



July 25, 2006

Mr. Andrew Smith
I&E/EMD/EQB
Building 12, Room 235
MCB Camp Lejeune, NC 28542

**SUBJECT: FINAL Annual Groundwater Monitoring Report 2006
Building BB-190
Contract N62470-04-D-0205, TO 0016
MCB Camp Lejeune, North Carolina**

Dear Mr. Smith,

Sovereign Consulting Inc. (Sovereign) is pleased to submit the BB-190 FINAL Annual Groundwater Monitoring Report for the 2006 reporting period. If you require further information regarding these submittals, please feel free to contact us. Sovereign appreciates the opportunity to assist you with your environmental projects.

Sincerely,

Sovereign Consulting, Inc.

A handwritten signature in black ink, appearing to read "Nicole L. Hall", is written over a light gray rectangular background.

Nicole L. Hall, P.E.
Senior Engineer

Cc: Mr. Dave Cleland (NAVFAC)
Mr. Chris Murray (Sovereign)

FINAL
ANNUAL GROUNDWATER MONITORING REPORT 2006
BUILDING BB-190

NCDENR Incident Number: 22793
Marine Corps Base
Camp Lejeune, North Carolina

July 24, 2006

Prepared for:



Mr. David T. Cleland, P.G.
Marine Corps North Carolina IPT
Naval Facilities Engineering Command Mid-Atlantic
6506 Hampton Blvd
Norfolk, VA 23508-1278



Mr. Andrew Smith
I&E/EMD/EQB
Building 12, Post Lane
MCB Camp Lejeune, NC 28542

Prepared by:



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Contract Number: N62470-04-D-0205
Task Order: 0011

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LIST OF ACRONYMS

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

MCB	Marine Corps Base
MDL	Method Detection Limit
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
MSCC	Maximum Soil Contaminant Concentration
MSL	Mean Sea Level
MTBE	Methyl tertiary butyl ether
µg/Kg	Micrograms per Kilogram
µg/L	Micrograms per 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
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

Building BB-190 is located in the Courthouse Bay area of MCB Camp Lejeune off of Marines Road. It is an active water treatment plant. An active potable water supply well, PSWBB47, is located approximately 100 feet north of Building BB-190. The former 500-gallon diesel UST located at the subject site was used to store diesel fuel for heat production and was abandoned in place in May 1994.

Soil samples, collected during tank closure activities, showed the presence of TPH-GRO and DRO above state action levels. As a result, a comprehensive site assessment (CSA) was conducted at the site by Richard Catlin and Associates (now known as Catlin Engineers and Scientists, CATLIN) in 1995. Two areas exhibited soil TPH concentrations above action levels during the CSA - one in the vicinity of monitoring well MW16 and the other in the vicinity of former UST BB-190-1. Of these two areas, only soils in the vicinity of the former UST exhibited soil TPH concentrations above the Final Clean-up Level calculated at 120 ppm as TPH-Gasoline. Free product was not identified during the CSA. Dissolved phase constituents, however, were detected in groundwater at the site.

Due to soil and groundwater contamination, the CSA recommended a corrective action plan (CAP) be prepared to address contamination at the site. The 1996 CATLIN CAP recommended biosparging to address groundwater contamination, using a combination of horizontal and vertical biosparge wells. To address vadose zone soil contamination and to collect vapors from the biosparge wells, the CAP proposed soil vapor extraction using horizontal soil vapor extraction wells. The biosparge/soil vapor extraction system was subsequently installed by J.A. Jones Environmental Services, Inc. (J.A. Jones) in October 1998 and operated until December 1999, when the system was shut down based on low contaminant concentrations.

Following system deactivation in December 1999, post-operation groundwater monitoring was conducted quarterly. No free product was present, and dissolved phase constituents remained below detectable concentrations at most site wells. Wells MW07 and MW16 were the only wells that exhibited contaminants (benzene and/or ethylbenzene) above NCGWQSSs. Soil sampling conducted in September 2001 showed soil contaminant levels were below NCDENR established soil-to-groundwater maximum soil contaminant concentrations.

Based on J.A. Jones soil and groundwater data, they generated a May 2002 monitoring report which stated the site qualified for a low risk classification and recommended the site be considered for No Further Action (NFA) status by NCDENR. NCDENR subsequently denied the request for NFA due to the close proximity of potable water supply well PSWBB47. NCDENR recommended that groundwater monitoring be continued at the site and that the monitoring program should include water supply well PSWBB47. Alternatively, they recommended that the potable water supply well be properly abandoned, and a well abandonment be recorded submitted to NCDENR.

Subsequent gauging and sampling of the site's 17 monitoring wells, as well as the nearby potable water supply well, was conducted by Engineering and Environment, Inc. (EEI) in both June 2004 and 2005. Sampling was not performed in 2003 due to funding issues. Neither monitoring event detected free product at the site. In addition, no contaminants were detected in the water supply well, PSWBB47, or in the site's three deep monitoring wells. Contamination above NCGWQSSs were detected only in the two wells closest to the former UST, MW07 and MW16. Contaminant concentrations were below GCLs.

The current monitoring program was conducted in May 2006 by Sovereign Consulting Inc. (Sovereign). No measurable free product was identified at the site. Groundwater contaminant levels remained generally the same with no significant changes. Contaminant levels continue to show an overall decrease as compared to pre-remediation conditions. Since this site is classified by NCDENR as a high risk site due to the close proximity of active potable water supply well PSWBB47, Sovereign recommends MCB Camp Lejeune continue annual groundwater monitoring and reporting at the site.

1.0 TITLE PAGE

DATE OF REPORT: July 24, 2006

Facility I.D.: N/A

NCDENR Incident Number: 22793

Site Name: Building BB-190

Site Location: Marine Corps Base Camp Lejeune, North Carolina

Nearest City/Town: Camp Lejeune

County: Onslow

Risk Classification: High Risk

Land Use Classification: Industrial/Commercial

Property Owner: Commanding Officer – MCB Camp Lejeune
I&E/EMD/EQB
PSC Box 20004

Address: MCB Camp Lejeune, NC 28542-0004

Phone: (910) 451-5068

Tank Owner: Same as above

Address: Same as above

Phone: Same as above

Property Occupant: Same as above

Address: MCB Camp Lejeune, NC

Phone: None

Consultant/Contractor: Sovereign Consulting Inc.

Address: 405 Oakmeads Crescent, Suite 1
Virginia Beach, VA 23462

Phone: (757) 456-5093

Release Information

Date Discovered: June 14, 1994

Latitude:

34° 54' 84" N

Longitude:

77° 21' 48.96" W

Estimated Quantity of Release: Unknown

Cause of Release: Leaking underground storage tank system

Source of Release (Piping/UST): UST and associated system

Sizes and contents of UST system(s) from which the release occurred: The former UST was a 500-gallon diesel tank.



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

2.0 INTRODUCTION

The purpose of this report is to summarize data from a recent groundwater gauging and sampling event at the Building BB-190 site aboard MCB Camp Lejeune, North Carolina. This data was collected in May 2006. The project's scope of work entailed gauging of 17 site monitoring wells (each are preceded by the prefix USTBB190) – MW01-MW17, as well as a nearby water supply well, PSWBB47. Groundwater samples from the wells were also collected during the May 2006 event. Analyses run included EPA Methods 602 + Xylenes, 625 + 10 largest non-target peaks, and the MADEP methods. Results of Sovereign's 2006 gauging and sampling event are presented in this report.

3.0 SITE HISTORY

Building BB-190 is located in the Courthouse Bay area of MCB Camp Lejeune off of Marines Road. It is an active water treatment plant. An active potable water supply well, PSWBB47, is located approximately 100 feet north of Building BB-190.

The former 500-gallon diesel UST located at the subject site was used to store diesel fuel for heat production. The tank system was abandoned in May 1994. The tank closure report states the delivery and vent lines servicing the UST were disconnected and capped, and the tank was abandoned in place, after appropriate cleaning, by pumping it full with a concrete slurry. Two soil samples were collected during tank closure activities. Results showed the presence of TPH-GRO and DRO above state action levels in one of the two samples.

As a result, a comprehensive site assessment was conducted at the site by Richard Catlin and Associates (now known as Catlin Engineers and Scientists, CATLIN) in 1995. The report was performed in order to determine the magnitude of and extent of soil and ground water contamination associated with the former UST, identify and delineate possible free product accumulation, if present, and assess the potential for exposure to possible subsurface petroleum related contaminants. Two areas exhibited soil TPH concentrations above action levels during the CSA - one in the vicinity of monitoring well MW16 and the other in the vicinity of former UST BB-190-1. Of these two areas, only soils in the vicinity of the former UST exhibited soil TPH concentrations above the Final Clean-up Level calculated at 120 ppm as TPH-Gasoline. Free product was not identified during the CSA. Dissolved phase constituents, however, were detected in groundwater at the site.

Due to soil and groundwater contamination, the CSA recommended a CAP be prepared to address contamination at the site. The 1996 CATLIN CAP recommended biosparging to address groundwater contamination, using a combination of horizontal and vertical biosparge wells. To address vadose zone soil contamination and to collect vapors from the biosparge wells, the CAP proposed soil vapor extraction using horizontal soil vapor extraction wells. The biosparge/soil vapor extraction system was subsequently installed by J.A. Jones in October 1998. The system included one horizontal biosparge well, four vertical biosparge wells, and two horizontal soil vapor extraction wells.

The remediation system operated from October 1998 until December 1999 when the system was shut down based on low contaminant concentrations. A baseline groundwater sampling event was conducted in August 1998. Monthly groundwater sampling events were conducted during the first quarter of system operation (November 1998, December 1998, and January 1999), after which groundwater sampling was conducted quarterly (April, July, and October 1999).

Following the October 1999 sampling event, most wells had not exhibited detectable concentrations of any dissolved phase contaminants. In addition, only the two monitoring wells located closest to the former UST (wells MW07 and MW16) exhibited constituent concentrations above NCGWQSs (limited to benzene and/or ethylbenzene).

Following system deactivation in December 1999, post-operation groundwater monitoring was conducted quarterly during the months of January, April, July, and October 2000. Data from the post-operation monitoring indicated no free product was present, and dissolved phase constituents remained below detectable concentrations at most site wells. Wells MW07 and MW16 were the only wells that exhibited contaminants above NCGWQSs (again limited to benzene and/or ethylbenzene).

In September 2001, five soil samples were collected from five borings advanced in areas where previous investigations had identified elevated TPH concentrations in vadose zone soils. Only one of the five soil samples contained detectable contamination concentrations. These concentrations, however, were all were below NCDENR established soil-to-groundwater maximum soil contaminant concentrations. J.A. Jones generated a monitoring report documenting the remediation system operation, groundwater monitoring program (during and post system operation), and 2001 soil sampling event dated May 2002. The report indicated the site qualified for a low risk classification and recommended the site be considered for No Further Action status by NCDENR.

In a response letter dated July 10, 2002, NCDENR denied the Request for No Further Action due to the close proximity of the site to potable water supply well PSWBB47. The supply well is located on the northern portion of the site approximately 100 feet from the former UST. NCDENR recommended that groundwater monitoring be continued at the site, and that the monitoring program should include water supply well PSWBB47. Alternatively, NCDENR recommended that the potable water supply well be properly abandoned, and a well abandonment be recorded submitted to NCDENR.

Follow on gauging and sampling of the site's 17 monitoring wells, as well as the nearby potable water supply well, was conducted by EEI in both June 2004 and 2005. Sampling was not performed in 2003 due to funding issues. There was no measurable free detected during the June 2004 monitoring event. In addition, no contaminants were detected in the water supply well, PDWBB47, or in the site's three deep monitoring wells. Contamination above NCGWQSs were detected only in the two wells closest to the former UST, MW07 and MW16. Contaminant concentrations were below GCLs. EEI also gauged and sampled the site in June 2005. Findings were the same as those in the June 2004 event with contaminant concentrations being slightly lower.

The current monitoring program was conducted in May 2006. Site activities included well gauging of the 17 site monitoring wells, as well as groundwater sampling from the 17 monitoring wells and from potable water supply well PSWBB47. This report outlines and describes site activities as performed by Sovereign during the May 2006 gauging and sampling event.

4.0 GAUGING AND SAMPLING RESULTS

The 2006 field program for the Building BB-190 site consisted of a one time gauging and groundwater sampling event of seventeen site wells (MW01 through MW17) and one potable water supply well (PSWBB47). Activities were conducted in accordance with NCDENR

guidance.

4.1 WELL GAUGING

Monitoring wells MW01 through MW17 were gauged on May 10, 2006. Gauging data is summarized in Table 2. Wells were gauged using an interface probe to measure the depth to water and depth to product (if present). Depth to water values ranged from 4.60 feet to 13.58 feet below TOC. No measurable free product was detected at any site well designated for gauging during the 2006 monitoring program.

Top of casing elevations and DTW values were used to obtain groundwater elevations at the site. Figure 3 shows shallow groundwater elevations. From the map, groundwater generally flows to the west-southwest across the site, which is consistent with the direction observed from previous investigations.

4.2 GROUNDWATER SAMPLING

Groundwater sampling was also conducted at the site. Annual groundwater samples were collected from the site in May 2006. One duplicate sample was collected and two laboratory supplied trip blanks were submitted for analysis. Prior to sampling, wells were purged of one well casing volume of water using a peristaltic pump with connected polyethylene discharge tubing and a low flow purging and sampling procedure. Purging of the wells was completed using the techniques described in the NCDENR UST Section *Guidelines for Sampling, Version 1.2*, dated September 1, 2003. Specifically, Sovereign field personnel follow purging completion criteria detailed in Appendix F of the *Guidelines for Sampling*. One option of these criteria state that adequate purging is achieved when three consecutive measurements in which the three parameters listed below are within the stated limits, dissolved oxygen is no greater than 20 percent of saturation at the field measured temperature, and turbidity is no greater than 20 Nephelometric Turbidity Units (NTUs):

1. Temperature: $\pm 0.2^{\circ}\text{C}$
2. pH: ± 0.2 Standard Units
3. Specific Conductance: $\pm 5.0\%$ of reading

This method is used, as opposed to purging three well volumes, in order to make the most efficient use of time when sampling. As in any scenario, professional judgment is also relied upon in the field during gauging and sampling events. Water quality indicator parameters (pH, temperature, conductivity, oxidation-reduction potential, dissolved oxygen, and turbidity) were measured and recorded. If a well purged to dryness, the well was allowed to recharge before sampling.

Samples were collected after purging using the laboratory-prepared sample bottles, placed on ice, and shipped under proper chain of custody to SGS/Paradigm Analytical Laboratories Inc. (SGS) in Wilmington, North Carolina (NC Certification Number 481). The lab tested the groundwater samples for volatiles via EPA method 602, semivolatiles using EPA method 625, and volatile and extractable petroleum hydrocarbons with the MADEP methods. Laboratory reports and chain of custody documentation are included in Appendix B.

Eleven of the 17 site monitoring wells did not exhibit target analytes above the laboratory reporting limits. The wells that contained detectable contaminant concentrations were MW02, MW07, MW08, MW12, MW16, and MW17. Monitoring well MW17 was the only new well to display detectable concentrations since the last monitoring report.

Concentrations (VOC) in this well, however, were very low.

Two volatile compounds were detected in three wells at the site. Ethylbenzene and total xylenes were detected in monitoring wells MW07, MW16, and MW17. Monitoring wells MW07 and MW16 are both screened in the surficial aquifer and located close to and downgradient of the former UST, while MW17 is located further southeast. Contaminant concentrations in the wells were well below the established groundwater standards for the compounds. Ethylbenzene was detected at 83.4 µg/L, 214 µg/L, and 1.29 µg/L in MW07, MW16, and MW17, respectively. Total xylenes were also detected in the same wells at concentrations of 259.3 µg/L, 284.7 µg/L, and 6.14 µg/L. None of the other wells sampled, including potable water supply well PSWBB47, contained detectable volatile contaminant concentrations. Results for the remainder wells were below quantitation limits for all EPA Method 602 target analytes. Volatile organic compound results are summarized in Table 3 and shown on Figure 4.

Four semi-volatile contaminants, acenaphthene, fluorene, naphthalene, and phenanthrene, were detected at the site. Acenaphthene and fluorene were detected in MW02, MW07, MW08, MW12, and MW16 at concentrations well below the NCGWQS of 80 µg/L. Naphthalene was detected in MW07, MW12, and MW16 at concentrations of 99.9 µg/L, 3.80J µg/L, and 151 µg/L, respectively. The naphthalene concentrations in wells MW07 and MW16 were above the groundwater quality standard of 21 µg/L. Phenanthrene was also detected at the site in monitoring wells MW07, MW08, and MW12. None of the concentrations, however, were above the NCGWQS of 210 µg/L. No semi-volatile compounds or TICs were detected in the groundwater sample from PSWBB47.

Eleven of the well samples at the site exhibited one or more TICs. TICs are substances not on the target compound list, and not all TICs are identified and quantitated using individual standards. All TIC quantitations are estimated. Most of the TICs were identified as unknown or isomer compounds, such as isomer of trimethylbenzene, unknown aromatic, etc. One compound, propylbenzene, was identified in MW16 with a match probability of 91% and a concentration of 107 µg/L. The total TIC concentration in that well was 2,342 µg/L. Semivolatile compound results are summarized in Table 4 and shown on Figure 5.

MADEP constituents were also detected in two wells at the site – monitoring wells MW07 and MW16. The C₅-C₈ aliphatics and C₉-C₂₂ aromatics concentrations were detected in both wells at concentration above the NCGWQSs. Monitoring wells MW07 and MW16 contained C₅-C₈ aliphatics concentrations of 430 µg/L and 740 µg/L, respectively. The two wells also exhibited concentrations of C₉-C₂₂ aromatics at 1,640 µg/L and 3,510 µg/L, as well as C₉-C₁₈ aliphatics concentrations of <1,100 µg/L and <1,600 µg/L. The C₉-C₁₈ aliphatics concentrations were below the applicable groundwater quality standard of 4,200 µg/L. There were no detections of C₁₉-C₃₆ aliphatics in any site well, and the supply well, PSWBB47, did not exhibit any MADEP constituents.

The duplicate sample was obtained from MW17. No target analytes were detected in the duplicate samples except for bis(2-ethylhexyl)phthalate at a concentration of 1.40J µg/L as compared to the NCGWQS of 2.5 µg/L. The laboratory supplied trip blank was also free of target analytes. The blank for the sampling event for MW14 and PSWBB47; however, was broken upon receipt and, as a result, laboratory analysis was not performed.

Overall, the site continues to display the same trend in contaminant concentrations. Volatile contaminant concentrations in MW07 and MW16 have decreased in the past year. Although, MW17 exhibited ethylbenzene (1.29 µg/L) and total xylenes (6.14 µg/L) concentrations, they were well below the established groundwater quality standards. Semi-volatile contaminants at the site were present in generally the same orders of magnitude as compared to 2005 data, except for the naphthalene concentration in MW16. It increased an order of magnitude from 72.4 µg/L in 2005 to 151 µg/L in 2006. Both concentrations are above the naphthalene NCGWQS of 21 µg/L. The 2004 naphthalene concentration in MW16 was 113 µg/L. MADEP constituents at the site were only present in the groundwater samples obtained from MW07 and MW16. Current monitoring data from the 2006 event shows a slight increase in concentrations as compared to 2005 data. The 2006 results are more comparable to the 2004 groundwater data.

An overview similar to that performed in the 2005 EEI annual report shows the following information and compares the most recent data to the last two years. Groundwater contaminant concentrations remain well below pre-remediation conditions and significantly below GCLs.

Maximum Detected Concentrations

Analyte	NCGWQS	GCL	Pre-Remediation 1995	Immediately following Deactivation (Jan 2000)	Ten Months after Deactivation (Oct 2000)	2004 Data	2005 Data	Current (2006) Data
Benzene	1	5000	3210	31	5	4.81	2.86	ND
Ethylbenzene	550	84,500	895	23	68	267	151	214
Total Xylenes	530	87,500	2390	19	11	671	419.5	284.7
Naphthalene	21	15,500	423	ND	17	113	72.4	151
Benzo(a)pyrene	0.00479	1.5	37.2	ND	ND	ND	ND	ND

Concentrations are expressed in micrograms per liter

ND indicates the analyte was not detected at the laboratory detection limit.

(1995 data from Catlin, 1995; 2000 data from Jones, 2002; 2004/2005 data from EEI, 2004/2005)

Historical groundwater sampling data from previous annual reports can be found in Appendix A for comparison.

5.0 RECEPTOR SURVEY

Sovereign reassessed site conditions and concluded that the receptor survey previously completed by J.A. Jones in the May 2002 annual monitoring report still applies. The J.A. Jones survey is located in Appendix A for review. In addition, an updated risk classification and land use form is provided in Appendix D. There has been no change in receptor impact, and there have been no changes to land use of the site or the immediate surrounding areas.

6.0 CONCLUSIONS AND RECOMMENDATIONS

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

1. Surficial aquifer groundwater flows to the west-southwest across the site, consistent with previous investigations. DTW values in site monitoring wells ranged from 4.60 feet to 13.58 feet below TOC.
2. Potential downward flow of surficial aquifer groundwater may be retarded due to the presence of a clay unit that appears to function as a semi-confining unit separating the surficial aquifer groundwater from the underlying groundwater of the limestone unit.
3. No measurable free product was detected during the May 2006 monitoring event.
4. No target analytes were detected in potable water supply well PSWBB47, indicating there has been no impact to this well. In addition, deep monitoring well MW13, also near the water supply well, was below quantitation limits for all analytes.
5. Only two shallow monitoring wells at the site, MW07 and MW16, exhibited contaminant concentrations above NCGWQSs. Each well contained naphthalene, C₅-C₈ aliphatics, and C₉-C₂₂ aromatics at levels above their applicable groundwater quality standards. None, however, were above the established GCLs.
6. No target analytes were detected in the three deep monitoring wells (screened in the groundwater of the limestone unit), including well MW15, located adjacent to the near source surficial aquifer well MW07.
7. Previous investigations indicated constituent concentrations in soil are below NCDENR Soil-to-Groundwater Maximum Contaminant Concentrations.

Since this site is classified by NCDENR as a high risk site due to the close proximity of active potable water supply well PSWBB47, Sovereign recommends MCB Camp Lejeune continue annual groundwater monitoring and reporting at the site.

7.0 REFERENCES

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

Richard Catlin and Associates, Inc., *Leaking Underground Storage Tank Comprehensive Site Assessment, UST BB-190-1, Marine Corps Base, Camp Lejeune, North Carolina*, October 6, 1995.

Richard Catlin and Associates, Inc., *Leaking Underground Storage Tank Corrective Action Plan, UST BB-190-1, Marine Corps Base, Camp Lejeune, North Carolina*, August 14, 1996.

Engineering and Environment, Inc., *Quarterly Groundwater Monitoring Report, Site BB-190, Marine Corps Base Camp Lejeune, North Carolina*, June 2004.

Engineering and Environment, Inc., *Annual Groundwater Monitoring Report 2005, Revision 0, Site BB-190, Marine Corps Base Camp Lejeune, North Carolina*, July 12, 2005.

Environmental and Regulatory Consultants, Inc., *Tank Removal Report, Marine Corps Base, Building BB-190, Camp Lejeune, North Carolina*, July 11, 1994

J.A. Jones Environmental Services, Inc., *Annual Monitoring Report and Request for No Further Action Status, Soil and Groundwater Remediation, UST BB190-1, Marine Corps Base Camp Lejeune, North Carolina*, May 30, 2002.

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

North Carolina Department of Environment and Natural Resources, Division of Waste Management, Underground Storage Tank Section, *Guidelines for Sampling, Version 1.2*, September 1, 2003.

North Carolina Department of Environment and Natural Resources, Division of Waste Management, Underground Storage Tank Section, *Response Letter to MCBCLNC EMD*, July 10, 2002.

North Carolina Geological Survey, *Geologic Map of North Carolina, Scale 1:500,000*, 1985.

North Carolina Geological Survey, *Preliminary Explanatory Text for the 1985 Geologic Map of North Carolina, Contractual Report 88-1*, November 4, 1998.

