 1.49
Purge/Sample Method: Low Flow Method

Depth to Product from TOC (feet):	N/A
Initial Depth to Water from TOC (feet):	8.25
Product Thickness (feet):	N/A
Total Depth from TOC (feet):	17.42

Start Purge Date/Time: 0852
Total Volume Purged (gal): 3
Sample Time/Date: 0930
Sampler Name: TE

[illegible]

[illegible]

[illegible]

[illegible]

Do/GND
would not
stabilize -
sampled
after 6th
reading

[illegible]

[illegible]

Project Number: NVOIS
Project Name: M232-236
Date: 9/19/06
Weather: 70's

Well ID: MW21

Sample ID: USTM232-236- M

Well Condition: Broken

Protective Casing Diameter (inch): 2

Inner Casing Diameter (inch): 1" (0.041)

Water Column (feet):	<u>7.35</u>
Casing Volume (gal):	<u>0.301</u>
Purge/Sample Method:	Low Flow Method

Depth to Product from TOC (feet):	<u>N/A</u>
Initial Depth to Water from TOC (feet):	<u>7.16</u>
Product Thickness (feet):	<u>N/A</u>
Total Depth from TOC (feet):	<u>14.51</u>

Start Purge Date/Time: 1206
Total Volume Purged (gal): 1.5
Sample Time/Date 1228
Sampler Name: TE

[illegible]

Project Number: NV015
Project Name: M232-236
Date: 9/19/06
Weather: 70's

[illegible]

Project Number: NV015

Project Name: M232-236

Date: 1/22/07

Weather: 40's ↑

Well ID: MW05
Sample ID: US1 M232-236-MW05
Well Condition:

Protective Casing Diameter (inch):	N/A
Inner Casing Diameter (inch):	2" (0.163)
Depth to Product from TOC (feet):	N/A
Initial Depth to Water from TOC (feet):	9.13
Product Thickness (feet):	N/A
Total Depth from TOC (feet):	32.48

Water Column (feet):	<u>23.35</u>
Casing Volume (gal):	<u>3.80</u>
Purge/Sample Method:	<u>Low Flow Method</u>
Start Purge Date/Time:	<u>0836</u>
Total Volume Purged (gal):	<u>5</u>
Sample Time/Date	<u>0940</u>
Sampler Name:	<u>TE</u>

[illegible]

* Duplicate Sample taken on MW07

Project Number: NV015
Project Name: M232-236
Date: 1/23/07
Weather: 40's ↑

Well ID: MW20
Sample ID: UST MP32-236-MW20
Well Condition: Good

Protective Casing Diameter (inch):	2
Inner Casing Diameter (inch):	1" (0.041)
Depth to Product from TOC (feet):	N/A
Initial Depth to Water from TOC (feet):	6.98
Product Thickness (feet):	N/A
Total Depth from TOC (feet):	14.70

Water Column (feet):	7.72
Casing Volume (gal):	0.31
Purge/Sample Method:	Low Flow Method
Start Purge Date/Time:	11/30
Total Volume Purged (gal):	2
Sample Time/Date	12/0
Sampler Name:	TE

[illegible]

Project Number: NV015

Project Name: M232-236

Date: 1/23/07

Weather: 40's

Well ID: MWD1
Sample ID: UST M232-234-MWD1
Well Condition: Good

Protective Casing Diameter (inch):	2
Inner Casing Diameter (inch):	1" (0.041)
Depth to Product from TOC (feet):	N/A
Initial Depth to Water from TOC (feet):	6.28
Product Thickness (feet):	N/A
Total Depth from TOC (feet):	14.50

Water Column (feet):	<u>8.22</u>
Casing Volume (gal):	<u>0.33</u>
Purge/Sample Method:	<u>Low Flow Method</u>
Start Purge Date/Time:	<u>10/4/8</u>
Total Volume Purged (gal):	<u>3</u>
Sample Time/Date	<u>11/23</u>
Sampler Name:	<u>TE</u>

[illegible]

