

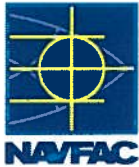
FINAL ANNUAL GROUNDWATER MONITORING REPORT 2008-2009

BUILDINGS M-232-236

NCDENR Incident Number: 9593

Marine Corps Base
Camp Lejeune, North Carolina

Prepared for:



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LIST OF ACRONYMS

BDL	Below Detection Limit
BLS	Below Ground Surface
BQL	Below Quantitation Limit
BLS	Below Land Surface
DTW	Depth to Water
EMD	Environmental Management Division
EPA	Environmental Protection Agency
EPH	Extractable Petroleum Hydrocarbons
EQB	Environmental Quality Branch
FT	Feet
GCL	Gross Contaminant Level
I&E	Installations and Environment Department
2L GWQS	NCAC T15A:02L Groundwater Quality Standards
m	Meter
MADEP	Massachusetts Department of Environmental Protection
MCB	Marine Corps Base
MSCC	Maximum Soil Contaminant Concentration
MSL	Mean Sea Level
MTBE	Methyl tertiary butyl ether
µg/L	Micrograms per Liter
NA	Not Analyzed
N/A	Not Applicable
NAVFAC	Naval Facilities Engineering Command Atlantic
NC	North Carolina
NCDENR	North Carolina Department of Environment and Natural Resources
2L GWQS	North Carolina Groundwater Quality Standards
NE	None Established
QA/QC	Quality Assurance/Quality Control
STGW	Soil-to-Groundwater
SVOC	Semi Volatile Organic Compound
TIC	Tentatively Identified Compound
TOC	Top of Casing
TPH	Total Petroleum Hydrocarbons
US	United States
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
VPH	Volatile Petroleum Hydrocarbons

EXECUTIVE SUMMARY

Buildings M-232 through 236 are located in the Camp Johnson area of Marine Corps Base (MCB) Camp Lejeune along Hayes Street. The buildings are currently utilized as bachelor housing quarters. The 2007 risk classification and land use form indicates the site is residential with intermediate risk, which is due to the presence of free product at the site.

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

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

Site groundwater monitoring was conducted by various contractors from 1993 through 2008. Data showed the persistence of free product at the site; however, a downward trend was observed in groundwater contaminant levels.

In recent years, free product was consistently observed at the site in only monitoring well MW19, located in the vicinity of the former UST associated with Building M-235. In an effort to address the free product, MCB Camp Lejeune conducted a soil excavation event from April 30 – May 2, 2007 in the MW19 area. Confirmation soil samples from the MW19 soil excavation indicate that contaminants are present above the soil to groundwater (STGW) maximum soil contaminant concentrations (MSCCs), but below the residential and industrial/commercial MSCCs. The compound 4-isopropyltoluene was also detected in the soil samples, for which there are no established MSCCs.

Historical groundwater sampling results for the site indicate either no or low quantities of contaminant compounds. Noncompliant C₉-C₂₂ Aromatics concentrations have been generally detected at the site in the monitoring wells which are located in the former tank basins (MW18, MW19 (replaced as MW23), MW20, MW21, and MW22).

During the 2008-2009 monitoring period, Osage of Virginia Inc. (Osage) conducted quarterly monitoring well gauging of the 22 site monitoring wells and semi-annual sampling of nine select monitoring wells. Groundwater samples were analyzed for volatile and semi-volatile compounds via EPA Methods 602, and 625 in accordance with the program scope of work, as well as volatile and extractable hydrocarbons using the MADEP methods. The second groundwater sampling event was postponed due to soil excavation activities in the former tank basins. These soil excavations are currently underway as of the preparation of this report. CATLIN Engineers and Scientists (CATLIN) will present the findings of the soil excavations under separate cover, and groundwater sampling results from the tank basin monitoring wells will be included in their report.

Free product was identified during the 2008-2009 monitoring period in July 2008 (MW23) and March 2009 (MW22). No volatile organic compounds (VOCs) were detected at the site above the North Carolina 2L Groundwater Quality Standards (2L GWQSs). Only one semi volatile organic compound (SVOC), Bis(2-ethylhexyl)phthalate, was detected in groundwater at the site above the 2L GWQS. Those detections were in monitoring wells MW01, MW03, MW05, and MW15. None of the concentrations, however, exceeded the Gross Contaminant Level (GCL). Noncompliant MADEP hydrocarbon fractions (C₉ – C₂₂ Aromatics) were detected in wells MW18, MW20, MW21, and MW22 above the 2L GWQS. Data from Osage's 2008-2009 monitoring events are presented in this report.

Based on the findings of this report, Osage recommends continuing quarterly gauging of all site monitoring wells and semi-annual sampling of select monitoring wells (MW01, MW03, MW05, MW08, MW18, MW20, MW21, MW22, and MW23). Recurrence of free product in site wells should be monitored, and product recovery should be conducted as indicated by the gauging data.

1.0 TITLE PAGE

DATE OF REPORT: June 2009

Facility I.D.: M-232-236

UST Incident Number: 9593

Site Name: M-232-236

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

Nearest City/Town: Camp Lejeune

County: Onslow

Risk Classification: Intermediate Risk

Land Use Classification: Residential

UST Owner: Commanding Officer- MCB Camp Lejeune

I&E/EMD/EOB

PSC Box 20004

Address: MCB Camp Lejeune, NC 28542-0004

Phone: (910) 451-5068

UST Operator: Same as above

Address: Same as above

Phone: Same as above

Property Owner: Same as above

Address: Same as above

Phone: Same as above

Property Occupant: Same as above

Address: Same as above

Phone: Same as above

Consultant/Contractor: CATLIN Engineers and Scientists

Address: 220 Old Dairy Rd.

Wilmington, NC 28405

Phone: (910) 452-5861

Osage of Virginia

2618A Colley Ave

Norfolk, VA 23517

Phone: (757) 440-0400

Release Information

Date Discovered: May 1990

Latitude:

34° 43' 13" N

Longitude:

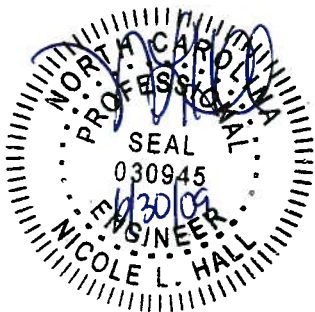
77° 24' 52" W

Estimated Quantity of Release: Unknown

Cause of Release: Unknown

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

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



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

2.0 INTRODUCTION

The purpose of this report is to summarize data from groundwater gauging and sampling events at Buildings M-232 through M-236 aboard MCB Camp Lejeune, North Carolina. The data was collected during the 2008 - 2009 monitoring period. The project's scope of work entailed four gauging events for 22 site monitoring wells and one groundwater sampling event of nine site monitoring wells. The four gauging events were conducted to measure and record the depth to free product (if present) and depth to groundwater. The sampling event was conducted to analyze the site groundwater for petroleum constituents using USEPA Methods 602 plus xylenes, 625 plus the 10 largest non target peaks, and the MADEP Methods VPH and EPH. Data for Osage's 2008 - 2009 monitoring and sampling events are presented in this report.

3.0 SITE HISTORY

Buildings M-232 through M-236 are located along Hayes Street within Camp Johnson, which is aboard MCB Camp Lejeune in Onslow County, North Carolina (Figure 3-1). The buildings are currently used as bachelors' quarters for military personnel.

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

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

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

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

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

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

Law continued conducting groundwater monitoring activities in 2000 and 2001. The monitoring program included quarterly well gauging at all site wells and semi-annual groundwater sampling at wells MW03 (identified as MW07), MW05, MW18, MW20, MW21, and MW22. The gauging data from these monitoring activities identified the presence of measurable free product only in monitoring well MW19, at thicknesses ranging from 0.12 foot to 0.61 foot. Free product recovery was conducted, and groundwater sampling data indicated few compounds were present at concentrations above 2L GWQSs (none above established GCLs). Law concluded that concentrations of detected constituents were generally decreasing over time.

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

EEI continued site monitoring activities with a new program that began in June 2004. Quarterly well gauging was conducted at 22 site monitoring wells, and semi-annual groundwater samples were obtained from monitoring wells MW05, MW07, MW18, MW20, MW21, and MW22. Free product was observed only in monitoring well MW19, which was located in the vicinity of the former UST associated with Building M235, during the 2004-2005 monitoring period. Product thicknesses in MW19 ranged from 0.10 foot to 0.49 foot. Product recovery was conducted via hand bailing. Laboratory analysis of groundwater samples from the two 2004 semi-annual groundwater sampling events indicated no VOC or SVOC concentrations above 2L GWQSs. The C9-C22 Aromatics were present at concentrations slightly above 2L GWQSs in wells MW18, MW20, and/or MW21. These wells are located in the immediate vicinity of the three former USTs associated with Buildings M-236, M-233, and M-232. The 2004-2005 gauging data indicate groundwater flow direction varied over time, resulting in limited net movement of groundwater across the site. The report indicated that the potential for migration of dissolved-phase constituents away from the former USTs was limited given site groundwater flow conditions.

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

Sovereign Consulting oversaw monitoring activities for the 2006-2007 and 2007-2008 monitoring periods. Quarterly gauging and semi-annual groundwater sampling was conducted. The program began with gauging events in August 2006, November 2006, January 2007, and April 2007, and groundwater sampling events in August 2006 and January 2007. The results of these activities were summarized in an annual groundwater monitoring report dated July 20, 2007. Measurable free product was observed in only monitoring well MW19 at the site in the amounts of 0.12 ft, 0.24 ft, 0.12 ft, and 0.45 ft during the August 2006, November 2006, January 2007, and April 2007 events, respectively. There were no detections of VOCs or SVOCs during the monitoring period above groundwater standards; however, C₉-C₂₂ Aromatics concentrations were all above the 2L GWQS of 210 µg/L.

In an effort to address the free product in MW19, MCB Camp Lejeune conducted a soil excavation event from April 30 – May 2, 2007 in the MW19 area adjacent to Building M-235. Confirmation soil samples from the soil excavation indicated that contaminants were present above the STGW MSCCs, but below the residential and industrial/commercial MSCCs. Monitoring well MW23 was installed June 21, 2007 as a replacement well for MW19.

From May 2007 to June 2008 Sovereign's monitoring included quarterly gauging of the 22 site monitoring wells and semi-annual groundwater sampling of wells MW01, MW03, MW05, MW08, MW09, MW15, MW18, MW20, MW21, and MW22. Free product was not observed in any of the monitoring wells that were gauged. Groundwater sampling results for the 2007-2008 monitoring period show there were no VOCs or SVOCs detected in groundwater at the site above the North Carolina 2L GWQSs. Noncompliant C₉-C₂₂ Aromatics concentrations were detected during the monitoring period in monitoring wells MW18, MW21, and MW22. Findings were reported in an Annual Groundwater Monitoring Report for the site dated June 30, 2008.

In August 2007, Sovereign also conducted a soil and groundwater investigation around the former tank basins, excluding the M-235 area since it was assessed in the Spring of 2007 as noted above. Investigation results were reported in a Final Soil Contamination Report dated August 29, 2008, which followed their Annual Report submittal. Soil samples were obtained from the approximate sidewalls and center of the former tank basins. Laboratory analysis of the soil samples showed noncompliant TPH GRO and DRO concentrations in each tank basin. Temporary piezometers were installed in the center of each former tank basin to collect a groundwater sample and monitor for free product. Free product was detected using an oil water interface probe in the location of M-233; therefore, no groundwater sample was collected. Groundwater samples from the remaining buildings (M-232, M-234, and M-236) exhibited noncompliant concentrations of Naphthalene and

C₉-C₂₂ Aromatics. As a result of the findings, MCB Camp Lejeune is conducting soil excavations of the former tank basins. Field work and reporting is currently underway as of the preparation of this report.

During the 2008-2009 monitoring period, Osage of Virginia Inc. (Osage) conducted quarterly monitoring well gauging of 22 wells and semi-annual sampling of nine monitoring wells. Groundwater samples were analyzed for volatile and semi-volatile compounds via EPA Methods 602, and 625 in accordance with the program scope of work, as well as volatile and extractable hydrocarbons using MADEP methods. The second sampling event was not completed, however, due to soil excavation activities, which are currently taking place. Data from Osage's 2008-2009 monitoring events are presented in this report.

24.0 MONITORING ACTIVITIES – 2008-2009

The 2008-2009 monitoring period consisted of quarterly gauging events of 22 monitoring wells and one groundwater sampling event of nine select wells. Activities were conducted in accordance with NCDENR guidance.

4.1 WELL GAUGING

All 22 groundwater monitoring wells were included in gauging activities at the site (Figure 4-1). The monitoring wells were gauged in July 2008, September 2008, December 2008, and March 2009 using an interface probe capable of measuring the depth to water and depth to product (if present) to the nearest 0.01 foot. Depth to water (DTW) values ranged from 3.38 feet (MW23, March 2009) to 14.48 feet (MW03, September 2008) below TOC. Measurable free product was detected in monitoring well MW22 (0.41 feet) during the March 2009 gauging event and in MW23 (0.03 feet) during the July 2008 event; free product was not observed during either the September or December 2008 gauging events. Gauging data for each well was recorded and is summarized in Table 4-1. Product plumes are also illustrated on the July 2008 and March 2009 groundwater elevation figures (Figures 4-2 and 4-5).

Top of casing elevations and DTW values were used to obtain groundwater elevations at the site. Based on the quarterly groundwater elevations and contours shown in Figures 4-2 through 4-5, a high point exists in the vicinity of MW23. Groundwater flows into the site from the northwest and northeast, which has been observed in previous reports.

4.2 GROUNDWATER SAMPLING

One groundwater sampling event was conducted in July 2008; the second sampling event was not conducted due to excavation activities being performed at the site. Groundwater was collected from monitoring wells MW01, MW03, MW05, MW08, MW15, MW18, MW20, MW21, and MW22 using low-flow purging and sampling methods. Note that since free product was measured in MW23, Osage did not collect a groundwater sample in July 2008. One duplicate sample was also collected during the sampling event. Samples were

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

The laboratory report and chain of custody documentation for the July 2008 sampling event is included in Appendix B. The analytical data for the groundwater sampling event is summarized in Table 4-2 and depicted in Figure 4-6.

July 2008 Groundwater Sampling Event

EPA Method 602

There were no VOCs detected in groundwater at the site above the North Carolina 2L GWQSSs. Only one VOC, Ethylbenzene, was detected in monitoring well MW22 (1.31 µg/L) at a concentration well below the 2L GWQS of 550 µg/L and GCL 84,500 µg/L.

EPA Method 625

Laboratory analysis detected five SVOCs (Acenaphthene, Bis(2-ethylhexyl)phthalate, Flourene, Naphthalene, and Phanthrene) in site groundwater. Only Bis(2-ethylhexyl)phthalate was detected at concentrations exceeding the 2L GWQS. Bis(2-ethylhexyl)phthalate exceeded the 2L GWQS (2.5 µg/L) in groundwater from wells MW01 (23.5 µg/L), MW03 (17.1 µg/L), MW05 (13.8 µg/L), and MW15 (17.2 µg/L). Bis(2-ethylhexyl)phthalate is not a petroleum-related compound. This compound is commonly used in plastics as a plasticizing agent. The occurrence of this compound is likely the result of sampling/laboratory artifact, resulting from the use of plastic sampling equipment and/or analytical instrument tubing.

All monitoring wells sampled during the monitoring period contained one or more TICs. TICs are substances not on the target compound list, and not all TICs are identified and quantified using individual standards. All TIC quantifications are estimated. Monitoring well MW01 contained 1 unknown TIC with a total concentration of 7.44 µg/L. Monitoring well MW03 contained 1 known TIC and 1 unknown TIC with a total concentration of 17.03 µg/L. Monitoring well MW05 contained 1 unknown TIC with a total concentration of 8.1 µg/L. Monitoring well MW08 contained 1 unknown TIC with a total concentration of 8.3 µg/L, and monitoring well MW15 contained 1 known TIC with a total concentration of 7.92 µg/L. Monitoring well MW18 contained 8 known and 2 unknown TICs with a total concentration of 149.3 µg/L; Monitoring well MW20 contained 1 known and 5 unknown TICs with a total concentration of 36.13 µg/L. Monitoring well MW21 contained 7 known and 3 unknown TICs with a total concentration of 138.7 µg/L, and finally, monitoring well MW22 contained 6 known and 3 unknown TICs with a total concentration of 88.74 µg/L.

MADEP Methods

C₉ - C₁₈ Aliphatics and C₉ - C₂₂ Aromatics were detected in groundwater samples obtained from the site. C₉ - C₁₈ Aliphatics were detected in monitoring well MW21 at a concentration of <901 µg/L, which is below the 2L GWQS of 4,200 µg/L. Monitoring wells MW18, MW20, MW21, and MW22 contained C₉ - C₂₂ Aromatics at concentrations of 398 µg/L, <226 µg/L, 434 µg/L, and <302 µg/L, respectively. These concentrations exceed the C₉ - C₂₂ Aromatics 2L GWQS of 210 µg/L.

Quality Assurance and Quality Control (QA/QC)

Laboratory-prepared trip blanks were analyzed for quality control. The trip blanks were analyzed for VOCs only. No VOCs were detected in the trip blanks.

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

5.0 RECEPTOR SURVEY

Osage reassessed site conditions and concluded that the receptor survey previously completed by Sovereign in 2007 still applies. There has been no change in receptor impact, and there have been no changes to land use of the site or the surrounding areas. The site was classified as intermediate risk with residential land use, and there are no water supply wells in the vicinity.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on fieldwork and laboratory analytical data gathered during the 2008-2009 monitoring period, the following conclusions are presented.

1. Previous investigations indicate petroleum constituent concentrations in vadose zone soils are present at the site in the former tank basins above the STGW MSCCs and State Action Limits for TPH.
2. Shallow surficial groundwater aquifer flow varies at the site with northeastern and southwestern components. Flow into the site is from the northwest and northeast as seen in previous reports.
3. Groundwater sampling results for the 2008-2009 monitoring period show there were no VOCs detected in groundwater at the site above the 2L GWQSs. One SVOC [Bis(2-ethylhexyl)phthalate] was detected at concentrations exceeding the 2L GWQS in wells MW01, MW03, MW05, and MW15. Noncompliant C₉-C₂₂ Aromatics concentrations were also detected during the monitoring period in monitoring wells MW18, MW20, MW21, and MW22.