TABLES

TABLE 1
WELL CONSTRUCTION INFORMATION
Incident Number and Name: 22793 - Building BB-190

Monitoring Well	Date Installed	Well Depth (feet below TOC)	Top of Casing Elevation (feet)	Well Type
USTBB190-MW01	3/15/1995	15	8.06	II
USTBB190-MW02	3/15/1995	15	6.94	II
USTBB190-MW03	3/15/1995	15	8.90	II
USTBB190-MW04	3/16/1995	15	8.82	II
USTBB190-MW05	3/16/1995	10	6.80	II
USTBB190-MW06	3/16/1995	10	5.16	II
USTBB190-MW07	3/22/1995	15	6.40	II
USTBB190-MW08	3/23/1995	15	8.87	II
USTBB190-MW09	3/23/1995	15	8.71	II
USTBB190-MW10	3/24/1995	15	5.22	II
USTBB190-MW11	3/24/1995	15	8.01	II
USTBB190-MW12	3/24/1995	13.5	7.47	II
USTBB190-MW13	3/20/1995	50	9.18	III
USTBB190-MW14	3/24/1995	48.5	5.04	III
USTBB190-MW15	3/24/1995	50	6.37	III
USTBB190-MW16	3/23/1995	36	6.21	Pumping Well
USTBB190-MW17	Unknown	Unknown	Unknown	Unknown

Source: CATLIN CSA 1995; well depths per well construction records

TABLE 2
GROUNDWATER ELEVATION AND PRODUCT THICKNESS DATA
MAY 2006

Incident Number and Name: 22793 - Building BB-190

Monitoring Well	Top of Casing Elevation (feet)	Depth to Water (DTW)	Groundwater Elevation (feet)	Product Thickness (feet)
		05/10/06	05/10/06	05/10/06
USTBB190-MW01	8.06	6.86	1.20	--
USTBB190-MW02	6.94	4.60	2.34	--
USTBB190-MW03	8.90	7.64	1.26	--
USTBB190-MW04	8.82	6.55	2.27	--
USTBB190-MW05	6.80	6.55	0.25	--
USTBB190-MW06	5.16	5.22	-0.06	--
USTBB190-MW07	6.40	4.75	1.65	--
USTBB190-MW08	8.87	6.42	2.45	--
USTBB190-MW09	8.71	6.42	2.29	--
USTBB190-MW10	5.22	5.27	-0.05	--
USTBB190-MW11	8.01	8.38	-0.37	--
USTBB190-MW12	7.47	4.82	2.65	--
USTBB190-MW13	9.18	13.58	-4.40	--
USTBB190-MW14	5.04	8.35	-3.31	--
USTBB190-MW15	6.37	9.80	-3.43	--
USTBB190-MW16	6.21	5.65	0.56	--
USTBB190-MW17	Unknown	5.21	Not Calculated	--
PSWBB47	Unknown	NM	Not Calculated	NM

- NM = Well not measured; either not accessible or not designated as part of gauging program.
- Not Calculated due to insufficient data or well not measured.
- Unknown top of casing elevation
- "--" = free product not present during gauging event.

TABLE 3
SUMMARY OF GROUNDWATER SAMPLING RESULTS
Date: July 2006
Incident Number and Name: 22793 – Building BB-190
Facility ID#: N/A
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						
USTBB190-MW01	USTBB190-MW01	5/10/2006	BQL	BQL	BQL	BQL	BQL	BQL
USTBB190-MW02	USTBB190-MW02	5/10/2006	BQL	BQL	BQL	BQL	BQL	BQL
USTBB190-MW03	USTBB190-MW03	5/10/2006	BQL	BQL	BQL	BQL	BQL	BQL
USTBB190-MW04	USTBB190-MW04	5/11/2006	BQL	BQL	BQL	BQL	BQL	BQL
USTBB190-MW05	USTBB190-MW05	5/11/2006	BQL	BQL	BQL	BQL	BQL	BQL
USTBB190-MW06	USTBB190-MW06	5/11/2006	BQL	BQL	BQL	BQL	BQL	BQL
USTBB190-MW07	USTBB190-MW07	5/10/2006	BQL	BQL	83.4	BQL	BQL	259.3
USTBB190-MW08	USTBB190-MW08	5/11/2006	BQL	BQL	BQL	BQL	BQL	BQL
USTBB190-MW09	USTBB190-MW09	5/11/2006	BQL	BQL	BQL	BQL	BQL	BQL
USTBB190-MW10	USTBB190-MW10	5/11/2006	BQL	BQL	BQL	BQL	BQL	BQL
USTBB190-MW11	USTBB190-MW11	5/11/2006	BQL	BQL	BQL	BQL	BQL	BQL
USTBB190-MW12	USTBB190-MW12	5/11/2006	BQL	BQL	BQL	BQL	BQL	BQL
USTBB190-MW13	USTBB190-MW13	5/11/2006	BQL	BQL	BQL	BQL	BQL	BQL
USTBB190-MW14	USTBB190-MW14	5/17/2006	BQL	BQL	BQL	BQL	BQL	BQL
USTBB190-MW15	USTBB190-MW15	5/10/2006	BQL	BQL	BQL	BQL	BQL	BQL
USTBB190-MW16	USTBB190-MW16	5/10/2006	BQL	BQL	214	BQL	BQL	284.7
USTBB190-MW17	USTBB190-MW17	5/10/2006	BQL	BQL	1.29	BQL	BQL	6.14
PSWPSWBB47	PSWPSWBB47	5/17/2006	BQL	BQL	BQL	BQL	BQL	BQL
Duplicate	Duplicate	5/10/2006	BQL	BQL	BQL	BQL	BQL	BQL
Trip Blank	Trip Blank	5/11/2006	BQL	BQL	BQL	BQL	BQL	BQL
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

- All results reported in µg/l
- µg/L =micrograms per liter
- GCL = gross contamination level
- BQL = Below Quantitation Limits; see laboratory report for specific limits.
- **BOLD** = detected contaminant concentration.
- Duplicate sample obtained from MW17.

TABLE 4
SUMMARY OF GROUNDWATER SAMPLING RESULTS
Date: July 2006
Incident Number and Name: 22793 – Building BB-190
Facility ID#: N/A
Analytical Method: EPA Method 625

Contaminant of Concern			Acenaphthene	Fluorene	Naphthalene	Phenanthrene	All Other Compounds
Well ID	Sample ID	Date Collected					
USTBB190-MW01	USTBB190-MW01	5/10/2006	BQL	BQL	BQL	BQL	BQL
USTBB190-MW02	USTBB190-MW02	5/10/2006	4.90 J	2.50 J	BQL	BQL	BQL
USTBB190-MW03	USTBB190-MW03	5/10/2006	BQL	BQL	BQL	BQL	BQL
USTBB190-MW04	USTBB190-MW04	5/11/2006	BQL	BQL	BQL	BQL	BQL
USTBB190-MW05	USTBB190-MW05	5/11/2006	BQL	BQL	BQL	BQL	BQL
USTBB190-MW06	USTBB190-MW06	5/11/2006	BQL	BQL	BQL	BQL	BQL
USTBB190-MW07	USTBB190-MW07	5/10/2006	1.40 J	2.50 J	99.9	1.60 J	BQL
USTBB190-MW08	USTBB190-MW08	5/11/2006	8.30 J	4.40 J	BQL	1.90 J	BQL
USTBB190-MW09	USTBB190-MW09	5/11/2006	BQL	BQL	BQL	BQL	BQL
USTBB190-MW10	USTBB190-MW10	5/11/2006	BQL	BQL	BQL	BQL	BQL
USTBB190-MW11	USTBB190-MW11	5/11/2006	BQL	BQL	BQL	BQL	BQL
USTBB190-MW12	USTBB190-MW12	5/11/2006	5.10 J	1.30 J	3.80 J	BQL	BQL
USTBB190-MW13	USTBB190-MW13	5/11/2006	BQL	BQL	BQL	BQL	BQL
USTBB190-MW14	USTBB190-MW14	5/17/2006	BQL	BQL	BQL	BQL	BQL
USTBB190-MW15	USTBB190-MW15	5/10/2006	BQL	BQL	BQL	BQL	BQL
USTBB190-MW16	USTBB190-MW16	5/10/2006	1.50 J	2.10 J	151	BQL	BQL
USTBB190-MW17	USTBB190-MW17	5/10/2006	BQL	BQL	BQL	BQL	BQL
PSWPSWBB47	PSWPSWBB47	5/17/2006	BQL	BQL	BQL	BQL	BQL
Duplicate	Duplicate	5/10/2006	BQL	BQL	BQL	BQL	BQL ¹
2L Standard (µg/l)			80	280	21	210	Varies
GCL (µg/l)			2,120	950	15,500	410	Varies

- TICs detected in MW04 – MW13 and MW16 with no match probabilities.
- All results reported in µg/l
- µg/L = micrograms per liter
- GCL = gross contamination level
- BQL = Below Quantitation Limits; see laboratory report for specific limits.
- Note ¹ – Duplicate sample contained 1.40 µg/l Bis(2-ethylhexyl)phthalate as compared to the NCGWQS of 2.5 µg/l.
- J = Detected below the laboratory quantitation limit.
- **BOLD** = detected contaminant concentration.
- **BOLD** and **shaded** = detected contaminant concentration above the NCGWQS.
- Duplicate sample obtained from MW17.

TABLE 5

SUMMARY OF GROUNDWATER SAMPLING RESULTS

Date: July 2006

Incident Number and Name: 22793 – Building BB-190

Facility ID#: N/A

Analytical Method: MADEP Method VPH/EPH

Contaminant of Concern →			C ₅ -C ₈ Aliphatics	C ₉ -C ₁₂ Aliphatics	C ₉ -C ₁₀ Aromatics	C ₉ -C ₁₈ Aliphatics	C ₁₉ -C ₃₆ Aliphatics	C ₁₁ -C ₂₂ Aromatics
Well ID	Sample ID	Date Collected						
USTBB190-MW01	USTBB190-MW01	5/10/2006	<100	<100	<100	<100	<100	<100
USTBB190-MW02	USTBB190-MW02	5/10/2006	<100	<100	<100	<100	<100	<100
USTBB190-MW03	USTBB190-MW03	5/10/2006	<100	<100	<100	<100	<100	<100
USTBB190-MW04	USTBB190-MW04	5/11/2006	<100	<100	<100	<100	<100	<100
USTBB190-MW05	USTBB190-MW05	5/11/2006	<100	<100	<100	<100	<100	<100
USTBB190-MW06	USTBB190-MW06	5/11/2006	<100	<100	<100	<100	<100	<100
USTBB190-MW07	USTBB190-MW07	5/10/2006	430	1,000	1,300	<100	<100	340
USTBB190-MW08	USTBB190-MW08	5/11/2006	<100	<100	<100	<100	<100	<100
USTBB190-MW09	USTBB190-MW09	5/11/2006	<100	<100	<100	<100	<100	<100
USTBB190-MW10	USTBB190-MW10	5/11/2006	<100	<100	<100	<100	<100	<100
USTBB190-MW11	USTBB190-MW11	5/11/2006	<100	<100	<100	<100	<100	<100
USTBB190-MW12	USTBB190-MW12	5/11/2006	<100	<100	<100	<100	<100	<100
USTBB190-MW13	USTBB190-MW13	5/11/2006	<100	<100	<100	<100	<100	<100
USTBB190-MW14	USTBB190-MW14	5/17/2006	<100	<100	<100	<100	<100	<100
USTBB190-MW15	USTBB190-MW15	5/10/2006	<100	<100	<100	<100	<100	<100
USTBB190-MW16	USTBB190-MW16	5/10/2006	740	1,500	3,100	<100	<100	410
USTBB190-MW17	USTBB190-MW17	5/10/2006	<100	<100	<100	<100	<100	<100
PSWPSWBB47	PSWPSWBB47	5/17/2006	<100	<100	<100	<100	<100	<100
Duplicate	Duplicate	5/10/2006	<100	<100	<100	<100	<100	<100

- All results reported in µg/l
- µg/L = micrograms per liter
- GCL = gross contamination level
- **BOLD** = detected contaminant concentration.
- Duplicate sample obtained from MW17.

TABLE 6
SUMMARY OF GROUNDWATER SAMPLING RESULTS

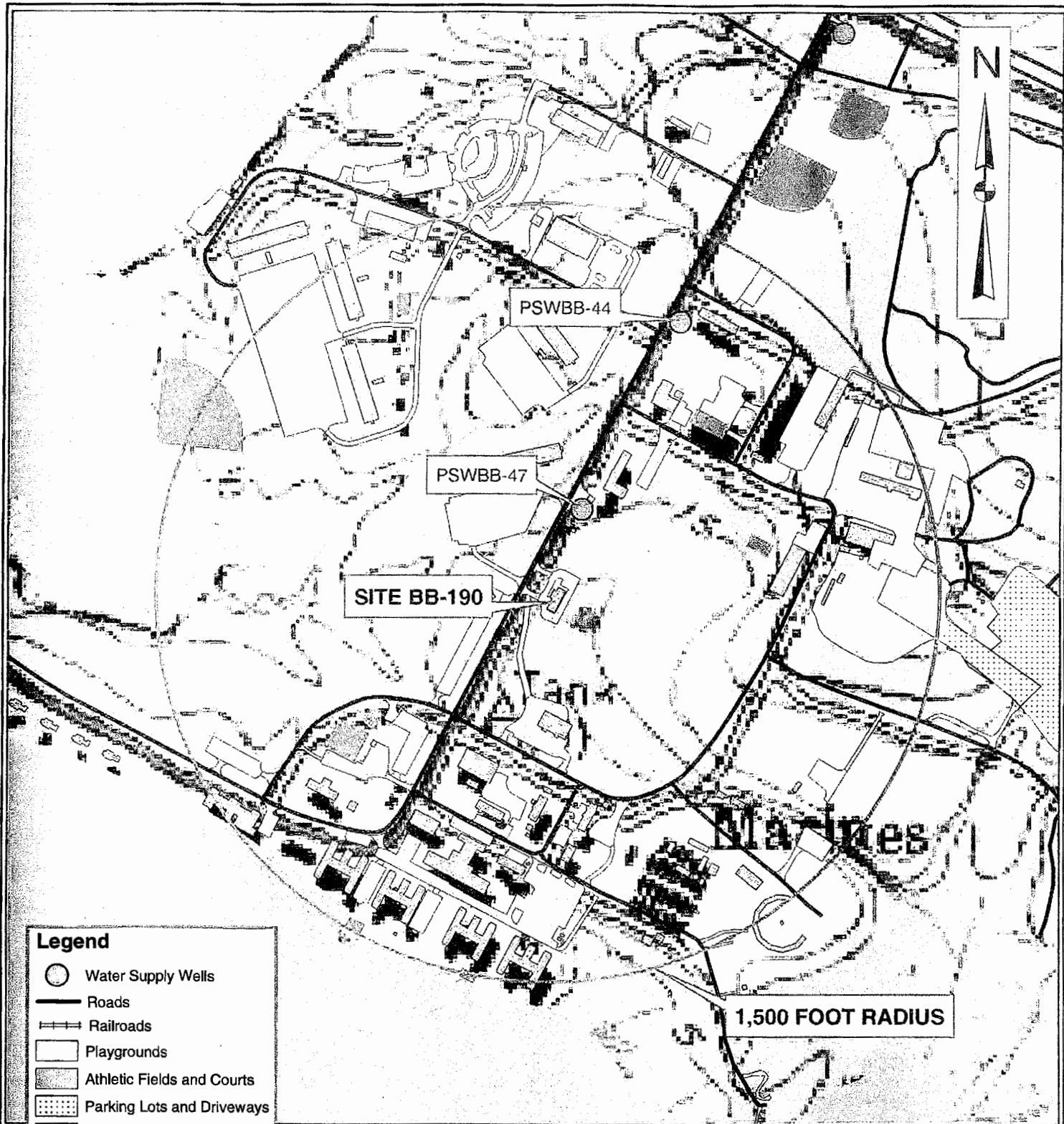
Date: July 2006
Incident Number and Name: 22793 – Building BB-190
Facility ID#: N/A

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

Contaminant of Concern →			C ₅ -C ₈ Aliphatics	C ₉ -C ₁₈ Aliphatics	C ₁₁ -C ₂₂ Aromatics	C ₁₉ -C ₃₆ Aliphatics
Well ID	Sample ID	Date Collected				
USTBB190-MW01	USTBB190-MW01	5/10/2006	<100	<200	<200	<100
USTBB190-MW02	USTBB190-MW02	5/10/2006	<100	<200	<200	<100
USTBB190-MW03	USTBB190-MW03	5/10/2006	<100	<200	<200	<100
USTBB190-MW04	USTBB190-MW04	5/11/2006	<100	<200	<200	<100
USTBB190-MW05	USTBB190-MW05	5/11/2006	<100	<200	<200	<100
USTBB190-MW06	USTBB190-MW06	5/11/2006	<100	<200	<200	<100
USTBB190-MW07	USTBB190-MW07	5/10/2006	430	<1,100	1,640	<100
USTBB190-MW08	USTBB190-MW08	5/11/2006	<100	<200	<200	<100
USTBB190-MW09	USTBB190-MW09	5/11/2006	<100	<200	<200	<100
USTBB190-MW10	USTBB190-MW10	5/11/2006	<100	<200	<200	<100
USTBB190-MW11	USTBB190-MW11	5/11/2006	<100	<200	<200	<100
USTBB190-MW12	USTBB190-MW12	5/11/2006	<100	<200	<200	<100
USTBB190-MW13	USTBB190-MW13	5/11/2006	<100	<200	<200	<100
USTBB190-MW14	USTBB190-MW14	5/17/2006	<100	<200	<200	<100
USTBB190-MW15	USTBB190-MW15	5/10/2006	<100	<200	<200	<100
USTBB190-MW16	USTBB190-MW16	5/10/2006	740	<1,600	3,510	<100
USTBB190-MW17	USTBB190-MW17	5/10/2006	<100	<200	<200	<100
PSWPSWBB47	PSWPSWBB47	5/17/2006	<100	<200	<200	<100
Duplicate	Duplicate	5/10/2006	<100	<200	<200	<100
2L Interim Standard (µg/l)			420	4,200	210	42,000
GCL (µg/l)			NE	NE	NE	NE

- All results reported in µg/l
- µg/L = micrograms per liter
- GCL = Gross Contaminant Level
- NE = Not Established
- **BOLD** = detected contaminant concentration.
- **BOLD** and shaded = detected contaminant concentration above the NCGWQS.
- Duplicate sample obtained from MW17.

FIGURES



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



SOVEREIGN CONSULTING INC.
VIRGINIA BEACH, VIRGINIA

PROJECT

BB-190
MONITORING REPORT
MARINE CORPS BASE
CAMP LEJEUNE, NC

TITLE

GENERAL VICINITY
TOPOGRAPHIC SITE MAP

FIGURE

1

JOB NO.

206-063

DATE

JULY 2006

SCALE

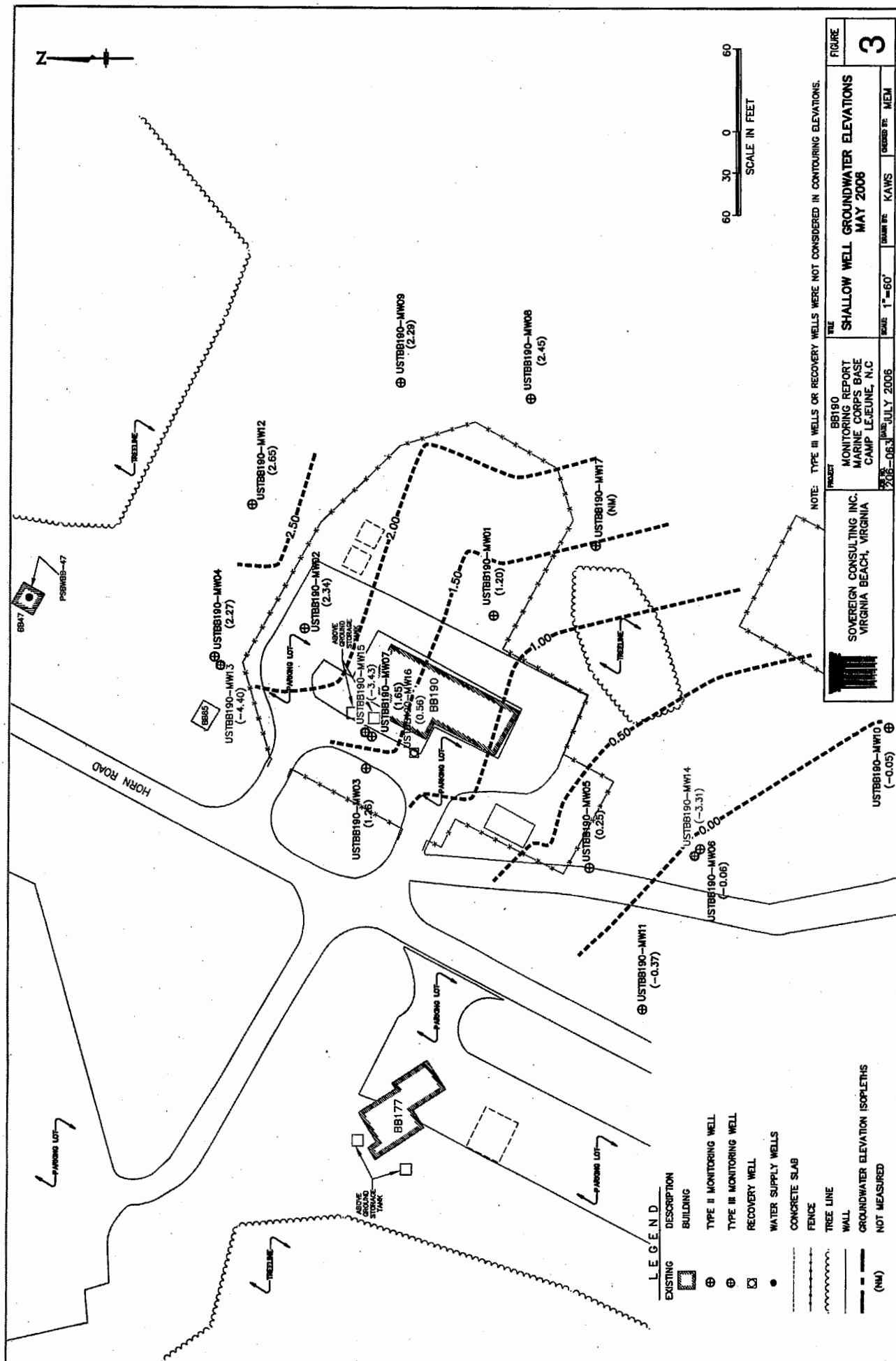
AS SHOWN

DRAWN BY

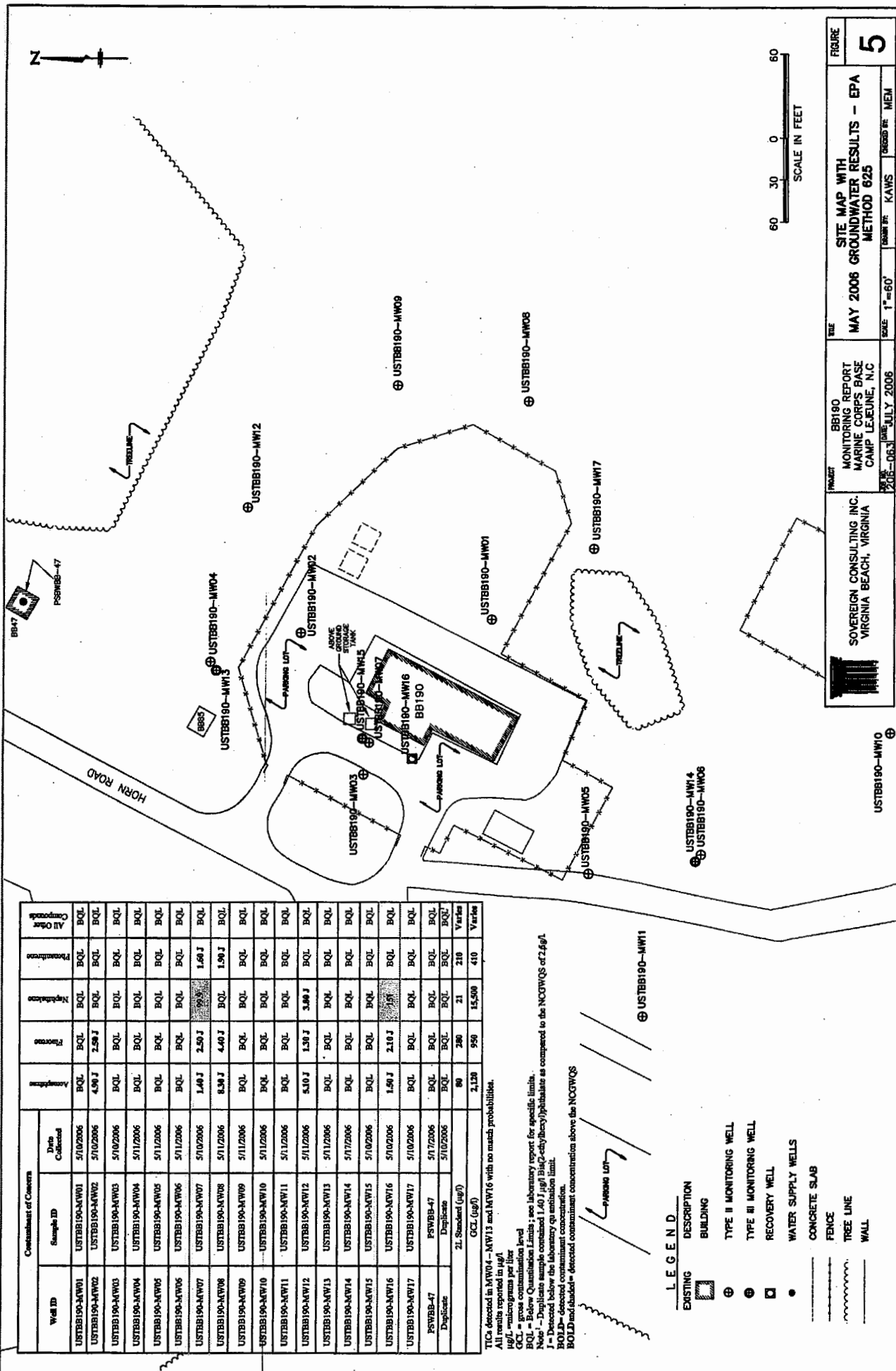
SAC

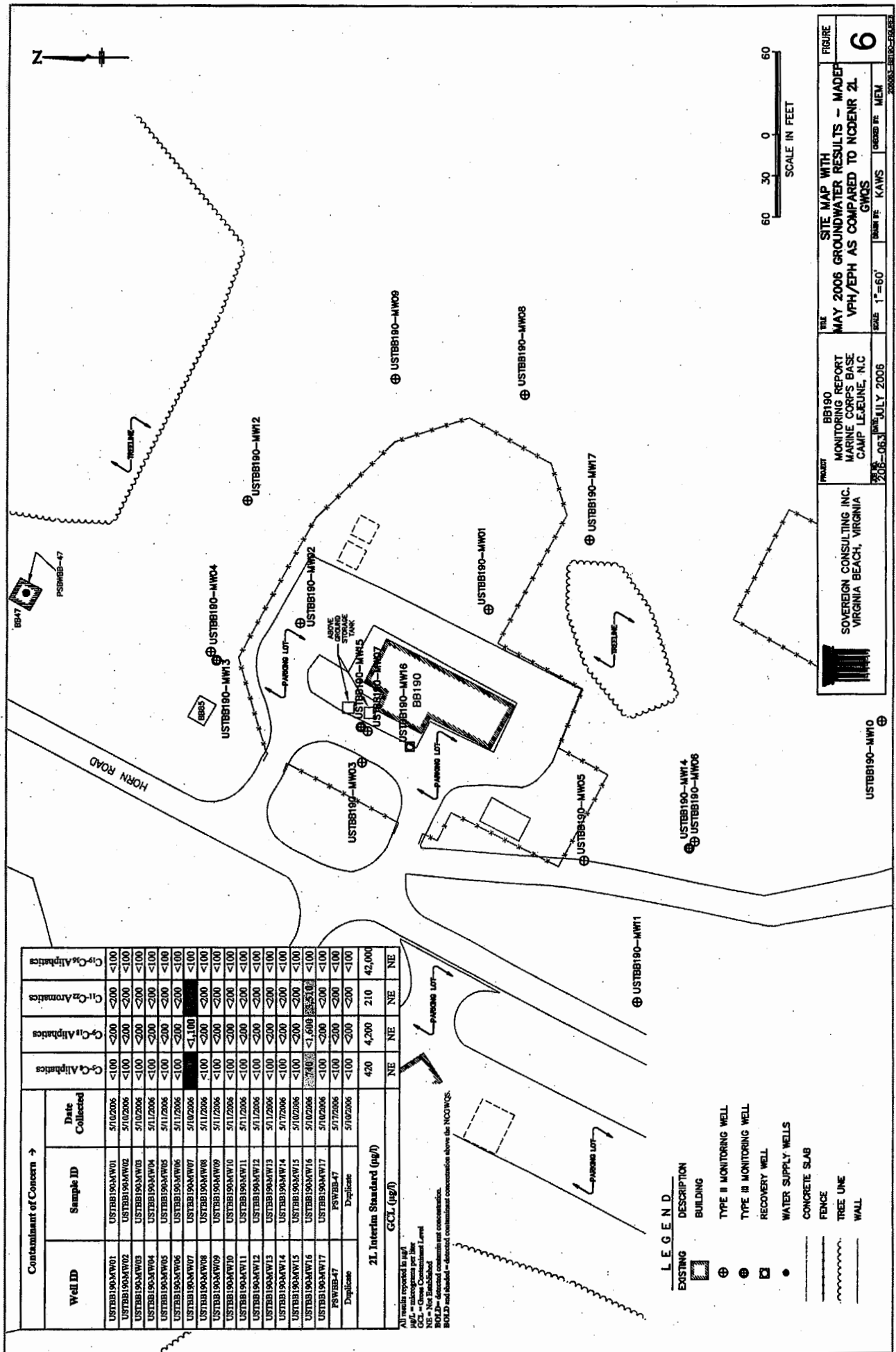
CHECKED BY

NH



PROJECT		FIGURE	
SOVEREIGN CONSULTING INC. MARINE CORPS BASE CAMP LEEUNE, N.C.		3	
DATE: JULY 2006		SCALE: 1"=60'	
DRAWN BY: KAWS		CHECKED BY: MEM	
TITLE		SHALLOW WELL GROUNDWATER ELEVATIONS MAY 2006	