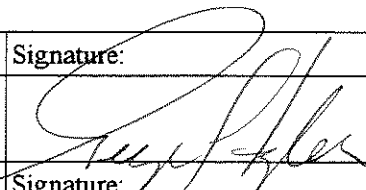
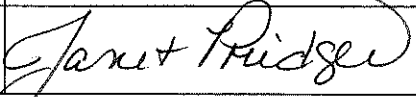
APPENDIX D

USTM232-236-MW19 SOIL EXCAVATION DOCUMENTATION

Marine Corps Base, Camp Lejeune

Non-Hazardous Waste Shipping Document

Document #: 06736

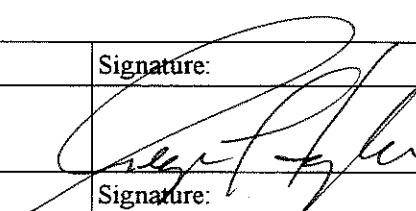
Site: <u>M235 Camp Johnson CLNC (CTO 003)</u>			Page 1 of	
Generator's Name & Mailing Address: <u>COMMANDING GENERAL AC/S, I&E (EMD) MARINE CORPS BASE PSC BOX 20004 CAMP LEJEUNE, NC 28542-0004</u>			US EPA ID Number: <u>NC6170022580</u>	
Generator's Telephone #: <u>(910) 451-1482</u>				
Transporter's Name, Mailing Address & Telephone Number: <u>P+F Environmental 8549 Mill Branch Rd Rocky Mount NC 27803 (252) 212-8012</u>			US EPA ID Number: <u>NCR00028490</u>	
Destination's Name, Mailing Address & Telephone Number: <u>P+F Environmental Speight Chapel Rd Whitaker NC 27891 (252) 443-4083</u>			US EPA ID Number: <u>SR0300126</u>	
Waste Shipping Name and Description	Containers		Total Quantity	Units
	Number	Type		
<u>TPH Contaminated Soil</u>	<u>001</u>	<u>DT</u>	<u>10.55</u>	<u>TONS</u>
<u>NON HAZARDOUS</u>				
Container/Tag Number: Lab:		Profile #:		
Additional Information and Discrepancy Indication: <u>COL# NC 4538892</u> <u>TRK-P-101</u> <u>TAG# ZB12254</u>				
GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:				
Printed/Typed Name		Signature:		Date:
<u>George Taylor</u>				<u>4/30/07</u>
Transporter's Name		Signature:		Date:
<u>Walter Puka</u>				<u>4/30/07</u>
Accepting Facility		Signature:		Date:
<u>P+7 Environmental, Inc.</u>				<u>4/30/07</u>

Return Original form to Generator

Marine Corps Base, Camp Lejeune

Non-Hazardous Waste Shipping Document

Document #: 06739

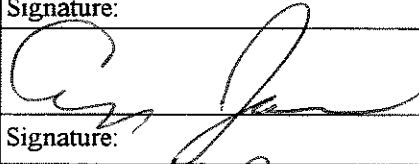
Site: <u>M235 Camp Johnson CLNC (CTO 003)</u>			Page 1 of	
Generator's Name & Mailing Address: <u>COMMANDING GENERAL</u> <u>AC/S, I&E (EMD)</u> <u>MARINE CORPS BASE</u> <u>PSC BOX 20004</u> <u>CAMP LEJEUNE, NC 28542-0004</u>			US EPA ID Number: <u>NC6170022580</u>	
Generator's Telephone #: <u>(910) 451-1482</u>				
Transporter's Name, Mailing Address & Telephone Number: <u>P+P Environmental Services</u> <u>8549 Mill Branch RD Rocky Mount NC 27803 (252) 212-8012</u>			US EPA ID Number: <u>NC600008490</u>	
Destination's Name, Mailing Address & Telephone Number: <u>P+P Environmental</u> <u>SPEIGHTS Chapel RD Whitaker NC 27891 (252) 443-4083</u>			US EPA ID Number: <u>SR0500106</u>	
Waste Shipping Name and Description	Containers		Total Quantity	Units
	Number	Type		
<u>TPH Contaminated Soil Non Hazardous</u>	<u>001</u>	<u>DT</u>	<u>15.92</u>	<u>TONS</u>
Container/Tag Number: Lab:		Profile #:		
Additional Information and Discrepancy Indication: <u>CDL# NC 4538892</u> <u>TRK# P101</u> <u>Tag# ZB12254</u>				
GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:				
Printed/Typed Name		Signature:		Date:
<u>George L. Taylor</u>				<u>5-1-07</u>
Transporter's Name		Signature:		Date:
<u>WALTER PARKER</u>		<u>Walt Parker</u>		<u>5/1/07</u>
Accepting Facility		Signature:		Date:
<u>P+P Environmental, Inc</u>		<u>James R. Ridgeway</u>		<u>5/1/07</u>