In order to move toward the eventual goal of No Further Action status at the site, MCB Camp Lejeune will have to demonstrate that soils in the former UST basins do not contain contamination above applicable state action limits for TPH DRO and TPH GRO or STGW

MSCCs. Since the site is currently ranked as an intermediate site, soils must meet the lower of the residential or STGW MSCCs. A soil removal action is underway in the vicinity of the former UST basins of buildings M-232, M-233, M234, and M236. The removal action is scheduled to be completed by June 30, 2009.

To monitor free product and groundwater conditions, Osage recommends continuing quarterly gauging of all site monitoring wells and semi-annual sampling of select monitoring wells (MW01, MW03, MW05, MW08, MW18, MW20, MW21, MW22, and MW23). Groundwater samples should be analyzed for VOCs and SVOCs via EPA Methods 602 and 610, as well as MADEP VPH and EPH. Recurrence of free product in site wells should be monitored, and product recovery should be conducted as indicated by the gauging data.

7.0 REFERENCES

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TABLES

Table 4-1
Groundwater Elevation and Product Thickness Data
M232-236
MCB Camp Lejeune
Jacksonville, North Carolina

Monitoring Well	Top Of Casing Elevation (ft msl)	Well Diameter	Depth to Product	Depth to Water	Groundwater Elevation	Depth to Product	Depth to Water	Groundwater Elevation	Depth to Product	Depth to Water	Groundwater Elevation	Depth to Product	Depth to Water	Groundwater Elevation	Depth to Product	Depth to Water	Groundwater Elevation
			7/11/2008			7/14/2008			9/18/2008			12/24/2008			3/4/2009		
USTM232-236-MW01	13.98	2	NA	12.11	1.87	NA	10.38	3.60	NA	11.73	2.25	NA	9.68	4.30	NA	8.4	5.58
USTM232-236-MW02	13.65	2	NM	NM	NA	NA	11.66	1.99	NA	11.93	1.72	NA	11.92	1.73	NA	11.6	2.05
USTM232-236-MW03	16.26	2	NA	14.64	1.62	NA	14.27	1.99	NA	14.48	1.78	NA	14.45	1.81	NA	14.18	2.08
USTM232-236-MW04	16.10	2	NM	NM	NA	NA	14.09	2.01	NA	14.22	1.88	NA	13.35	2.75	NA	12.67	3.43
USTM232-236-MW05	12.92	2	NA	11.13	1.79	NA	10.83	2.09	NA	11.1	1.82	NA	11.13	1.79	NA	10.78	2.14
USTM232-236-MW06	12.76	2	NM	NM	NA	NA	10.11	2.65	NA	11.14	1.62	NA	9.1	3.66	NA	8	4.76
USTM232-236-MW07	12.58	2	NM	NM	NA	NA	8.9	3.68	NA	11.38	1.20	NA	9.01	3.57	NA	7.8	4.78
USTM232-236-MW08	12.59	2	NA	11.30	1.29	NA	10.88	1.71	NA	11.1	1.49	NA	11.15	1.44	NA	10.82	1.77
USTM232-236-MW09	14.24	2	NM	NM	NA	NA	12.59	1.65	NA	12.68	1.56	NA	12.81	1.43	NA	12.56	1.68
USTM232-236-MW10	13.70	2	NM	NM	NA	NA	12.17	1.53	NA	12.13	1.57	NA	12.12	1.58	NA	11.88	1.82
USTM232-236-MW11	10.64	2	NM	NM	NA	NA	8.18	2.46	NA	9.9	0.74	NA	7.02	3.62	NA	5.92	4.72
USTM232-236-MW12	10.66	2	NM	NM	NA	NA	9.22	1.44	NA	9.37	1.29	NA	9.6	1.06	NA	9.21	1.45
USTM232-236-MW13	15.75	2	NM	NM	NA	NA	13.55	2.20	NA	13.7	2.05	NA	13.7	2.05	NA	13.5	2.25
USTM232-236-MW14	15.84	2	NM	NM	NA	NA	13.25	2.59	NA	13.3	2.54	NA	13.08	2.76	NA	13.02	2.82
USTM232-236-MW15	14.82	2	NA	12.92	1.90	NA	12.74	2.08	NA	12.81	2.01	NA	12.73	2.09	NA	12.55	2.27
USTM232-236-MW16	14.88	2	NM	NM	NA	NA	13.01	1.87	NA	13.16	1.72	NA	13.21	1.67	NA	12.96	1.92
USTM232-236-MW17	14.15	2	NM	NM	NA	NA	9.9	4.25	NA	12.04	2.11	NA	9.38	4.77	NA	6.98	7.17
USTM232-236-MW18	10.28	1	NA	9.43	0.85	NA	9.11	1.17	NA	9.34	0.94	NA	9.31	0.97	NA	8.97	1.31
USTM232-236-MW20	11.03	1	NA	9.44	1.59	NA	9.02	2.01	NA	9.3	1.73	NA	9.15	1.88	NA	8.7	2.33
USTM232-236-MW21	11.36	1	NA	9.41	1.95	NA	8.45	2.91	NA	9.45	1.91	NA	8.98	2.38	NA	8.34	3.02
USTM232-236-MW22	11.31	1	NA	9.54	1.77	NA	8.65	2.66	NA	9.36	1.95	NA	8.9	2.41	8.34	8.75	2.56
USTM232-236-MW23	10.26	2	5.40	5.43	4.86	NA	4.06	6.20	NA	6.01	4.25	NA	4.80	5.46	NA	3.38	6.88

TOC = Top of Casing
msl = mean sea level
NA= not applicable; free product not detected; not calculated.
NM = not measured
* Free product was removed via peristaltic pump

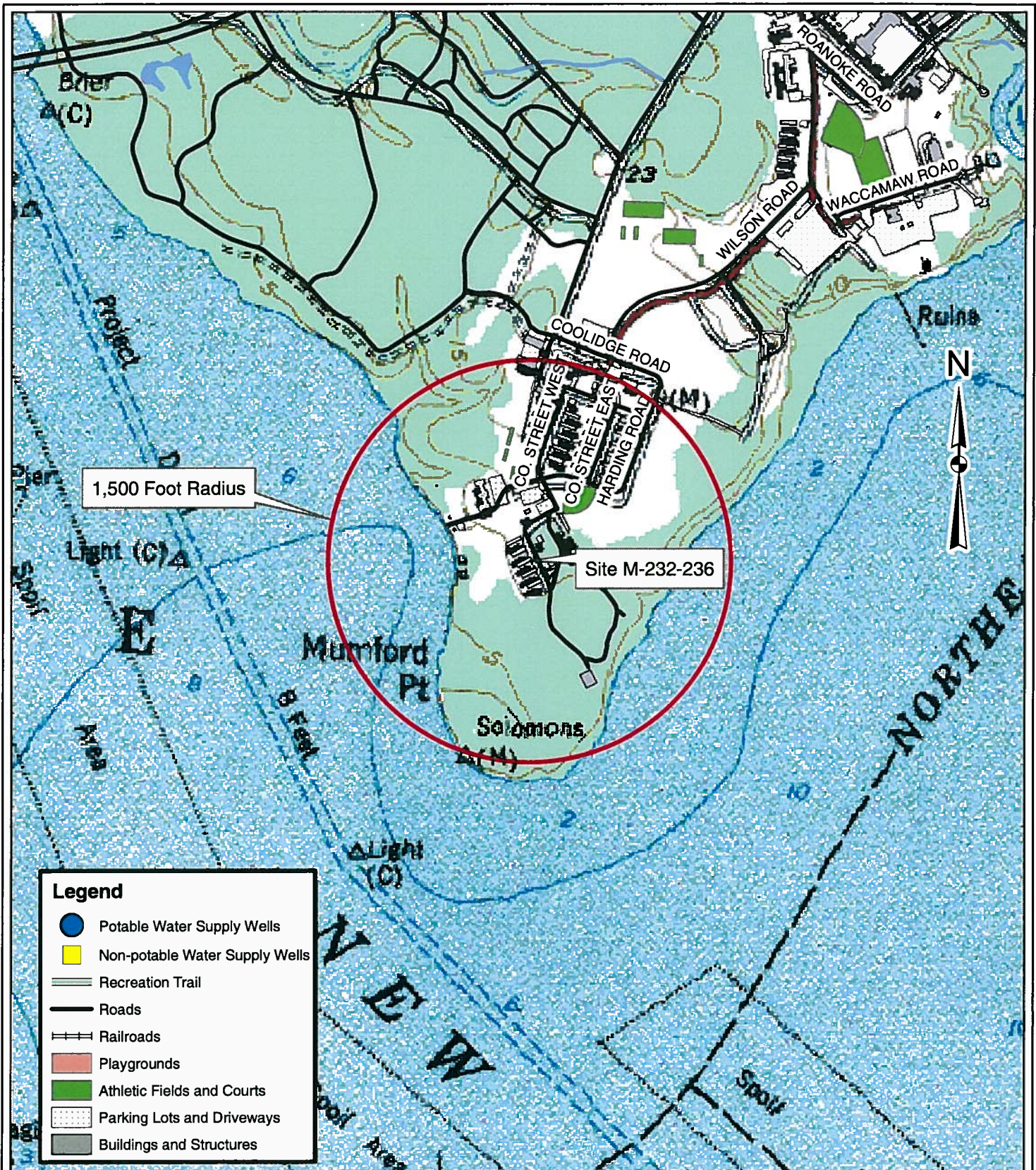
TABLE 4-2
SUMMARY OF GROUNDWATER LABORATORY RESULTS - JULY 2008
EPA METHOD 602, 625, and MADEP EPH/VPH

Incident Name and No.: M232-236 - 9593

Well ID	Contaminant of Concern →		EPA 602						EPA 625						MADEP EPH/VPH			
	Sample ID	Date Collected	Benzene	Diisopropyl ether (DIPE)	Ethylbenzene	Methyl-tert butyl ether (MTBE)	Toluene	Total Xylenes	Acenaphthene	Bis(2-ethylhexyl)phthalate	Flourene	Naphthalene	Phenanthrene	TICs Total	C ₅ -C ₈ Aliphatics	C ₁₉ -C ₃₆ Aliphatics	C ₉ -C ₁₈ Aliphatics	C ₉ -C ₂₂ Aromatics
GCL (µg/L) 2L GWQS (µg/L)			5,000 1	70,000 70	84,500 550	200,000 200	257,500 1,000	87,500 530	2,120 80	2,500 2.5	950 280	15,500 21	410 210	NE NE	NE 420	NE 42,000	NE 4,200	NE 210
USTM232-236-MW01	USTM232-236-MW01	7/11/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	<0.661	23.5	<0.661	<0.585	<0.748	7.44	<100	<100	<200	<200
USTM232-236-MW03	USTM232-236-MW03	7/10/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	1.67J	17.1	1.84J	<0.601	<0.768	17.03	<100	<100	<200	<200
USTM232-236-MW05	USTM232-236-MW05	7/11/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	<0.651	13.8	<0.651	<0.576	<0.763	8.10	<100	<100	<200	<200
USTM232-236-MW08	USTM232-236-MW08	7/11/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	<0.699	<0.762	<0.699	<0.619	<0.790	8.30	<100	<100	<200	<200
USTM232-236-MW15	USTM232-236-MW15	7/10/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	<0.637	17.2	<0.637	<0.564	<0.721	7.92	<100	<100	<200	<200
USTM232-236-MW18	USTM232-236-MW18	7/11/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	4.63J	<0.724	7.41	3.49J	5.01J	149.3	<100	<100	<200	398
USTM232-236-MW20	USTM232-236-MW20	7/10/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	1.90J	<0.743	1.84J	<0.603	<0.771	36.13	<100	<100	<200	<226
USTM232-236-MW21	USTM232-236-MW21	7/11/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	2.00J	<0.808	2.19J	2.25J	<0.838	138.7	<100	<100	<901	434
USTM232-236-MW22	USTM232-236-MW22	7/10/2008	<0.177	<0.253	1.31	<0.306	<0.313	<0.886	3.05J	<0.795	3.47J	8.13	2.27J	88.74	<100	<100	<200	<302
TRIP BLANK	TRIP BLANK	7/10/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

All results in micrograms per liter (µg/L).
Bold results indicate concentrations above 2L GWQS
GCL = Gross Contaminant Level
2L GWQS = NCAC T15A:02L Groundwater Quality Standards
NA = Not Analyzed
NE = Not Established
J = Estimated concentration, below the calibration range and above the method detection limit

FIGURES



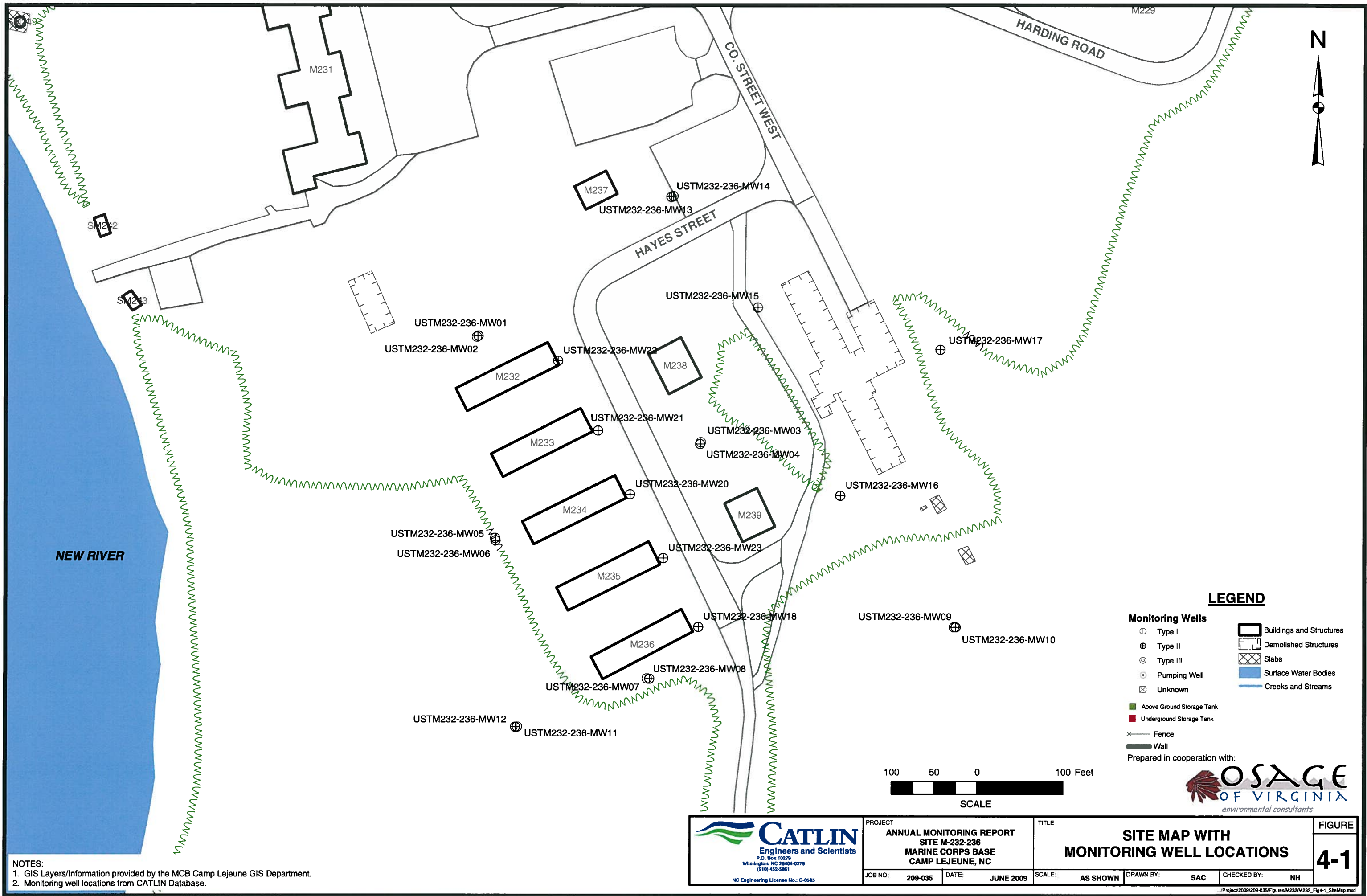
Prepared in cooperation with:

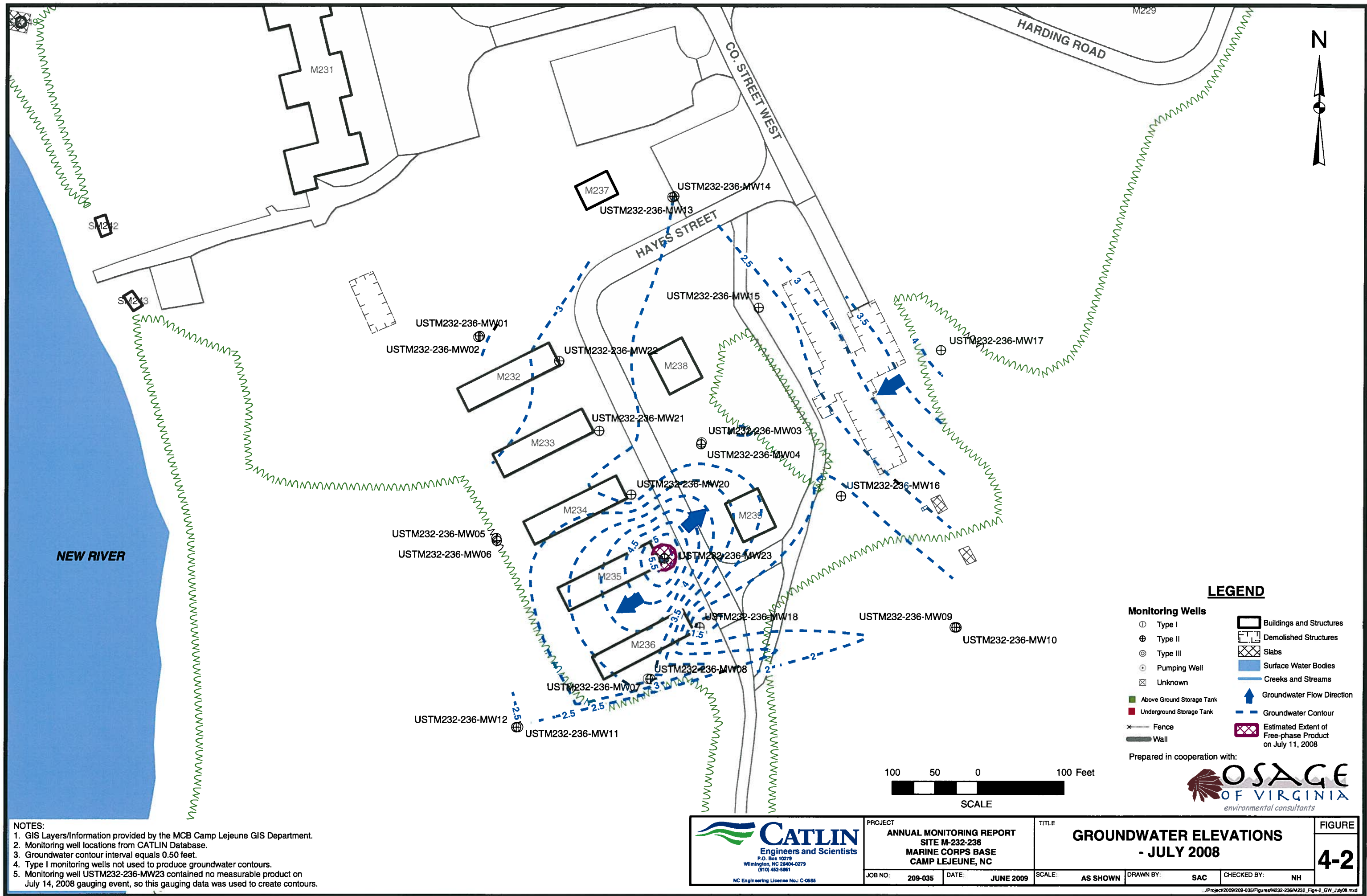


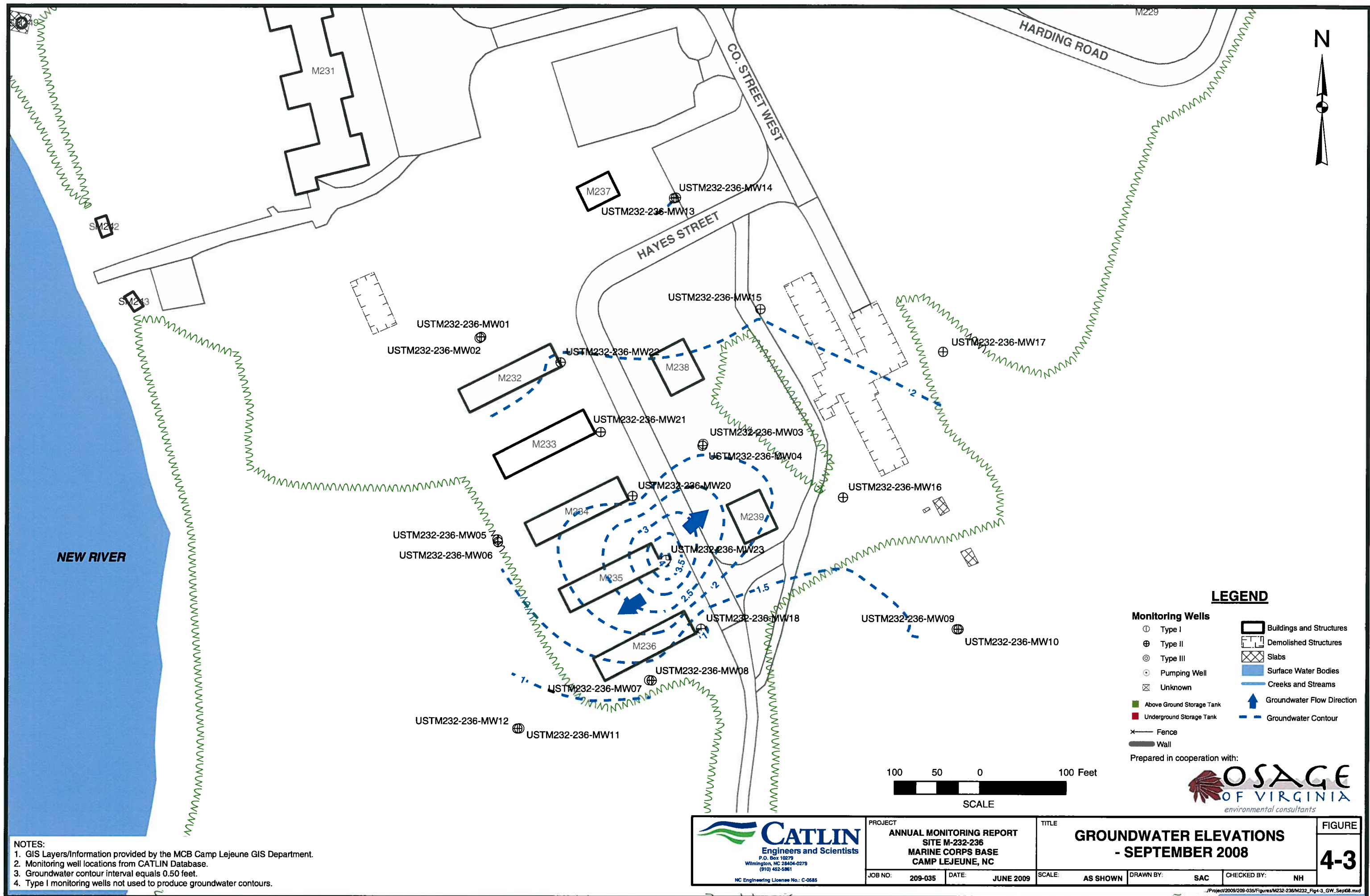
Data Sources: Data Layers provided by MCB Camp Lejeune GIS Office.

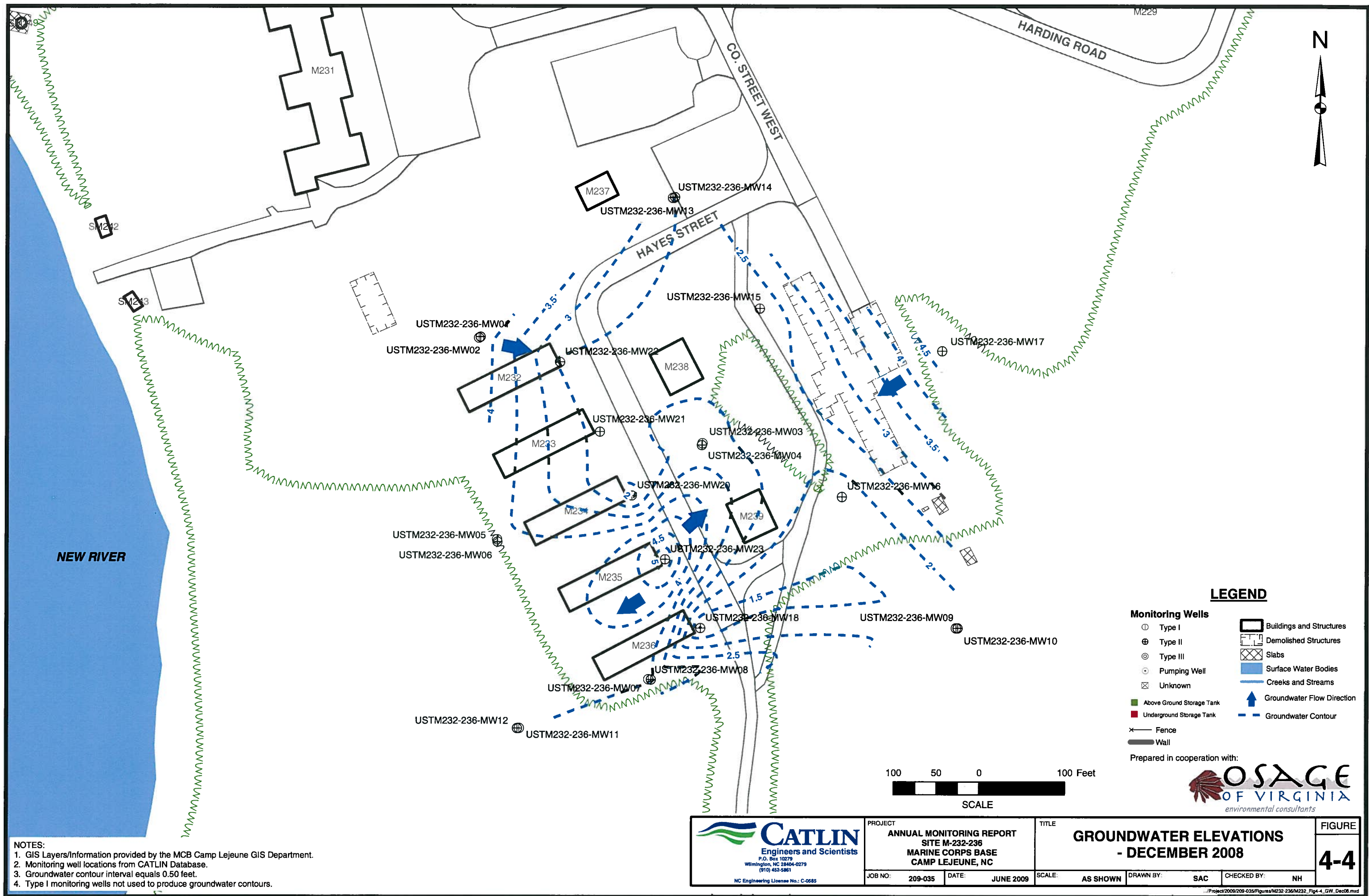
1,000 500 0 1,000 Feet
SCALE

 CATLIN Engineers and Scientists P.O. Box 10279 Wilmington, NC 28404-0279 (910) 452-5861 NC Engineering License No.: C-0585	PROJECT ANNUAL MONITORING REPORT SITE M-232-236 MARINE CORPS BASE CAMP LEJEUNE, NC		TITLE SITE LOCATION MAP		FIGURE 3-1
	JOB NO. 209-035	DATE JUNE 2009	SCALE AS SHOWN	DRAWN BY SAC	CHECKED BY NH









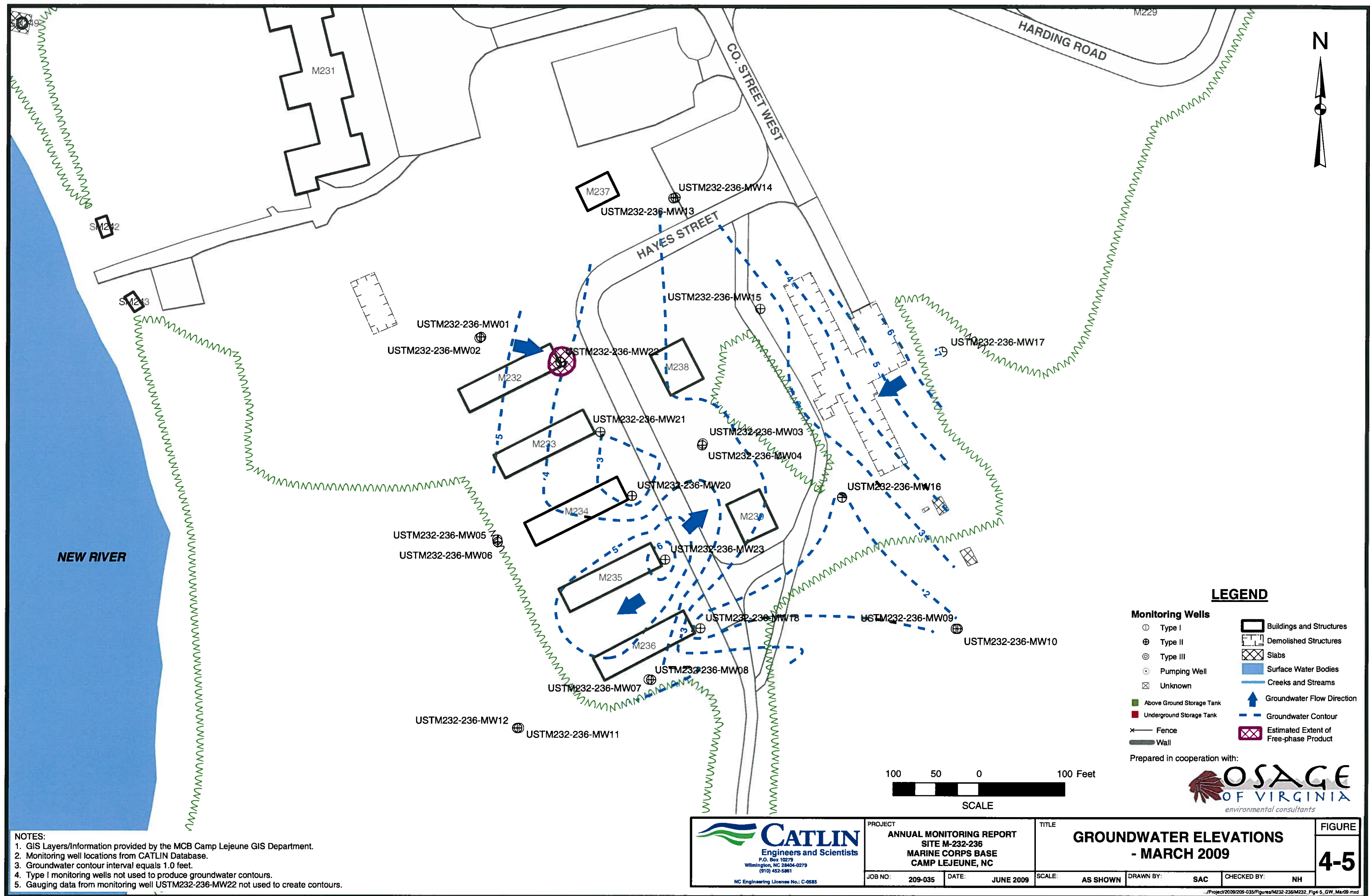
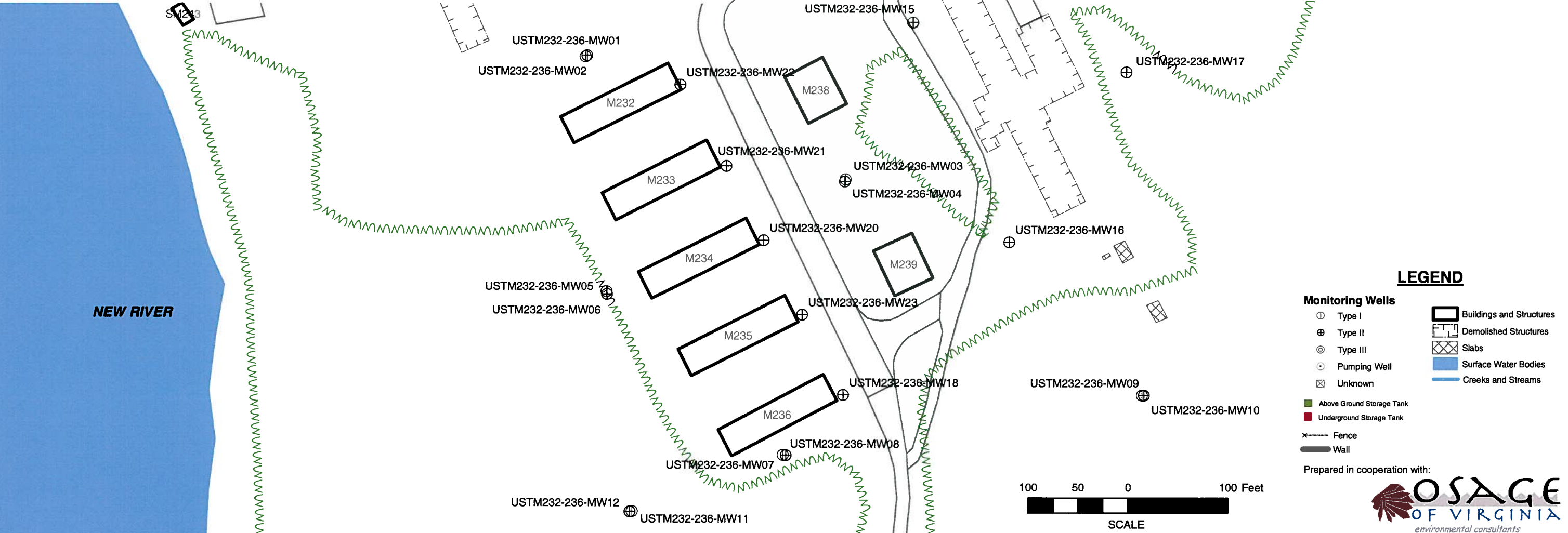


TABLE 3-3
SUMMARY OF GROUNDWATER LABORATORY RESULTS - JULY 2008
EPA METHOD 602, 625, and MADEP EPH/VPH

Incident Name and No.: 9593 M232-236

Well ID	Contaminant of Concern →		EPA 602							EPA 625						MADEP EPH/VPH				
			Benzene	Diisopropyl ether (DIPE)	Ethylbenzene	Methyl-tert butyl ether (MTBE)	Toluene	Total Xylenes	Acenaphthene	Bis(2-ethylhexyl)phthalate	Fluorene	Naphthalene	Phenanthrene	TICs Total	C ₇ -C ₈ Aliphatics	C ₉ -C ₁₀ Aliphatics	C ₉ -C ₁₁ Aliphatics	C ₉ -C ₁₂ Aromatics		
	Sample ID	Date Collected																		
GCL (µg/L)			5,000	70,000	84,500	200,000	257,500	87,500	2,120	2,500	950	15,500	410	NE	NE	NE	NE	NE		
2L GWQS (µg/L)			1	70	550	200	1,000	530	80	2.5	280	21	210	NE	420	42,000	4,200	210		
USTM232-236-MW01	USTM232-236-MW01	7/11/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	<0.661	23.5	<0.661	<0.585	<0.748	7.44	<100	<100	<200	<200		
USTM232-236-MW03	USTM232-236-MW03	7/10/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	1.67J	17.1	1.84J	<0.601	<0.768	17.03	<100	<100	<200	<200		
USTM232-236-MW05	USTM232-236-MW05	7/11/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	<0.651	13.8	<0.651	<0.576	<0.763	8.10	<100	<100	<200	<200		
USTM232-236-MW08	USTM232-236-MW08	7/11/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	<0.699	<0.762	<0.699	<0.619	<0.790	8.30	<100	<100	<200	<200		
USTM232-236-MW15	USTM232-236-MW15	7/10/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	<0.637	17.2	<0.637	<0.564	<0.721	7.92	<100	<100	<200	<200		
USTM232-236-MW18	USTM232-236-MW18	7/11/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	4.63J	<0.724	7.41	3.49J	5.01J	149.3	<100	<100	<200	398		
USTM232-236-MW20	USTM232-236-MW20	7/10/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	1.90J	<0.743	1.84J	<0.603	<0.771	36.13	<100	<100	<200	<226		
USTM232-236-MW21	USTM232-236-MW21	7/11/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	2.00J	<0.808	2.19J	2.25J	<0.838	138.7	<100	<100	<901	434		
USTM232-236-MW22	USTM232-236-MW22	7/10/2008	<0.177	<0.253	1.31	<0.306	<0.313	<0.886	3.05J	<0.795	3.47J	8.13	2.27J	88.74	<100	<100	<200	<302		
TRIP BLANK	TRIP BLANK	7/10/2008	<0.177	<0.253	<0.19	<0.306	<0.313	<0.886	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		

All results in micrograms per liter (µg/L).
Bold results indicate concentrations above 2L GWQS.
GCL = Gross Contaminant Level
2L GWQS = NCAC T15A-02L Groundwater Quality Standards
NA = Not Analyzed
NE = Not Established
J = Estimated concentration, below the calibration range and above the method detection limit



NOTES:
1. GIS Layers/Information provided by the MCB Camp Lejeune GIS Department.
2. Monitoring well locations from CATLIN Database.