APPENDIX A

HISTORICAL DATA

Historical Groundwater Quality Data

JA Jones Data – 1998-2000

EEI Data – 2004-2005

JA Jones Data

JA Jones Risk Classification Form
September 2001 Soil Sampling Summary Table

HISTORICAL GROUNDWATER QUALITY DATA

EEI DATA

Table 4-1
Summary of Groundwater Analytical Results for June 2005
Site BB-190

Sample Location Date Sampled	NCGWQS	GCL	MW-1 06/07/05	MW-2 06/07/05	MW-3 06/07/05	MW-4 06/06/05	MW-5 06/08/05	MW-6 06/07/05	MW-7 06/07/05	MW-8 06/06/05	MW-9 06/06/05	MW-10 06/07/05	MW-11 06/08/05	MW-12 06/06/05	MW-13 06/06/05	DUP ⁽¹⁾ 06/06/05	MW-14 06/07/05	MW-15 06/07/05	MW-16 06/07/05	MW-17 06/07/05	BB-47 06/20/05	DUP ⁽²⁾ 06/20/05
EPA 602 (ug/L)																						
Benzene	1	5000	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	2.96	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<25.0	<1.00	<1.00	<1.00	
Ethylbenzene	29	29,000	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	357	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	151	<1.00	<1.00	<1.00	
Toluene	1000	257,500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	0.921 J	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<25.0	<1.00	<1.00	<1.00	
Total Xylenes	530	87,500	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	73.15	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	419.5	<4.00	<4.00	<4.00	
Total BTEX			ND	ND	ND	ND	ND	ND	108.85	ND	ND	ND	ND	ND	ND	ND	ND	570.5	ND	ND	ND	
EPA 625 (ug/L)																						
Acenaphthene	80	2120	<10.0	12.5	<10.0	<10.0	<10.0	<10.0	<10.0	6.50 J	<10.0	<10.0	<10.0	1.70 J	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Benzo(a)pyrene	0.00479	1.5	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Fluorene	280	950	<10.0	2.80 J	<10.0	<10.0	<10.0	<10.0	<10.0	3.60 J	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Naphthalene	21	15,500	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	23.6	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	72.4	<10.0	<10.0	<10.0	
Phenanthrene	210	410	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	1.90 J	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
TICs (total) ⁽⁴⁾			9.52 J	5.18 J	10.69 J	NR	55.1 J	NR	438 J	9.15 J	4.63 J	NR	4.65 J	5.19 J	5.24 J	9.57 J	21.6 J	1127.3 J	17.12 J	NR	NR	
MADEP VPH (ug/L)																						
C ₅ -C ₈ Aliphatics	420	NE	<100	<100	<100	<100	<100	<100	130	<100	<100	<100	<100	<100	<100	<100	<100	<400	<100	<100	<100	
C ₉ -C ₁₂ Aliphatics ⁽⁵⁾			<100	<100	<100	<100	<100	<100	200	<100	<100	<100	<100	<100	<100	<100	<100	910	<100	<100	<100	
C ₃ -C ₁₀ Aromatics ⁽⁵⁾			<100	<100	<100	<100	<100	<100	270	<100	<100	<100	<100	<100	<100	<100	<100	730	<100	<100	<100	
MADEP EPH (ug/L)																						
C ₉ -C ₁₈ Aliphatics ⁽⁵⁾			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	400	<100	<100	<100	
C ₁₅ -C ₂₈ Aliphatics	42,000	NE	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
C ₁₁ -C ₂₂ Aromatics ⁽⁵⁾			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	200	<100	<100	<100	
MADEP VPH + EPH (ug/L)																						
C ₉ -C ₁₂ + C ₉ -C ₁₈ Aliphatics ⁽⁵⁾	4200	NE	<200	<200	<200	<200	<200	<200	200	<200	<200	<200	<200	<200	<200	<200	<200	1310	<200	<200	<200	
C ₉ -C ₁₀ + C ₁₁ -C ₂₂ Aromatics ⁽⁵⁾	210	NE	<200	<200	<200	<200	<200	<200	270	<200	<200	<200	<200	<200	<200	<200	<200	930	<200	<200	<200	

⁽¹⁾ Duplicate sample collected from well MW-13

⁽²⁾ The extraction for the EPA 625 analysis for the duplicate sample collected from well MW-13 was conducted one day past the method-specified holding time

⁽³⁾ Duplicate sample collected from well BB-47

⁽⁴⁾ TIC: Tentatively Identified Compound; sum of all TICs is presented; any TIC identified as a specific compound is footnoted separately

⁽⁵⁾ Laboratory quantitation is performed on each of the indicated hydrocarbon fractions; NCGWQS are based on the sum of the indicated fractions; the sums for the indicated fractions are presented as MADEP VPH + EPH

Bold type indicates analyte detection

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

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

ug/L: micrograms per liter

<#: not detected at the indicated reporting limit

J: estimated concentration less than the reporting limit, or TIC concentration (all TIC concentrations estimated)

ND: None detected; no benzene, toluene, ethylbenzene, or total xylenes were detected

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

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

GCL: Gross Contamination Level

NCGWQS: North Carolina Groundwater Quality Standard

Table 4-1
Summary of Groundwater Analytical Results for June 2004
Site BB-190

Sample Location Date Sampled	NCGWQS	GCL	MW-1 06/03/04	MW-2 06/03/04	MW-3 06/03/04	MW-4 06/02/04	MW-5 06/03/04	MW-6 06/02/04	MW-7 06/03/04	MW-8 06/03/04	MW-9 06/02/04	MW-10 06/02/04	MW-11 06/03/04	MW-12 06/02/04	MW-13 06/02/04	DUP ⁽¹⁾ 06/02/04	MW-14 06/02/04	MW-15 06/03/04	MW-16 06/03/04	MW-17 06/03/04	BB-47 06/08/04
EPA 602 (ug/L)																					
Benzene	1	5000	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	4.81	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
Ethylbenzene	29	29,000	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	165	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	2.3	<1.00	<1.00	
Toluene	1000	257,500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	7.13	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	267	<1.00	<1.00	
Total Xylenes	530	87,500	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	418	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	3.97	<3.00	<4.00	
Total BTEX			ND	ND	ND	ND	ND	ND	590.13	ND	ND	ND	ND	ND	ND	ND	ND	944.27	ND	ND	
EPA 625 (ug/L)																					
Acenaphthene	80	2120	<10.0	4.40 J	<10.0	<10.0	<10.0	<10.0	2.00 J	<10.0	<10.0	<10.0	<10.0	2.10 J	<10.0	<10.0	<10.0	<10.0	2.20 J	<10.0	
Benzo(a)pyrene	0.00479	1.5	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Fluorene	280	950	<10.0	1.40 J	<10.0	<10.0	<10.0	<10.0	1.70 J	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Naphthalene	21	15,500	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	96.5	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	113	<10.0	<10.0	
Phenanthrene	210	410	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
TICs (total) ⁽²⁾			NR	NR	NR	NR	NR	NR	1372 J ⁽³⁾	NR	NR	NR	NR	NR	8.1 J	NR	NR	1572 J	NR	19 J	
MADEP VPH (ug/L)																					
C ₉ -C ₁₀ Aliphatics	420	NE	<100	<100	<100	<100	<100	<100	310	<100	<100	<100	<100	<100	<100	<100	<100	350	<100	<100	
C ₉ -C ₁₂ Aliphatics ⁽⁴⁾			<100	<100	<100	<100	<100	<100	2000	<100	<100	<100	<100	<100	<100	<100	<100	3000	<100	<100	
C ₉ -C ₁₀ Aromatics ⁽⁴⁾			<100	<100	<100	<100	<100	<100	1300	<100	<100	<100	<100	<100	<100	<100	<100	960	<100	<100	
MADEP EPH (ug/L)																					
C ₉ -C ₁₈ Aliphatics ⁽⁴⁾			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	190	<100	<100	
C ₉ -C ₁₈ Aliphatics ⁽⁴⁾	42,000	NE	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
C ₁₁ -C ₂₂ Aromatics ⁽⁴⁾			<100	<100	<100	<100	<100	<100	260	<100	<100	<100	<100	<100	<100	<100	<100	180	<100	<100	
MADEP VPH + EPH (ug/L)																					
C ₉ -C ₁₂ + C ₉ -C ₁₈ Aliphatics ⁽⁴⁾	4200	NE	-	-	-	-	-	-	2000	-	-	-	-	-	-	-	-	-	3190	-	-
C ₉ -C ₁₀ + C ₁₁ -C ₂₂ Aromatics ⁽⁴⁾	210	NE	-	-	-	-	-	-	1560	-	-	-	-	-	-	-	-	-	1340	-	-

⁽¹⁾ DUP is a duplicate sample collected from well MW-13

⁽²⁾ TIC: Tentatively Identified Compound; sum of all TICs is presented; any TIC identified as a specific compound is footnoted separately

⁽³⁾ One TIC was identified as 2-Methylnaphthalene, reported at an estimated concentration of 45 ug/L; the NCGWQS for 2-Methylnaphthalene is 14 ug/L; the GCL for 2-Methylnaphthalene is 12,500 ug/L

⁽⁴⁾ Laboratory quantitation is performed on each of the indicated hydrocarbon fractions; NCGWQS are based on the sum of the indicated fractions; the sums for the indicated fractions are presented as MADEP VPH + EPH

Bold type indicates analyte detection

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

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

ug/L: micrograms per liter

<#: not detected at the indicated reporting limit

J: estimated concentration less than the reporting limit

ND: None detected; no benzene, toluene, ethylbenzene, or total xylenes were detected

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

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

GCL: Gross Contamination Level

NCGWQS: North Carolina Groundwater Quality Standard

JA JONES DATA

TABLE 3-1
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		MW-01		
		Sample ID	Sample Date	USTBB190-MW01-00A	USTBB190-MW01-98D3	USTBB190-MW01-98D2
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L						
Benzene	1			1/1/1999	12/9/1998	11/17/1998
Elhylbenzene	29			BQL	BQL	BQL
Toluene	1000			BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L						
Naphthalene	21			BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL

Notes
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		MW-02			
		Sample ID	Sample Date	USTBB190-MW02-99A	USTBB190-MW02-98D3	USTBB190-MW02-98D2	USTBB190-MW02-98C2
<i>Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L</i>							
Benzene	1			1/11/1999	12/9/1998	11/17/1998	8/10/1998
Ethylbenzene	29			BQL	BQL	BQL	BQL
Toluene	1000			BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL	BQL
<i>Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L</i>							
Naphthalene	21			BQL	BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter		NCDENR	Sample Location		MW-03					
Regulatory Limit		Sample ID	Sample Date	USTBB190-MW03-00D	USTBB190-MW03-00C	USTBB190-MW03-00B	USTBB190-MW03-00A	USTBB190-MW03-99D	USTBB190-MW03-99C	USTBB190-MW03-99B
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L				10/4/2000	7/11/2000	4/5/2000	1/11/2000	10/18/1999	7/7/1999	4/7/1999
Benzene	1			BQL	NA	BQL	BQL	BQL	BQL	BQL
Ethylbenzene	29			BQL	NA	BQL	BQL	BQL	BQL	BQL
Toluene	1000			BQL	NA	BQL	BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	NA	BQL	BQL	BQL	BQL	BQL
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L										
Naphthalene	21			BQL	BQL	BQL	BQL	BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		MW-03		
		Sample ID	Sample Date	USTBB190-MW03-99A	USTBB190-MW03-98D3	USTBB190-MW03-98D2
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L						
Benzene	1			1/11/1999	12/9/1998	11/17/1998
Ethylbenzene	29			BQL	BQL	BQL
Toluene	1000			BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L						
Naphthalene	21			BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NC DENR Regulatory Limit	Sample Location		MW-04						
		Sample ID	Sample Date	USTBB190-MW04-00D	USTBB190-MW04-00C	USTBB190-MW04-00B	USTBB190-MW04-00A	USTBB190-MW04-99D	USTBB190-MW04-99C	USTBB190-MW04-99B
Volatle Aromatic Hydrocarbons by USEPA Method 602, ug/L										
Benzene	1			BQL	7/11/2000	4/5/2000	BQL	BQL	BQL	BQL
Ethylbenzene	29			BQL	NA	BQL	BQL	BQL	BQL	BQL
Toluene	1000			BQL	NA	BQL	BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	NA	BQL	BQL	BQL	BQL	BQL
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L										
Naphthalene	21			BQL	BQL	BQL	BQL	BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDEMR Regulatory Limit	Sample Location		MW-04		
		Sample ID	Sample Date	USTBB190-MW04-99A	USTBB190-MW04-98D3	USTBB190-MW04-98D2
<i>Volatle Aromatic Hydrocarbons by USEPA Method 802, ug/L</i>						
Benzene	1			1/11/1999	12/9/1998	11/17/1998
Ethylbenzene	29			BQL	BQL	BQL
Toluene	1000			BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL
<i>Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L</i>						
Naphthalene	21			BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR	Sample Location		MW-05						
		Sample ID	Sample Date	USTBB190-MW05-00D	USTBB190-MW05-00C	USTBB190-MW05-00B	USTBB190-MW05-00A	USTBB190-MW05-99D	USTBB190-MW05-99C	USTBB190-MW05-99B
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L	Regulatory Limit									
Benzene	1			BQL	7/11/2000	4/5/2000	1/11/2000	BQL	BQL	BQL
Ethylbenzene	29			BQL	NA	BQL	BQL	BQL	BQL	BQL
Toluene	1000			BQL	NA	BQL	BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	NA	BQL	BQL	BQL	BQL	BQL
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L										
Naphthalene	21			BQL	BQL	BQL	BQL	BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		MW-05			
		Sample ID	Sample Date	USTBB190-MW05-99A	USTBB190-MW05-98D3	USTBB190-MW05-98D2	USTBB190-MW05-98C2
<i>Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L</i>				1/11/1999	12/9/1998	11/17/1998	8/10/1998
Benzene	1			BQL	BQL	BQL	BQL
Ethylbenzene	29			BQL	BQL	BQL	BQL
Toluene	1000			BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL	BQL
<i>Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L</i>							
Naphthalene	21			BQL	BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		MW-06						
		Sample ID	Sample Date	USTBB190-MW06-00D	USTBB190-MW06-00C	USTBB190-MW06-00B	USTBB190-MW06-00A	USTBB190-MW06-09D	USTBB190-MW06-99C	USTBB190-MW06-99B
<i>Volatle Aromatic Hydrocarbons by USEPA Method 602, ug/L</i>				10/4/2000	7/11/2000	4/5/2000	1/11/2000	10/18/1999	7/7/1999	4/7/1999
Benzene	1			BQL	NA	BQL	BQL	BQL	BQL	BQL
Ethylbenzene	29			BQL	NA	BQL	BQL	BQL	BQL	BQL
Toluene	1000			BQL	NA	BQL	BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	NA	BQL	BQL	BQL	BQL	BQL
<i>Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L</i>										
Naphthalene	21			BQL	BQL	BQL	BQL	BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		MW-06			
		Sample ID	Sample Date	USTBB190-MW06-99A	USTBB190-MW06-98D3	USTBB190-MW06-98D2	USTBB190-MW06-98C2
<i>Volatile Aromatic Hydrocarbons by USEPA Method 802, ug/L</i>							
Benzene	1			1/1/1999	12/9/1998	11/17/1998	8/10/1998
Ethylbenzene	29			BQL	BQL	BQL	BQL
Toluene	1000			BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL	BQL
<i>Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L</i>							
Naphthalene	21			BQL	BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lefeu, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		USTBB190-MW07-00D	USTBB190-MW07-00C	USTBB190-MW07-00B	MW-07				USTBB190-MW07-99C	USTBB190-MW07-99B
		Sample ID	Sample Date				USTBB190-MW07-00A	USTBB190-MW07-99D	USTBB190-MW07-99C	USTBB190-MW07-99B		
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L				10/4/2000	7/11/2000	4/5/2000	1/11/2000	10/18/1999	7/7/1999	4/7/1999		
	1			BQL	7	14	31	18	18	29		
	29			68	39	49	23	18	29	33		
	1000			BQL	BQL	3	2	BQL	BQL	BQL		
Total Xylenes Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L	530			11	13	51	19	BQL	BQL	BQL		
Naphthalene Acenaphthene	21			17	16	20	BQL	BQL	BQL	BQL		
	80			BQL	BQL	BQL	BQL	BQL	BQL	BQL		

Notes:

Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.

Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR	Sample Location		MW-07			
		Sample ID	Sample Date	USTBB190-MW07-98A	USTBB190-MW07-98D3	USTBB190-MW07-98D2	USTBB190-MW07-98C2
<i>Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L</i>	Regulatory Limit						
Benzene	1			1/11/1999	12/9/1998	11/17/1998	8/10/98
Ethylbenzene	29			77	160	160	150
Toluene	1000			66	170	240	70
Total Xylenes	530			BQL	BQL	BQL	BQL
<i>Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L</i>				BQL	BQL	BQL	BQL
Naphthalene	21			BQL	16	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated in boldface type.
Shaded area indicates concentrations above laboratory quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		MW-08		
		Sample ID	Sample Date	USTBB190-MW08-99A	USTBB190-MW08-98D3	USTBB190-MW08-98D2
<i>Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L</i>						
Benzene	1			BQL	BQL	BQL
Ethylbenzene	29			BQL	BQL	BQL
Toluene	1000			BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL
<i>Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L</i>						
Naphthalene	21			BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		MW-09			
		Sample ID	Sample Date	USTBB190-MW09-99A	USTBB190-MW09-98D3	USTBB190-MW09-98D2	USTBB190-MW09-98C2
Volatiles Aromatic Hydrocarbons by USEPA Method 602, ug/L							
Benzene	1			BQL	BQL	BQL	BQL
Ethylbenzene	29			BQL	BQL	BQL	BQL
Toluene	1000			BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL	BQL
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L							
Naphthalene	21			BQL	BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		MW-10			
		Sample ID	Sample Date	USTBB190-MW10-99A	USTBB190-MW10-98D3	USTBB190-MW10-98D2	USTBB190-MW10-98C2
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L							
Benzene	1			1/11/1999	12/9/1998	11/17/1998	8/10/1998
Ethylbenzene	29			BQL	BQL	BQL	BQL
Toluene	1000			BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL	BQL
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L							
Naphthalene	21			BQL	BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		MW-11			
		Sample ID	Sample Date	USTBB190-MW11-99A	USTBB190-MW11-98D3	USTBB190-MW11-98D2	USTBB190-MW11-98C2
<i>Volatle Aromatic Hydrocarbons by USEPA Method 602, ug/L</i>							
Benzene	1			BQL			8/10/1998 BQL
Ethylbenzene	29			BQL	12/9/1998 BQL	11/17/1998 BQL	BQL
Toluene	1000			BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL	BQL
<i>Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L</i>							
Naphthalene	21			BQL	BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter		NCDENR	Sample Location		MW-12							
			Sample ID	Sample Date	USTBB190-MW12-00D	USTBB190-MW12-00C	USTBB190-MW12-00B	USTBB190-MW12-00A	USTBB190-MW12-99D	USTBB190-MW12-99C	USTBB190-MW12-99B	
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L		Regulatory Limit										
	Benzene	1			10/4/2000	7/11/2000	4/5/2000		1/11/2000	10/18/1999	7/7/1999	4/7/1999
	Ethylbenzene	29			BQL	BQL	BQL		BQL	BQL	BQL	BQL
	Toluene	1000			BQL	BQL	BQL		BQL	BQL	BQL	BQL
	Total Xylenes	530			BQL	BQL	BQL		BQL	BQL	BQL	BQL
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L												
	Naphthalene	21			BQL	13	BQL		BQL	BQL	14	BQL
	Acenaphthene	80			BQL	20	BQL		BQL	BQL	16	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		MW-12			
		Sample ID	Sample Date	USTBB190-MW12-99A	USTBB190-MW12-98D3	USTBB190-MW12-98D2	USTBB190-MW12-98C2
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L							
Benzene	1			1/1/1999	12/9/1998	11/17/1998	8/10/1998
Ethylbenzene	29			BQL	BQL	BQL	BQL
Toluene	1000			BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL	BQL
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L							
Naphthalene	21			BQL	BQL	BQL	BQL
Acenaphthene	80			15	BQL	22	15

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR	Sample Location		MW-13						
		Sample ID	Sample Date	USTBB190-MW13-00D	USTBB190-MW13-00C	USTBB190-MW13-00B	USTBB190-MW13-00A	USTBB190-MW13-09D	USTBB190-MW13-09C	USTBB190-MW13-09B
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L	Regulatory Limit									
Benzene	1			BQL	BQL	BQL	BQL	BQL	BQL	BQL
Ethylbenzene	29			BQL	BQL	BQL	BQL	BQL	BQL	BQL
Toluene	1000			BQL	BQL	BQL	BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL	BQL	BQL	BQL	BQL
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L										
Naphthalene	21			BQL	BQL	BQL	BQL	BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location Sample ID Sample Date	MW-13				MW-14	
			USTBB190-MW13-99A	USTBB190-MW13-98D3	USTBB190-MW13-98D2	USTBB190-MW13-98C2	USTBB190-MW14-99A	USTBB190-MW14-98C2
<i>Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L</i>								
Benzene	1		BQL	BQL	BQL	BQL	BQL	BQL
Ethylbenzene	29		BQL	BQL	BQL	BQL	BQL	BQL
Toluene	1000		BQL	BQL	BQL	BQL	BQL	BQL
Total Xylenes	530		BQL	BQL	BQL	BQL	BQL	BQL
<i>Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L</i>								
Naphthalene	21		BQL	BQL	BQL	BQL	BQL	BQL
Acenaphthene	80		BQL	BQL	BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		MW-15							
		Sample ID	Sample Date	USTBB190-MW15-00D	USTBB190-MW15-00C	USTBB190-MW15-00B	USTBB190-MW15-00A	USTBB190-MW15-99D	USTBB190-MW15-99C	USTBB190-MW15-99B	
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L											
Benzene	1			10/4/2000	7/1/2000	4/5/2000	1/1/2000	10/18/1999	7/7/1999	4/7/1999	
Ethylbenzene	29			BQL	BQL	BQL	BQL	BQL	BQL	BQL	
Toluene	1000			BQL	BQL	BQL	BQL	BQL	BQL	BQL	
Total Xylenes	530			BQL	BQL	BQL	BQL	BQL	BQL	BQL	
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L											
Naphthalene	21			BQL	BQL	BQL	BQL	BQL	BQL	BQL	
Acenaphthene	80			BQL	BQL	BQL	BQL	BQL	BQL	BQL	

Notes:

Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07

Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16

NA indicates that the sample was not analyzed for the constituent.