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Marine Corps Base, Camp Lejeune

Non-Hazardous Waste Shipping Document

Document #: 06740

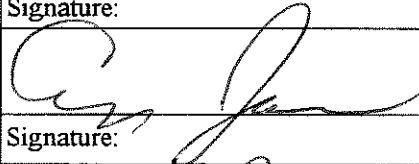
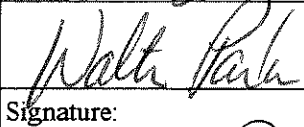
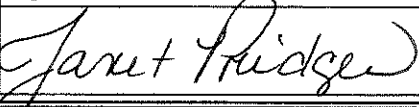
Site: <u>M235 Camp Johnson CLNC (CTO 003)</u>			Page 1 of	
Generator's Name & Mailing Address: <u>COMMANDING GENERAL</u> <u>AC/S, I&E (EMD)</u> <u>MARINE CORPS BASE</u> <u>PSC BOX 20004</u> <u>CAMP LEJEUNE, NC 28542-0004</u>			US EPA ID Number: <u>NC6170022580</u>	
Generator's Telephone #: <u>(910) 451-1482</u>				
Transporter's Name, Mailing Address & Telephone Number: <u>P+F Environmental Services</u> <u>8549 Mill Branch Rd Rocky Mount NC 27803</u> <u>(252) 212-8012</u>			US EPA ID Number: <u>NCR000008490</u>	
Destination's Name, Mailing Address & Telephone Number: <u>P+F Environmental Services</u> <u>Speights Chapel Rd Whitakers NC 27891</u> <u>(252) 443-4083</u>			US EPA ID Number: <u>RO500106</u>	
Waste Shipping Name and Description	Containers		Total Quantity	Units
	Number	Type		
<u>Petroleum Contaminated Soil</u>	<u>001</u>	<u>DT</u>	<u>14.77</u>	<u>TONS</u>
<u>NON HAZARDOUS</u>				
Container/Tag Number:		Profile #:		
Lab:				
Additional Information and Discrepancy Indication: <u>CDL# NC4538892</u> <u>TRK# P101</u> <u>TDG# ZB12254</u>				
GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:				
Printed/Typed Name		Signature:		Date:
<u>EUGENE JONES</u>				<u>5/2/07</u>
Transporter's Name		Signature:		Date:
<u>WALTER PARKER</u>				<u>5/2/07</u>
Accepting Facility		Signature:		Date:
<u>P+F Environmental, Inc.</u>				<u>5/2/07</u>