CATLIN
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PROJECT
**ANNUAL MONITORING REPORT
SITE M-232-236
MARINE CORPS BASE
CAMP LEJEUNE, NC**

JOB NO: 209-035 DATE: JUNE 2009

TITLE
**SITE MAP WITH GROUNDWATER
RESULTS - JULY 2008**

SCALE: AS SHOWN DRAWN BY: SAC CHECKED BY: NH

FIGURE
4-6



Prepared in cooperation with:

APPENDIX A

HISTORICAL DATA

TABLE 1
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
EPA METHOD 602

Contaminant of Concern →					
<u>Well ID</u>	<u>Date</u>	<u>Ethylbenzene</u>	<u>Methyl-tert butyl ether</u>	<u>Toluene</u>	<u>Total Xylenes</u>
2L GWQS		550	200	1000	530
GCL		550000	200000	257500	87500
USTM232-236-MW01	6/21/2007	BQL	BQL	BQL	BQL
USTM232-236-MW01	12/18/2007	BQL	BQL	BQL	BQL
USTM232-236-MW01	7/11/2008	BQL	BQL	BQL	BQL
USTM232-236-MW03	6/21/2007	BQL	BQL	BQL	BQL
USTM232-236-MW03	12/18/2007	BQL	BQL	BQL	BQL
USTM232-236-MW03	7/10/2008	BQL	BQL	BQL	BQL

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

TABLE 1
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
EPA METHOD 602

Contaminant of Concern →					
<u>Well ID</u>	<u>Date</u>	<u>Ethylbenzene</u>	<u>Methyl-tert butyl ether</u>	<u>Toluene</u>	<u>Total Xylenes</u>
2L GWQS		550	200	1000	530
GCL		550000	200000	257500	87500
USTM232-236-MW05	12/12/2005	BQL	BQL	1.13	BQL
USTM232-236-MW05	8/17/2006	BQL	BQL	BQL	BQL
USTM232-236-MW05	1/23/2007	0.18	BQL	1.28	BQL
USTM232-236-MW05	6/21/2007	BQL	BQL	BQL	BQL
USTM232-236-MW05	12/18/2007	BQL	BQL	BQL	BQL
USTM232-236-MW05	7/11/2008	BQL	BQL	BQL	BQL
USTM232-236-MW07	12/12/2005	BQL	BQL	BQL	BQL
USTM232-236-MW07	8/17/2006	BQL	BQL	BQL	BQL
USTM232-236-MW07	1/23/2007	BQL	BQL	0.53	BQL

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
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EPA METHOD 602

Contaminant of Concern →					
<u>Well ID</u>	<u>Date</u>	<u>Ethylbenzene</u>	<u>Methyl-tert butyl ether</u>	<u>Toluene</u>	<u>Total Xylenes</u>
2L GWQS		550	200	1000	530
GCL		550000	200000	257500	87500
USTM232-236-MW08	6/21/2007	BQL	0.79	BQL	BQL
USTM232-236-MW08	12/18/2007	BQL	0.46	BQL	BQL
USTM232-236-MW08	7/11/2008	BQL	BQL	BQL	BQL
USTM232-236-MW09	6/21/2007	BQL	BQL	BQL	BQL
USTM232-236-MW09	12/18/2007	BQL	BQL	BQL	BQL
USTM232-236-MW15	6/21/2007	BQL	BQL	BQL	BQL
USTM232-236-MW15	12/18/2007	BQL	BQL	BQL	BQL
USTM232-236-MW15	7/10/2008	BQL	BQL	BQL	BQL

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
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TABLE 1
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
EPA METHOD 602

Contaminant of Concern →					
<u>Well ID</u>	<u>Date</u>	<u>Ethylbenzene</u>	<u>Methyl-tert butyl ether</u>	<u>Toluene</u>	<u>Total Xylenes</u>
2L GWQS		550	200	1000	530
GCL		550000	200000	257500	87500
USTM232-236-MW18	12/12/2005	BQL	BQL	1.43	BQL
USTM232-236-MW18	8/16/2006	BQL	BQL	BQL	BQL
USTM232-236-MW18	1/23/2007	0.33	BQL	0.60	BQL
USTM232-236-MW18	6/21/2007	0.53	BQL	BQL	BQL
USTM232-236-MW18	12/18/2007	BQL	BQL	BQL	BQL
USTM232-236-MW18	7/11/2008	BQL	BQL	BQL	BQL

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
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 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

TABLE 1
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
EPA METHOD 602

Contaminant of Concern →					
<u>Well ID</u>	<u>Date</u>	<u>Ethylbenzene</u>	<u>Methyl-tert butyl ether</u>	<u>Toluene</u>	<u>Total Xylenes</u>
2L GWQS		550	200	1000	530
GCL		550000	200000	257500	87500
USTM232-236-MW20	12/12/2005	BQL	BQL	1.01	BQL
USTM232-236-MW20	8/16/2006	BQL	BQL	BQL	BQL
USTM232-236-MW20	1/23/2007	0.36	BQL	0.47	BQL
USTM232-236-MW20	6/21/2007	0.76	BQL	BQL	BQL
USTM232-236-MW20	12/18/2007	BQL	BQL	BQL	BQL
USTM232-236-MW20	7/10/2008	BQL	BQL	BQL	BQL

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
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 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

TABLE 1
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
EPA METHOD 602

Contaminant of Concern →					
<u>Well ID</u>	<u>Date</u>	<u>Ethylbenzene</u>	<u>Methyl-tert butyl ether</u>	<u>Toluene</u>	<u>Total Xylenes</u>
2L GWQS		550	200	1000	530
GCL		550000	200000	257500	87500
USTM232-236-MW21	12/12/2005	1.62	BQL	1.64	BQL
USTM232-236-MW21	8/16/2006	BQL	BQL	BQL	BQL
USTM232-236-MW21	1/23/2007	1.09	BQL	0.96	1.02
USTM232-236-MW21	6/22/2007	0.46	BQL	BQL	0.70
USTM232-236-MW21	12/18/2007	BQL	BQL	BQL	BQL
USTM232-236-MW21	7/11/2008	BQL	BQL	BQL	BQL

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

TABLE 1
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
EPA METHOD 602

Contaminant of Concern 					
<u>Well ID</u>	<u>Date</u>	<u>Ethylbenzene</u>	<u>Methyl-tert butyl ether</u>	<u>Toluene</u>	<u>Total Xylenes</u>
2L GWQS		550	200	1000	530
GCL		550000	200000	257500	87500
USTM232-236-MW22	12/12/2005	BQL	BQL	1.20	BQL
USTM232-236-MW22	8/16/2006	BQL	BQL	0.31	BQL
USTM232-236-MW22	1/23/2007	0.58	BQL	0.86	0.47
USTM232-236-MW22	6/22/2007	2.07	BQL	BQL	0.84
USTM232-236-MW22	12/18/2007	0.94	BQL	BQL	BQL
USTM232-236-MW22	7/10/2008	1.31	BQL	BQL	BQL

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

TABLE 2
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
EPA METHOD 625

Contaminant of Concern →								
Well ID	Date	Acenaphthene	Anthracene	Bis(2-ethylhexyl)phthalate	Diphenylamine	Fluorene	Naphthalene	Phenanthrene
2L GWQS		80	2100	2.5	0	280	21	210
GCL		2120	2100	2500	0	950	15500	410
USTM232-236-MW01	6/21/2007	BQL	BQL	BQL	BQL	BQL	BQL	BQL
USTM232-236-MW01	12/18/2007	BQL	BQL	BQL	BQL	BQL	BQL	BQL
USTM232-236-MW01	7/11/2008	BQL	BQL	23.50	BQL	BQL	BQL	BQL
USTM232-236-MW03	6/21/2007	1.90	BQL	BQL	BQL	1.90	BQL	BQL
USTM232-236-MW03	12/18/2007	1.40	BQL	BQL	BQL	1.70	BQL	BQL
USTM232-236-MW03	7/10/2008	1.67	BQL	17.10	BQL	1.84	BQL	BQL

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

TABLE 2
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
EPA METHOD 625

Contaminant of Concern 									
<u>Well ID</u>	<u>Date</u>	Acenaphthene	Anthracene	Bis(2-ethylhexyl)phthalate	Diphenylamine	Fluorene	Naphthalene	Phenanthrene	
2L GWQS		80	2100	2.5	0	280	21	210	
GCL		2120	2100	2500	0	950	15500	410	
USTM232-236-MW05	12/12/2005	BQL	BQL	BQL	BQL	BQL	BQL	BQL	
USTM232-236-MW05	8/17/2006	BQL	BQL	BQL	BQL	BQL	BQL	BQL	
USTM232-236-MW05	1/23/2007	BQL	BQL	BQL	BQL	BQL	BQL	BQL	
USTM232-236-MW05	6/21/2007	BQL	BQL	BQL	BQL	BQL	BQL	BQL	
USTM232-236-MW05	12/18/2007	BQL	BQL	BQL	BQL	BQL	BQL	BQL	
USTM232-236-MW05	7/11/2008	BQL	BQL	13.80	BQL	BQL	BQL	BQL	
USTM232-236-MW07	12/12/2005	BQL	BQL	BQL	BQL	BQL	BQL	BQL	
USTM232-236-MW07	8/17/2006	BQL	BQL	BQL	BQL	BQL	BQL	BQL	
USTM232-236-MW07	1/23/2007	BQL	BQL	BQL	BQL	BQL	BQL	BQL	

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
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TABLE 2
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
EPA METHOD 625

Contaminant of Concern 								
Well ID	Date	Acenaphthene	Anthracene	Bis(2-ethylhexyl)phthalate	Diphenylamine	Fluorene	Naphthalene	Phenanthrene
2L GWQS		80	2100	2.5	0	280	21	210
GCL		2120	2100	2500	0	950	15500	410
USTM232-236-MW08	6/21/2007	BQL	BQL	BQL	BQL	BQL	BQL	BQL
USTM232-236-MW08	12/18/2007	BQL	BQL	BQL	BQL	BQL	BQL	BQL
USTM232-236-MW08	7/11/2008	BQL	BQL	BQL	BQL	BQL	BQL	BQL
USTM232-236-MW09	6/21/2007	BQL	BQL	BQL	BQL	BQL	BQL	BQL
USTM232-236-MW09	12/18/2007	BQL	BQL	BQL	BQL	BQL	BQL	BQL
USTM232-236-MW15	6/21/2007	BQL	BQL	BQL	BQL	BQL	BQL	BQL
USTM232-236-MW15	12/18/2007	BQL	BQL	BQL	BQL	BQL	BQL	BQL
USTM232-236-MW15	7/10/2008	BQL	BQL	17.20	BQL	BQL	BQL	BQL

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

TABLE 2
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
EPA METHOD 625

Contaminant of Concern →								
Well ID	Date	Acenaphthene	Anthracene	Bis(2-ethylhexyl)phthalate	Diphenylamine	Fluorene	Naphthalene	Phenanthrene
2L GWQS		80	2100	2.5	0	280	21	210
GCL		2120	2100	2500	0	950	15500	410
USTM232-236-MW18	12/12/2005	5.50	BQL	BQL	BQL	7.40	BQL	7.00
USTM232-236-MW18	8/16/2006	7.60	BQL	BQL	1.70	10.80	BQL	9.80
USTM232-236-MW18	1/23/2007	9.30	BQL	BQL	BQL	10.30	1.60	8.20
USTM232-236-MW18	6/21/2007	5.90	BQL	BQL	BQL	8.60	5.70	3.40
USTM232-236-MW18	12/18/2007	BQL	BQL	BQL	BQL	2.70	BQL	BQL
USTM232-236-MW18	7/11/2008	4.63	BQL	BQL	BQL	7.41	3.49	5.01

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
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TABLE 2
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
EPA METHOD 625

Contaminant of Concern 								
<u>Well ID</u>	<u>Date</u>	Acenaphthene	Anthracene	Bis(2-ethylhexyl)phthalate	Diphenylamine	Fluorene	Naphthalene	Phenanthrene
2L GWQS		80	2100	2.5	0	280	21	210
GCL		2120	2100	2500	0	950	15500	410
USTM232-236-MW20	12/12/2005	BQL	BQL	BQL	BQL	1.40	BQL	BQL
USTM232-236-MW20	8/16/2006	1.70	BQL	BQL	BQL	1.70	BQL	BQL
USTM232-236-MW20	1/23/2007	1.40	BQL	BQL	BQL	1.60	BQL	BQL
USTM232-236-MW20	6/21/2007	2.30	BQL	BQL	BQL	2.20	1.20	BQL
USTM232-236-MW20	12/18/2007	1.60	BQL	BQL	BQL	1.60	BQL	BQL
USTM232-236-MW20	7/10/2008	1.90	BQL	BQL	BQL	1.84	BQL	BQL

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
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TABLE 2
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
EPA METHOD 625

Contaminant of Concern →								
Well ID	Date	Acenaphthene	Anthracene	Bis(2-ethylhexyl)phthalate	Diphenylamine	Fluorene	Naphthalene	Phenanthrene
2L GWQS		80	2100	2.5	0	280	21	210
GCL		2120	2100	2500	0	950	15500	410
USTM232-236-MW21	12/12/2005	3.20	BQL	BQL	BQL	5.70	5.50	3.60
USTM232-236-MW21	8/16/2006	BQL	BQL	BQL	BQL	6.50	2.80	BQL
USTM232-236-MW21	1/23/2007	5.20	BQL	BQL	BQL	6.60	4.40	6.70
USTM232-236-MW21	12/18/2007	2.10	1.80	BQL	BQL	3.00	BQL	BQL
USTM232-236-MW21	7/11/2008	2.00	BQL	BQL	BQL	2.19	2.25	BQL

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
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 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
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 7. Shaded concentrations indicate exceedance of the 2L GWQS
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TABLE 2
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
EPA METHOD 625

Contaminant of Concern 								
<u>Well ID</u>	<u>Date</u>	Acenaphthene	Anthracene	Bis(2-ethylhexyl)phthalate	Diphenylamine	Fluorene	Naphthalene	Phenanthrene
2L GWQS		80	2100	2.5	0	280	21	210
GCL		2120	2100	2500	0	950	15500	410
USTM232-236-MW22	12/12/2005	2.20	BQL	BQL	BQL	3.30	4.90	3.00
USTM232-236-MW22	8/16/2006	BQL	BQL	BQL	BQL	7.10	4.80	BQL
USTM232-236-MW22	1/23/2007	3.00	BQL	BQL	BQL	3.40	4.40	3.00
USTM232-236-MW22	6/22/2007	5.60	BQL	BQL	BQL	5.60	18.30	2.60
USTM232-236-MW22	12/18/2007	2.60	BQL	BQL	BQL	3.10	3.20	2.40
USTM232-236-MW22	7/10/2008	3.05	BQL	BQL	BQL	3.47	8.13	2.27

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

TABLE 3
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
MADEP VPH/EPH

Contaminant of Concern 			
<u>Well ID</u>	<u>Date</u>	C9-C18 Aliphatics	C9-C22 Aromatics
2L GWQS		4200	210
GCL		0	0
USTM232-236-MW01	6/21/2007	BQL	BQL
USTM232-236-MW01	12/18/2007	BQL	BQL
USTM232-236-MW01	7/11/2008	BQL	BQL
USTM232-236-MW03	6/21/2007	BQL	1029.40
USTM232-236-MW03	12/18/2007	BQL	BQL
USTM232-236-MW03	7/10/2008	BQL	BQL

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

TABLE 3
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
MADEP VPH/EPH

Contaminant of Concern 			
<u>Well ID</u>	<u>Date</u>	C9-C18 Aliphatics	C9-C22 Aromatics
2L GWQS		4200	210
GCL		0	0
USTM232-236-MW05	12/12/2005	BQL	BQL
USTM232-236-MW05	8/17/2006	BQL	BQL
USTM232-236-MW05	9/19/2006	BQL	BQL
USTM232-236-MW05	1/23/2007	BQL	BQL
USTM232-236-MW05	6/21/2007	BQL	53.50
USTM232-236-MW05	12/18/2007	BQL	BQL
USTM232-236-MW05	7/11/2008	BQL	BQL