Detected concentrations above the regulatory limits are indicated

in boldface type.

Shaded area indicates concentrations above laboratory

quantitation limits.

BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		MW-15			
		Sample ID	Sample Date	USTBB190-MW15-99A	USTBB190-MW15-98D1	USTBB190-MW15-98D2	USTBB190-MW15-98C2
<i>Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L</i>							
Benzene	1			1/1/1999	12/9/1998	11/17/1998	8/10/1998
Ethylbenzene	29			BQL	BQL	BQL	BQL
Toluene	1000			BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL	BQL
<i>Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L</i>							
Naphthalene	21			BQL	BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR Regulatory Limit	Sample Location		USTBB190-MW16-004	USTBB190-MW16-00C	USTBB190-MW16-00B	USTBB190-MW16-00A	USTBB190-MW16-99D	USTBB190-MW16-99C	USTBB190-MW16-99B
		Sample ID	Sample Date							
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L										
Benzene	1			5	11	2	5	63	18	28
Ethylbenzene	29			10	42	25	3	45	86	98
Toluene	1000			BQL	BQL	BQL	BQL	6	BQL	14
Total Xylenes	530			4	19	15	BQL	21	80	78
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L										
Naphthalene	21			BQL	BQL	BQL	BQL	25	16	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NC DENR Regulatory Limit	Sample Location		MW-16		
		Sample ID	Sample Date	USTBB190-MW16-99A	USTBB190-MW16-98D3	USTBB190-MW16-98D2
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L						
Benzene	1			1/1/1999	12/9/1998	11/17/1998
Ethylbenzene	29			41	22	31
Toluene	1000			72	33	53
Total Xylenes	530			BQL	BQL	BQL
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L						
Naphthalene	21			BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated in boldface type.
Shaded area indicates concentrations above laboratory quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NC DENR Regulatory Limit	Sample Location		MW-17						
		Sample ID	Sample Date	USTBB190-MW17-00D	USTBB190-MW17-00C	USTBB190-MW17-00B	USTBB190-MW17-00A	USTBB190-MW17-99D	USTBB190-MW17-99C	USTBB190-MW17-99B
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L				10/4/2000	7/11/2000	4/5/2000	1/11/2000	10/18/1999	7/7/1999	4/7/1999
Benzene	1			BQL	BQL	BQL	BQL	BQL	BQL	BQL
Ethylbenzene	29			BQL	BQL	BQL	BQL	BQL	BQL	BQL
Toluene	1000			BQL	BQL	BQL	BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL	BQL	BQL	BQL	BQL
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L										
Naphthalene	21			BQL	BQL	BQL	BQL	BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NC DENR Regulatory Limit	Sample Location		MW-17			
		Sample ID	Sample Date	USTBB190-MW17-99A	USTBB190-MW17-98D3	USTBB190-MW17-98D2	USTBB190-MW17-98C2
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L							
Benzene	1			BQL	BQL	BQL	BQL
Ethylbenzene	29			BQL	BQL	BQL	BQL
Toluene	1000			BQL	BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL	BQL
Polynuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L							
Naphthalene	21			BQL	BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDENR	Sample Location		DUP-01							
		Regulatory Limit	Sample Date	Sample ID	USTBB190-DUP01-00D	USTBB190-DUP01-00C	USTBB190-DUP01-00B	USTBB190-DUP01-00A	USTBB190-DUP01-99D	USTBB190-DUP01-99C	USTBB190-DUP01-99B
Volatile Aromatic Hydrocarbons by USEPA Method 822, ug/L											
Benzene	1				10/4/2000	7/11/2000	4/5/2000	1/11/2000	10/18/1999	7/7/1999	4/7/1999
Ethylbenzene	29				BQL	7	10	23	19	32	30
Toluene	1000				64	39	40	17	20	32	38
Total Xylenes	530				BQL	BQL	BQL	1	BQL	BQL	BQL
Polynuclear Aromatic Hydrocarbons by USEPA Method 810, ug/L					BQL	12	49	4	BQL	BQL	BQL
Naphthalene	21				16	19	15	BQL	BQL	BQL	BQL
Acenaphthene	80				BQL	BQL	BQL	BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent
Detected concentrations above the regulatory limits are indicated
in boldface type.

Shaded area indicates concentrations above laboratory
quantitation limits
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDEMR Regulatory Limit	Sample Location		DUP-01			
		Sample ID	Sample Date	USTBB190-DUP01-99A	USTBB190-DUP01-98D3	USTBB190-DUP01-98D2	USTBB190-DUP01-98C2
Volatile Aromatic Hydrocarbons by USEPA Method 602, ug/L							
Benzene	1			1/11/1999	12/29/1998	11/17/1998	8/10/1998
Ethylbenzene	29			71	120	320	286
Toluene	1000			60	130	460	240
Total Xylenes	530			BQL	BQL	BQL	BQL
Poly/nuclear Aromatic Hydrocarbons by USEPA Method 610, ug/L				BQL	BQL	BQL	26
Naphthalene	21						
Acenaphthene	80			BQL	12	BQL	11
				BQL	BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

TABLE 3-1 (Continued)
Summary of Detected Concentrations
Groundwater Monitoring Well Samples
UST BB190-1
Camp Lejeune, North Carolina

Parameter	NCDEMR Regulatory Limit	Sample Location		DUP-02		
		Sample ID	Sample Date	USTBB190-DUP02-99B	USTBB190-DUP02-98D3	USTBB190-DUP02-98D2
<i>Volatile Aromatic Hydrocarbons by USEPA Method 802, ug/L</i>				1/1/2000	12/9/1998	11/17/1998
Benzene	1			26	26	32
Ethylbenzene	29			48	50	53
Toluene	1000			BQL	BQL	BQL
Total Xylenes	530			BQL	BQL	BQL
<i>Polynuclear Aromatic Hydrocarbons by USEPA Method 810, ug/L</i>						
Naphthalene	21			BQL	BQL	BQL
Acenaphthene	80			BQL	BQL	BQL

Notes:
Duplicate sample no. 1 (DUP-01) taken from monitoring well MW-07
Duplicate sample no. 2 (DUP-02) taken from monitoring well MW-16
NA indicates that the sample was not analyzed for the constituent.
Detected concentrations above the regulatory limits are indicated
in boldface type.
Shaded area indicates concentrations above laboratory
quantitation limits.
BQL = Below Laboratory Quantitation Limit

JA JONES DATA FROM 2002 ANNUAL REPORT

Concentrations as established in Table 4 of the Guidance Document. The analytical results of the soil samples collected from soil borings SB-01 through SB-03 and SB-05 did not indicate detected concentrations above the laboratory quantitation limits. A summary of the detected concentrations from the soil samples collected from soil boring SB-04 with the corresponding Soil-to-Groundwater Maximum Contaminant Concentration is as follows:

Contaminant	Sampling Event (9/13/01) (µg/kg)	Soil-to-Water Maximum Contaminant Concentration (µg/kg)
Ethylbenzene	11	240
Naphthalene	12	580
n-Propylbenzene	5.9	2,000
Toluene	13	7,000
1,2,4-Trimethylbenzene	42	8,000
1,3,5-Trimethylbenzene	15	7,000
Total Xylenes	43	5,000
C9-C18 Aliphatics	470,000	3,255,000
C19-C36 Aliphatics	320,000	*
C9-C10 Aromatics	3,300	34,000

* Indicates that the constituent is considered immobile.

Figure 1-2 depicts the soil sample locations. Appendix A provides the laboratory analytical data from the soil sampling event conducted September 13, 2001.

SECTION 4.0

NO FURTHER ACTION STATUS EVALUATION

4.1 EVALUATION OF SECONDARY CONTAMINANT SOURCES

4.1.1 Petroleum Hydrocarbon Product

Liquid-phase petroleum hydrocarbon (free product) product was not observed or detected at the UST BB190-1 site area during site assessment and corrective action activities completed by Catlin and J.A. Jones.

4.2 RISK CLASSIFICATION

This section summarizes the criteria used by the NCDENR to classify the site in a risk category. In accordance with the Guidance Document, the following details regarding the potential risk are required for classification as a high, intermediate, or low risk category. This site is currently ranked as a High risk, which makes the site eligible for consideration of a No Further Action status.

1. *Current Risk Status (High, Intermediate, or Low):*

The NCDENR has the site classified as a High Risk site.

2. *Has an existing water supply well, including one for non-drinking purposes, been contaminated by the discharge or release?*

According to the CAP two water supply wells (BB47 and BB44) are located upgradient and approximately 150 feet north-northwest and 1,350 feet north-northeast from the site, respectively. There is no evidence of this well being impacted by the diesel fuel discharge from the former UST.

3. *Is a water supply well used for drinking water located within 1000 feet of the source area of a confirmed discharge or release?*

According to the CAP two water supply wells (BB47 and BB44) are located upgradient and approximately 150 feet north-northwest and 1,350 feet north-northeast from the site, respectively. These wells reportedly access water from the Castle Hayne aquifer.

4. *Is a water supply well not used for drinking water located within 250 feet of the source area of a confirmed discharge or release?*

According to the CAP, one water supply well, BB47, is located within 250 feet of the source area and is located approximately 150 feet north-northwest (upgradient) of the site.

5. *Does the groundwater within 500 feet of the source area of a confirmed discharge or release have the potential for future use in that there is no source of water supply other than the groundwater?*

Because the UST BB190-1 site is located at the Marine Corps Base, Camp Lejeune, it is highly unlikely that this site will change its intended use.

6. *Do the vapors from the discharge or release pose a serious threat of explosion due to accumulation of the vapors in a confined space?*

There is no documented presence of utility line vapors in the CSA or the CAP. According to the CAP Underground utilities depths are reportedly less than five feet deep; and therefore, should not act as preferential pathway.

7. *Does the discharge or release pose an imminent danger to public health, public safety, or the environment?*

Soil contamination has not been detected above the Soil-to-Groundwater Maximum Contaminant Concentration nor has there been any free product observed at the site. The nearest surface water body is located approximately 1,600 feet south of the site and no vapors have been reported. A water supply well is located approximately 150 feet from the site, but is located upgradient. Thus, the release is not expected to have any impact upon public health, public safety, or the environment based on these means of exposure.

8. *Is surface water located within 500 feet of the source area of a confirmed discharge or release and does the maximum groundwater contamination concentration exceed the applicable surface water quality standard and criteria found in 15A NCAC 2B .0200 by a factor of 10?*

There are no surface water bodies within 500 feet of the site. The nearest body of water is the New River and is located approximately 1,600 feet south of the site.

9. *In the Coastal Plain Physiographic Province as designated on a map entitled "Geology of North Carolina" published by the Department in 1985, is the source area of a confirmed discharge or release located in an area in which there is recharge to an unconfined or semi-confined deeper aquifer which the Department determined is being used or may be used as a source of drinking water?*

In the Camp Lejeune area, the surficial aquifer is approximately ten feet thick and is not the source utilized for water supply. The Castle Hayne aquifer and confining unit underlies the surficial aquifer and is used for water supply in the Camp Lejeune area. The confining unit is generally 10 feet thick and consists of partially eroded clay, silt, and sandy clay beds. The Castle Hayne aquifer is chiefly comprised of sand and limestone beds and is reported to be approximately 150 feet to 300 feet thick and averages approximately 203 feet thick in the Camp Lejeune area.

10. *Is the source area of a confirmed discharge or release located within a designated wellhead protection area, as defined in 42 USC 300j-7(e)?*

Currently, there are no established wellhead protection areas in the Coastal Plain Region of North Carolina.

11. *Do the levels of groundwater contamination for any contaminant except ethylene dibromide, benzene, and alkane and aromatic carbon fraction classes exceed 50 percent of the solubility of the contaminant at 25 degrees Celsius or 1000 times the groundwater quality standard or interim standard established in 15A NCAC 2L .0202, whichever is lower (these levels have been termed as "gross contamination levels" – Table 7 of the Guidance Document)?*

Contaminant concentrations for the list of contaminants detected at the UST BB190-1 site do not exceed their corresponding Gross Contamination Level. A list of the contaminants detected in groundwater samples collected from the UST BB190-1 site with their maximum concentration, their final groundwater sampling concentration, and Gross Contamination Levels are presented as follows:

List of Contaminants	Maximum Concentration from CAP (8/14/96) ($\mu\text{g/l}$)	Final Sampling Event (10/4/00) ($\mu\text{g/l}$)	NCDENR Gross Contamination Level ($\mu\text{g/l}$)
Ethylbenzene	895	68	29,000
Total Xylenes	2,390	11	87,500
Naphthalene	423	17	15,500

BQL indicates the constituent was below the laboratory quantitation limit.

12. Do the levels of groundwater contamination for ethylene dibromide or benzene exceed 1000 times the federal drinking water standard set out in 40 CFR 141 (these levels have been termed as "Gross Contamination Levels" – Table 7 of the Guidance Document)?

The maximum concentration of benzene detected at the UST BB190-1 site does not exceed the Gross Contamination Level. The maximum concentration of benzene detected in groundwater samples collected from the UST BB190-1 site with its Gross Contamination Level is presented as follows:

<u>List of Contaminants</u>	<u>Maximum Concentration from CAP (8/14/96) (µg/l)</u>	<u>Final Post- Operation Sampling Event (10/4/00) (µg/l)</u>	<u>NCDENR Gross Contamination Level (µg/l)</u>
Benzene	3,210	5	5,000

APPENDIX B

LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTATION FROM 2006 SAMPLING EVENTS



Mr. Chris Murray
Sovereign Consulting
606 Thimble Shoals Rd.
Suite A1
Newport-News VA 23606
Report Number: G650-54
Client Project: NV014

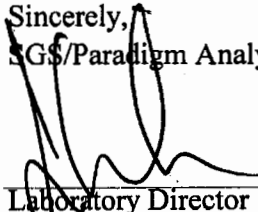
Dear Mr. Murray:

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


Date



Results for Volatiles

by GC 602

Client Sample ID: USTBB190-MW01

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/10/2006 13:40

Lab Sample ID: G650-54-1A

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/22/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/22/2006
Ethylbenzene	BQL	1.00	1	5/22/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/22/2006
Toluene	BQL	1.00	1	5/22/2006
m/p-Xylene	BQL	2.00	1	5/22/2006
o-Xylene	BQL	2.00	1	5/22/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.6	99

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles

by GC 602

Client Sample ID: USTBB190-MW02

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/10/2006 12:21

Lab Sample ID: G650-54-2A

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/22/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/22/2006
Ethylbenzene	BQL	1.00	1	5/22/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/22/2006
Toluene	BQL	1.00	1	5/22/2006
m/p-Xylene	BQL	2.00	1	5/22/2006
o-Xylene	BQL	2.00	1	5/22/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.5	98.8

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles

by GC 602

Client Sample ID: USTBB190-MW03

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/10/2006 10:35

Lab Sample ID: G650-54-3A

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/22/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/22/2006
Ethylbenzene	BQL	1.00	1	5/22/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/22/2006
Toluene	BQL	1.00	1	5/22/2006
m/p-Xylene	BQL	2.00	1	5/22/2006
o-Xylene	BQL	2.00	1	5/22/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.7	104

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles

by GC 602

Client Sample ID: USTBB190-MW04

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/11/2006 14:05

Lab Sample ID: G650-54-4A

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/22/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/22/2006
Ethylbenzene	BQL	1.00	1	5/22/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/22/2006
Toluene	BQL	1.00	1	5/22/2006
m/p-Xylene	BQL	2.00	1	5/22/2006
o-Xylene	BQL	2.00	1	5/22/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.8	97.1

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_CIMS_V2.1



Results for Volatiles

by GC 602

Client Sample ID: USTBB190-MW05

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/11/2006 10:10

Lab Sample ID: G650-54-5A

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/23/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/23/2006
Ethylbenzene	BQL	1.00	1	5/23/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/23/2006
Toluene	BQL	1.00	1	5/23/2006
m/p-Xylene	BQL	2.00	1	5/23/2006
o-Xylene	BQL	2.00	1	5/23/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.2	98.1

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles

by GC 602

Client Sample ID: USTBB190-MW06

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/11/2006 10:29

Lab Sample ID: G650-54-6A

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/23/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/23/2006
Ethylbenzene	BQL	1.00	1	5/23/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/23/2006
Toluene	BQL	1.00	1	5/23/2006
m/p-Xylene	BQL	2.00	1	5/23/2006
o-Xylene	BQL	2.00	1	5/23/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.7	96.8

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_UIMS_v2.1



Results for Volatiles
by GC 602

Client Sample ID: USTBB190-MW07

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/10/2006 9:59

Lab Sample ID: G650-54-7B

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	5.00	5	5/24/2006
Diisopropyl ether (DIPE)	BQL	5.00	5	5/24/2006
Ethylbenzene	83.4	5.00	5	5/24/2006
Methyl-tert butyl ether (MTBE)	BQL	10.0	5	5/24/2006
Toluene	BQL	5.00	5	5/24/2006
m/p-Xylene	223	10.0	5	5/24/2006
o-Xylene	36.3	10.0	5	5/24/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	45.7	114

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles

by GC 602

Client Sample ID: USTBB190-MW08

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/11/2006 10:50

Lab Sample ID: G650-54-8A

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/23/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/23/2006
Ethylbenzene	BQL	1.00	1	5/23/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/23/2006
Toluene	BQL	1.00	1	5/23/2006
m/p-Xylene	BQL	2.00	1	5/23/2006
o-Xylene	BQL	2.00	1	5/23/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.8	99.6

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles

by GC 602

Client Sample ID: USTBB190-MW09

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/11/2006 13:20

Lab Sample ID: G650-54-9A

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/23/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/23/2006
Ethylbenzene	BQL	1.00	1	5/23/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/23/2006
Toluene	BQL	1.00	1	5/23/2006
m/p-Xylene	BQL	2.00	1	5/23/2006
o-Xylene	BQL	2.00	1	5/23/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.7	96.9

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles
by GC 602

Client Sample ID: USTBB190-MW10

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/11/2006 11:11

Lab Sample ID: G650-54-10A

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/23/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/23/2006
Ethylbenzene	BQL	1.00	1	5/23/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/23/2006
Toluene	BQL	1.00	1	5/23/2006
m/p-Xylene	BQL	2.00	1	5/23/2006
o-Xylene	BQL	2.00	1	5/23/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.9	97.3

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles

by GC 602

Client Sample ID: USTBB190-MW11

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/11/2006 9:54

Lab Sample ID: G650-54-11A

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/23/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/23/2006
Ethylbenzene	BQL	1.00	1	5/23/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/23/2006
Toluene	BQL	1.00	1	5/23/2006
m/p-Xylene	BQL	2.00	1	5/23/2006
o-Xylene	BQL	2.00	1	5/23/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.2	98

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles

by GC 602

Client Sample ID: USTBB190-MW12

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/11/2006 13:21

Lab Sample ID: G650-54-12A

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/23/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/23/2006
Ethylbenzene	BQL	1.00	1	5/23/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/23/2006
Toluene	BQL	1.00	1	5/23/2006
m/p-Xylene	BQL	2.00	1	5/23/2006
o-Xylene	BQL	2.00	1	5/23/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.6	99.1

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles

by GC 602

Client Sample ID: USTBB190-MW13

Analyzed By: MJC

Client Project ID: NV014

Date Collected: 5/11/2006 14:40

Lab Sample ID: G650-54-13C

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/25/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/25/2006
Ethylbenzene	BQL	1.00	1	5/25/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/25/2006
Toluene	BQL	1.00	1	5/25/2006
m/p-Xylene	BQL	2.00	1	5/25/2006
o-Xylene	BQL	2.00	1	5/25/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.0	97.5

Comments:

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

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles

by GC 602

Client Sample ID: USTBB190-MW15

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/10/2006 11:10

Lab Sample ID: G650-54-14A

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/23/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/23/2006
Ethylbenzene	BQL	1.00	1	5/23/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/23/2006
Toluene	BQL	1.00	1	5/23/2006
m/p-Xylene	BQL	2.00	1	5/23/2006
o-Xylene	BQL	2.00	1	5/23/2006

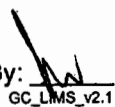
Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.5	104

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_LMS_v2.1



Results for Volatiles
by GC 602

Client Sample ID: USTBB190-MW16

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/10/2006 15:00

Lab Sample ID: G650-54-15B

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	10.0	10	5/24/2006
Diisopropyl ether (DIPE)	BQL	10.0	10	5/24/2006
Ethylbenzene	214	10.0	10	5/24/2006
Methyl-tert butyl ether (MTBE)	BQL	20.0	10	5/24/2006
Toluene	BQL	10.0	10	5/24/2006
m/p-Xylene	260	20.0	10	5/24/2006
o-Xylene	24.7	20.0	10	5/24/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	43.0	107

Comments:

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

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles
by GC 602

Client Sample ID: USTBB190-MW17

Analyzed By: JTF

Client Project ID: NV014

Date Collected: 5/10/2006 11:23

Lab Sample ID: G650-54-16A

Date Received: 5/12/2006

Lab Project ID: G650-54

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/23/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/23/2006
Ethylbenzene	1.29	1.00	1	5/23/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/23/2006
Toluene	BQL	1.00	1	5/23/2006
m/p-Xylene	BQL	2.00	1	5/23/2006
o-Xylene	6.14	2.00	1	5/23/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	42.4	106

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles

by GC 602

Client Sample ID: Duplicate

Client Project ID: NV014

Lab Sample ID: G650-54-17A

Lab Project ID: G650-54

Analyzed By: JTF

Date Collected: 5/10/2006 0:00

Date Received: 5/12/2006

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/23/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/23/2006
Ethylbenzene	BQL	1.00	1	5/23/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/23/2006
Toluene	BQL	1.00	1	5/23/2006
m/p-Xylene	BQL	2.00	1	5/23/2006
o-Xylene	BQL	2.00	1	5/23/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	42.4	106

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles

by GC 602

Client Sample ID: Trip Blank

Client Project ID: NV014

Lab Sample ID: G650-54-18A

Lab Project ID: G650-54

Analyzed By: JTF

Date Collected: 5/10/2006 0:00

Date Received: 5/12/2006

Matrix: Water

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/23/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/23/2006
Ethylbenzene	BQL	1.00	1	5/23/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/23/2006
Toluene	BQL	1.00	1	5/23/2006
m/p-Xylene	BQL	2.00	1	5/23/2006
o-Xylene	BQL	2.00	1	5/23/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.8	96.9

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Reviewed By: 

GC_LIMS_v2.1



Results for Volatiles
by GC 602

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: VBLK052306B
Lab Project ID:

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

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/23/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/23/2006
Ethylbenzene	BQL	1.00	1	5/23/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/23/2006
Toluene	BQL	1.00	1	5/23/2006
m/p-Xylene	BQL	2.00	1	5/23/2006
o-Xylene	BQL	2.00	1	5/23/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.2	103

Comments:

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

Reviewed By: 

GC_LIMS_v2.1



Control Limits for QC Check / Laboratory Control Spike

601 Spike[ppb]: 10
 Instrument: gc3
 Filename: 052306\003f0101.txt

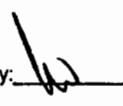
Compound	ppb	Q(%)	QC Limits		P _s (%)	LCS Limits	
			Lower	Upper		Lower	Upper
Bromodichloromethane	10.9	109.2	76.0	124.0	109	42	172
Bromoform	10.2	102.1	73.6	126.6	102	13	169
Bromomethane	8.9	89.1	58.6	141.6	89	D	144
Carbon tetrachloride	10.4	104.5	68.6	131.6	104	43	143
Chlorobenzene	10.7	106.8	72.0	128.0	107	38	160
Chloroethane	10.7	107.1	77.0	123.0	107	46	137
Chloroform	10.6	106.5	75.0	125.0	106	49	133
Chloromethane	9.2	92.0	69.6	140.6	92	D	193
Dibromochloromethane	10.3	103.3	66.6	134.6	103	24	191
1,2-Dibromoethane	10.9	109.1	13.6	186.4	109	D	206
1,2-Dichlorobenzene	10.9	109.4	70.0	130.0	109	D	208
1,3-Dichlorobenzene	10.9	108.8	49.6	150.6	109	7	187
1,4-Dichlorobenzene	11.2	111.7	69.6	130.6	112	42	143
1,1-Dichloroethane	10.4	104.4	84.0	116.0	104	47	132
1,2-Dichloroethane	10.6	106.6	71.6	128.6	106	51	147
1,1-Dichloroethene	9.6	96.6	63.0	137.0	96	28	167
cis-1,2-Dichloroethene	10.5	104.5	34.4	180.6	105	19	181
trans-1,2-Dichloroethene	10.3	102.8	64.0	136.0	103	38	166
1,2-Dichloropropane	10.8	108.0	74.0	126.0	108	44	166
cis-1,3-Dichloropropene	10.9	109.2	64.0	136.0	109	22	178
trans-1,3-Dichloropropene	10.4	104.5	64.0	136.0	104	22	178
Methylene Chloride	9.9	99.8	77.6	122.6	99	26	162
1,1,2,2-Tetrachloroethane	6.6	64.6	49.0	161.0	66	8	184
Tetrachloroethane	10.6	106.1	70.0	130.0	106	26	162
1,1,1-Trichloroethane	10.6	104.6	71.0	129.0	106	41	138
1,1,2-Trichloroethane	10.9	109.6	78.6	121.6	109	39	136
Trichloroethene	10.6	106.8	77.0	123.0	106	36	146
Trichlorofluoromethane	10.4	104.4	66.6	133.6	104	21	166
Vinyl Chloride	10.6	106.6	68.6	131.6	106	28	163