Return Original form to Generator

Marine Corps Base, Camp Lejeune

Non-Hazardous Waste Shipping Document

Document #: 06740

Site: <u>M235 Camp Johnson CLNC (CTO 003)</u>			Page 1 of	
Generator's Name & Mailing Address: <u>COMMANDING GENERAL</u> <u>AC/S, I&E (EMD)</u> <u>MARINE CORPS BASE</u> <u>PSC BOX 20004</u> <u>CAMP LEJEUNE, NC 28542-0004</u>			US EPA ID Number: <u>NC6170022580</u>	
Generator's Telephone #: <u>(910) 451-1482</u>				
Transporter's Name, Mailing Address & Telephone Number: <u>P+P Environmental Services</u> <u>8549 Mill Branch Rd Rocky Mount NC 27803</u> <u>(252) 212-8012</u>			US EPA ID Number: <u>NCR000008440</u>	
Destination's Name, Mailing Address & Telephone Number: <u>P+P Environmental Services</u> <u>SPEIGHTS Chapel Rd Whitakers NC 27891</u> <u>(252) 443-4083</u>			US EPA ID Number: <u>RO500106</u>	
Waste Shipping Name and Description	Containers		Total Quantity	Units
	Number	Type		
<u>Petroleum Contaminated Soil</u>	<u>001</u>	<u>DT</u>	<u>14.77</u>	<u>TONS</u>
<u>NON HAZARDOUS</u>				
Container/Tag Number: Lab:		Profile #:		
Additional Information and Discrepancy Indication: <u>CDL# NC4538892</u> <u>TRK# P101</u> <u>TDS# ZB12254</u>				
GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:				
Printed/Typed Name	Signature:		Date:	
<u>EUGENE JONES</u>			<u>5/2/07</u>	
Transporter's Name	Signature:		Date:	
<u>WALTER PARKER</u>			<u>5/2/07</u>	
Accepting Facility	Signature:		Date:	
<u>P+P Environmental, Inc.</u>			<u>5/2/07</u>	

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APPENDIX E
RISK CLASSIFICATION AND LAND USE FORM

RISK CHARACTERIZATION
2007 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 well used for non-drinking purposes? **NO**
According to MCB Camp Lejeune, recent water supply well sampling data indicates no impact to the nearest water supply wells.
2. Is a water supply well used for drinking water located within 1,000 feet of the source area of the release? **NO**
There are no water supply wells within 1,500 feet of the site (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? **NO**
There are no water supply wells within 1,500 feet of the site.
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)? **NO**
There are an adequate number of locations for additional water supply wells to be installed on other portions of Marine Corps Base Camp Lejeune.
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? **NO**
There has been no evidence or any reported incident to suggest an accumulation of vapors at the site. The building is also constructed on a concrete slab.
6. Are there any other factors that would cause the release to pose an imminent danger to public health, public safety, or the environment? **NO**
Data collected during this monitoring period and previous investigations does not provide evidence to suggest other factors that would cause an imminent danger to public health, public safety, or the environment.

Intermediate Risk

7. Is a surface water body located within 500 feet of the source area of the release? **YES**
A shallow drainage ditch is present between the eastern wall of Buildings M-232 through M-236 and Hayes Street. The nearest mapped surface water bodies are the New River, located approximately 650 feet west of the site, and Northeast Creek, located approximately 850 feet southeast of the site.
8. Is the source area of the release located within a approved or planned wellhead protection area as defined in 42 USC 300h-7(e)? **NO**
Wellhead protection areas defined by 42 USC 300h-7(e) have not as of this report been designated. MCB Camp Lejeune, however, has identified wellhead protection areas on the base. The most recent Wellhead Protection Plan Update (2002) does not include this site within a potential wellhead protection area; there are no water supply wells in the Camp Johnson 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?
 The site is located in the eastern portion of the Coastal Plain Physiographic Province of North Carolina.
 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?
 Per previous investigations, shallow soil at the site is described being a mixture of sands, silts, and clays. The uppermost nine feet of soils are described as silts and clays with variable amounts of very fine to medium sand. From approximately nine feet bgs to about 19 feet bgs, very fine sands coarsening downwards to very coarse sands are encountered. From 19 to 30 feet bgs, maximum to very coarse sands are present. The first saturated soils of the surficial aquifer were typically encountered at approximately nine to 11 feet bgs. The deepest monitoring wells at the site extend only to approximately 30 feet bgs. Groundwater elevations at site well pairs vary over time and are inconsistent; therefore, no conclusions can be drawn regarding recharge. Of the monitoring wells sampled this period, there were no contaminants at 30 feet detected above NCGWQSs – all detections were several orders of magnitude less than the 2L standards.
YES

10. Do the levels of groundwater contamination for any contaminant exceed the gross contamination levels (see Table 9) established by the Department?
 Based on the current groundwater conditions and analytes analyzed, groundwater contaminants do exceed the gross contamination levels. Free product, however, has been documented in MW19.
NO