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

TABLE 3
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
MADEP VPH/EPH

Contaminant of Concern 			
<u>Well ID</u>	<u>Date</u>	C9-C18 Aliphatics	C9-C22 Aromatics
2L GWQS		4200	210
GCL		0	0
USTM232-236-MW07	12/12/2005	BQL	BQL
USTM232-236-MW07	8/17/2006	BQL	BQL
USTM232-236-MW07	9/19/2006	BQL	BQL
USTM232-236-MW07	1/23/2007	BQL	BQL
USTM232-236-MW08	6/21/2007	BQL	54.10
USTM232-236-MW08	12/18/2007	BQL	BQL
USTM232-236-MW08	7/11/2008	669.00	BQL
USTM232-236-MW09	6/21/2007	BQL	BQL
USTM232-236-MW09	12/18/2007	BQL	BQL

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

TABLE 3
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
MADEP VPH/EPH

Contaminant of Concern 			
<u>Well ID</u>	<u>Date</u>	C9-C18 Aliphatics	C9-C22 Aromatics
2L GWQS		4200	210
GCL		0	0
USTM232-236-MW15	6/21/2007	BQL	BQL
USTM232-236-MW15	12/18/2007	BQL	BQL
USTM232-236-MW15	7/10/2008	BQL	BQL
USTM232-236-MW18	12/12/2005	130.00	420.00
USTM232-236-MW18	8/16/2006	BQL	BQL
USTM232-236-MW18	9/19/2006	230.00	520.00
USTM232-236-MW18	1/23/2007	250.00	320.00
USTM232-236-MW18	6/21/2007	75.60	309.00
USTM232-236-MW18	12/18/2007	BQL	BQL
USTM232-236-MW18	7/11/2008	BQL	398.00

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

TABLE 3
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
MADEP VPH/EPH

Contaminant of Concern 			
<u>Well ID</u>	<u>Date</u>	C9-C18 Aliphatics	C9-C22 Aromatics
2L GWQS		4200	210
GCL		0	0
USTM232-236-MW20	12/12/2005	BQL	BQL
USTM232-236-MW20	8/16/2006	BQL	BQL
USTM232-236-MW20	9/19/2006	BQL	BQL
USTM232-236-MW20	1/23/2007	BQL	BQL
USTM232-236-MW20	6/21/2007	BQL	94.50
USTM232-236-MW20	12/18/2007	BQL	BQL
USTM232-236-MW20	7/10/2008	BQL	126.00

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

TABLE 3
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
MADEP VPH/EPH

Contaminant of Concern 			
<u>Well ID</u>	<u>Date</u>	C9-C18 Aliphatics	C9-C22 Aromatics
2L GWQS		4200	210
GCL		0	0
USTM232-236-MW21	12/12/2005	100.00	300.00
USTM232-236-MW21	8/16/2006	BQL	BQL
USTM232-236-MW21	9/19/2006	270.00	410.00
USTM232-236-MW21	1/23/2007	300.00	560.00
USTM232-236-MW21	6/22/2007	BQL	409.00
USTM232-236-MW21	12/18/2007	105.00	130.00
USTM232-236-MW21	7/11/2008	801.00	434.00

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

TABLE 3
SITE M-232-236
GROUNDWATER LABORATORY ANALYTICAL RESULTS - JULY 2005 TO APRIL 2009
MADEP VPH/EPH

Contaminant of Concern 			
<u>Well ID</u>	<u>Date</u>	C9-C18 Aliphatics	C9-C22 Aromatics
2L GWQS		4200	210
GCL		0	0
USTM232-236-MW22	12/12/2005	BQL	250.00
USTM232-236-MW22	8/16/2006	BQL	BQL
USTM232-236-MW22	9/19/2006	150.00	390.00
USTM232-236-MW22	1/23/2007	170.00	BQL
USTM232-236-MW22	6/22/2007	72.30	505.00
USTM232-236-MW22	12/18/2007	110.00	178.00
USTM232-236-MW22	7/10/2008	BQL	202.00

- Notes:
1. 2L GWQS = North Carolina groundwater quality standard 15A NCAC 2L .0202
 2. GCL = Gross Contamination Levels for ground water as defined in "Guidelines for Assessment and Corrective Action" North Carolina Underground Storage Tank Section, effective July 15, 2008
 3. All units are in ug/L (Micrograms per Liter)
 4. BQL = Below Quantitation Limits
 5. A zero in the 2L GWQS row indicates the 2L Standard is equal to the laboratory detection limit
 6. A zero in the GCL row indicates a GCL has not been established
 7. Shaded concentrations indicate exceedance of the 2L GWQS
 8. Only compounds which were detected are shown on table. All other compounds were BQL
 9. Please note, compounds reported in duplicate columns are the result of multiple laboratories submitting EDD data with different nomenclature. Unless BQL appears in both duplicate columns, a detection is present and that concentration is reported numerically.

APPENDIX B

LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTATION



Mike Cree
Osage of Virginia
2618 A Colley Ave
Norfolk, VA 23517

Report Number: G649-46

Client Project: CTO 015

Dear Mike Cree,

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 Environmental Services at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

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

Sincerely,
SGS Environmental Services, Inc.

 7/23/08
Project Manager Date
Ashley Nifong



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/CL = Reporting Limit / Control 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.

**Results for Volatiles**

by GC 602

Client Sample ID: USTM232-236-MW03

Analyzed By: RSB

Client Project ID: CTO 015

Date Collected: 7/10/2008 14:05

Lab Sample ID: G649-46-1A

Date Received: 7/11/2008

Lab Project ID: G649-46

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	7/18/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	7/18/2008	
Ethylbenzene	BQL	1.00	0.19	1	7/18/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	7/18/2008	
Toluene	BQL	1.00	0.313	1	7/18/2008	
m/p-Xylene	BQL	2.00	0.481	1	7/18/2008	
o-Xylene	BQL	2.00	0.405	1	7/18/2008	

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.

**Results for Volatiles**

by GC 602

Client Sample ID: USTM232-236-MW15

Analyzed By: RSB

Client Project ID: CTO 015

Date Collected: 7/10/2008 15:40

Lab Sample ID: G649-46-2A

Date Received: 7/11/2008

Lab Project ID: G649-46

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	7/18/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	7/18/2008	
Ethylbenzene	BQL	1.00	0.19	1	7/18/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	7/18/2008	
Toluene	BQL	1.00	0.313	1	7/18/2008	
m/p-Xylene	BQL	2.00	0.481	1	7/18/2008	
o-Xylene	BQL	2.00	0.405	1	7/18/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.1	100

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

**Results for Volatiles**

by GC 602

Client Sample ID: USTM232-236-MW01

Analyzed By: RSB

Client Project ID: CTO 015

Date Collected: 7/11/2008 8:45

Lab Sample ID: G649-46-3A

Date Received: 7/11/2008

Lab Project ID: G649-46

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	7/18/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	7/18/2008	
Ethylbenzene	BQL	1.00	0.19	1	7/18/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	7/18/2008	
Toluene	BQL	1.00	0.313	1	7/18/2008	
m/p-Xylene	BQL	2.00	0.481	1	7/18/2008	
o-Xylene	BQL	2.00	0.405	1	7/18/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.3	101

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

**Results for Volatiles**

by GC 602

Client Sample ID: USTM232-236-MW05

Analyzed By: RSB

Client Project ID: CTO 015

Date Collected: 7/11/2008 9:50

Lab Sample ID: G649-46-4A

Date Received: 7/11/2008

Lab Project ID: G649-46

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	7/18/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	7/18/2008	
Ethylbenzene	BQL	1.00	0.19	1	7/18/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	7/18/2008	
Toluene	BQL	1.00	0.313	1	7/18/2008	
m/p-Xylene	BQL	2.00	0.481	1	7/18/2008	
o-Xylene	BQL	2.00	0.405	1	7/18/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.2	100

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

**Results for Volatiles**

by GC 602

Client Sample ID: USTM232-236-MW08

Analyzed By: RSB

Client Project ID: CTO 015

Date Collected: 7/11/2008 11:15

Lab Sample ID: G649-46-5A

Date Received: 7/11/2008

Lab Project ID: G649-46

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	7/18/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	7/18/2008	
Ethylbenzene	BQL	1.00	0.19	1	7/18/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	7/18/2008	
Toluene	BQL	1.00	0.313	1	7/18/2008	
m/p-Xylene	BQL	2.00	0.481	1	7/18/2008	
o-Xylene	BQL	2.00	0.405	1	7/18/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.0	100

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

**Results for Volatiles**

by GC 602

Client Sample ID: USTM232-236-MW18

Analyzed By: RSB

Client Project ID: CTO 015

Date Collected: 7/11/2008 10:00

Lab Sample ID: G649-46-6D

Date Received: 7/11/2008

Lab Project ID: G649-46

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	7/21/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	7/21/2008	
Ethylbenzene	BQL	1.00	0.19	1	7/21/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	7/21/2008	
Toluene	BQL	1.00	0.313	1	7/21/2008	
m/p-Xylene	BQL	2.00	0.481	1	7/21/2008	
o-Xylene	BQL	2.00	0.405	1	7/21/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.7	99.4

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

**Results for Volatiles**

by GC 602

Client Sample ID: USTM232-236-MW21

Analyzed By: RSB

Client Project ID: CTO 015

Date Collected: 7/11/2008 8:15

Lab Sample ID: G649-46-7D

Date Received: 7/11/2008

Lab Project ID: G649-46

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	7/21/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	7/21/2008	
Ethylbenzene	BQL	1.00	0.19	1	7/21/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	7/21/2008	
Toluene	BQL	1.00	0.313	1	7/21/2008	
m/p-Xylene	BQL	2.00	0.481	1	7/21/2008	
o-Xylene	BQL	2.00	0.405	1	7/21/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.2	98

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

**Results for Volatiles**

by GC 602

Client Sample ID: USTM232-236-MW20

Analyzed By: RSB

Client Project ID: CTO 015

Date Collected: 7/10/2008 16:30

Lab Sample ID: G649-46-8A

Date Received: 7/11/2008

Lab Project ID: G649-46

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	7/18/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	7/18/2008	
Ethylbenzene	BQL	1.00	0.19	1	7/18/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	7/18/2008	
Toluene	BQL	1.00	0.313	1	7/18/2008	
m/p-Xylene	BQL	2.00	0.481	1	7/18/2008	
o-Xylene	BQL	2.00	0.405	1	7/18/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.2	101

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

**Results for Volatiles**

by GC 602

Client Sample ID: USTM232-236-MW22

Analyzed By: RSB

Client Project ID: CTO 015

Date Collected: 7/10/2008 15:10

Lab Sample ID: G649-46-9A

Date Received: 7/11/2008

Lab Project ID: G649-46

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	7/18/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	7/18/2008	
Ethylbenzene	1.31	1.00	0.19	1	7/18/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	7/18/2008	
Toluene	BQL	1.00	0.313	1	7/18/2008	
m/p-Xylene	BQL	2.00	0.481	1	7/18/2008	
o-Xylene	BQL	2.00	0.405	1	7/18/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.5	101

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

**Results for Volatiles**

by GC 602

Client Sample ID: Trip Blank
Client Project ID: CTO 015
Lab Sample ID: G649-46-10A
Lab Project ID: G649-46

Analyzed By: RSB
Date Collected: 7/10/2008 0:00
Date Received: 7/11/2008
Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	7/18/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	7/18/2008	
Ethylbenzene	BQL	1.00	0.19	1	7/18/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	7/18/2008	
Toluene	BQL	1.00	0.313	1	7/18/2008	
m/p-Xylene	BQL	2.00	0.481	1	7/18/2008	
o-Xylene	BQL	2.00	0.405	1	7/18/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.0	100

Comments:

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

**Results for Volatiles**

by GC 602

Client Sample ID: Method Blank

Analyzed By: RSB

Client Project ID:

Date Collected:

Lab Sample ID: VBLK3071808A

Date Received:

Lab Project ID:

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	7/18/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	7/18/2008	
Ethylbenzene	BQL	1.00	0.19	1	7/18/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	7/18/2008	
Toluene	BQL	1.00	0.313	1	7/18/2008	
m/p-Xylene	BQL	2.00	0.481	1	7/18/2008	
o-Xylene	BQL	2.00	0.405	1	7/18/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.0	100

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Summary Results for QC Check

Method: 602

Filename : 3071808/003R

Compound	SA ug/L	Result ug/L	Rec (%) #	QC Limits	
				Lower	Upper
Benzene	20.0	20.8	104.1	77.0	123.0
Chlorobenzene	20.0	20.2	101.1	80.5	119.5
1,2-Dichlorobenzene	40.0	39.1	97.9	68.0	132.0
1,3-Dichlorobenzene	20.0	19.9	99.5	72.5	127.5
1,4-Dichlorobenzene	40.0	39.6	99.0	69.5	130.5
• Diisopropyl ether	20.0	20.9	104.7	43.1	156.9
Ethylbenzene	20.0	21.2	106.2	63.0	137.0
• MTBE	40.0	41.2	102.9	46.8	153.2
Toluene	20.0	20.4	101.9	77.5	127.0
• m,p-Xylene	40.0	42.0	105.0	11.2	188.8
• o-Xylene	40.0	40.2	100.5	47.6	152.4

Flags :

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



Summary Results for Laboratory Control Spike

Method: 602

Filename : 3071808/005R

Compound	SA ug/L	Result ug/L	Rec (%)	#	LCS Limits	
					Lower	Upper
Benzene	10.0	10.1	100.9		39	150
Chlorobenzene	10.0	9.8	98.0		55	136
1,2-Dichlorobenzene	20.0	19.2	96.1		37	154
1,3-Dichlorobenzene	10.0	9.7	96.7		50	141
1,4-Dichlorobenzene	20.0	19.3	96.6		42	143
• Diisopropyl ether	10.0	10.2	101.7		30	170
Ethylbenzene	10.0	10.1	100.5		32	160
• MTBE	20.0	20.1	100.3		35	165
Toluene	10.0	9.9	99.2		46	148
• m,p-Xylene	20.0	19.8	99.1		D	239
• o-Xylene	20.0	19.4	97.2		36	164

Flags :

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

Summary Results for MS-MSD

Method: ~~602~~

Sample: 3071808/017F::3071808/017R

MS: 3071808/019f::3071808/019R

MSD: 3071808/020f::3071808/020R

Compound	SA	µg/L			REC(%)		REC Limits		RPD	
		Sam.	MS	MSD	MS	MSD	Lower	Upper	(30%)	#
Benzene	10.0	10.3	10.0	9.7	100	97	39	150	3.3	
Chlorobenzene	10.0	ND	10.1	9.6	101	96	55	135	5.4	
1,2-Dichlorobenzene	20.0	ND	20.1	18.9	100	95	37	154	5.9	
1,3-Dichlorobenzene	10.0	ND	10.0	9.4	100	94	50	141	6.3	
1,4-Dichlorobenzene	20.0	1.6	18.1	16.9	90	85	42	143	6.6	
• Diisopropyl ether	10.0	ND	10.8	10.1	108	101	30	170	6.4	
Ethylbenzene	10.0	ND	10.5	9.9	105	99	32	160	5.6	
• MTBE	20.0	ND	22.0	20.7	110	104	35	165	6.2	
Toluene	10.0	ND	10.4	9.9	104	99	46	148	5.2	
• m,p-Xylene	20.0	13.9	20.9	20.0	104	100	D	239	4.4	
• o-Xylene	20.0	1.3	20.6	19.6	103	98	36	164	5.2	

Flags:

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

Reviewed By: _____

**Results for Volatiles**

by GC 602

Client Sample ID: Method Blank

Analyzed By: RSB

Client Project ID:

Date Collected:

Lab Sample ID: VBLK1072108A

Date Received:

Lab Project ID:

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	7/21/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	7/21/2008	
Ethylbenzene	BQL	1.00	0.19	1	7/21/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	7/21/2008	
Toluene	BQL	1.00	0.313	1	7/21/2008	
m/p-Xylene	BQL	2.00	0.481	1	7/21/2008	
o-Xylene	BQL	2.00	0.405	1	7/21/2008	

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.