Method: 602 Spike[ppb]: 10
 Instrument: gc3
 Filename: 052306\003r0101.txt

Compound	ppb	Q(%)	QC Limits		P _s (%)	LCS Limits	
			Lower	Upper		Lower	Upper
Benzene	10.0	100.0	77.0	123.0	100	39	160
Chlorobenzene	10.4	103.6	80.6	119.6	104	66	136
1,2-Dichlorobenzene	10.6	106.7	68.0	132.0	106	37	164
1,3-Dichlorobenzene	10.4	103.8	72.6	127.6	104	60	141
1,4-Dichlorobenzene	10.3	103.0	69.6	130.6	103	42	143
Diisopropyl ether	9.8	98.0	43.1	166.9	98	30	170
Ethylbenzene	10.7	107.1	63.0	137.0	107	32	160
MTBE	9.6	96.8	46.8	163.2	96	36	166
Toluene	10.2	102.0	77.6	127.0	102	46	148
m,p-Xylene	21.1	106.6	11.2	188.8	106	D	239
o-Xylene	10.6	106.6	47.6	162.4	106	36	164

Flags:

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

Reviewed by: 

VO34.112202.1



Control Limits for MS-MSD

Method: 601 Spike[ppb]: 10
Instrument: gc3
Sample: 052306\015f0101.txt
MS: 052306\017f0101.txt
MSD: 052306\018f0101.txt

5

Compound	µg/L			P(%)		P Limits	
	Sam.	MS	MSD	MS	MSD	Lower	Upper
Bromodichloromethane	ND	10.2	12.0	102	120	42	172
Bromoform	ND	9.4	11.0	94	110	13	159
Bromomethane	ND	8.3	8.2	83	82	D	144
Carbon tetrachloride	ND	9.8	11.6	98	116	43	143
Chlorobenzene	ND	9.9	11.8	93	112	38	150
Chloroethane	ND	10.6	10.3	106	103	46	137
Chloroform	ND	9.8	11.8	98	118	49	133
Chloromethane	ND	9.1	9.6	91	95	D	193
Dibromochloromethane	ND	9.6	11.3	96	113	24	191
1,2-Dibromoethane	ND	11.0	12.6	110	126	D	206
1,2-Dichlorobenzene	ND	9.7	11.7	97	117	D	208
1,3-Dichlorobenzene	ND	9.6	11.6	96	116	7	187
1,4-Dichlorobenzene	ND	10.0	11.8	100	118	42	143
1,1-Dichloroethane	ND	9.9	11.8	99	118	47	132
1,2-Dichloroethane	ND	9.9	11.6	99	116	61	147
1,1-Dichloroethene	ND	10.0	12.2	100	122	28	167
cis-1,2-Dichloroethene	ND	10.6	12.6	100	118	19	181
trans-1,2-Dichloroethene	ND	9.9	11.8	99	118	38	155
1,2-Dichloropropane	ND	9.7	11.8	97	116	44	156
cis-1,3-Dichloropropene	ND	10.0	11.7	100	117	22	178
trans-1,3-Dichloropropene	ND	9.6	11.3	96	113	22	178
Methylene Chloride	ND	9.6	11.7	96	117	26	162
1,1,2,2-Tetrachloroethane	ND	9.9	7.1	99	71	8	184
Tetrachloroethane	13.86	19.7	21.0	68	72	26	162
1,1,1-Trichloroethane	ND	9.8	11.7	98	117	41	138
1,1,2-Trichloroethane	ND	10.0	11.7	100	117	39	136
Trichloroethene	ND	10.8	12.7	100	118	35	146
Trichlorofluoromethane	ND	10.4	11.2	104	112	21	158
Vinyl Chloride	ND	10.2	11.1	102	111	28	163

Method: 602 Spike[ppb]: 10
Instrument: gc3
Sample: 052306\015r0101.txt
MS: 052306\017r0101.txt
MSD: 052306\018r0101.txt

Compound	µg/L			P(%)		P Limits	
	Sam.	MS	MSD	MS	MSD	Lower	Upper
Benzene	ND	9.8	11.8	98	118	39	150
Chlorobenzene	ND	9.8	11.7	98	117	55	135
1,2-Dichlorobenzene	ND	9.7	11.7	96	116	37	154
1,3-Dichlorobenzene	ND	9.4	11.3	94	113	60	141
1,4-Dichlorobenzene	ND	9.4	11.2	93	112	42	143
Diisopropyl ether	ND	9.6	11.6	96	116	30	170
Ethylbenzene	ND	10.2	12.4	102	124	32	160
MTBE	ND	9.8	11.7	98	117	35	165
Toluene	ND	9.8	11.8	98	118	46	148
m,p-Xylene	ND	20.0	24.3	100	122	D	239
o-Xylene	ND	9.8	11.7	98	117	36	164

Flags:

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

Reviewed by: 

VO25.112202.1



Results for Volatiles
by GC 602

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: VBLK3052506A
Lab Project ID:

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

Analyte	Result ug/L	RL ug/L	Dilution Factor	Date Analyzed
Benzene	BQL	1.00	1	5/25/2006
Diisopropyl ether (DIPE)	BQL	1.00	1	5/25/2006
Ethylbenzene	BQL	1.00	1	5/25/2006
Methyl-tert butyl ether (MTBE)	BQL	2.00	1	5/25/2006
Toluene	BQL	1.00	1	5/25/2006
m/p-Xylene	BQL	2.00	1	5/25/2006
o-Xylene	BQL	2.00	1	5/25/2006

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.1	97.8

Comments:

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

Reviewed By: 

GC_LIMS_v2.1

Control Limits for QC Check / Laboratory Control Spike

Method: 602 Spike[ppb]: 10
 Instrument: gc3
 Filename: 052506\002r0101.txt

Compound	ppb	Q(%)	QC Limits		P _s (%)	LCS Limits	
			Lower	Upper		Lower	Upper
Benzene	9.7	96.8	77.0	123.0	97	39	150
Chlorobenzene	9.5	95.5	80.5	119.5	95	55	135
1,2-Dichlorobenzene	9.8	97.6	68.0	132.0	98	37	154
1,3-Dichlorobenzene	9.3	93.4	72.5	127.5	93	50	141
1,4-Dichlorobenzene	9.1	91.3	69.5	130.5	91	42	143
• Diisopropyl ether	9.2	91.7	43.1	156.9	92	30	170
Ethylbenzene	10.0	100.4	63.0	137.0	100	32	160
• MTBE	9.5	94.9	46.8	153.2	95	35	165
Toluene	9.7	96.7	77.5	127.0	97	46	148
• m,p-Xylene	19.9	99.4	11.2	188.8	99	D	239
• o-Xylene	8.9	89.4	47.6	152.4	89	36	164

Flags :

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

Reviewed by: 

Control Limits for MS-MSD

Method: 602 Spike[ppb]: 10
 Instrument : gc3
 Sample : 052506\015r0101.txt
 MS : 052506\017r0101.txt
 MSD : 052506\018r0101.txt

Compound	µg/L			P(%)		P Limits	
	Sam.	MS	MSD	MS	MSD	Lower	Upper
Benzene	32.2	41.8	41.6	96	94	39	150
Chlorobenzene	ND	9.9	9.9	99	99	55	135
1,2-Dichlorobenzene	ND	10.2	10.4	100	102	37	154
1,3-Dichlorobenzene	ND	9.9	10.0	98	99	50	141
1,4-Dichlorobenzene	ND	9.6	9.7	96	97	42	143
• Diisopropyl ether	ND	10.1	10.1	99	99	30	170
Ethylbenzene	3.7	14.5	14.4	108	107	32	160
• MTBE	3.0	12.8	12.7	99	98	35	165
Toluene	6.2	16.1	16.0	99	98	46	148
• m,p-Xylene	8.5	29.1	28.9	103	102	D	239
• o-Xylene	1.2	10.7	10.7	95	95	36	164

Flags :

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

Reviewed by: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW01
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/24/06
Date Analyzed	05/24/06
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	94
Surrogate % Recovery - FID	99

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

** = Excludes any surrogates or internal standards.

Lab Info: G650-54-1C

Reviewed By: lw



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW02
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/24/06
Date Analyzed	05/24/06
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	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: G650-54-2D

Reviewed By: hw



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW03
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/24/06
Date Analyzed	05/24/06
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	98
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: G650-54-3D

Reviewed By: WJ



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW04
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/25/06
Date Analyzed	05/25/06
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: G650-54-4B

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

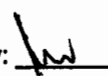
Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW05
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/25/06
Date Analyzed	05/25/06
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	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: G650-54-5D

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW06
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/25/06
Date Analyzed	05/25/06
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: G650-54-6C

Reviewed By:



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW07
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/24/06
Date Analyzed	05/24/06
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	430 (µg/L)
C ₉ -C ₁₂ Aliphatics**	1000 (µg/L)
C ₉ -C ₁₀ Aromatics**	1300 (µg/L)
Surrogate % Recovery - PID	100
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: G650-54-7B

Reviewed By: lw



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW08
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/25/06
Date Analyzed	05/25/06
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	97
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: G650-54-8C

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW09
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/25/06
Date Analyzed	05/25/06
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	91
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: G650-54-9C

Reviewed By: W



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

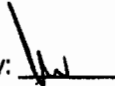
Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW10
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/25/06
Date Analyzed	05/25/06
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: G650-54-10B

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW11
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/25/06
Date Analyzed	05/25/06
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	97
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: G650-54-11C

Reviewed By:



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW12
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/25/06
Date Analyzed	05/25/06
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: G650-54-12B

Reviewed By: hw



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW13
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/25/06
Date Analyzed	05/25/06
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	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: G650-54-13A

Reviewed By: W



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW15
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/24/06
Date Analyzed	05/24/06
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	< 100 (µg/L)
C ₉ -C ₁₂ Aliphatics**	< 100 (µg/L)
C ₈ -C ₁₀ Aromatics**	< 100 (µg/L)
Surrogate % Recovery - PID	91
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: G650-54-14C

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW16
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/24/06
Date Analyzed	05/24/06
Dry Weight	
Dilution Factor	1
C ₅ -C ₈ Aliphatics**	740 (µg/L)
C ₉ -C ₁₂ Aliphatics**	1500 (µg/L)
C ₉ -C ₁₀ Aromatics**	3100 (µg/L)
Surrogate % Recovery - PID	120
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: G650-54-15B

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW17
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/24/06
Date Analyzed	05/24/06
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	93
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: G650-54-16B

Reviewed By:



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

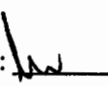
Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	Duplicate
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/24/06
Date Analyzed	05/24/06
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: G650-54-17D

Reviewed By: 

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date:

05/04/06

PID Initial Calibration Date:

05/04/06

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	18.2	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	18.50	Calibration Factor
	250		
	500		
	750		
	1000		

Calibration Check Date:

05/24/06

Calibration Check

Range	Levels (mg/Kg) (µg/L)	RPD
C ₅ -C ₈ Aliphatics	2000 200	17.3
C ₉ -C ₁₂ Aliphatics	500 50	-6.4
C ₉ -C ₁₀ Aromatics	500 50	5.2

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date:

05/04/06

PID Initial Calibration Date:

05/04/06

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	18.2	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	18.50	Calibration Factor
	250		
	500		
	750		
	1000		

Calibration Check Date:

05/25/06

Calibration Check

Range	Levels (mg/Kg)	(µg/L)	RPD
C ₅ -C ₈ Aliphatics	2000	200	23.7
C ₉ -C ₁₂ Aliphatics	500	50	-3.3
C ₉ -C ₁₀ Aromatics	500	50	5.2

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

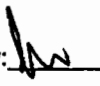
Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW01
Sample Matrix	Water
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/16/06
Date Analyzed	05/22/06
Dry Weight	
Dilution Factor	1:1
C ₈ -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	46
Aromatic Surrogate % Recovery	56
Fractionation Surrogate 1 % Recovery	64

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-54-1H

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW02
Sample Matrix	Water
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/16/06
Date Analyzed	05/22/06
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	47
Aromatic Surrogate % Recovery	51
Fractionation Surrogate 1 % Recovery	62

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-54-2H

Reviewed By:



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

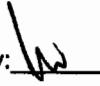
Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW03
Sample Matrix	Water
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/16/06
Date Analyzed	05/22/06
Dry Weight	
Dilution Factor	1:1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₈ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	71
Aromatic Surrogate % Recovery	58
Fractionation Surrogate 1 % Recovery	63

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-54-3H

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW04
Sample Matrix	Water
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/16/06
Date Analyzed	05/22/06
Dry Weight	
Dilution Factor	1:1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₈ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	65
Aromatic Surrogate % Recovery	57
Fractionation Surrogate 1 % Recovery	59

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-54-4H

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW05
Sample Matrix	Water
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/16/06
Date Analyzed	05/22/06
Dry Weight	
Dilution Factor	1:1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₈ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	65
Aromatic Surrogate % Recovery	62
Fractionation Surrogate 1 % Recovery	56

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-54-5H

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

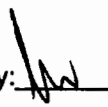
Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW06
Sample Matrix	Water
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/24/06
Date Analyzed	05/25/06
Dry Weight	
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₈ -C ₃₈ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	76
Aromatic Surrogate % Recovery	67

Comments:

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

Lab info: G650-54-6J

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW07
Sample Matrix	Water
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/16/06
Date Analyzed	05/22/06
Dry Weight	
Dilution Factor	1:1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₈ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	340 (ug/L)
Aliphatic Surrogate % Recovery	71
Aromatic Surrogate % Recovery	61
Fractionation Surrogate 1 % Recovery	53

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-54-7H

Reviewed By: LM



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

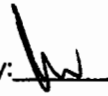
Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW08
Sample Matrix	Water
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/16/06
Date Analyzed	05/21/06
Dry Weight	
Dilution Factor	1:1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₈ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	77
Aromatic Surrogate % Recovery	54
Fractionation Surrogate 1 % Recovery	55

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-54-8H

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW09
Sample Matrix	Water
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/16/06
Date Analyzed	05/21/06
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	70
Aromatic Surrogate % Recovery	48
Fractionation Surrogate 1 % Recovery	48

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-54-9H

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW10
Sample Matrix	Water
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/16/06
Date Analyzed	05/21/06
Dry Weight	
Dilution Factor	1:1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₈ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	78
Aromatic Surrogate % Recovery	62
Fractionation Surrogate 1 % Recovery	64

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-54-10H

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW11
Sample Matrix	Water
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/16/06
Date Analyzed	05/21/06
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	81
Aromatic Surrogate % Recovery	62
Fractionation Surrogate 1 % Recovery	61

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-54-11H

Reviewed By: hw



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW12
Sample Matrix	Water
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/16/06
Date Analyzed	05/22/06
Dry Weight	
Dilution Factor	1:1
C ₈ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₈ -C ₃₆ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	82
Aromatic Surrogate % Recovery	65
Fractionation Surrogate 1 % Recovery	65

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-54-12H

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

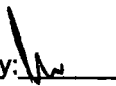
Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW13
Sample Matrix	Water
Date Collected	05/11/06
Date Received	05/12/06
Date Extracted	05/16/06
Date Analyzed	05/22/06
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	88
Aromatic Surrogate % Recovery	64
Fractionation Surrogate 1 % Recovery	60

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-54-13H

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW15
Sample Matrix	Water
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/16/06
Date Analyzed	05/22/06
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	84
Aromatic Surrogate % Recovery	59
Fractionation Surrogate 1 % Recovery	62

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-54-14H

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW16
Sample Matrix	Water
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/24/06
Date Analyzed	05/26/06
Dry Weight	
Dilution Factor	1:1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₈ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	410 (ug/L)
Aliphatic Surrogate % Recovery	78
Aromatic Surrogate % Recovery	59
Fractionation Surrogate 1 % Recovery	100

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-54-151

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW17
Sample Matrix	Water
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/24/06
Date Analyzed	05/25/06
Dry Weight	
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₈ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	87
Aromatic Surrogate % Recovery	67

Comments:

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

Lab info: g650-54-16I

Reviewed By: 



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	Duplicate
Sample Matrix	Water
Date Collected	05/10/06
Date Received	05/12/06
Date Extracted	05/24/06
Date Analyzed	05/26/06
Dry Weight	
Dilution Factor	1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₈ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	48
Aromatic Surrogate % Recovery	40

Comments:

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

Lab info: g650-54-171

Reviewed By: lw

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 04/19/06

Calibration Ranges and Limits

Range	MDL (2/2004) (µg/L)	ML (µg/L)	RL (µg/L)	RL (mg/Kg)
C ₉ -C ₁₈ Aliphatics	3.84	12.2	100	10
C ₁₉ -C ₃₆ Aliphatics	0.57	1.8	100	10
C ₁₁ -C ₂₂ Aromatics	4.54	14.4	100	10

Calibration Concentration Levels

Range	Levels (µg/mL)	%RSD or CCC	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	6	13.30	Calibration Factor
	30		
	60		
	120		
	240		
C ₁₉ -C ₃₆ Aliphatics	8	10.1	Calibration Factor
	40		
	80		
	160		
	320		
C ₁₁ -C ₂₂ Aromatics	17	4.5	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 05/21/06

Calibration Check

Range	Levels (µg/mL)	RPD
C ₉ -C ₁₈ Aliphatics	120	4.9
C ₁₉ -C ₃₆ Aliphatics	160	-1.2
C ₁₁ -C ₂₂ Aromatics	340	-8.3

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 04/19/06

Calibration Ranges and Limits

Range	MDL (2/2004) (µg/L)	ML (µg/L)	RL (µg/L)	RL (mg/Kg)
C ₉ -C ₁₈ Aliphatics	3.84	12.2	100	10
C ₁₉ -C ₃₆ Aliphatics	0.57	1.8	100	10
C ₁₁ -C ₂₂ Aromatics	4.54	14.4	100	10

Calibration Concentration Levels

Range	Levels (µg/mL)	%RSD or CCC	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	6	13.30	Calibration Factor
	30		
	60		
	120		
	240		
C ₁₉ -C ₃₆ Aliphatics	8	10.1	Calibration Factor
	40		
	80		
	160		
	320		
C ₁₁ -C ₂₂ Aromatics	17	4.5	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 05/21/06

Calibration Check

Range	Levels (µg/mL)	RPD
C ₉ -C ₁₈ Aliphatics	120	10.4
C ₁₉ -C ₃₆ Aliphatics	160	3.4
C ₁₁ -C ₂₂ Aromatics	340	-5.2

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 Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 04/19/06

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	13.30	Calibration Factor
	30		
	60		
	120		
	240		
C ₁₉ -C ₃₆ Aliphatics	8	10.1	Calibration Factor
	40		
	80		
	160		
	320		
C ₁₁ -C ₂₂ Aromatics	17	4.5	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 05/22/06

Calibration Check

Range	Levels (µg/mL)	RPD
C ₉ -C ₁₈ Aliphatics	120	-2.5
C ₁₉ -C ₃₆ Aliphatics	160	-11.4
C ₁₁ -C ₂₂ Aromatics	340	-10.8

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

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

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 04/19/06

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 ₃₈ 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	13.30	Calibration Factor
	30		
	60		
	120		
	240		
C ₁₉ -C ₃₈ Aliphatics	8	10.1	Calibration Factor
	40		
	80		
	160		
	320		
C ₁₁ -C ₂₂ Aromatics	17	4.5	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 05/25/06

Calibration Check

Range	Levels (µg/mL)	RPD
C ₉ -C ₁₈ Aliphatics	120	-2.5
C ₁₉ -C ₃₈ Aliphatics	160	-11.3
C ₁₁ -C ₂₂ Aromatics	340	-24.3

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 04/19/06

Calibration Ranges and Limits

Range	MDL (2/2004) (µg/L)	ML (µg/L)	RL (µg/L)	RL (mg/Kg)
C ₉ -C ₁₈ Aliphatics	3.84	12.2	100	10
C ₁₉ -C ₃₆ Aliphatics	0.57	1.8	100	10
C ₁₁ -C ₂₂ Aromatics	4.54	14.4	100	10

Calibration Concentration Levels

Range	Levels (µg/mL)	%RSD or CCC	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	6	13.30	Calibration Factor
	30		
	60		
	120		
	240		
C ₁₉ -C ₃₆ Aliphatics	8	10.1	Calibration Factor
	40		
	80		
	160		
	320		
C ₁₁ -C ₂₂ Aromatics	17	4.5	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 05/26/06

Calibration Check

Range	Levels (µg/mL)	RPD
C ₉ -C ₁₈ Aliphatics	120	-1.8
C ₁₉ -C ₃₆ Aliphatics	160	-12.9
C ₁₁ -C ₂₂ Aromatics	340	-13.6

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW01
Client Project ID: NV014
Lab Sample ID: G650-54-1J
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 13:40
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/20/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/20/2006	
Anthracene	BQL	10.0	1.75	1	5/20/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/20/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/20/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/20/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/20/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/20/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/20/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/20/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/20/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/20/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/20/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/20/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/20/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/20/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/20/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/20/2006	
Chrysene	BQL	10.0	1.11	1	5/20/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/20/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/20/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/20/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/20/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/20/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/20/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/20/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/20/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/20/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/20/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/20/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/20/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/20/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/20/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/20/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/20/2006	
Fluoranthene	BQL	10.0	1.41	1	5/20/2006	
Fluorene	BQL	10.0	1.22	1	5/20/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/20/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/20/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/20/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/20/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/20/2006	
Isophorone	BQL	10.0	1.27	1	5/20/2006	
Naphthalene	BQL	10.0	1.08	1	5/20/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW01
Client Project ID: NV014
Lab Sample ID: G650-54-1J
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 13:40
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/20/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/20/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/20/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/20/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/20/2006	
Phenanthrene	BQL	10.0	1.38	1	5/20/2006	
Phenol	BQL	10.0	3.38	1	5/20/2006	
Pyrene	BQL	10.0	2.08	1	5/20/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/20/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/20/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	6.6	66
2-Fluorophenol	10	5.7	57
Nitrobenzene-d5	10	6.6	66
Phenol-d6	10	6.2	62
2,4,6-Tribromophenol	10	7.3	73
4-Terphenyl-d14	10	6.4	64

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: USTBB190-MW01
Client Project ID: NV014
Lab Sample ID: G650-54-1J
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/10/2006 13:40
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Date Analyzed: 5/20/2006
Matrix: Water

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

Comment:

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

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

Reviewed by: fw



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW02
Client Project ID: NV014
Lab Sample ID: G650-54-2J
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 12:21
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	4.90	10.0	1.22	1	5/20/2006	J
Acenaphthylene	BQL	10.0	1.12	1	5/20/2006	
Anthracene	BQL	10.0	1.75	1	5/20/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/20/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/20/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/20/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/20/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/20/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/20/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/20/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/20/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/20/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/20/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/20/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/20/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/20/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/20/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/20/2006	
Chrysene	BQL	10.0	1.11	1	5/20/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/20/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/20/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/20/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/20/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/20/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/20/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/20/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/20/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/20/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/20/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/20/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/20/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/20/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/20/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/20/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/20/2006	
Fluoranthene	BQL	10.0	1.41	1	5/20/2006	
Fluorene	2.50	10.0	1.22	1	5/20/2006	J
Hexachlorobenzene	BQL	10.0	1.22	1	5/20/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/20/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/20/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/20/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/20/2006	
Isophorone	BQL	10.0	1.27	1	5/20/2006	
Naphthalene	BQL	10.0	1.08	1	5/20/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW02
Client Project ID: NV014
Lab Sample ID: G650-54-2J
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 12:21
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/20/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/20/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/20/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/20/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/20/2006	
Phenanthrene	BQL	10.0	1.38	1	5/20/2006	
Phenol	BQL	10.0	3.38	1	5/20/2006	
Pyrene	BQL	10.0	2.08	1	5/20/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/20/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/20/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	6.8	68
2-Fluorophenol	10	5.5	55
Nitrobenzene-d5	10	6.6	66
Phenol-d6	10	5.7	57
2,4,6-Tribromophenol	10	7.4	74
4-Terphenyl-d14	10	8.6	86

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 



Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: USTBB190-MW02
Client Project ID: NV014
Lab Sample ID: G650-54-2J
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/10/2006 12:21
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Date Analyzed: 5/20/2006
Matrix: Water

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

Comment:

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

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

Reviewed by: 