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)?
 The project area buildings are used as housing quarters for military personnel.
YES

2. Does the property contain a school, daycare center, hospital, playground, park, recreation area, church, nursing home, or other place of public assembly?
 The project area does not contain any of the above referenced places of public assembly; however, the buildings are residential in nature.
NO

3. Does the property contain a commercial (e.g., retail, warehouse, office/business space, and so on 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?
 The subject site is residential.
NO

4. Do children visit the property?
 Children would not typically visit the property since the buildings are bachelor housing quarters.
 Is access to the property reliably restricted consistent with its use (e.g., by fences, security personnel or both)?
NO

There are no fences around the subject buildings; however, the site is located within Camp Johnson aboard MCB Camp Lejeune, which has restricted access via a manned gate.

5. Do pavement, buildings, or other structures cap the contaminated soil? **YES**
The area consists of buildings, sidewalks, and a road with some grassy areas.
Appropriate land use restrictions could be implemented to restrict use of soils at the site.
6. What is the zoning status of the property? The MCB Camp Lejeune is not subject to local or county zoning requirements. The surrounding properties are developed for military support purposes.
7. Is the use of the property likely to change in the next 20 years? **NO**
The designated use of military property is not likely to change in the foreseeable 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)? Buildings M-232 through 236 are bachelor housing quarters, each immediately adjacent to the former source areas.
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? A recreational area is approximately 500 feet to the northwest of the source areas.
3. What is the zoning status of properties in the surrounding area? The MCB Camp Lejeune is not subject to local or county zoning requirements. The surrounding properties are developed for military support purposes.
4. Briefly characterize the use and activities of the land in the surrounding area. The land surrounding the source area has been developed for military support purposes. The buildings associated with the site are residential use buildings. The next closest buildings, M-238 and M-239, are used for furniture storage. There is a recreational area within 500 feet of the site.

Receptor Information

1. Water Supply Wells
There are no water supply wells near the site.
2. Public Water Supplies
Public water is provided to buildings within 1,500 feet of the site by water mains which carry treated potable water. Potable water is supplied to the Base by the MCB water supply system which has various water treatment facilities throughout the Base. Groundwater obtained from the Castle Hayne Aquifer is the raw water source for the treatment facilities.
3. Surface Water
The nearest mapped surface water bodies are the New River, located approximately 650 feet west of the site, and Northeast Creek, located approximately 850 feet southeast of the

site. A shallow drainage ditch is present between the eastern wall of Buildings M-232 through M-236 and Hayes Street.

4. Wellhead Protection Areas
According to the Wellhead Protection Plan – 2002 Update prepared by AH Environmental, the site is not located within a Base established wellhead protection area.
5. Describe Deep Aquifers in the Coastal Plain Physiographic Region (refer to page 19 of the guidelines):**NOTE:** This requirement only pertains to releases in the Coastal Plain physiographic region as designated on a map entitled “Geology of North Carolina” published by the Department in 1985.
As identified in the Geologic Map of North Carolina (North Carolina Department of natural Resources and Community Development 1985), the subject site lies within the Coastal Plain physiographic province. Results of the current event show that the 30 feet depth Type II well (MW05) does not exhibit groundwater contaminant concentrations above NCGWQSs. To some degree, seven of the ten aquifers identified to date in the North Carolina Coastal Plain are typically present beneath portions of the MCB Camp Lejeune. In order of increasing depth, these aquifers include the Surficial, Castle Hayne, Beaufort, Peedee, Black Creek, and upper and lower Cape Fear aquifers. Both the Beaufort and Peedee aquifers contain saltwater in portions of the Base and are not generally used for water supply. The Castle Hayne aquifer contains freshwater and is the principal aquifer used in the area for water.
6. Describe Subsurface Structures (*refer to page 19 of the guidelines*):
Subsurface utilities are present at the site. These utilities are generally located above the water table and are not considered potential receptors.
7. Property Owners and Occupants
The subject site is owned and operated by the Commanding Officer – Marine Corps Base, Camp Lejeune.