Summary Results for QC Check

Method: 602

Filename : 1072108/003R

Compound	SA	Result	Rec	QC Limits	
	ug/L	ug/L	(%) #	Lower	Upper
Benzene	20.0	19.7	98.6	77.0	123.0
Chlorobenzene	20.0	18.6	93.2	80.5	119.5
1,2-Dichlorobenzene	40.0	34.8	86.9	68.0	132.0
1,3-Dichlorobenzene	20.0	17.5	87.6	72.5	127.5
1,4-Dichlorobenzene	40.0	35.6	89.0	69.5	130.5
• Diisopropyl ether	20.0	21.9	109.6	43.1	156.9
Ethylbenzene	20.0	18.6	93.0	83.0	137.0
• MTBE	40.0	36.8	91.9	46.8	153.2
Toluene	20.0	19.1	95.3	77.5	127.0
• m,p-Xylene	40.0	36.8	92.1	11.2	188.8
• o-Xylene	40.0	36.3	90.7	47.6	152.4

Flags :

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

Summary Results for Laboratory Control Spike

Method: 602

Filename : 1072108/005R

Compound	SA	Result	Rec	LCS Limits	
	ug/L	ug/L	(%) #	Lower	Upper
Benzene	10.0	8.6	86.6	39	150
Chlorobenzene	10.0	10.0	100.1	55	135
1,2-Dichlorobenzene	20.0	22.5	112.5	37	154
1,3-Dichlorobenzene	10.0	11.3	112.6	50	141
1,4-Dichlorobenzene	20.0	22.9	114.4	42	143
• Diisopropyl ether	10.0	7.5	75.2	30	170
Ethylbenzene	10.0	10.6	106.3	32	160
• MTBE	20.0	17.9	89.5	35	165
Toluene	10.0	9.9	99.5	46	148
• m,p-Xylene	20.0	22.1	110.6	D	239
• o-Xylene	20.0	22.0	110.0	36	164

Flags :

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

Summary Results for MS-MSD

Method: 802

Sample: 1072108/017F::1072108/017R

MS: 1072108/019f::1072108/019R

MSD: 1072108/020f::1072108/020R

Compound	SA	Sam.	µg/L		REC(%)		REC Limits		RPD	
			MS	MSD	MS	MSD	Lower	Upper	(30%)	#
Benzene	10.0	ND	10.2	10.3	102	103	39	150	1.0	
Chlorobenzene	10.0	ND	9.4	9.5	94	95	55	135	0.9	
1,2-Dichlorobenzene	20.0	ND	18.3	18.5	92	93	37	154	1.1	
1,3-Dichlorobenzene	10.0	ND	8.9	9.0	89	90	50	141	1.1	
1,4-Dichlorobenzene	20.0	ND	13.3	18.2	66	91	42	143	31.1	+
• Diisopropyl ether	10.0	ND	11.3	11.1	113	111	30	170	1.3	
Ethylbenzene	10.0	ND	9.4	9.5	94	95	32	160	1.4	
• MTBE	20.0	ND	18.2	18.6	91	93	35	165	2.2	
Toluene	10.0	ND	9.7	9.7	97	97	46	148	0.1	
• m,p-Xylene	20.0	ND	18.5	18.8	93	94	D	239	1.7	
• o-Xylene	20.0	ND	18.3	18.6	92	93	36	164	1.5	

Flags:

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

Reviewed By: _____



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 015

Sample Information	
Sample Identification	USTM232-236-MW03
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	07/10/08
Date Received	07/11/08
Date Extracted	07/16/08 00:38 - 07/16/08 00:38
Date Analyzed	07/16/08 00:38 - 07/16/08 00:38
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result µg/L	Report Limit µg/L	Flags
C ₅ -C ₈ Aliphatics**	BQL	100	
C ₉ -C ₁₂ Aliphatics**	BQL	100	
C ₉ -C ₁₀ Aromatics**	BQL	100	
	Percent Recovery	Flags	Limits Lower Upper
Surrogate % Recovery - PID	91.1		70 130
Surrogate % Recovery - FID	93.9		70 130

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

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

Lab Info: g649-46-1a	Lab Info: g649-46-1a
FID Info: VP071508/035F0101.D	PID Info: VP071508/035R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of Virginia

Project Name: CTO 015

Sample Information	
Sample Identification	USTM232-236-MW15
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	07/10/08
Date Received	07/11/08
Date Extracted	07/16/08 01:05 - 07/16/08 01:05
Date Analyzed	07/16/08 01:05 - 07/16/08 01:05
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result µg/L	Report Limit µg/L	Flags
C ₅ -C ₈ Aliphatics**	BQL	100	
C ₉ -C ₁₂ Aliphatics**	BQL	100	
C ₉ -C ₁₀ Aromatics**	BQL	100	
	Percent Recovery	Flags	Limits Lower Upper
Surrogate % Recovery - PID	93.8		70 130
Surrogate % Recovery - FID	96.0		70 130

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

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

Lab Info: g649-46-2a	Lab Info: g649-46-2a
FID Info: VP071508/036F0101.D	PID Info: VP071508/036R0101.D

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 015

Sample Information	
Sample Identification	USTM232-236-MW01
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	07/11/08
Date Received	07/11/08
Date Extracted	07/16/08 01:32 - 07/16/08 01:32
Date Analyzed	07/16/08 01:32 - 07/16/08 01:32
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result µg/L	Report Limit µg/L	Flags
C ₅ -C ₈ Aliphatics**	BQL	100	
C ₉ -C ₁₂ Aliphatics**	BQL	100	
C ₉ -C ₁₀ Aromatics**	BQL	100	
	Percent Recovery	Flags	Limits Lower Upper
Surrogate % Recovery - PID	89.9		70 130
Surrogate % Recovery - FID	92.7		70 130

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

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

Lab Info: g649-46-3a	Lab Info: g649-46-3a
FID Info: VP071508/037F0101.D	PID Info: VP071508/037R0101.D

Reviewed By: 

**VPH (Aliphatics/Aromatics) Laboratory Reporting Form**Client Name: Osage of VirginiaProject Name: CTO 015

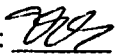
Sample Information	
Sample Identification	USTM232-236-MW05
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	07/11/08
Date Received	07/11/08
Date Extracted	07/16/08 01:58 - 07/16/08 01:58
Date Analyzed	07/16/08 01:58 - 07/16/08 01:58
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result µg/L	Report Limit µg/L	Flags	
C ₅ -C ₈ Aliphatics**	BQL	100		
C ₉ -C ₁₂ Aliphatics**	BQL	100		
C ₉ -C ₁₀ Aromatics**	BQL	100		
	Percent Recovery	Flags	Limits	
			Lower	Upper
Surrogate % Recovery - PID	94.5		70	130
Surrogate % Recovery - FID	95.4		70	130

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

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

Lab Info: g649-46-4a	Lab Info: g649-46-4a
FID Info: VP071508/038F0101.D	PID Info: VP071508/038R0101.D

Reviewed By: 

**VPH (Aliphatics/Aromatics) Laboratory Reporting Form**Client Name: Osage of VirginiaProject Name: CTO 015

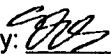
Sample Information	
Sample Identification	USTM232-236-MW08
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	07/11/08
Date Received	07/11/08
Date Extracted	07/17/08 22:09 - 07/17/08 22:09
Date Analyzed	07/17/08 22:09 - 07/17/08 22:09
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result µg/L	Report Limit µg/L	Flags	
C ₅ -C ₈ Aliphatics**	BQL	100		
C ₉ -C ₁₂ Aliphatics**	BQL	100		
C ₉ -C ₁₀ Aromatics**	BQL	100		
	Percent Recovery	Flags	Limits	
			Lower	Upper
Surrogate % Recovery - PID	96.8		70	130
Surrogate % Recovery - FID	98.0		70	130

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

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

Lab Info: g649-46-5b	Lab Info: g649-46-5b
FID Info: VP071708/019F0101.D	PID Info: VP071708/019R0101.D

Reviewed By: 

**VPH (Aliphatics/Aromatics) Laboratory Reporting Form**Client Name: Osage of VirginiaProject Name: CTO 015

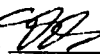
Sample Information	
Sample Identification	USTM232-236-MW18
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	07/11/08
Date Received	07/11/08
Date Extracted	07/16/08 22:29 - 07/16/08 22:29
Date Analyzed	07/16/08 22:29 - 07/16/08 22:29
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result µg/L	Report Limit µg/L	Flags	
C ₅ -C ₈ Aliphatics**	BQL	100		
C ₉ -C ₁₂ Aliphatics**	BQL	100		
C ₉ -C ₁₀ Aromatics**	129	100		
	Percent Recovery	Flags	Limits	
			Lower	Upper
Surrogate % Recovery - PID	91.3		70	130
Surrogate % Recovery - FID	96.1		70	130

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

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

Lab Info: g649-46-6a	Lab Info: g649-46-6a
FID Info: VP071608/032F0101.D	PID Info: VP071608/032R0101.D

Reviewed By: 

**VPH (Aliphatics/Aromatics) Laboratory Reporting Form**Client Name: Osage of VirginiaProject Name: CTO 015

Sample Information	
Sample Identification	USTM232-236-MW21
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	07/11/08
Date Received	07/11/08
Date Extracted	07/16/08 22:56 - 07/16/08 22:56
Date Analyzed	07/16/08 22:56 - 07/16/08 22:56
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result µg/L	Report Limit µg/L	Flags
C ₅ -C ₈ Aliphatics**	BQL	100	
C ₉ -C ₁₂ Aliphatics**	BQL	100	
C ₉ -C ₁₀ Aromatics**	104	100	
		Percent Recovery	Limits Lower Upper
Surrogate % Recovery - PID		93.9	70 130
Surrogate % Recovery - FID		97.1	70 130

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

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

Lab Info: g649-46-7a	Lab Info: g649-46-7a
FID Info: VP071608/033F0101.D	PID Info: VP071608/033R0101.D

Reviewed By:

**VPH (Aliphatics/Aromatics) Laboratory Reporting Form**Client Name: Osage of VirginiaProject Name: CTO 015

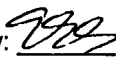
Sample Information	
Sample Identification	USTM232-236-MW20
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	07/10/08
Date Received	07/11/08
Date Extracted	07/16/08 02:25 - 07/16/08 02:25
Date Analyzed	07/16/08 02:25 - 07/16/08 02:25
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result µg/L	Report Limit µg/L	Flags
C ₅ -C ₈ Aliphatics**	BQL	100	
C ₉ -C ₁₂ Aliphatics**	BQL	100	
C ₉ -C ₁₀ Aromatics**	BQL	100	
	Percent Recovery	Flags	Limits Lower Upper
	Surrogate % Recovery - PID	91.2	70 130
	Surrogate % Recovery - FID	95.1	70 130

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

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

Lab Info: g649-46-8a	Lab Info: g649-46-8a
FID Info: VP071508/039F0101.D	PID Info: VP071508/039R0101.D

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 015

Sample Information	
Sample Identification	USTM232-236-MW22
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	07/10/08
Date Received	07/11/08
Date Extracted	07/16/08 02:52 - 07/16/08 02:52
Date Analyzed	07/16/08 02:52 - 07/16/08 02:52
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result µg/L	Report Limit µg/L	Flags
C ₅ -C ₈ Aliphatics**	BQL	100	
C ₉ -C ₁₂ Aliphatics**	BQL	100	
C ₉ -C ₁₀ Aromatics**	BQL	100	
	Percent Recovery	Flags	Limits Lower Upper
	Surrogate % Recovery - PID	89.6	70 130
	Surrogate % Recovery - FID	93.8	70 130

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

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

Lab Info: g649-46-9a	Lab Info: g649-46-9a
FID Info: VP071508/040F0101.D	PID Info: VP071508/040R0101.D

Reviewed By:

**VPH (Aliphatics/Aromatics) Laboratory Reporting Form**

Client Name: _____

Project Name: _____

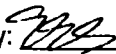
Sample Information	
Sample Identification	vblk4071508a
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	
Date Received	
Date Extracted	
Date Analyzed	07/15/08 10:51 - 07/15/08 10:51
Dry Weight	100
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result µg/L	Report Limit µg/L	Flags
C ₅ -C ₈ Aliphatics**	BQL	100	
C ₉ -C ₁₂ Aliphatics**	BQL	100	
C ₉ -C ₁₀ Aromatics**	BQL	100	
	Percent Recovery	Flags	Limits Lower Upper
Surrogate % Recovery - PID	94.0		70 130
Surrogate % Recovery - FID	95.9		70 130

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

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

Lab Info: vblk4071508a	Lab Info: vblk4071508a
FID Info: VP071508/006F0101.D	PID Info: VP071508/006R0101.D

Reviewed By: 



SGS ENVIRONMENTAL SERVICES, INC.

LABORATORY CONTROL SPIKE RESULTS
by Method VPH

SGS Environmental Services, Inc.

Lab Sample ID: LCS4071508A
Lab Project ID: Batch QC
Report Basis: Wet

Analyzed By:
Matrix: Water
Percent Solids: NA %

Analytical QC Results Summary

Analyte	Expected Amount µg/L	Measured Amount µg/L	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C5-C8 Aliphatics		108				
C9-C12 Aliphatics		42.5				
C9-C10 Aromatics		30.8				
Total VPH	200	182	91.0	70.0	130	

Surrogate Standards	Expected Amount µg/L	Measured Amount µg/L	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
Surrogate - PID	1250	1165	93.2	70.0	130	
Surrogate - FID	1250	1208	96.6	70.0	130	

Reviewed By: _____

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS**
by Method VPH

SGS Environmental Services, Inc.

Lab Sample ID: g649-45-9a
MS Sample ID: g649-45-9a
MSD Sample ID: g649-45-9a
Lab Project ID: Batch QC for VP071508
Report Basis: Wet

Analyzed By: DVG
Matrix: Water
Percent Solids: NA %

Matrix Spike Results Summary

Analyte	Sample Amount µg/L	Spiked Amount µg/L	Measured Amount µg/L	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C5-C8 Aliphatics	386	-	513	-	-	-	
C9-C12 Aliphatics	199	-	243	-	-	-	
C9-C10 Aromatics	72.2	-	91.7	-	-	-	
Total VPH	657	200	847	95.2	70	130	

Matrix Spike Duplicate Results Summary

Analyte	Spiked Amount µg/L	Measured Amount µg/L	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C5-C8 Aliphatics	-	528	-	-	-	
C9-C12 Aliphatics	-	245	-	-	-	
C9-C10 Aromatics	-	91.7	-	-	-	
Total VPH	200	864	103.0	70	130	

Analyte	MS Amount µg/L	MSD Amount µg/L	RPD Value (%)	RPD Limit (%)	Qualifier
C5-C8 Aliphatics	-	-	-	-	
C9-C12 Aliphatics	-	-	-	-	
C9-C10 Aromatics	-	-	-	-	
Total VPH	847	864	1.99	20	

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: _____

Project Name: _____

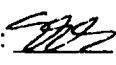
Sample Information	
Sample Identification	vblk4071608a
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	
Date Received	
Date Extracted	
Date Analyzed	07/16/08 10:48 - 07/16/08 10:48
Dry Weight	100
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result µg/L	Report Limit µg/L	Flags
C ₅ -C ₈ Aliphatics**	BQL	100	
C ₉ -C ₁₂ Aliphatics**	BQL	100	
C ₉ -C ₁₀ Aromatics**	BQL	100	
	Percent Recovery	Flags	Limits Lower Upper
Surrogate % Recovery - PID	94.7		70 130
Surrogate % Recovery - FID	95.9		70 130

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

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

Lab Info: vblk4071608a	Lab Info: vblk4071608a
FID Info: VP071608/006F0101.D	PID Info: VP071608/006R0101.D

Reviewed By: 



SGS ENVIRONMENTAL SERVICES, INC.

LABORATORY CONTROL SPIKE RESULTS
by Method VPH

SGS Environmental Services, Inc.

Lab Sample ID: LCS4071608A
Lab Project ID: Batch QC
Report Basis: WetAnalyzed By:
Matrix: Water
Percent Solids: NA %**Analytical QC Results Summary**

Analyte	Expected Amount µg/L	Measured Amount µg/L	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C5-C8 Aliphatics		106				
C9-C12 Aliphatics		43.1				
C9-C10 Aromatics		31.1				
Total VPH	200	180	90.0	70.0	130	

Surrogate Standards	Expected Amount µg/L	Measured Amount µg/L	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
Surrogate - PID	1250	1152	92.2	70.0	130	
Surrogate - FID	1250	1176	94.1	70.0	130	

Reviewed By: 

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS**
by Method VPH

SGS Environmental Services, Inc.

Lab Sample ID: g649-46-5a
MS Sample ID: g649-46-5a
MSD Sample ID: g649-46-5a
Lab Project ID: Batch QC for VP071608
Report Basis: Wet

Analyzed By: DVG
Matrix: Water
Percent Solids: NA %

Matrix Spike Results Summary

Analyte	Sample Amount µg/L	Spiked Amount µg/L	Measured Amount µg/L	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C5-C8 Aliphatics	0.000	-	100.00	-	-	-	
C9-C12 Aliphatics	4.500	-	38.90	-	-	-	
C9-C10 Aromatics	12.200	-	29.40	-	-	-	
Total VPH	10.500	200.0	169.0	79.1	70	130	

Matrix Spike Duplicate Results Summary

Analyte	Spiked Amount µg/L	Measured Amount µg/L	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C5-C8 Aliphatics	-	105.00	-	-	-	
C9-C12 Aliphatics	-	41.60	-	-	-	
C9-C10 Aromatics	-	30.00	-	-	-	
Total VPH	200.0	177.0	83.2	70	130	

Analyte	MS Amount µg/L	MSD Amount µg/L	RPD Value (%)	RPD Limit (%)	Qualifier
C5-C8 Aliphatics	-	-	-	-	
C9-C12 Aliphatics	-	-	-	-	
C9-C10 Aromatics	-	-	-	-	
Total VPH	169.0	177.0	5	20	

Reviewed By: 



VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: _____

Project Name: _____

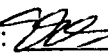
Sample Information	
Sample Identification	vblk4071708a
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	
Date Received	
Date Extracted	
Date Analyzed	07/17/08 10:45 - 07/17/08 10:45
Dry Weight	100
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result µg/L	Report Limit µg/L	Flags
C ₅ -C ₈ Aliphatics**	BQL	100	
C ₉ -C ₁₂ Aliphatics**	BQL	100	
C ₉ -C ₁₀ Aromatics**	BQL	100	
	Percent Recovery	Flags	Limits Lower Upper
Surrogate % Recovery - PID	91.8		70 130
Surrogate % Recovery - FID	93.8		70 130

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

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

Lab Info: vblk4071708a	Lab Info: vblk4071708a
FID Info: VP071708/006F0101.D	PID Info: VP071708/006R0101.D

Reviewed By: 

**LABORATORY CONTROL SPIKE RESULTS**
by Method VPH

SGS Environmental Services, Inc.

Lab Sample ID: LCS4071708A
Lab Project ID: Batch QC
Report Basis: Wet

Analyzed By:
Matrix: Water
Percent Solids: NA %

Analytical QC Results Summary

Analyte	Expected Amount µg/L	Measured Amount µg/L	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C5-C8 Aliphatics		108				
C9-C12 Aliphatics		43.3				
C9-C10 Aromatics		31.2				
Total VPH	200	183	91.5	70.0	130	

Surrogate Standards	Expected Amount µg/L	Measured Amount µg/L	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
Surrogate - PID	1250	1225	98.0	70.0	130	
Surrogate - FID	1250	1231	98.5	70.0	130	

Reviewed By: 

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS**
by Method VPH

SGS Environmental Services, Inc.