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW03
Client Project ID: NV014
Lab Sample ID: G650-54-3I
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 10:35
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/20/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/20/2006	
Anthracene	BQL	10.0	1.75	1	5/20/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/20/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/20/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/20/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/20/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/20/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/20/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/20/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/20/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/20/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/20/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/20/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/20/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/20/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/20/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/20/2006	
Chrysene	BQL	10.0	1.11	1	5/20/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/20/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/20/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/20/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/20/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/20/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/20/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/20/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/20/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/20/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/20/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/20/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/20/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/20/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/20/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/20/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/20/2006	
Fluoranthene	BQL	10.0	1.41	1	5/20/2006	
Fluorene	BQL	10.0	1.22	1	5/20/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/20/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/20/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/20/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/20/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/20/2006	
Isophorone	BQL	10.0	1.27	1	5/20/2006	
Naphthalene	BQL	10.0	1.08	1	5/20/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW03
Client Project ID: NV014
Lab Sample ID: G650-54-3I
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 10:35
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/20/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/20/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/20/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/20/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/20/2006	
Phenanthrene	BQL	10.0	1.38	1	5/20/2006	
Phenol	BQL	10.0	3.38	1	5/20/2006	
Pyrene	BQL	10.0	2.08	1	5/20/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/20/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/20/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	5.9	59
2-Fluorophenol	10	5.7	57
Nitrobenzene-d5	10	6.3	63
Phenol-d6	10	5.7	57
2,4,6-Tribromophenol	10	6.3	63
4-Terphenyl-d14	10	9	90

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: USTBB190-MW03
Client Project ID: NV014
Lab Sample ID: G650-54-3I
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/10/2006 10:35
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Date Analyzed: 5/20/2006
Matrix: Water

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

Comment:

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

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

Reviewed by: 



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW04
Client Project ID: NV014
Lab Sample ID: G650-54-4I
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 14:05
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/27/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/27/2006	
Anthracene	BQL	10.0	1.75	1	5/27/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/27/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/27/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/27/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/27/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/27/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/27/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/27/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/27/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/27/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/27/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/27/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/27/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/27/2006	
Chrysene	BQL	10.0	1.11	1	5/27/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/27/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/27/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/27/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/27/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/27/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/27/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/27/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/27/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/27/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/27/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/27/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/27/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/27/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/27/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/27/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/27/2006	
Fluoranthene	BQL	10.0	1.41	1	5/27/2006	
Fluorene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/27/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/27/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/27/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/27/2006	
Isophorone	BQL	10.0	1.27	1	5/27/2006	
Naphthalene	BQL	10.0	1.08	1	5/27/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW04
Client Project ID: NV014
Lab Sample ID: G650-54-4I
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 14:05
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/27/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/27/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/27/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/27/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/27/2006	
Phenanthrene	BQL	10.0	1.38	1	5/27/2006	
Phenol	BQL	10.0	3.38	1	5/27/2006	
Pyrene	BQL	10.0	2.08	1	5/27/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/27/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/27/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.1	71
2-Fluorophenol	10	6.1	61
Nitrobenzene-d5	10	6.6	66
Phenol-d6	10	6.1	61
2,4,6-Tribromophenol	10	6.5	65
4-Terphenyl-d14	10	7.8	78

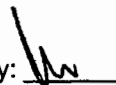
Comments:

* 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: USTBB190-MW04
Client Project ID: NV014
Lab Sample ID: G650-54-4I
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/11/2006 14:05
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Date Analyzed: 5/27/2006
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	14.18			13.2
2	Unknown	11.17			6.13
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: USTBB190-MW05
Client Project ID: NV014
Lab Sample ID: G650-54-51
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 10:10
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/27/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/27/2006	
Anthracene	BQL	10.0	1.75	1	5/27/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/27/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/27/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/27/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/27/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/27/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/27/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/27/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/27/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/27/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/27/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/27/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/27/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/27/2006	
Chrysene	BQL	10.0	1.11	1	5/27/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/27/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/27/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/27/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/27/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/27/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/27/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/27/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/27/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/27/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/27/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/27/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/27/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/27/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/27/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/27/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/27/2006	
Fluoranthene	BQL	10.0	1.41	1	5/27/2006	
Fluorene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/27/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/27/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/27/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/27/2006	
Isophorone	BQL	10.0	1.27	1	5/27/2006	
Naphthalene	BQL	10.0	1.08	1	5/27/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW05
Client Project ID: NV014
Lab Sample ID: G650-54-51
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 10:10
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/27/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/27/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/27/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/27/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/27/2006	
Phenanthrene	BQL	10.0	1.38	1	5/27/2006	
Phenol	BQL	10.0	3.38	1	5/27/2006	
Pyrene	BQL	10.0	2.08	1	5/27/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/27/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/27/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	6.9	69
2-Fluorophenol	10	6.3	64
Nitrobenzene-d5	10	6.7	67
Phenol-d6	10	6.1	61
2,4,6-Tribromophenol	10	6.2	62
4-Terphenyl-d14	10	7.9	79

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: USTBB190-MW05
Client Project ID: NV014
Lab Sample ID: G650-54-5I
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/11/2006 10:10
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Date Analyzed: 5/27/2006
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	14.19			8.02
2	Unknown	11.17			5.53
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: lw



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW06
Client Project ID: NV014
Lab Sample ID: G650-54-61
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 10:29
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/27/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/27/2006	
Anthracene	BQL	10.0	1.75	1	5/27/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/27/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/27/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/27/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/27/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/27/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/27/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/27/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/27/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/27/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/27/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/27/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/27/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/27/2006	
Chrysene	BQL	10.0	1.11	1	5/27/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/27/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/27/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/27/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/27/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/27/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/27/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/27/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/27/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/27/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/27/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/27/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/27/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/27/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/27/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/27/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/27/2006	
Fluoranthene	BQL	10.0	1.41	1	5/27/2006	
Fluorene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/27/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/27/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/27/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/27/2006	
Isophorone	BQL	10.0	1.27	1	5/27/2006	
Naphthalene	BQL	10.0	1.08	1	5/27/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW06
Client Project ID: NV014
Lab Sample ID: G650-54-6I
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 10:29
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/27/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/27/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/27/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/27/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/27/2006	
Phenanthrene	BQL	10.0	1.38	1	5/27/2006	
Phenol	BQL	10.0	3.38	1	5/27/2006	
Pyrene	BQL	10.0	2.08	1	5/27/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/27/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/27/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.1	71
2-Fluorophenol	10	5.9	59
Nitrobenzene-d5	10	6.3	63
Phenol-d6	10	5.7	57
2,4,6-Tribromophenol	10	6.1	61
4-Terphenyl-d14	10	7.8	78

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: USTBB190-MW06
Client Project ID: NV014
Lab Sample ID: G650-54-6I
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/11/2006 10:29
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Date Analyzed: 5/27/2006
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	14.19			5.35
2	Unknown	11.17			5.26
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: USTBB190-MW07
Client Project ID: NV014
Lab Sample ID: G650-54-7K
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 9:59
Date Received: 5/12/2006
Date Extracted: 5/17/2006
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	5/20/2006	J
Acenaphthylene	BQL	10.0	1.12	1	5/20/2006	
Anthracene	BQL	10.0	1.75	1	5/20/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/20/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/20/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/20/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/20/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/20/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/20/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/20/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/20/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/20/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/20/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/20/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/20/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/20/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/20/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/20/2006	
Chrysene	BQL	10.0	1.11	1	5/20/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/20/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/20/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/20/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/20/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/20/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/20/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/20/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/20/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/20/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/20/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/20/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/20/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/20/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/20/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/20/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/20/2006	
Fluoranthene	BQL	10.0	1.41	1	5/20/2006	
Fluorene	2.50	10.0	1.22	1	5/20/2006	J
Hexachlorobenzene	BQL	10.0	1.22	1	5/20/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/20/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/20/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/20/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/20/2006	
Isophorone	BQL	10.0	1.27	1	5/20/2006	
Naphthalene	99.9	10.0	1.08	1	5/20/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW07
Client Project ID: NV014
Lab Sample ID: G650-54-7K
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 9:59
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/20/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/20/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/20/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/20/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/20/2006	
Phenanthrene	1.60	10.0	1.38	1	5/20/2006	J
Phenol	BQL	10.0	3.38	1	5/20/2006	
Pyrene	BQL	10.0	2.08	1	5/20/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/20/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/20/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	6.2	62
2-Fluorophenol	10	5.4	54
Nitrobenzene-d5	10	7	70
Phenol-d6	10	5.9	59
2,4,6-Tribromophenol	10	7.4	74
4-Terphenyl-d14	10	8.2	82

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: hw



Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: USTBB190-MW07
Client Project ID: NV014
Lab Sample ID: G650-54-7K
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

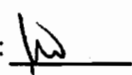
Analyzed By: MRC
Date Collected: 5/10/2006 9:59
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Date Analyzed: 5/20/2006
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Trimethylbenzene, Isomer of	6.56			514
2	Trimethylbenzene, Isomer of	6.88			190
3	Ethylmethylbenzene, Isomer of	6.14			188
4	Ethylmethylbenzene, Isomer of	6.18			176
5	Trimethylbenzene, Isomer of	6.25			172
6	Aromatic, Unknown	7.04			157
7	Dimethylbenzene, Isomer of	4.87			97.2
8	Diethylbenzene, Isomer of	7.27			87
9	Aromatic, Unknown	8.31			74
10	Trimethylbenzene, Isomer of	6.05			70.3

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: USTBB190-MW08
Client Project ID: NV014
Lab Sample ID: G650-54-81
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 10:50
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	8.30	10.0	1.22	1	5/27/2006	J
Acenaphthylene	BQL	10.0	1.12	1	5/27/2006	
Anthracene	BQL	10.0	1.75	1	5/27/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/27/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/27/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/27/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/27/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/27/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/27/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/27/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/27/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/27/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/27/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/27/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/27/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/27/2006	
Chrysene	BQL	10.0	1.11	1	5/27/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/27/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/27/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/27/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/27/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/27/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/27/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/27/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/27/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/27/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/27/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/27/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/27/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/27/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/27/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/27/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/27/2006	
Fluoranthene	BQL	10.0	1.41	1	5/27/2006	
Fluorene	4.40	10.0	1.22	1	5/27/2006	J
Hexachlorobenzene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/27/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/27/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/27/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/27/2006	
Isophorone	BQL	10.0	1.27	1	5/27/2006	
Naphthalene	BQL	10.0	1.08	1	5/27/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW08
Client Project ID: NV014
Lab Sample ID: G650-54-81
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 10:50
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/27/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/27/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/27/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/27/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/27/2006	
Phenanthrene	1.90	10.0	1.38	1	5/27/2006	J
Phenol	BQL	10.0	3.38	1	5/27/2006	
Pyrene	BQL	10.0	2.08	1	5/27/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/27/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/27/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	6.8	68
2-Fluorophenol	10	6.2	62
Nitrobenzene-d5	10	6.6	66
Phenol-d6	10	6.2	62
2,4,6-Tribromophenol	10	5.8	58
4-Terphenyl-d14	10	7.5	75

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: USTBB190-MW08
Client Project ID: NV014
Lab Sample ID: G650-54-81
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/11/2006 10:50
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Date Analyzed: 5/27/2006
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	14.20			6.67
2	Unknown	4.96			5.5
3	Unknown	11.17			5.17
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: USTBB190-MW09
Client Project ID: NV014
Lab Sample ID: G650-54-91
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 13:20
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/27/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/27/2006	
Anthracene	BQL	10.0	1.75	1	5/27/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/27/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/27/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/27/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/27/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/27/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/27/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/27/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/27/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/27/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/27/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/27/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/27/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/27/2006	
Chrysene	BQL	10.0	1.11	1	5/27/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/27/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/27/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/27/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/27/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/27/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/27/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/27/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/27/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/27/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/27/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/27/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/27/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/27/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/27/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/27/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/27/2006	
Fluoranthene	BQL	10.0	1.41	1	5/27/2006	
Fluorene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/27/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/27/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/27/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/27/2006	
Isophorone	BQL	10.0	1.27	1	5/27/2006	
Naphthalene	BQL	10.0	1.08	1	5/27/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW09
Client Project ID: NV014
Lab Sample ID: G650-54-9I
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 13:20
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/27/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/27/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/27/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/27/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/27/2006	
Phenanthrene	BQL	10.0	1.38	1	5/27/2006	
Phenol	BQL	10.0	3.38	1	5/27/2006	
Pyrene	BQL	10.0	2.08	1	5/27/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/27/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/27/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.7	77
2-Fluorophenol	10	6.4	64
Nitrobenzene-d5	10	7	70
Phenol-d6	10	6.6	66
2,4,6-Tribromophenol	10	6.3	63
4-Terphenyl-d14	10	8.7	87

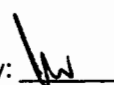
Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 



Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: USTBB190-MW09
Client Project ID: NV014
Lab Sample ID: G650-54-9I
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/11/2006 13:20
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Date Analyzed: 5/27/2006
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	14.19			6.3
2	Unknown	11.17			5.49
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: USTBB190-MW10
Client Project ID: NV014
Lab Sample ID: G650-54-101
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 11:11
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/27/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/27/2006	
Anthracene	BQL	10.0	1.75	1	5/27/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/27/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/27/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/27/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/27/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/27/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/27/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/27/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/27/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/27/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/27/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/27/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/27/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/27/2006	
Chrysene	BQL	10.0	1.11	1	5/27/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/27/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/27/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/27/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/27/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/27/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/27/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/27/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/27/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/27/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/27/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/27/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/27/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/27/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/27/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/27/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/27/2006	
Fluoranthene	BQL	10.0	1.41	1	5/27/2006	
Fluorene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/27/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/27/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/27/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/27/2006	
Isophorone	BQL	10.0	1.27	1	5/27/2006	
Naphthalene	BQL	10.0	1.08	1	5/27/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW10
Client Project ID: NV014
Lab Sample ID: G650-54-101
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 11:11
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/27/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/27/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/27/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/27/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/27/2006	
Phenanthrene	BQL	10.0	1.38	1	5/27/2006	
Phenol	BQL	10.0	3.38	1	5/27/2006	
Pyrene	BQL	10.0	2.08	1	5/27/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/27/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/27/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	5.8	58
2-Fluorophenol	10	4.7	47
Nitrobenzene-d5	10	5	50
Phenol-d6	10	4.5	45
2,4,6-Tribromophenol	10	4.8	48
4-Terphenyl-d14	10	6.7	67

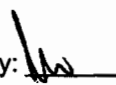
Comments:

* 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: USTBB190-MW10
Client Project ID: NV014
Lab Sample ID: G650-54-10I
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/11/2006 11:11
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Date Analyzed: 5/27/2006
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	4.36			4.32
2	Unknown	11.17			4.26
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: USTBB190-MW11
Client Project ID: NV014
Lab Sample ID: G650-54-11K
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 9:54
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/27/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/27/2006	
Anthracene	BQL	10.0	1.75	1	5/27/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/27/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/27/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/27/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/27/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/27/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/27/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/27/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/27/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/27/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/27/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/27/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/27/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/27/2006	
Chrysene	BQL	10.0	1.11	1	5/27/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/27/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/27/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/27/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/27/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/27/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/27/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/27/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/27/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/27/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/27/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/27/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/27/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/27/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/27/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/27/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/27/2006	
Fluoranthene	BQL	10.0	1.41	1	5/27/2006	
Fluorene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/27/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/27/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/27/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/27/2006	
Isophorone	BQL	10.0	1.27	1	5/27/2006	
Naphthalene	BQL	10.0	1.08	1	5/27/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW11
Client Project ID: NV014
Lab Sample ID: G650-54-11K
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 9:54
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/27/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/27/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/27/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/27/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/27/2006	
Phenanthrene	BQL	10.0	1.38	1	5/27/2006	
Phenol	BQL	10.0	3.38	1	5/27/2006	
Pyrene	BQL	10.0	2.08	1	5/27/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/27/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/27/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7	70
2-Fluorophenol	10	6.1	61
Nitrobenzene-d5	10	6.6	66
Phenol-d6	10	6.1	61
2,4,6-Tribromophenol	10	5.9	59
4-Terphenyl-d14	10	8.3	83

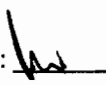
Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 



Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: USTBB190-MW11
Client Project ID: NV014
Lab Sample ID: G650-54-11K
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/11/2006 9:54
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Date Analyzed: 5/27/2006
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	4.96			7.26
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: 



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW12
Client Project ID: NV014
Lab Sample ID: G650-54-121
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 13:21
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	5.10	10.0	1.22	1	5/27/2006	J
Acenaphthylene	BQL	10.0	1.12	1	5/27/2006	
Anthracene	BQL	10.0	1.75	1	5/27/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/27/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/27/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/27/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/27/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/27/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/27/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/27/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/27/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/27/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/27/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/27/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/27/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/27/2006	
Chrysene	BQL	10.0	1.11	1	5/27/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/27/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/27/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/27/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/27/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/27/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/27/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/27/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/27/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/27/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/27/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/27/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/27/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/27/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/27/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/27/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/27/2006	
Fluoranthene	BQL	10.0	1.41	1	5/27/2006	
Fluorene	1.30	10.0	1.22	1	5/27/2006	J
Hexachlorobenzene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/27/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/27/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/27/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/27/2006	
Isophorone	BQL	10.0	1.27	1	5/27/2006	
Naphthalene	3.80	10.0	1.08	1	5/27/2006	J



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW12
Client Project ID: NV014
Lab Sample ID: G650-54-121
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 13:21
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/27/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/27/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/27/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/27/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/27/2006	
Phenanthrene	BQL	10.0	1.38	1	5/27/2006	
Phenol	BQL	10.0	3.38	1	5/27/2006	
Pyrene	BQL	10.0	2.08	1	5/27/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/27/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/27/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.4	74
2-Fluorophenol	10	6.3	64
Nitrobenzene-d5	10	6.8	68
Phenol-d6	10	6.3	63
2,4,6-Tribromophenol	10	6.2	62
4-Terphenyl-d14	10	8.4	84

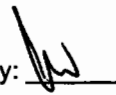
Comments:

* 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: USTBB190-MW12
Client Project ID: NV014
Lab Sample ID: G650-54-12I
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/11/2006 13:21
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Date Analyzed: 5/27/2006
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	4.96			6.57
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: 



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW13
Client Project ID: NV014
Lab Sample ID: G650-54-131
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 14:40
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/27/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/27/2006	
Anthracene	BQL	10.0	1.75	1	5/27/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/27/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/27/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/27/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/27/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/27/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/27/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/27/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/27/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/27/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/27/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/27/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/27/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/27/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/27/2006	
Chrysene	BQL	10.0	1.11	1	5/27/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/27/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/27/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/27/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/27/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/27/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/27/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/27/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/27/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/27/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/27/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/27/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/27/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/27/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/27/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/27/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/27/2006	
Fluoranthene	BQL	10.0	1.41	1	5/27/2006	
Fluorene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/27/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/27/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/27/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/27/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/27/2006	
Isophorone	BQL	10.0	1.27	1	5/27/2006	
Naphthalene	BQL	10.0	1.08	1	5/27/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW13
Client Project ID: NV014
Lab Sample ID: G650-54-13I
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/11/2006 14:40
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/27/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/27/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/27/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/27/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/27/2006	
Phenanthrene	BQL	10.0	1.38	1	5/27/2006	
Phenol	BQL	10.0	3.38	1	5/27/2006	
Pyrene	BQL	10.0	2.08	1	5/27/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/27/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/27/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	6.7	67
2-Fluorophenol	10	6.2	62
Nitrobenzene-d5	10	6.6	66
Phenol-d6	10	6	60
2,4,6-Tribromophenol	10	5.5	55
4-Terphenyl-d14	10	8.1	81

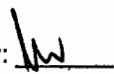
Comments:

* 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: USTBB190-MW13
Client Project ID: NV014
Lab Sample ID: G650-54-131
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/11/2006 14:40
Date Received: 5/12/2006
Date Extracted: 5/18/2006
Date Analyzed: 5/27/2006
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	7.58			5.27
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: 



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW15
Client Project ID: NV014
Lab Sample ID: G650-54-14I
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 11:10
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/20/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/20/2006	
Anthracene	BQL	10.0	1.75	1	5/20/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/20/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/20/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/20/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/20/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/20/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/20/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/20/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/20/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/20/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/20/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/20/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/20/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/20/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/20/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/20/2006	
Chrysene	BQL	10.0	1.11	1	5/20/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/20/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/20/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/20/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/20/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/20/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/20/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/20/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/20/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/20/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/20/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/20/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/20/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/20/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/20/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/20/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/20/2006	
Fluoranthene	BQL	10.0	1.41	1	5/20/2006	
Fluorene	BQL	10.0	1.22	1	5/20/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/20/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/20/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/20/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/20/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/20/2006	
Isophorone	BQL	10.0	1.27	1	5/20/2006	
Naphthalene	BQL	10.0	1.08	1	5/20/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW15
Client Project ID: NV014
Lab Sample ID: G650-54-14I
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 11:10
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/20/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/20/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/20/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/20/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/20/2006	
Phenanthrene	BQL	10.0	1.38	1	5/20/2006	
Phenol	BQL	10.0	3.38	1	5/20/2006	
Pyrene	BQL	10.0	2.08	1	5/20/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/20/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/20/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.6	76
2-Fluorophenol	10	6.3	63
Nitrobenzene-d5	10	7.3	73
Phenol-d6	10	6.1	61
2,4,6-Tribromophenol	10	7.5	75
4-Terphenyl-d14	10	9.3	93

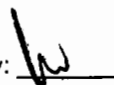
Comments:

* 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: USTBB190-MW15
Client Project ID: NV014
Lab Sample ID: G650-54-141
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

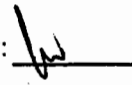
Analyzed By: MRC
Date Collected: 5/10/2006 11:10
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Date Analyzed: 5/20/2006
Matrix: Water

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

Comment:

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

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

Reviewed by: 



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW16
Client Project ID: NV014
Lab Sample ID: G650-54-15H
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 15:00
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	1.50	10.0	1.22	1	5/26/2006	J
Acenaphthylene	BQL	10.0	1.12	1	5/26/2006	
Anthracene	BQL	10.0	1.75	1	5/26/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/26/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/26/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/26/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/26/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/26/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/26/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/26/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/26/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/26/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/26/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/26/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/26/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/26/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/26/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/26/2006	
Chrysene	BQL	10.0	1.11	1	5/26/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/26/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/26/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/26/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/26/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/26/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/26/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/26/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/26/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/26/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/26/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/26/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/26/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/26/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/26/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/26/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/26/2006	
Fluoranthene	BQL	10.0	1.41	1	5/26/2006	
Fluorene	2.10	10.0	1.22	1	5/26/2006	J
Hexachlorobenzene	BQL	10.0	1.22	1	5/26/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/26/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/26/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/26/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/26/2006	
Isophorone	BQL	10.0	1.27	1	5/26/2006	
Naphthalene	151	10.0	1.08	1	5/26/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW16
Client Project ID: NV014
Lab Sample ID: G650-54-15H
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 15:00
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/26/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/26/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/26/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/26/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/26/2006	
Phenanthrene	BQL	10.0	1.38	1	5/26/2006	
Phenol	BQL	10.0	3.38	1	5/26/2006	
Pyrene	BQL	10.0	2.08	1	5/26/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/26/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/26/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	6.4	64
2-Fluorophenol	10	5.2	51
Nitrobenzene-d5	10	7.1	71
Phenol-d6	10	5.8	58
2,4,6-Tribromophenol	10	7.9	79
4-Terphenyl-d14	10	7.7	77

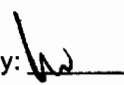
Comments:

* 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: USTBB190-MW16
Client Project ID: NV014
Lab Sample ID: G650-54-15H
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/10/2006 15:00
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Date Analyzed: 5/26/2006
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Trimethylbenzene, Isomer of	6.40			665
2	Trimethylbenzene, Isomer of	6.72			269
3	Ethylmethylbenzene, Isomer of	6.02			229
4	Aromatic, Unknown	6.88			223
5	Trimethylbenzene, Isomer of	6.09			214
6	Dimethylbenzene, Isomer of	4.83			205
7	Dimethylbenzene, Isomer of	4.70			151
8	Ethylmethylbenzene, Isomer of	5.98			148
9	Ethylmethylbenzene, Isomer of	7.11			131
10	Propylbenzene	5.89	000103-65-1	91	107

Comment:

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

Reviewed by: lw



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW17
Client Project ID: NV014
Lab Sample ID: G650-54-16H
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 11:23
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/26/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/26/2006	
Anthracene	BQL	10.0	1.75	1	5/26/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/26/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/26/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/26/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/26/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/26/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/26/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/26/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/26/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/26/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/26/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/26/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/26/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/26/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/26/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/26/2006	
Chrysene	BQL	10.0	1.11	1	5/26/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/26/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/26/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/26/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/26/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/26/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/26/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/26/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/26/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/26/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/26/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/26/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/26/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/26/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/26/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/26/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/26/2006	
Fluoranthene	BQL	10.0	1.41	1	5/26/2006	
Fluorene	BQL	10.0	1.22	1	5/26/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/26/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/26/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/26/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/26/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/26/2006	
Isophorone	BQL	10.0	1.27	1	5/26/2006	
Naphthalene	BQL	10.0	1.08	1	5/26/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW17
Client Project ID: NV014
Lab Sample ID: G650-54-16H
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 11:23
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/26/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/26/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/26/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/26/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/26/2006	
Phenanthrene	BQL	10.0	1.38	1	5/26/2006	
Phenol	BQL	10.0	3.38	1	5/26/2006	
Pyrene	BQL	10.0	2.08	1	5/26/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/26/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/26/2006	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	6.9	69		
2-Fluorophenol		10	6.1	61		
Nitrobenzene-d5		10	6.8	68		
Phenol-d6		10	6.7	67		
2,4,6-Tribromophenol		10	7.5	75		
4-Terphenyl-d14		10	8.1	81		

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: USTBB190-MW17
Client Project ID: NV014
Lab Sample ID: G650-54-16H
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/10/2006 11:23
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Date Analyzed: 5/26/2006
Matrix: Water

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

Comment:

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

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

Reviewed by: hw



Results for Semivolatiles
by GCMS 625

Client Sample ID: Duplicate
Client Project ID: NV014
Lab Sample ID: G650-54-17H
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 0:00
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/26/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/26/2006	
Anthracene	BQL	10.0	1.75	1	5/26/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/26/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/26/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/26/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/26/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/26/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/26/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/26/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/26/2006	
Bis(2-ethylhexyl)phthalate	1.40	10.0	1.33	1	5/26/2006	J
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/26/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/26/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/26/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/26/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/26/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/26/2006	
Chrysene	BQL	10.0	1.11	1	5/26/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/26/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/26/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/26/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/26/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/26/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/26/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/26/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/26/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/26/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/26/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/26/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/26/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/26/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/26/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/26/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/26/2006	
Fluoranthene	BQL	10.0	1.41	1	5/26/2006	
Fluorene	BQL	10.0	1.22	1	5/26/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/26/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/26/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/26/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/26/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/26/2006	
Isophorone	BQL	10.0	1.27	1	5/26/2006	
Naphthalene	BQL	10.0	1.08	1	5/26/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: Duplicate
Client Project ID: NV014
Lab Sample ID: G650-54-17H
Lab Project ID: G650-54

Analyzed By: MRC
Date Collected: 5/10/2006 0:00
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/26/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/26/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/26/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/26/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/26/2006	
Phenanthrene	BQL	10.0	1.38	1	5/26/2006	
Phenol	BQL	10.0	3.38	1	5/26/2006	
Pyrene	BQL	10.0	2.08	1	5/26/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/26/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/26/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	6.9	69
2-Fluorophenol	10	6.1	61
Nitrobenzene-d5	10	6.9	69
Phenol-d6	10	6.7	67
2,4,6-Tribromophenol	10	7.5	75
4-Terphenyl-d14	10	8.2	82

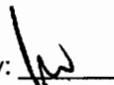
Comments:

* 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: Duplicate
Client Project ID: NV014
Lab Sample ID: G650-54-17H
Lab Project ID: G650-54
Sample Wt/Vol: 500 ML
Dilution: 1

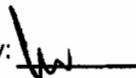
Analyzed By: MRC
Date Collected: 5/10/2006 0:00
Date Received: 5/12/2006
Date Extracted: 5/17/2006
Date Analyzed: 5/26/2006
Matrix: Water

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

Comment:

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

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

Reviewed by: 



Results for Semivolatiles
by GCMS 625

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB5185
Lab Project ID:

Analyzed By: MRC
Date Collected:
Date Received:
Date Extracted: 5/17/2006
Matrix: WATER

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/22/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/22/2006	
Anthracene	BQL	10.0	1.75	1	5/22/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/22/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/22/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/22/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/22/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/22/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/22/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/22/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/22/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/22/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/22/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/22/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/22/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/22/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/22/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/22/2006	
Chrysene	BQL	10.0	1.11	1	5/22/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/22/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/22/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/22/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/22/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/22/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/22/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/22/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/22/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/22/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/22/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/22/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/22/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/22/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/22/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/22/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/22/2006	
Fluoranthene	BQL	10.0	1.41	1	5/22/2006	
Fluorene	BQL	10.0	1.22	1	5/22/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/22/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/22/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/22/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/22/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/22/2006	
Isophorone	BQL	10.0	1.27	1	5/22/2006	
Naphthalene	BQL	10.0	1.08	1	5/22/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB5185
Lab Project ID:

Analyzed By: MRC
Date Collected:
Date Received:
Date Extracted: 5/17/2006
Matrix: WATER

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/22/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/22/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/22/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/22/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/22/2006	
Phenanthrene	BQL	10.0	1.38	1	5/22/2006	
Phenol	BQL	10.0	3.38	1	5/22/2006	
Pyrene	BQL	10.0	2.08	1	5/22/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/22/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/22/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	5.9	59
2-Fluorophenol	10	5.2	52
Nitrobenzene-d5	10	5.8	58
Phenol-d6	10	5.6	56
2,4,6-Tribromophenol	10	3.9	39
4-Terphenyl-d14	10	6.9	69

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 



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

Client Sample ID: Batch QC

Client Project ID:

Lab Sample ID: Batch-5185-MS/MSD/LCS

Lab Project ID:

Matrix: WATER

Prep Method: 3520

Date Collected:

Date Received:

Date Extracted: 05/17/06

Date Analyzed: 05/23/06

Analyzed By: MRC

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	200	153	76.3	200	145	72.7	4.83	30	62.0-119
4-Chloro-3-methylphenol	BQL	200	157	78.7	200	156	77.9	1.02	30	67.0-109
2-Chlorophenol	BQL	200	126	62.9	200	121	60.7	3.56	30	59.0-95.0
1,4-Dichlorobenzene	BQL	200	103	51.6	200	88.2	44.1	15.7	30	29.0-86.0
2,4-Dinitrotoluene	BQL	200	163	81.4	200	155	77.7	4.65	30	63.0-103
N-Nitrosodi-n-propylamine	BQL	200	159	79.5	200	155	77.4	2.68	30	67.0-107
4-Nitrophenol	BQL	200	140	70.1	200	129	64.5	8.32	30	49.0-146
Pentachlorophenol	BQL	200	81.8	40.9*	200	70.4	35.2*	15.0	30	43.0-106
Phenol	BQL	200	135	67.3	200	129	64.3	4.56	30	61.0-100
Pyrene	BQL	200	168	84.2	200	162	80.9	4.00	30	41.0-123
1,2,4-Trichlorobenzene	BQL	200	144	72.1	200	129	64.7	10.8	30	41.0-96.0

	Spiked Amount (µg/L)	LCS Conc. (µg/L)	LCS Spike %	QC Limits
				% Rec.
Acenaphthylene	100	75.1	75.1	72.9-127
4-Chloro-3-methylphenol	100	78.1	78.1	61.6-113
2-Chlorophenol	100	59.4	59.4	52.3-104
1,4-Dichlorobenzene	100	60.3	60.3	27.3-85.0
2,4-Dinitrotoluene	100	79.7	79.7	66.5-117
N-Nitrosodi-n-propylamine	100	74.7	74.7	54.4-119
4-Nitrophenol	100	62.4	62.4	32.4-150
Pentachlorophenol	100	36.0	36.0	23.9-115
Phenol	100	64.2	64.2	54.5-106
Pyrene	100	86.9	86.9	63.5-126
1,2,4-Trichlorobenzene	100	73.6	73.6	49.1-98.5

Comments:

Concentrations reflect the spiked sample amounts.

Flags:

* = Out of limits.

NA = Not applicable.

Reviewed By: 



Results for Semivolatiles
by GCMS 625

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB5186
Lab Project ID:

Analyzed By: MRC
Date Collected:
Date Received:
Date Extracted: 5/17/2006
Matrix: WATER

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/26/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/26/2006	
Anthracene	BQL	10.0	1.75	1	5/26/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/26/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/26/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/26/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/26/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/26/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/26/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/26/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/26/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/26/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/26/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/26/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/26/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/26/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/26/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/26/2006	
Chrysene	BQL	10.0	1.11	1	5/26/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/26/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/26/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/26/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/26/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/26/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/26/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/26/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/26/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/26/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/26/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/26/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/26/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/26/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/26/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/26/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/26/2006	
Fluoranthene	BQL	10.0	1.41	1	5/26/2006	
Fluorene	BQL	10.0	1.22	1	5/26/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/26/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/26/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/26/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/26/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/26/2006	
Isophorone	BQL	10.0	1.27	1	5/26/2006	
Naphthalene	BQL	10.0	1.08	1	5/26/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB5186
Lab Project ID:

Analyzed By: MRC
Date Collected:
Date Received:
Date Extracted: 5/17/2006
Matrix: WATER

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/26/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/26/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/26/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/26/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/26/2006	
Phenanthrene	BQL	10.0	1.38	1	5/26/2006	
Phenol	BQL	10.0	3.38	1	5/26/2006	
Pyrene	BQL	10.0	2.08	1	5/26/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/26/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/26/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	6.8	68
2-Fluorophenol	10	5.6	56
Nitrobenzene-d5	10	6.3	63
Phenol-d6	10	6	60
2,4,6-Tribromophenol	10	5.2	52
4-Terphenyl-d14	10	7.4	74

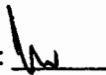
Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 



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

Client Sample ID: Batch QC

Client Project ID:

Lab Sample ID: Batch-5186-MS/MSD/LCS

Lab Project ID:

Matrix: WATER

Prep Method: 3520

Date Collected:

Date Received:

Date Extracted: 05/17/06

Date Analyzed: 05/25/06

Analyzed By: MRC

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	222	176	79.2	222	178	80.3	1.38	30	62.0-119
4-Chloro-3-methylphenol	BQL	222	178	80.0	222	189	85.1	6.18	30	67.0-109
2-Chlorophenol	BQL	222	147	66.3	222	158	71.3	7.27	30	59.0-95.0
1,4-Dichlorobenzene	BQL	222	131	58.8	222	134	60.4	2.68	30	29.0-86.0
2,4-Dinitrotoluene	BQL	222	173	77.8	222	175	78.6	1.02	30	63.0-103
N-Nitrosodi-n-propylamine	BQL	222	170	76.7	222	176	79.2	3.21	30	67.0-107
4-Nitrophenol	BQL	222	116	52.1	222	122	55.0	5.42	30	49.0-146
Pentachlorophenol	BQL	222	87.8	39.5	222	84.2	37.9	4.13	30	23.0-106
Phenol	BQL	222	159	71.5	222	169	76.1	6.23	30	61.0-100
Pyrene	BQL	222	210	94.5	222	208	93.8	0.743	30	41.0-123
1,2,4-Trichlorobenzene	BQL	222	161	72.5	222	161	72.3	0.276	30	41.0-96.0

	Spiked Amount (µg/L)	LCS Conc. (µg/L)	LCS Spike %	QC Limits % Rec.
Acenaphthylene	100	77.0	77.0	72.9-127
4-Chloro-3-methylphenol	100	77.0	77.0	61.6-113
2-Chlorophenol	100	63.9	63.9	52.3-104
1,4-Dichlorobenzene	100	55.5	55.5	27.3-85.0
2,4-Dinitrotoluene	100	74.3	74.3	66.5-117
N-Nitrosodi-n-propylamine	100	73.5	73.5	54.4-119
4-Nitrophenol	100	45.7	45.7	32.4-150
Pentachlorophenol	100	35.3	35.3	23.9-115
Phenol	100	69.4	69.4	54.5-106
Pyrene	100	94.2	94.2	63.5-126
1,2,4-Trichlorobenzene	100	69.7	69.7	49.1-98.5

Comments:

Concentrations reflect the spiked sample amounts.

Flags:

* = Out of limits.

NA = Not applicable.

Reviewed By: 



Results for Semivolatiles
by GCMS 625

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB5195
Lab Project ID:

Analyzed By: MRC
Date Collected:
Date Received:
Date Extracted: 5/18/2006
Matrix: WATER

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/26/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/26/2006	
Anthracene	BQL	10.0	1.75	1	5/26/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/26/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/26/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/26/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/26/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/26/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/26/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/26/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/26/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/26/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/26/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/26/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/26/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/26/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/26/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/26/2006	
Chrysene	BQL	10.0	1.11	1	5/26/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/26/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/26/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/26/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/26/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/26/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/26/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/26/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/26/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/26/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/26/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/26/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/26/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/26/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/26/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/26/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/26/2006	
Fluoranthene	BQL	10.0	1.41	1	5/26/2006	
Fluorene	BQL	10.0	1.22	1	5/26/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/26/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/26/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/26/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/26/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/26/2006	
Isophorone	BQL	10.0	1.27	1	5/26/2006	
Naphthalene	BQL	10.0	1.08	1	5/26/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB5195
Lab Project ID:

Analyzed By: MRC
Date Collected:
Date Received:
Date Extracted: 5/18/2006
Matrix: WATER

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/26/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/26/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/26/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/26/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/26/2006	
Phenanthrene	BQL	10.0	1.38	1	5/26/2006	
Phenol	BQL	10.0	3.38	1	5/26/2006	
Pyrene	BQL	10.0	2.08	1	5/26/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/26/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/26/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	5.2	52
2-Fluorophenol	10	4.8	48
Nitrobenzene-d5	10	5.2	52
Phenol-d6	10	5	50
2,4,6-Tribromophenol	10	4.1	41
4-Terphenyl-d14	10	6.8	68

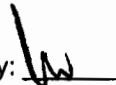
Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 



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

Client Sample ID: Batch QC

Client Project ID:

Lab Sample ID: Batch-5195-MS/MSD/LCS

Lab Project ID:

Matrix: WATER

Prep Method: 3520

Date Collected:

Date Received:

Date Extracted: 05/18/06

Date Analyzed: 05/27/06

Analyzed By: MRC

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	222	148	66.5	217	181	83.3	22.4	30	62.0-119
4-Chloro-3-methylphenol	BQL	222	149	67.0	217	184	84.8	23.5	30	67.0-109
2-Chlorophenol	BQL	222	128	57.6*	217	155	71.3	21.3	30	59.0-95.0
1,4-Dichlorobenzene	BQL	222	94.7	42.6	217	121	55.6	26.5	30	29.0-86.0
2,4-Dinitrotoluene	BQL	222	150	67.5	217	180	82.6	20.1	30	63.0-103
N-Nitrosodi-n-propylamine	BQL	222	147	66.0*	217	182	83.7	23.6	30	67.0-107
4-Nitrophenol	BQL	222	101	45.4*	217	123	56.8	22.3	30	49.0-146
Pentachlorophenol	BQL	222	72.9	32.8*	217	95.4	43.9	28.9	30	43.0-106
Phenol	BQL	222	142	63.9	217	170	78.3	20.3	30	61.0-100
Pyrene	BQL	222	188	84.5	217	215	99.0	15.8	30	41.0-123
1,2,4-Trichlorobenzene	BQL	222	131	59.0	217	162	74.5	23.2	30	41.0-96.0

	Spiked Amount (µg/L)	LCS Conc. (µg/L)	LCS Spike %	QC Limits
				% Rec.
Acenaphthylene	100	81.0	81.0	72.9-127
4-Chloro-3-methylphenol	100	84.4	84.4	61.6-113
2-Chlorophenol	100	70.9	70.9	52.3-104
1,4-Dichlorobenzene	100	52.8	52.8	27.3-85.0
2,4-Dinitrotoluene	100	79.1	79.1	66.5-117
N-Nitrosodi-n-propylamine	100	84.0	84.0	54.4-119
4-Nitrophenol	100	51.9	51.9	32.4-150
Pentachlorophenol	100	38.7	38.7	23.9-115
Phenol	100	76.9	76.9	54.5-106
Pyrene	100	93.1	93.1	63.5-126
1,2,4-Trichlorobenzene	100	71.3	71.3	49.1-98.5

Comments:

Concentrations reflect the spiked sample amounts.

Flags:

* = Out of limits.

NA = Not applicable.

Reviewed By: 



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

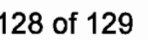
ug/L = micrograms per liter, ppb, parts per billion

% 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.



PAGE 1 OF 2

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

1 CLIENT: Sovereign Consulting Inc. CONTACT: Chris Murray PHONE NO: 757.777.8982 PROJECT: NV014 SITE/PWSID#: BB190 REPORTS TO: Chris Murray FAX NO: 757.594.9227 INVOICE TO: 606 Thumble Shoals Blvd Ste 1-A MEMPHIS, TN 38106 P.O. NUMBER				SGS Reference: C650-54				PAGE <u>2</u> OF <u>2</u>	
2 LAB NO. SAMPLE IDENTIFICATION DATE TIME MATRIX				No CONTAINERS SAMPLE TYPE C= COMP G= GRAB		Preservatives Used HCl HCl HCl None Analysis Required ③ 602 VPH EPH 625+TIC			
USTBB190-MW11 05/11/06 0954 W 7 USTBB190-MW12 05/11/06 1321 ↑ USTBB190-MW13 05/11/06 1440 ↓ ~~USTBB190-MW14~~ USTBB190-MW15 05/10/06 1110 ↓ USTBB190-MW17 05/10/06 1500 ↓ USTBB190-MW19 05/10/06 1123 ↓ Duplicate 05/10/06 — ↑ Trip Blank 06/11/06 — W 2				X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X		REMARKS 4.10.1			
3 Collected/Relinquished By: (1) <i>Chris Murray</i> Date: 5/11/06 Time: Received By:				Shipping Carrier:		Samples Received Cold? (Circle) YES NO Temperature (C): 3.7 24 Chain of Custody Seal: (Circle) 222			
Relinquished By: (2) Date: 5/11/06 Time: Received By:				Shipping Ticket No:		Special Deliverable Requirements:			
Relinquished By: (3) Date: 5/11/06 Time: Received By:				Special Deliverable Requirements:		Chain of Custody Seal: (Circle)			
Relinquished By: (4) Date: Time: Received By:				Requested Turnaround Time and Special Instructions:		INTACT BROKEN ABSENT			

Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
 200 W. Potter Drive
 5500 Business Drive
 Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

□ 1258 Greenbrier Street
 Charleston, WV 25311
 Tel: (304) 346-0725 Fax: (304) 346-0781

Write - Retained by Lab
Yellow - Returned with Report
Pink - Retained by Samples



Mr. Chris Murray
Sovereign Consulting
606 Thimble Shoals Rd.
Suite A1
Newport-News VA 23606
Report Number: G650-57
Client Project: NV014

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

6/16/2006

Date



Results for Volatiles

by GC 602

Client Sample ID: USTBB190-MW14

Analyzed By: MJC

Client Project ID: NV014

Date Collected: 5/17/2006 10:05

Lab Sample ID: G650-57-1A

Date Received: 5/18/2006

Lab Project ID: G650-57

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.0414	1	5/25/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.0297	1	5/25/2006	
Ethylbenzene	BQL	1.00	0.0665	1	5/25/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.0773	1	5/25/2006	
Toluene	BQL	1.00	0.0527	1	5/25/2006	
m/p-Xylene	BQL	2.00	0.139	1	5/25/2006	
o-Xylene	BQL	2.00	0.0847	1	5/25/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.1	97.8

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.



Results for Volatiles
by GC 602

Client Sample ID: PSWBB47
Client Project ID: NV014
Lab Sample ID: G650-57-2A
Lab Project ID: G650-57

Analyzed By: MJC
Date Collected: 5/17/2006 10:20
Date Received: 5/18/2006
Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.0414	1	5/25/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.0297	1	5/25/2006	
Ethylbenzene	BQL	1.00	0.0665	1	5/25/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.0773	1	5/25/2006	
Toluene	BQL	1.00	0.0527	1	5/25/2006	
m/p-Xylene	BQL	2.00	0.139	1	5/25/2006	
o-Xylene	BQL	2.00	0.0847	1	5/25/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.1	97.6

Comments:

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

Reviewed By: *el*
GC_LIMS_v2.1



Results for Volatiles
by GC 602

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: VBLK3052506A
Lab Project ID:

Analyzed By: MJC
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	0.0414	1	5/25/2006	
Diisopropyl ether (DIPE)	BQL	1.00	0.0297	1	5/25/2006	
Ethylbenzene	BQL	1.00	0.0665	1	5/25/2006	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.0773	1	5/25/2006	
Toluene	BQL	1.00	0.0527	1	5/25/2006	
m/p-Xylene	BQL	2.00	0.139	1	5/25/2006	
o-Xylene	BQL	2.00	0.0847	1	5/25/2006	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.1	97.8

Comments:

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

Reviewed By: 
GC_LIMS_v2.1



Control Limits for MS-MSD

Method: 602 Spike[ppb]: 10
Instrument: gc3
Sample: 052506\015r0101.txt
MS: 052506\017r0101.txt
MSD: 052506\018r0101.txt

Compound	µg/L			P(%)		P Limits	
	Sam.	MS	MSD	MS	MSD	Lower	Upper
Benzene	32.2	41.8	41.6	96	94	39	160
Chlorobenzene	ND	9.9	9.9	99	99	55	135
1,2-Dichlorobenzene	ND	10.2	10.4	100	102	37	164
1,3-Dichlorobenzene	ND	9.9	10.0	98	99	50	141
1,4-Dichlorobenzene	ND	9.6	9.7	95	97	42	143
• Diisopropyl ether	ND	10.1	10.1	99	99	30	170
Ethylbenzene	3.7	14.5	14.4	108	107	32	160
• MTBE	3.0	12.8	12.7	99	98	35	165
Toluene	6.2	16.1	16.0	99	98	46	148
• m,p-Xylene	8.5	29.1	28.9	103	102	D	239
• o-Xylene	1.2	10.7	10.7	95	95	36	164

Flags :

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

Reviewed by: W

Control Limits for QC Check / Laboratory Control Spike

Method: 602 Spike[ppb]: 10
 Instrument : gc3
 Filename : 052506\002r0101.txt

Compound	ppb	Q(%)	QC Limits		P _s (%)	LCS Limits	
			Lower	Upper		Lower	Upper
Benzene	9.7	96.8	77.0	123.0	97	39	150
Chlorobenzene	9.5	95.5	80.5	119.5	95	55	136
1,2-Dichlorobenzene	9.8	97.6	68.0	132.0	98	37	154
1,3-Dichlorobenzene	9.3	93.4	72.5	127.5	93	50	141
1,4-Dichlorobenzene	9.1	91.3	69.5	130.5	91	42	143
• Diisopropyl ether	9.2	91.7	43.1	156.9	92	30	170
Ethylbenzene	10.0	100.4	63.0	137.0	100	32	160
• MTBE	9.5	94.9	46.8	153.2	95	35	165
Toluene	9.7	96.7	77.5	127.0	97	46	148
• m,p-Xylene	19.9	99.4	11.2	188.8	99	D	239
• o-Xylene	8.9	89.4	47.6	152.4	89	36	164

Flags :

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

Reviewed by: *PN*



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW14
Client Project ID: NV014
Lab Sample ID: G650-57-1H
Lab Project ID: G650-57

Analyzed By: MRC
Date Collected: 5/17/2006 10:05
Date Received: 5/18/2006
Date Extracted: 5/24/2006
Matrix: Water

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



Results for Semivolatiles
by GCMS 625

Client Sample ID: USTBB190-MW14
Client Project ID: NV014
Lab Sample ID: G650-57-1H
Lab Project ID: G650-57

Analyzed By: MRC
Date Collected: 5/17/2006 10:05
Date Received: 5/18/2006
Date Extracted: 5/24/2006
Matrix: Water

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

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.2	72
2-Fluorophenol	10	6.2	62
Nitrobenzene-d5	10	6.5	65
Phenol-d6	10	6.2	62
2,4,6-Tribromophenol	10	6.9	69
4-Terphenyl-d14	10	7.4	74

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: USTBB190-MW14
Client Project ID: NV014
Lab Sample ID: G650-57-1H
Lab Project ID: G650-57
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/17/2006 10:05
Date Received: 5/18/2006
Date Extracted: 5/24/2006
Date Analyzed: 6/1/2006
Matrix: Water

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

Comment:

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

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

Reviewed by:



Results for Semivolatiles
by GCMS 625

Client Sample ID: PSWBB47
Client Project ID: NV014
Lab Sample ID: G650-57-2H
Lab Project ID: G650-57

Analyzed By: MRC
Date Collected: 5/17/2006 10:20
Date Received: 5/18/2006
Date Extracted: 5/24/2006
Matrix: Water

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



Results for Semivolatiles
by GCMS 625

Client Sample ID: PSWBB47
Client Project ID: NV014
Lab Sample ID: G650-57-2H
Lab Project ID: G650-57

Analyzed By: MRC
Date Collected: 5/17/2006 10:20
Date Received: 5/18/2006
Date Extracted: 5/24/2006
Matrix: Water

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

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.4	74
2-Fluorophenol	10	6.5	65
Nitrobenzene-d5	10	6.9	69
Phenol-d6	10	6.2	62
2,4,6-Tribromophenol	10	6.8	68
4-Terphenyl-d14	10	8	80

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: PSWBB47
Client Project ID: NV014
Lab Sample ID: G650-57-2H
Lab Project ID: G650-57
Sample Wt/Vol: 500 ML
Dilution: 1

Analyzed By: MRC
Date Collected: 5/17/2006 10:20
Date Received: 5/18/2006
Date Extracted: 5/24/2006
Date Analyzed: 6/1/2006
Matrix: Water

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

Comment:

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

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

Reviewed by:



Results for Semivolatiles
by GCMS 625

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB5245
Lab Project ID:

Analyzed By: MRC
Date Collected:
Date Received:
Date Extracted: 5/24/2006
Matrix: WATER