Lab Sample ID: g649-46-5a
MS Sample ID: g649-46-5a
MSD Sample ID: g649-46-5a
Lab Project ID: Batch QC for VP071708
Report Basis: Wet

Analyzed By: DVG
Matrix: Water
Percent Solids: NA %

Matrix Spike Results Summary

Analyte	Sample Amount µg/L	Spiked Amount µg/L	Measured Amount µg/L	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C5-C8 Aliphatics	0.000	-	90.70	-	-	-	
C9-C12 Aliphatics	4.410	-	41.50	-	-	-	
C9-C10 Aromatics	12.300	-	30.50	-	-	-	
Total VPH	10.500	200.0	163.0	76.1	70	130	

Matrix Spike Duplicate Results Summary

Analyte	Spiked Amount µg/L	Measured Amount µg/L	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C5-C8 Aliphatics	-	88.80	-	-	-	
C9-C12 Aliphatics	-	40.80	-	-	-	
C9-C10 Aromatics	-	30.30	-	-	-	
Total VPH	200.0	160.0	74.7	70	130	

Analyte	MS Amount µg/L	MSD Amount µg/L	RPD Value (%)	RPD Limit (%)	Qualifier
C5-C8 Aliphatics	-	-	-	-	
C9-C12 Aliphatics	-	-	-	-	
C9-C10 Aromatics	-	-	-	-	
Total VPH	163.0	160.0	2	20	

Reviewed By: 

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 07/14/08 PID Initial Calibration Date: 07/14/08

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	3.21	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	1.00	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	11.22	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 07/15/08 Filename: VP071508/033F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C ₅ -C ₈ Aliphatics	200	16	-22.6	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-23.2	±25%
C ₉ -C ₁₀ Aromatics	200	16	-10.2	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 07/14/08

PID Initial Calibration Date: 07/14/08

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	3.21	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	1.00	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	11.22	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 07/15/08

Filename: VP071508/047F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C ₅ -C ₈ Aliphatics	200	16	-8.1	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-20.5	±25%
C ₉ -C ₁₀ Aromatics	200	16	0.8	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 07/14/08

PID Initial Calibration Date: 07/14/08

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	3.21	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	1.00	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	11.22	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 07/16/08

Filename: VP071608/002F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C ₅ -C ₈ Aliphatics	200	16	-4.6	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-14.5	±25%
C ₉ -C ₁₀ Aromatics	200	16	1.0	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 07/14/08

PID Initial Calibration Date: 07/14/08

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	3.21	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	1.00	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	11.22	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 07/16/08

Filename: VP071608/037F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C ₅ -C ₈ Aliphatics	200	16	-9.8	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-21.5	±25%
C ₉ -C ₁₀ Aromatics	200	16	-1.7	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 07/14/08

PID Initial Calibration Date: 07/14/08

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	3.21	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	1.00	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	11.22	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 07/17/08

Filename: VP071708/002F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C ₅ -C ₈ Aliphatics	200	16	-10.7	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-21.5	±25%
C ₉ -C ₁₀ Aromatics	200	16	-8.1	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 07/14/08

PID Initial Calibration Date: 07/14/08

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	3.21	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	1.00	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	11.22	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 07/17/08

Filename: VP071708/025F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C ₅ -C ₈ Aliphatics	200	16	-11.6	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-23.9	±25%
C ₉ -C ₁₀ Aromatics	200	16	-1.3	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

**EPH (Aliphatics/Aromatics) Laboratory Reporting Form**Client Name: Osage of VirginiaProject Name: CTO 015

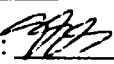
Sample Information	
Sample Identification	USTM232-236-MW03
Sample Matrix	WATER
Date Collected	07/10/08
Date Received	07/11/08
Date Extracted	07/16/08
Date Analyzed	07/21/08 11:24 - 07/21/08 11:53
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	938
Final Volume (mL)	5.0

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

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	123		40	140
Aromatic (ortho-terphenyl)	119		40	140
Fractionation 1 (2-bromonaphthalene)	84.7		40	140
Fractionation 2 (2-fluorobiphenyl)	86.6		40	140

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

Lab Info: G649-46-1L	Lab Info: G649-46-1L
Aliphatic: EP072108/007F0701.D	Aromatic: EP072108/008F0801.D

Reviewed By: 

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of Virginia

Project Name: CTO 015

Sample Information	
Sample Identification	USTM232-236-MW15
Sample Matrix	WATER
Date Collected	07/10/08
Date Received	07/11/08
Date Extracted	07/16/08
Date Analyzed	07/17/08 15:06 - 07/17/08 15:06
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	953
Final Volume (mL)	5.0

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

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	68.8		40	140
Aromatic (ortho-terphenyl)	80.7		40	140

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

Lab Info: G649-46-2L	Lab Info: G649-46-2L
Aliphatic: EP071708/005F0301.D	Aromatic: EP071708/005F0301.D

Reviewed By: 

**EPH (Aliphatics/Aromatics) Laboratory Reporting Form**Client Name: Osage of VirginiaProject Name: CTO 015

Sample Information	
Sample Identification	USTM232-236-MW01
Sample Matrix	WATER
Date Collected	07/11/08
Date Received	07/11/08
Date Extracted	07/16/08
Date Analyzed	07/17/08 15:34 - 07/17/08 15:34
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	935
Final Volume (mL)	5.0

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

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	133		40	140
Aromatic (ortho-terphenyl)	130		40	140

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

Lab Info: G649-46-3L	Lab Info: G649-46-3L
Aliphatic: EP071708/006F0401.D	Aromatic: EP071708/006F0401.D

Reviewed By:

**EPH (Aliphatics/Aromatics) Laboratory Reporting Form**Client Name: Osage of VirginiaProject Name: CTO 015

Sample Information	
Sample Identification	USTM232-236-MW05
Sample Matrix	WATER
Date Collected	07/11/08
Date Received	07/11/08
Date Extracted	07/16/08
Date Analyzed	07/17/08 16:03 - 07/17/08 16:03
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	933
Final Volume (mL)	5.0

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

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	132		40	140
Aromatic (ortho-terphenyl)	130		40	140

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

Lab Info: G649-46-4L	Lab Info: G649-46-4L
Aliphatic: EP071708/007F0501.D	Aromatic: EP071708/007F0501.D

Reviewed By:

**EPH (Aliphatics/Aromatics) Laboratory Reporting Form**Client Name: Osage of VirginiaProject Name: CTO 015

Sample Information	
Sample Identification	USTM232-236-MW08
Sample Matrix	WATER
Date Collected	07/11/08
Date Received	07/11/08
Date Extracted	07/16/08
Date Analyzed	07/17/08 16:32 - 07/17/08 16:32
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	961
Final Volume (mL)	5.0

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

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	62.9		40	140
Aromatic (ortho-terphenyl)	54.3		40	140

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

Lab Info: G649-46-5M	Lab Info: G649-46-5M
Aliphatic: EP071708/008F0601.D	Aromatic: EP071708/008F0601.D

Reviewed By: 

**EPH (Aliphatics/Aromatics) Laboratory Reporting Form**Client Name: Osage of VirginiaProject Name: CTO 015

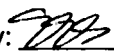
Sample Information	
Sample Identification	USTM232-236-MW18
Sample Matrix	WATER
Date Collected	07/11/08
Date Received	07/11/08
Date Extracted	07/16/08
Date Analyzed	07/21/08 12:23 - 07/21/08 12:51
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	857
Final Volume (mL)	5.0

Analytical Results			
Analytes**	Result µg/L	Report Limit µg/L	Flags
C9-C18 Aliphatics	BQL	100	
C19-C36 Aliphatics	BQL	100	
C11-C22 Aromatics	269	100	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	123		40	140
Aromatic (ortho-terphenyl)	125		40	140
Fractionation 1 (2-bromonaphthalene)	98.3		40	140
Fractionation 2 (2-fluorobiphenyl)	108		40	140

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

Lab Info: G649-46-6L	Lab Info: G649-46-6L
Aliphatic: EP072108/009F0101.D	Aromatic: EP072108/010F0201.D

Reviewed By: 

**EPH (Aliphatics/Aromatics) Laboratory Reporting Form**Client Name: Osage of VirginiaProject Name: CTO 015

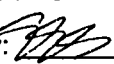
Sample Information	
Sample Identification	USTM232-236-MW21
Sample Matrix	WATER
Date Collected	07/11/08
Date Received	07/11/08
Date Extracted	07/16/08
Date Analyzed	07/21/08 13:20 - 07/21/08 13:49
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	938
Final Volume (mL)	5.0

Analytical Results			
Analytes**	Result µg/L	Report Limit µg/L	Flags
C9-C18 Aliphatics	801	100	
C19-C36 Aliphatics	BQL	100	
C11-C22 Aromatics	330	100	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	114		40	140
Aromatic (ortho-terphenyl)	106		40	140
Fractionation 1 (2-bromonaphthalene)	92.9		40	140
Fractionation 2 (2-fluorobiphenyl)	89.8		40	140

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

Lab Info: G649-46-7L	Lab Info: G649-46-7L
Aliphatic: EP072108/011F0301.D	Aromatic: EP072108/012F0401.D

Reviewed By: 

**EPH (Aliphatics/Aromatics) Laboratory Reporting Form**Client Name: Osage of VirginiaProject Name: CTO 015

Sample Information	
Sample Identification	USTM232-236-MW20
Sample Matrix	WATER
Date Collected	07/10/08
Date Received	07/11/08
Date Extracted	07/16/08
Date Analyzed	07/21/08 14:18 - 07/21/08 14:46
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	992
Final Volume (mL)	5.0

Analytical Results			
Analytes**	Result µg/L	Report Limit µg/L	Flags
C9-C18 Aliphatics	BQL	100	
C19-C36 Aliphatics	BQL	100	
C11-C22 Aromatics	126	100	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	77.3		40	140
Aromatic (ortho-terphenyl)	109		40	140
Fractionation 1 (2-bromonaphthalene)	101		40	140
Fractionation 2 (2-fluorobiphenyl)	96.1		40	140

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

Lab Info: G649-46-8L	Lab Info: G649-46-8L
Aliphatic: EP072108/013F0501.D	Aromatic: EP072108/014F0601.D

Reviewed By: 

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of Virginia

Project Name: CTO 015

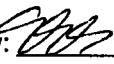
Sample Information	
Sample Identification	USTM232-236-MW22
Sample Matrix	WATER
Date Collected	07/10/08
Date Received	07/11/08
Date Extracted	07/16/08
Date Analyzed	07/21/08 15:15 - 07/21/08 15:44
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	897
Final Volume (mL)	5.0

Analytical Results			
Analytes**	Result µg/L	Report Limit µg/L	Flags
C9-C18 Aliphatics	BQL	100	
C19-C36 Aliphatics	BQL	100	
C11-C22 Aromatics	202	100	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	100		40	140
Aromatic (ortho-terphenyl)	88.9		40	140
Fractionation 1 (2-bromonaphthalene)	78.0		40	140
Fractionation 2 (2-fluorobiphenyl)	76.7		40	140

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

Lab Info: G649-46-9L	Lab Info: G649-46-9L
Aliphatic: EP072108/015F0701.D	Aromatic: EP072108/016F0801.D

Reviewed By: 

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 06/05/08

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	1.89	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	0.86	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	0.99	Linear Regression
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 07/17/08
07/17/08

Filenames: ep071708/001f0101.d
ep071708/002f0201.d

Calibration Check

Range	Levels		%Difference if CF %Drift if LR	Limits
	(µg/L)	(mg/Kg)		
C9-C18 Aliphatics	100	16.7	17.5	±25%
C19-C36 Aliphatics	100	16.7	17.0	±25%
C11-C22 Aromatics	100	16.7	-20.0	±25%

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

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

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 06/05/08

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	1.89	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	0.86	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	0.99	Linear Regression
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 07/18/08
07/18/08

FileNames: ep071808/001f0101.d
ep071808/002f0201.d

Calibration Check

Range	Levels		%Difference if CF %Drift if LR	Limits
	(µg/L)	(mg/Kg)		
C9-C18 Aliphatics	100	16.7	23.6	≤±25%
C19-C36 Aliphatics	100	16.7	23.4	≤±25%
C11-C22 Aromatics	100	16.7	8.1	≤±25%

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

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

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 06/05/08

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	1.89	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	0.86	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	0.99	Linear Regression
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 07/21/08
07/21/08

Filenames: ep072108/001f0101.d
ep072108/002f0201.d

Calibration Check

Range	Levels		%Difference if CF %Drift if LR	Limits
	(µg/L)	(mg/Kg)		
C9-C18 Aliphatics	100	16.7	23.5	≤±25%
C19-C36 Aliphatics	100	16.7	21.8	≤±25%
C11-C22 Aromatics	100	16.7	8.0	≤±25%

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

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

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 06/05/08

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	1.89	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	0.86	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	0.99	Linear Regression
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 07/22/08
07/22/08

Filenames: ep072208/001f0101.d
ep072208/002f0201.d

Calibration Check

Range	Levels		%Difference if CF %Drift if LR	Limits
	(µg/L)	(mg/Kg)		
C9-C18 Aliphatics	100	16.7	25.0	≤±25%
C19-C36 Aliphatics	100	16.7	24.8	≤±25%
C11-C22 Aromatics	100	16.7	10.6	≤±25%

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

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

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTM232-236-MW03

Client Project ID: CTO 015

Lab Sample ID: G649-46-1J

Lab Project ID: G649-46

Analyzed By: DES

Date Collected: 7/10/2008 14:05

Date Received: 7/11/2008

Date Extracted: 7/15/2008

Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	1.67	5.56	0.679	1	7/17/2008	J
Acenaphthylene	BQL	5.56	0.623	1	7/17/2008	
Anthracene	BQL	5.56	0.973	1	7/17/2008	
Benzo[a]anthracene	BQL	5.56	0.756	1	7/17/2008	
Benzo[a]pyrene	BQL	5.56	0.706	1	7/17/2008	
Benzo[b]fluoranthene	BQL	5.56	0.795	1	7/17/2008	
Benzo[g,h,i]perylene	BQL	5.56	2.54	1	7/17/2008	
Benzo[k]fluoranthene	BQL	5.56	0.606	1	7/17/2008	
Bis(2-chloroethoxy)methane	BQL	5.56	0.617	1	7/17/2008	
Bis(2-chloroethyl)ether	BQL	5.56	0.606	1	7/17/2008	
Bis(2-chloroisopropyl)ether	BQL	5.56	0.873	1	7/17/2008	
Bis(2-ethylhexyl)phthalate	17.1	5.56	0.740	1	7/17/2008	
4-bromophenyl phenyl ether	BQL	5.56	1.11	1	7/17/2008	
Butylbenzylphthalate	BQL	5.56	0.851	1	7/17/2008	
2-Chloronaphthalene	BQL	5.56	0.695	1	7/17/2008	
2-Chlorophenol	BQL	5.56	2.35	1	7/17/2008	
4-Chloro-3-methylphenol	BQL	5.56	1.81	1	7/17/2008	
4-Chlorophenyl phenyl ether	BQL	5.56	0.790	1	7/17/2008	
Chrysene	BQL	5.56	0.617	1	7/17/2008	
Dibenzo[a,h]anthracene	BQL	5.56	2.71	1	7/17/2008	
Di-n-Butylphthalate	BQL	5.56	0.918	1	7/17/2008	
3,3'-Dichlorobenzidine	BQL	11.1	2.28	1	7/17/2008	
2,4-Dichlorophenol	BQL	5.56	2.09	1	7/17/2008	
Diethylphthalate	BQL	5.56	0.823	1	7/17/2008	
Dimethylphthalate	BQL	5.56	0.578	1	7/17/2008	
2,4-Dimethylphenol	BQL	5.56	5.14	1	7/17/2008	
Di-n-octylphthalate	BQL	5.56	0.645	1	7/17/2008	
4,6-Dinitro-2-methylphenol	BQL	27.8	2.06	1	7/17/2008	
2,4-Dinitrophenol	BQL	27.8	2.34	1	7/17/2008	
2,4-Dinitrotoluene	BQL	5.56	0.845	1	7/17/2008	
2,6-Dinitrotoluene	BQL	5.56	0.784	1	7/17/2008	
Diphenylamine *	BQL	5.56	0.851	1	7/17/2008	
Fluoranthene	BQL	5.56	0.784	1	7/17/2008	
Fluorene	1.84	5.56	0.679	1	7/17/2008	J
Hexachlorobenzene	BQL	5.56	0.679	1	7/17/2008	
Hexachlorobutadiene	BQL	5.56	0.879	1	7/17/2008	
Hexachlorocyclopentadiene	BQL	11.1	11.1	1	7/17/2008	
Hexachloroethane	BQL	5.56	0.879	1	7/17/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.56	2.54	1	7/17/2008	
Isophorone	BQL	5.56	0.706	1	7/17/2008	
Naphthalene	BQL	5.56	0.601	1	7/17/2008	
Nitrobenzene	BQL	5.56	0.734	1	7/17/2008	
2-Nitrophenol	BQL	5.56	1.96	1	7/17/2008	
4-Nitrophenol	BQL	27.8	1.76	1	7/17/2008	
N-Nitrosodi-n-propylamine	BQL	5.56	1.04	1	7/17/2008	
Pentachlorophenol	BQL	27.8	1.57	1	7/17/2008	
Phenanthrene	BQL	5.56	0.768	1	7/17/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW03

Client Project ID: CTO 015

Lab Sample ID: G649-46-1J

Lab Project ID: G649-46

Analyzed By: DES

Date Collected: 7/10/2008 14:05

Date Received: 7/11/2008

Date Extracted: 7/15/2008

Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.56	1.88	1	7/17/2008	
Pyrene	BQL	5.56	1.16	1	7/17/2008	
1,2,4-Trichlorobenzene	BQL	5.56	0.740	1	7/17/2008	
2,4,6-Trichlorophenol	BQL	5.56	1.62	1	7/17/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	9.2	92		
2-Fluorophenol		10	8.1	81		
Nitrobenzene-d5		10	9.3	93		
Phenol-d6		10	8.9	89		
2,4,6-Tribromophenol		10	8.5	85		
4-Terphenyl-d14		10	9.4	94		

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

**Results of Library Search for Semivolatile Compounds**
by GCMS

Client Sample ID: USTM232-236-MW03
Client Project ID: CTO 015
Lab Sample ID: G649-46-1J
Lab Project ID: G649-46
Sample Wt/Vol: 899 ML
Dilution: 1

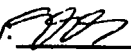
Analyzed By: DES
Date Collected: 7/10/2008 14:05
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Date Analyzed: 7/17/2008
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Cyclohexane, 1,2-dichloro-, trans-	4.65	000822-86-6	90	11.8
2	Aromatic, Unknown	7.91			5.23
3					
4					
5					
6					
7					
8					
9					
10					

Comment:

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

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

Reviewed by: 