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	10.0	1.22	1	5/31/2006	
Acenaphthylene	BQL	10.0	1.12	1	5/31/2006	
Anthracene	BQL	10.0	1.75	1	5/31/2006	
Benzo[a]anthracene	BQL	10.0	1.36	1	5/31/2006	
Benzo[a]pyrene	BQL	10.0	1.27	1	5/31/2006	
Benzo[b]fluoranthene	BQL	10.0	1.43	1	5/31/2006	
Benzo[g,h,i]perylene	BQL	10.0	4.57	1	5/31/2006	
Benzo[k]fluoranthene	BQL	10.0	1.09	1	5/31/2006	
Bis(2-chloroethoxy)methane	BQL	10.0	1.11	1	5/31/2006	
Bis(2-chloroethyl)ether	BQL	10.0	1.09	1	5/31/2006	
Bis(2-chloroisopropyl)ether	BQL	10.0	1.57	1	5/31/2006	
Bis(2-ethylhexyl)phthalate	BQL	10.0	1.33	1	5/31/2006	
4-bromophenyl phenyl ether	BQL	10.0	1.99	1	5/31/2006	
Butylbenzylphthalate	BQL	10.0	1.53	1	5/31/2006	
2-Chloronaphthalene	BQL	10.0	1.25	1	5/31/2006	
2-Chlorophenol	BQL	10.0	4.22	1	5/31/2006	
4-Chloro-3-methylphenol	BQL	10.0	3.26	1	5/31/2006	
4-Chlorophenyl phenyl ether	BQL	10.0	1.42	1	5/31/2006	
Chrysene	BQL	10.0	1.11	1	5/31/2006	
Dibenzo[a,h]anthracene	BQL	10.0	4.87	1	5/31/2006	
Di-n-Butylphthalate	BQL	10.0	1.65	1	5/31/2006	
1,2-Dichlorobenzene	BQL	10.0	1.25	1	5/31/2006	
1,3-Dichlorobenzene	BQL	10.0	1.24	1	5/31/2006	
1,4-Dichlorobenzene	BQL	10.0	1.20	1	5/31/2006	
3,3'-Dichlorobenzidine	BQL	20.0	4.10	1	5/31/2006	
2,4-Dichlorophenol	BQL	10.0	3.75	1	5/31/2006	
Diethylphthalate	BQL	10.0	1.48	1	5/31/2006	
Dimethylphthalate	BQL	10.0	1.04	1	5/31/2006	
2,4-Dimethylphenol	BQL	10.0	9.25	1	5/31/2006	
Di-n-octylphthalate	BQL	10.0	1.16	1	5/31/2006	
4,6-Dinitro-2-methylphenol	BQL	50.0	3.71	1	5/31/2006	
2,4-Dinitrophenol	BQL	50.0	4.20	1	5/31/2006	
2,4-Dinitrotoluene	BQL	10.0	1.52	1	5/31/2006	
2,6-Dinitrotoluene	BQL	10.0	1.41	1	5/31/2006	
Diphenylamine *	BQL	10.0	1.53	1	5/31/2006	
Fluoranthene	BQL	10.0	1.41	1	5/31/2006	
Fluorene	BQL	10.0	1.22	1	5/31/2006	
Hexachlorobenzene	BQL	10.0	1.22	1	5/31/2006	
Hexachlorobutadiene	BQL	10.0	1.58	1	5/31/2006	
Hexachlorocyclopentadiene	BQL	20.0	20.0	1	5/31/2006	
Hexachloroethane	BQL	10.0	1.58	1	5/31/2006	
Indeno(1,2,3-c,d)pyrene	BQL	10.0	4.57	1	5/31/2006	
Isophorone	BQL	10.0	1.27	1	5/31/2006	
Naphthalene	BQL	10.0	1.08	1	5/31/2006	



Results for Semivolatiles
by GCMS 625

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB5245
Lab Project ID:

Analyzed By: MRC
Date Collected:
Date Received:
Date Extracted: 5/24/2006
Matrix: WATER

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Nitrobenzene	BQL	10.0	1.32	1	5/31/2006	
2-Nitrophenol	BQL	10.0	3.52	1	5/31/2006	
4-Nitrophenol	BQL	50.0	3.17	1	5/31/2006	
N-Nitrosodi-n-propylamine	BQL	10.0	1.87	1	5/31/2006	
Pentachlorophenol	BQL	50.0	2.83	1	5/31/2006	
Phenanthrene	BQL	10.0	1.38	1	5/31/2006	
Phenol	BQL	10.0	3.38	1	5/31/2006	
Pyrene	BQL	10.0	2.08	1	5/31/2006	
1,2,4-Trichlorobenzene	BQL	10.0	1.33	1	5/31/2006	
2,4,6-Trichlorophenol	BQL	10.0	2.92	1	5/31/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	6.7	67
2-Fluorophenol	10	5.7	57
Nitrobenzene-d5	10	6.2	62
Phenol-d6	10	5.6	56
2,4,6-Tribromophenol	10	6.8	68
4-Terphenyl-d14	10	7.4	74

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By:



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-5245-MS/MSD/LCS

Date Extracted: 05/24/06

Lab Project ID:

Date Analyzed: 06/01/06

Matrix: WATER

Analyzed By: MRC

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	200	175	87.4	200	172	86.1	1.50	30	62.0-119
4-Chloro-3-methylphenol	BQL	200	164	81.8	200	158	78.8	3.74	30	67.0-109
2-Chlorophenol	BQL	200	142	70.9	200	145	72.6	2.37	30	59.0-95.0
1,4-Dichlorobenzene	BQL	200	105	52.4	200	96.4	48.2	8.35	30	29.0-86.0
2,4-Dinitrotoluene	BQL	200	185	92.4	200	177	88.4	4.42	30	63.0-103
N-Nitrosodi-n-propylamine	BQL	200	172	85.9	200	168	84.2	2.00	30	67.0-107
4-Nitrophenol	BQL	200	183	91.3	200	169	84.7	7.50	30	49.0-146
Pentachlorophenol	BQL	200	140	69.8	200	132	65.8	5.90	30	43.0-106
Phenol	BQL	200	141	70.4	200	140	69.8	0.856	30	61.0-100
Pyrene	BQL	200	176	88.0	200	166	83.0	5.85	30	41.0-123
1,2,4-Trichlorobenzene	BQL	200	147	73.7	200	137	68.4	7.46	30	41.0-96.0

	Spiked Amount (µg/L)	LCS Conc. (µg/L)	LCS Spike %	QC Limits
				% Rec.
Acenaphthylene	100	86.9	86.9	72.9-127
4-Chloro-3-methylphenol	100	77.0	77.0	61.6-113
2-Chlorophenol	100	69.5	69.5	52.3-104
1,4-Dichlorobenzene	100	46.2	46.2	27.3-85.0
2,4-Dinitrotoluene	100	90.3	90.3	66.5-117
N-Nitrosodi-n-propylamine	100	83.3	83.3	54.4-119
4-Nitrophenol	100	80.3	80.3	32.4-150
Pentachlorophenol	100	60.8	60.8	23.9-115
Phenol	100	67.5	67.5	54.5-106
Pyrene	100	88.1	88.1	63.5-126
1,2,4-Trichlorobenzene	100	68.6	68.6	49.1-98.5

Comments:

Concentrations reflect the spiked sample amounts.

Flags:

* = Out of limits.

NA = Not applicable.

Reviewed By:



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW14
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/17/06
Date Received	05/18/06
Date Extracted	05/31/06
Date Analyzed	05/31/06
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	89
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: G650-57-1D

Reviewed By: ew



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	PSWBB47
Sample Matrix	Water
Collection Option (for Soil)*	
Date Collected	05/17/06
Date Received	05/18/06
Date Extracted	05/31/06
Date Analyzed	05/31/06
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: G650-57-2E

Reviewed By: ESL



Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date:

05/04/06

PID Initial Calibration Date:

05/04/06

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	18.2	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	18.50	Calibration Factor
	250		
	500		
	750		
	1000		

Calibration Check Date:

05/31/06

Calibration Check

Range	Levels (µg/L) (mg/Kg)		RPD
C ₅ -C ₈ Aliphatics	2000	200	0.3
C ₉ -C ₁₂ Aliphatics	500	50	2.6
C ₉ -C ₁₀ Aromatics	500	50	17.2

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: NV014

Sample Information and Analytical Results	
Sample Identification	USTBB190-MW14
Sample Matrix	Water
Date Collected	05/17/06
Date Received	05/18/06
Date Extracted	05/30/06
Date Analyzed	06/05/06
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	80
Aromatic Surrogate % Recovery	74
Fractionation Surrogate 1 % Recovery	83

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-57-11

Reviewed By: EV



EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Sovereign Consulting

Project Name: NV014

Sample Information and Analytical Results	
Sample Identification	PSWBB47
Sample Matrix	Water
Date Collected	05/17/06
Date Received	05/18/06
Date Extracted	05/30/06
Date Analyzed	06/05/06
Dry Weight	
Dilution Factor	1:1
C ₉ -C ₁₈ Aliphatics*	< 100 (ug/L)
C ₁₉ -C ₃₈ Aliphatics*	< 100 (ug/L)
C ₁₁ -C ₂₂ Aromatics*	< 100 (ug/L)
Aliphatic Surrogate % Recovery	81
Aromatic Surrogate % Recovery	72
Fractionation Surrogate 1 % Recovery	81

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G650-57-2I

Reviewed By:



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)	RL (mg/Kg)
C ₉ -C ₁₈ Aliphatics	3.84	12.2	100	10
C ₁₉ -C ₃₈ 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 ₃₈ 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: 06/04/06

Calibration Check

Range	Levels (µg/mL)	RPD
C ₉ -C ₁₈ Aliphatics	120	11.8
C ₁₉ -C ₃₈ Aliphatics	160	-6.5
C ₁₁ -C ₂₂ Aromatics	340	14.9

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve



List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit (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.

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Write - Returned by Lab
Yellow - Returned with Report

APPENDIX C

FIELD DATA

[illegible]

MCB Camp LeJeune and New River MCAS

Weather:

~~NOT~~
BB190
05/10/06

Well Condition:

MWO2

USTBBI90.MW02

ALL DEPTHS ARE TO BE COLLECTED FROM THE TOP OF THE CASING.

Total Depth from TOC (feet):

Sampler Name:

9.65

1.57

1158

1219

22

IF

COLLECT READINGS AT THE START OF PURGING, AFTER EACH AND EVERY WELL VOLUME IS PURGED, AND AFTER SAMPLING IS COMPLETED.

[illegible]

PURGING AND BAILING GROUNDWATER SAMPLING FORM
MCB Camp LeJeune and New River MCAS

Project Number: NV014
 Project Name: BB190
 Date: 05/10/06
 Weather: _____

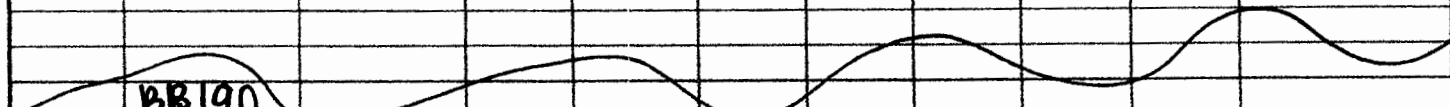
Well ID: MW03
 Sample ID: USTBB190-MW03
 Well Condition: _____

ALL DEPTHS ARE TO BE COLLECTED FROM THE TOP OF THE CASING.

Protective Casing Diameter (inch): _____
 Inner Casing Diameter (inch): 2"
 Inner Casing Material: _____
 Purge/Sample Method: _____
 PID/FID Reading of Well Headspace (ppm)
 Before Cap Removal: _____
 After Cap Removal: _____
 Depth to Product from TOC (feet): _____
 Initial Depth to Water from TOC (feet): 7.64
 Product Thickness (feet): _____
 Depth to Top of Screen from TOC (feet): _____
 Total Depth from TOC (feet): 17.11

Water Column (feet): 9.47
 Casing Volume (gal): 1.54
 Pump Intake Setting from TOC (feet): _____
 DTW After Pump Installed: _____
 Start Purge Date/Time: 1009
 End Purge Date/Time: 1034
 Total Volume Purged (gal): _____
 Depth to Water After Purge from TOC (feet): _____
 Pre-Sample Depth to Water from TOC (feet): _____
 Start Sample Date/Time: _____
 End Sample Date/Time: 1036
 Sampler Name: SF

COLLECT READINGS AT THE START OF PURGING, AFTER EACH AND EVERY WELL VOLUME IS PURGED,
 AND AFTER SAMPLING IS COMPLETED.

Time	Rate (gal/min)	Cumulative Gallons Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1024	200 ml/min	2	7.38	0.377	20.78	1.52	19.0	13.8		
1027			7.31	0.372	20.47	1.19	18.7	15.2		
1030			7.19	0.366	20.01	0.91	20.9	18.9		
1033			7.11	0.364	19.93	0.84	18.4	23.0		
										
<u>MW04</u>										
	<u>BB190</u>									
	<u>05/11/06</u>									
		<u>2"</u>								
	DTW	<u>10.55'</u>	Water Column			<u>11.25 ft</u>		Start Purge	<u>1333</u>	
	DTB	<u>17.80'</u>	Casing Volume			<u>1.83 gal</u>		End	<u>1403</u>	
								Sample	<u>1405</u>	
1353			5.96	0.145	19.24	0.35	11	52.5		
1356			5.97	0.144	19.39	0.35	9.5	50.7		
1359			5.97	0.144	19.41	0.35	15	48.1		
1402			5.97	0.145	19.49	0.40	11	45.8		

[illegible]

Project Number:
Project Name:
Date:
Weather:

NV014
BB190
5/11/06
shows

Well ID:
Sample ID:
Well Condition:

MW05
USTBB/90-11W05

Protective Casing Diameter (inch): 2"

Inner Casing Diameter (inch):

Inner Casing Material:

Purge/Sample Method:

PID/FID Reading of Well Headspace (ppm)

Before Cap Removal:

After Cap Removal:

Depth to Product from TOC (feet):

Initial Depth to Water from TOC (feet): 6.55

Product Thickness (feet):

Depth to Top of Screen from TOC (feet):

Total Depth from TOC (feet): 15.55

Water Column (feet): 9.20

Casing Volume (gal): 1.467

Pump Intake Setting from TOC (feet):

DTW After Pump Installed:

Start Purge Date/Time: 09/10

End Purge Date/Time:

Total Volume Purged (gal):

Depth to Water After Purge from TOC (feet):

Pre-Sample Depth to Water from TOC (feet):

Start Sample Date/Time:

End Sample Date/Time: 10/10

Sampler Name: JF

[illegible]

PURGING AND BAILING GROUNDWATER SAMPLING FORM
MCB Camp LeJeune and New River MCAS

Project Number: N0014
 Project Name: BB190
 Date: 05/11/06
 Weather: _____

Well ID: MW06
 Sample ID: USTBB190-MW06
 Well Condition: _____

ALL DEPTHS ARE TO BE COLLECTED FROM THE TOP OF THE CASING.

Protective Casing Diameter (inch): _____
 Inner Casing Diameter (inch): 2'
 Inner Casing Material: _____
 Purge/Sample Method: _____
 PID/FID Reading of Well Headspace (ppm)
 Before Cap Removal: _____
 After Cap Removal: _____
 Depth to Product from TOC (feet): _____
 Initial Depth to Water from TOC (feet): 5.22
 Product Thickness (feet): _____
 Depth to Top of Screen from TOC (feet): _____
 Total Depth from TOC (feet): 17.15

Water Column (feet): 11.93
 Casing Volume (gal): 1.94
 Pump Intake Setting from TOC (feet): _____
 DTW After Pump Installed: _____
 Start Purge Date/Time: 1001
 End Purge Date/Time: 1027
 Total Volume Purged (gal): _____
 Depth to Water After Purge from TOC (feet): _____
 Pre-Sample Depth to Water from TOC (feet): _____
 Start Sample Date/Time: _____
 End Sample Date/Time: 1029
 Sampler Name: SF

COLLECT READINGS AT THE START OF PURGING, AFTER EACH AND EVERY WELL VOLUME IS PURGED,
 AND AFTER SAMPLING IS COMPLETED.

Time	Rate (gal/min)	Cumulative Gallons Purged	pH (SI Units)	Conductivity (µohms/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Depth to Water (ft)	Comments
1016	200ml/min	2 gal	6.47	0.263	18.97	0.54	0.46	0.6		
1019			6.40	0.254	18.96	0.66	0.00	0.0		
1022			6.37	0.251	18.99	0.72	0.00	-0.3		
1025			6.32	0.247	18.79	0.49	0.00	-1.3		
<i>MW10</i>										
	<i>05/11/06</i>		<i>Water Column 10.73</i>							<i>MW10</i>
			<i>Casing Volume 1.75 gal</i>							<i>USTBB190-MW10</i>
<i>DTW</i>	<i>2"</i>									<i>Purge Start 1041</i>
<i>DTB</i>	<i>5.27</i>									<i>End 1110</i>
	<i>16.00</i>									<i>Sample 1111</i>
										<i>SF</i>
1100			6.38	0.359	19.01	0.87	16.2	5.0		
1103			6.38	0.360	19.80	0.45	10.17	2.9		
1106			6.39	0.360	19.05	0.38	8.50	1.6		
1109			6.40	0.361	19.06	0.40	8.78	-0.4		
<i>MW12</i>										
<i>DTW</i>	<i>4.82</i>	<i>2"</i>	<i>Water Column 9.41</i>							<i>Purge Start 1300</i>
<i>DTB</i>	<i>14.23</i>		<i>Casing Volume 1.53</i>							<i>End 1320</i>
										<i>Sample 1321</i>
1310			6.20	0.206	18.90	0.60	19	26.6		
1313			6.16	0.203	18.53	0.61	2.3	23.6		
1316			6.14	0.201	18.32	0.48	9.4	18.9		
1319			6.14	0.205	18.35	0.49	8.7	17.6		

Project Number: NV014
Project Name: BB190
Date: 05/10/06
Weather:

[illegible]

[illegible]

[illegible]

Project Number: NV014
Project Name: BB190
Date: 05/11/06
Weather:

Well ID: MW10
Sample ID: USTBB190-MW10
Well Condition:

Protective Casing Diameter (inch):	2"
Inner Casing Diameter (inch):	
Inner Casing Material:	
Purge/Sample Method:	
PID/FID Reading of Well Headspace (ppm)	
Before Cap Removal:	
After Cap Removal:	
Depth to Product from TOC (feet):	
Initial Depth to Water from TOC (feet):	3.27
Product Thickness (feet):	
Depth to Top of Screen from TOC (feet):	
Total Depth from TOC (feet):	16.00

Water Column (feet): 10.73

Casing Volume (gal): 1.75 gal

Pump Intake Setting from TOC (feet):

DTW After Pump Installed:

Start Purge Date/Time: 10/4/10

End Purge Date/Time: 11/10

Total Volume Purged (gal):

Depth to Water After Purge from TOC (feet):

Pre-Sample Depth to Water from TOC (feet):

Start Sample Date/Time:

End Sample Date/Time: 11/11

Sampler Name: SF

[illegible]

[illegible]

[illegible]

Project Number:
Project Name:
Date:
Weather:

NV2014
CHB
5/11/06

Well ID:
Sample ID:
Well Condition:

MW13
USTBB, 90-MW13

Protective Casing Diameter (inch):

2

Inner Casing Diameter (inch):

Inner Casing Material:

Purge/Sample Method:

PID/FID Reading of Well Headspace (ppm)

Before Cap Removal:

After Cap Removal:

Depth to Product from TOC (feet):

Initial Depth to Water from TOC (feet):

13.58

Product Thickness (feet):

Depth to Top of Screen from TOC (feet):

50.85

Water Column (feet):

$$\begin{array}{r} 37.27 \\ \hline 6.07 \end{array}$$

Casing Volume (gal):

Pump Intake Setting from TOC (feet):

DTW After Pump Installed:

Start Purge Date/Time:

End Purge Date/Time:

Total Volume Purged (gal):

Depth to Water After Purge from TOC (feet):

Pre-Sample Depth to Water from TOC (feet):

Start Sample Date/Time:

End Sample Date/Time:

Sampler Name:

1420

[illegible]

Project Number:
Project Name:
Date:
Weather:

NV014
Courthouse Bay
5/17/06

Well ID:

Sample ID:

Well Condition:

MW14
UST BB190-MW14

Protective Casing Diameter (inch):

Inner Casing Diameter (inch):

Inner Casing Material:

Purge/Sample Method:

PID/FID Reading of Well Headspace (ppm)

Before Cap Removal:

After Cap Removal:

Depth to Product from TOC (feet):

Initial Depth to Water from TOC (feet):

Product Thickness (feet):

Depth to Top of Screen from TOC (feet):

Total Depth from TOC (feet):

Water Column (feet):

Casing Volume (gal):

Pump Intake Setting from TOC (feet):

DTW After Pump Installed:

Start Purge Date/Time:

End Purge Date/Time:

Total Volume Purged (gal):

Depth to Water After Purge from TOC (feet):

Pre-Sample Depth to Water from TOC (feet):

Start Sample Date/Time:

End Sample Date/Time:

Sampler Name:[illegible]

[illegible]

[illegible]

Project Number: NVO14
Project Name: BB190
Date: 05/10/06
Weather:

* Duplicate

Project Number:
Project Name:
Date:
Weather:

NVO14
Cawthorne Bay
5/17/06

Well ID:
Sample ID:
Well Condition:

PSWBB47
PSWBB44

Protective Casing Diameter (inch): _____

Inner Casing Diameter (inch): _____

Inner Casing Material: _____

Purge/Sample Method: _____

PID/FID Reading of Well Headspace (ppm)

Before Cap Removal: _____

After Cap Removal: _____

Depth to Product from TOC (feet): _____

Initial Depth to Water from TOC (feet): _____

Product Thickness (feet): _____

Depth to Top of Screen from TOC (feet): _____

Total Depth from TOC (feet): _____

Water Column (feet): _____

Casing Volume (gal): _____

Pump Intake Setting from TOC (feet): _____

DTW After Pump Installed: _____

Start Purge Date/Time: _____

End Purge Date/Time: _____

Total Volume Purged (gal): _____

Depth to Water After Purge from TOC (feet): _____

Pre-Sample Depth to Water from TOC (feet): _____

Start Sample Date/Time: _____

End Sample Date/Time: _____

Sampler Name: _____

[illegible]

Date: 5/10/06
SITE: BB190
MCB Camp Lejeune and Ne
Gauged By: TE

[illegible]

APPENDIX D

UPDATED 2006 RISK CLASSIFICATION AND LAND USE FORM

RISK CHARACTERIZATION
2006 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 nearby 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? **YES**
Potable water supply wells PSWBB44 and PSWBB47 are located 1,350 feet north-northeast and approximately 100 feet north of Building BB-190.
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**
However, potable water supply wells are used for drinking water purposes as described in #3 above.
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**
While water supply well PSWBB47 is located within 500 feet of the site, there are an adequate number of locations for additional water supply wells to be installed on other portions of the Base.
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.
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? **NO**
There are no surface water bodies within 500 feet of the site. The nearest body of water is the New River and is located approximately 1,600 feet south 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)? **YES**
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) includes this site within a potential wellhead protection area.
9. Is the release located in the Coastal Plain physiographic region as designated on a map entitled "Geology of North Carolina" published by the Department in 1985? **YES**
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 as very fine to fine grained sand extending to a depth of approximately 15 feet below ground surface (bgs), with surficial aquifer groundwater encountered between four and 15 feet bgs. The fine sands are underlain by a silty organic clay varying in thickness from approximately two to five feet; the clay unit is not continuous across the site. Clayey sands and silty sands extending from approximately 20 feet bgs to 30 feet bgs are present beneath the clay. Sandy-silty limestone with shell fragments are encountered at approximately 30 feet bgs, and extend to at least 50 feet bgs. In addition, the three deep wells are each paired with a shallow well, with the deep/shallow pairs being MW-13/MW-4, MW-14/MW-6, and MW-15/MW-7. From elevation data collected during this event, the groundwater elevations in the each of the deep wells are lower than the groundwater elevations in the corresponding shallow well of each pair. This indicates a potential for downward movement of surficial aquifer groundwater. The elevation differences, however, in the well pairs suggests that the clay layer may be acting as a semi-confining unit, and as such, vertical flow between the groundwater of the surficial aquifer and the groundwater of underlying limestone unit would be retarded. There were no contaminants detected in any of the deep wells during this event.
10. Do the levels of groundwater contamination for any contaminant exceed the gross contamination levels (see Table 9) established by the Department? **NO**
Based on the current groundwater conditions and analytes analyzed, groundwater contaminants do exceed the gross contamination levels.

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)? **NO**
The project area does not contain any primary or secondary residence.

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. **NO**
3. Does the property contain a commercial (e.g., retail, warehouse, office/business space, etc.) or industrial (e.g., manufacturing, utilities, industrial research and development, chemical/petroleum bulk storage, etc.) enterprise, an inactive commercial or industrial enterprise, or is the land undeveloped?
The subject area is an active wastewater treatment plant. **YES**
4. Do children visit the property?
Children would not typically visit the property.
Is access to the property reliably restricted consistent with its use (e.g., by fences, security personnel or both)?
There is a fence that surrounds the property. **YES**
5. Do pavement, buildings, or other structures cap the contaminated soil?
The area is generally paved in the area of the former UST. Some small areas of grass and concrete exist throughout the site as shown in the site figures.
Appropriate land use restrictions could be implemented to restrict use of soils at the site. **YES**
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?
The designated use of military property is not likely to change in the foreseeable future. **NO**

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)? A barracks, BB255, is located approximately 600 feet to the north northwest of the site.
2. What is the distance from the source area of the release to the **nearest** school, daycare center, hospital, playground, park, recreation area, church, nursing home or other place of public assembly? There are three recreational field areas within 2,000 feet of the site. See Figure 1 of the 2006 Sovereign Annual Monitoring Report.

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. BB177 is an operational gas station and BB245 is a Marine Corps Exchange retail shop.

Receptor Information

1. **Water Supply Wells**
There are two water supply wells near the site as previously described – PSWBB44 and PSWBB47. Refer to Figure 1 for locations.
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 New River is located approximately 1,600 feet south of the site. A low area exists on site near the water tower (located adjacent to MW10) where water tends to stand during and after rain events.
4. **Wellhead Protection Areas**
According to the Wellhead Protection Plan – 2002 Update prepared by AH Environmental, the site is 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 Type III wells do not exhibit groundwater contaminant concentrations. 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.