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW15
Client Project ID: CTO 015
Lab Sample ID: G649-46-2J
Lab Project ID: G649-46

Analyzed By: DES
Date Collected: 7/10/2008 15:40
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.22	0.637	1	7/17/2008	
Acenaphthylene	BQL	5.22	0.585	1	7/17/2008	
Anthracene	BQL	5.22	0.914	1	7/17/2008	
Benzo[a]anthracene	BQL	5.22	0.711	1	7/17/2008	
Benzo[a]pyrene	BQL	5.22	0.664	1	7/17/2008	
Benzo[b]fluoranthene	BQL	5.22	0.747	1	7/17/2008	
Benzo[g,h,i]perylene	BQL	5.22	2.39	1	7/17/2008	
Benzo[k]fluoranthene	BQL	5.22	0.569	1	7/17/2008	
Bis(2-chloroethoxy)methane	BQL	5.22	0.580	1	7/17/2008	
Bis(2-chloroethyl)ether	BQL	5.22	0.569	1	7/17/2008	
Bis(2-chloroisopropyl)ether	BQL	5.22	0.820	1	7/17/2008	
Bis(2-ethylhexyl)phthalate	17.2	5.22	0.695	1	7/17/2008	
4-bromophenyl phenyl ether	BQL	5.22	1.04	1	7/17/2008	
Butylbenzylphthalate	BQL	5.22	0.799	1	7/17/2008	
2-Chloronaphthalene	BQL	5.22	0.653	1	7/17/2008	
2-Chlorophenol	BQL	5.22	2.20	1	7/17/2008	
4-Chloro-3-methylphenol	BQL	5.22	1.70	1	7/17/2008	
4-Chlorophenyl phenyl ether	BQL	5.22	0.742	1	7/17/2008	
Chrysene	BQL	5.22	0.580	1	7/17/2008	
Dibenzo[a,h]anthracene	BQL	5.22	2.54	1	7/17/2008	
Di-n-Butylphthalate	BQL	5.22	0.862	1	7/17/2008	
3,3'-Dichlorobenzidine	BQL	10.4	2.14	1	7/17/2008	
2,4-Dichlorophenol	BQL	5.22	1.96	1	7/17/2008	
Diethylphthalate	BQL	5.22	0.773	1	7/17/2008	
Dimethylphthalate	BQL	5.22	0.543	1	7/17/2008	
2,4-Dimethylphenol	BQL	5.22	4.83	1	7/17/2008	
Di-n-octylphthalate	BQL	5.22	0.606	1	7/17/2008	
4,6-Dinitro-2-methylphenol	BQL	26.1	1.94	1	7/17/2008	
2,4-Dinitrophenol	BQL	26.1	2.19	1	7/17/2008	
2,4-Dinitrotoluene	BQL	5.22	0.794	1	7/17/2008	
2,6-Dinitrotoluene	BQL	5.22	0.737	1	7/17/2008	
Diphenylamine *	BQL	5.22	0.799	1	7/17/2008	
Fluoranthene	BQL	5.22	0.737	1	7/17/2008	
Fluorene	BQL	5.22	0.637	1	7/17/2008	
Hexachlorobenzene	BQL	5.22	0.637	1	7/17/2008	
Hexachlorobutadiene	BQL	5.22	0.825	1	7/17/2008	
Hexachlorocyclopentadiene	BQL	10.4	10.4	1	7/17/2008	
Hexachloroethane	BQL	5.22	0.825	1	7/17/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.22	2.39	1	7/17/2008	
Isophorone	BQL	5.22	0.664	1	7/17/2008	
Naphthalene	BQL	5.22	0.564	1	7/17/2008	
Nitrobenzene	BQL	5.22	0.690	1	7/17/2008	
2-Nitrophenol	BQL	5.22	1.84	1	7/17/2008	
4-Nitrophenol	BQL	26.1	1.66	1	7/17/2008	
N-Nitrosodi-n-propylamine	BQL	5.22	0.977	1	7/17/2008	
Pentachlorophenol	BQL	26.1	1.48	1	7/17/2008	
Phenanthrene	BQL	5.22	0.721	1	7/17/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW15
Client Project ID: CTO 015
Lab Sample ID: G649-46-2J
Lab Project ID: G649-46

Analyzed By: DES
Date Collected: 7/10/2008 15:40
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.22	1.77	1	7/17/2008	
Pyrene	BQL	5.22	1.09	1	7/17/2008	
1,2,4-Trichlorobenzene	BQL	5.22	0.695	1	7/17/2008	
2,4,6-Trichlorophenol	BQL	5.22	1.53	1	7/17/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	9	90		
2-Fluorophenol		10	7.8	78		
Nitrobenzene-d5		10	9	90		
Phenol-d6		10	8.5	85		
2,4,6-Tribromophenol		10	8.3	83		
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: USTM232-236-MW15
Client Project ID: CTO 015
Lab Sample ID: G649-46-2J
Lab Project ID: G649-46
Sample Wt/Vol: 957 ML
Dilution: 1

Analyzed By: DES
Date Collected: 7/10/2008 15:40
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Date Analyzed: 7/17/2008
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Cyclohexane, 1,2-dichloro-, trans-	4.65	000822-86-6	90	7.92
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 625Client Sample ID: USTM232-236-MW01
Client Project ID: CTO 015
Lab Sample ID: G649-46-3J
Lab Project ID: G649-46Analyzed By: DES
Date Collected: 7/11/2008 8:45
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.42	0.661	1	7/17/2008	
Acenaphthylene	BQL	5.42	0.607	1	7/17/2008	
Anthracene	BQL	5.42	0.948	1	7/17/2008	
Benzo[a]anthracene	BQL	5.42	0.737	1	7/17/2008	
Benzo[a]pyrene	BQL	5.42	0.688	1	7/17/2008	
Benzo[b]fluoranthene	BQL	5.42	0.775	1	7/17/2008	
Benzo[g,h,i]perylene	BQL	5.42	2.48	1	7/17/2008	
Benzo[k]fluoranthene	BQL	5.42	0.590	1	7/17/2008	
Bis(2-chloroethoxy)methane	BQL	5.42	0.601	1	7/17/2008	
Bis(2-chloroethyl)ether	BQL	5.42	0.590	1	7/17/2008	
Bis(2-chloroisopropyl)ether	BQL	5.42	0.850	1	7/17/2008	
Bis(2-ethylhexyl)phthalate	23.5	5.42	0.720	1	7/17/2008	
4-bromophenyl phenyl ether	BQL	5.42	1.08	1	7/17/2008	
Butylbenzylphthalate	BQL	5.42	0.829	1	7/17/2008	
2-Chloronaphthalene	BQL	5.42	0.677	1	7/17/2008	
2-Chlorophenol	BQL	5.42	2.29	1	7/17/2008	
4-Chloro-3-methylphenol	BQL	5.42	1.77	1	7/17/2008	
4-Chlorophenyl phenyl ether	BQL	5.42	0.769	1	7/17/2008	
Chrysene	BQL	5.42	0.601	1	7/17/2008	
Dibenzo[a,h]anthracene	BQL	5.42	2.64	1	7/17/2008	
Di-n-Butylphthalate	BQL	5.42	0.894	1	7/17/2008	
3,3'-Dichlorobenzidine	BQL	10.8	2.22	1	7/17/2008	
2,4-Dichlorophenol	BQL	5.42	2.03	1	7/17/2008	
Diethylphthalate	BQL	5.42	0.802	1	7/17/2008	
Dimethylphthalate	BQL	5.42	0.563	1	7/17/2008	
2,4-Dimethylphenol	BQL	5.42	5.01	1	7/17/2008	
Di-n-octylphthalate	BQL	5.42	0.628	1	7/17/2008	
4,6-Dinitro-2-methylphenol	BQL	27.1	2.01	1	7/17/2008	
2,4-Dinitrophenol	BQL	27.1	2.28	1	7/17/2008	
2,4-Dinitrotoluene	BQL	5.42	0.823	1	7/17/2008	
2,6-Dinitrotoluene	BQL	5.42	0.764	1	7/17/2008	
Diphenylamine *	BQL	5.42	0.829	1	7/17/2008	
Fluoranthene	BQL	5.42	0.764	1	7/17/2008	
Fluorene	BQL	5.42	0.661	1	7/17/2008	
Hexachlorobenzene	BQL	5.42	0.661	1	7/17/2008	
Hexachlorobutadiene	BQL	5.42	0.856	1	7/17/2008	
Hexachlorocyclopentadiene	BQL	10.8	10.8	1	7/17/2008	
Hexachloroethane	BQL	5.42	0.856	1	7/17/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.42	2.48	1	7/17/2008	
Isophorone	BQL	5.42	0.688	1	7/17/2008	
Naphthalene	BQL	5.42	0.585	1	7/17/2008	
Nitrobenzene	BQL	5.42	0.715	1	7/17/2008	
2-Nitrophenol	BQL	5.42	1.91	1	7/17/2008	
4-Nitrophenol	BQL	27.1	1.72	1	7/17/2008	
N-Nitrosodi-n-propylamine	BQL	5.42	1.01	1	7/17/2008	
Pentachlorophenol	BQL	27.1	1.53	1	7/17/2008	
Phenanthrene	BQL	5.42	0.748	1	7/17/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW01
Client Project ID: CTO 015
Lab Sample ID: G649-46-3J
Lab Project ID: G649-46

Analyzed By: DES
Date Collected: 7/11/2008 8:45
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.42	1.83	1	7/17/2008	
Pyrene	BQL	5.42	1.13	1	7/17/2008	
1,2,4-Trichlorobenzene	BQL	5.42	0.720	1	7/17/2008	
2,4,6-Trichlorophenol	BQL	5.42	1.58	1	7/17/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	9.4	94		
2-Fluorophenol		10	8.2	82		
Nitrobenzene-d5		10	9.7	97		
Phenol-d6		10	8.8	88		
2,4,6-Tribromophenol		10	8.6	86		
4-Terphenyl-d14		10	9.5	94		

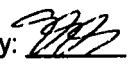
Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

**Results of Library Search for Semivolatile Compounds**
by GCMS

Client Sample ID: USTM232-236-MW01
Client Project ID: CTO 015
Lab Sample ID: G649-46-3J
Lab Project ID: G649-46
Sample Wt/Vol: 923 ML
Dilution: 1

Analyzed By: DES
Date Collected: 7/11/2008 8:45
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Date Analyzed: 7/17/2008
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	4.66			7.44
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: USTM232-236-MW05
Client Project ID: CTO 015
Lab Sample ID: G649-46-4J
Lab Project ID: G649-46

Analyzed By: DES
Date Collected: 7/11/2008 9:50
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.34	0.651	1	7/17/2008	
Acenaphthylene	BQL	5.34	0.598	1	7/17/2008	
Anthracene	BQL	5.34	0.934	1	7/17/2008	
Benzo[a]anthracene	BQL	5.34	0.726	1	7/17/2008	
Benzo[a]pyrene	BQL	5.34	0.678	1	7/17/2008	
Benzo[b]fluoranthene	BQL	5.34	0.763	1	7/17/2008	
Benzo[g,h,i]perylene	BQL	5.34	2.44	1	7/17/2008	
Benzo[k]fluoranthene	BQL	5.34	0.582	1	7/17/2008	
Bis(2-chloroethoxy)methane	BQL	5.34	0.592	1	7/17/2008	
Bis(2-chloroethyl)ether	BQL	5.34	0.582	1	7/17/2008	
Bis(2-chloroisopropyl)ether	BQL	5.34	0.838	1	7/17/2008	
Bis(2-ethylhexyl)phthalate	13.8	5.34	0.710	1	7/17/2008	
4-bromophenyl phenyl ether	BQL	5.34	1.06	1	7/17/2008	
Butylbenzylphthalate	BQL	5.34	0.816	1	7/17/2008	
2-Chloronaphthalene	BQL	5.34	0.667	1	7/17/2008	
2-Chlorophenol	BQL	5.34	2.25	1	7/17/2008	
4-Chloro-3-methylphenol	BQL	5.34	1.74	1	7/17/2008	
4-Chlorophenyl phenyl ether	BQL	5.34	0.758	1	7/17/2008	
Chrysene	BQL	5.34	0.592	1	7/17/2008	
Dibenzo[a,h]anthracene	BQL	5.34	2.60	1	7/17/2008	
Di-n-Butylphthalate	BQL	5.34	0.880	1	7/17/2008	
3,3'-Dichlorobenzidine	BQL	10.7	2.19	1	7/17/2008	
2,4-Dichlorophenol	BQL	5.34	2.00	1	7/17/2008	
Diethylphthalate	BQL	5.34	0.790	1	7/17/2008	
Dimethylphthalate	BQL	5.34	0.555	1	7/17/2008	
2,4-Dimethylphenol	BQL	5.34	4.94	1	7/17/2008	
Di-n-octylphthalate	BQL	5.34	0.619	1	7/17/2008	
4,6-Dinitro-2-methylphenol	BQL	26.7	1.98	1	7/17/2008	
2,4-Dinitrophenol	BQL	26.7	2.24	1	7/17/2008	
2,4-Dinitrotoluene	BQL	5.34	0.811	1	7/17/2008	
2,6-Dinitrotoluene	BQL	5.34	0.752	1	7/17/2008	
Diphenylamine *	BQL	5.34	0.816	1	7/17/2008	
Fluoranthene	BQL	5.34	0.752	1	7/17/2008	
Fluorene	BQL	5.34	0.651	1	7/17/2008	
Hexachlorobenzene	BQL	5.34	0.651	1	7/17/2008	
Hexachlorobutadiene	BQL	5.34	0.843	1	7/17/2008	
Hexachlorocyclopentadiene	BQL	10.7	10.7	1	7/17/2008	
Hexachloroethane	BQL	5.34	0.843	1	7/17/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.34	2.44	1	7/17/2008	
Isophorone	BQL	5.34	0.678	1	7/17/2008	
Naphthalene	BQL	5.34	0.576	1	7/17/2008	
Nitrobenzene	BQL	5.34	0.704	1	7/17/2008	
2-Nitrophenol	BQL	5.34	1.88	1	7/17/2008	
4-Nitrophenol	BQL	26.7	1.69	1	7/17/2008	
N-Nitrosodi-n-propylamine	BQL	5.34	0.998	1	7/17/2008	
Pentachlorophenol	BQL	26.7	1.51	1	7/17/2008	
Phenanthrene	BQL	5.34	0.736	1	7/17/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW05
Client Project ID: CTO 015
Lab Sample ID: G649-46-4J
Lab Project ID: G649-46

Analyzed By: DES
Date Collected: 7/11/2008 9:50
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.34	1.80	1	7/17/2008	
Pyrene	BQL	5.34	1.11	1	7/17/2008	
1,2,4-Trichlorobenzene	BQL	5.34	0.710	1	7/17/2008	
2,4,6-Trichlorophenol	BQL	5.34	1.56	1	7/17/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	9.3	93		
2-Fluorophenol		10	8.1	81		
Nitrobenzene-d5		10	9.3	93		
Phenol-d6		10	8.9	89		
2,4,6-Tribromophenol		10	8.5	85		
4-Terphenyl-d14		10	9.5	95		

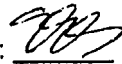
Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

**Results of Library Search for Semivolatile Compounds**
by GCMS

Client Sample ID: USTM232-236-MW05
Client Project ID: CTO 015
Lab Sample ID: G649-46-4J
Lab Project ID: G649-46
Sample Wt/Vol: 937 ML
Dilution: 1

Analyzed By: DES
Date Collected: 7/11/2008 9:50
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Date Analyzed: 7/17/2008
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	4.65			8.1
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: USTM232-236-MW08

Client Project ID: CTO 015

Lab Sample ID: G649-46-5K

Lab Project ID: G649-46

Analyzed By: DES

Date Collected: 7/11/2008 11:15

Date Received: 7/11/2008

Date Extracted: 7/15/2008

Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.73	0.699	1	7/17/2008	
Acenaphthylene	BQL	5.73	0.641	1	7/17/2008	
Anthracene	BQL	5.73	1.00	1	7/17/2008	
Benzo[a]anthracene	BQL	5.73	0.779	1	7/17/2008	
Benzo[a]pyrene	BQL	5.73	0.727	1	7/17/2008	
Benzo[b]fluoranthene	BQL	5.73	0.819	1	7/17/2008	
Benzo[g,h,i]perylene	BQL	5.73	2.62	1	7/17/2008	
Benzo[k]fluoranthene	BQL	5.73	0.624	1	7/17/2008	
Bis(2-chloroethoxy)methane	BQL	5.73	0.636	1	7/17/2008	
Bis(2-chloroethyl)ether	BQL	5.73	0.624	1	7/17/2008	
Bis(2-chloroisopropyl)ether	BQL	5.73	0.899	1	7/17/2008	
Bis(2-ethylhexyl)phthalate	BQL	5.73	0.762	1	7/17/2008	
4-bromophenyl phenyl ether	BQL	5.73	1.14	1	7/17/2008	
Butylbenzylphthalate	BQL	5.73	0.876	1	7/17/2008	
2-Chloronaphthalene	BQL	5.73	0.716	1	7/17/2008	
2-Chlorophenol	BQL	5.73	2.42	1	7/17/2008	
4-Chloro-3-methylphenol	BQL	5.73	1.87	1	7/17/2008	
4-Chlorophenyl phenyl ether	BQL	5.73	0.813	1	7/17/2008	
Chrysene	BQL	5.73	0.636	1	7/17/2008	
Dibenzo[a,h]anthracene	BQL	5.73	2.79	1	7/17/2008	
Di-n-Butylphthalate	BQL	5.73	0.945	1	7/17/2008	
3,3'-Dichlorobenzidine	BQL	11.5	2.35	1	7/17/2008	
2,4-Dichlorophenol	BQL	5.73	2.15	1	7/17/2008	
Diethylphthalate	BQL	5.73	0.848	1	7/17/2008	
Dimethylphthalate	BQL	5.73	0.596	1	7/17/2008	
2,4-Dimethylphenol	BQL	5.73	5.30	1	7/17/2008	
Di-n-octylphthalate	BQL	5.73	0.664	1	7/17/2008	
4,6-Dinitro-2-methylphenol	BQL	28.6	2.12	1	7/17/2008	
2,4-Dinitrophenol	BQL	28.6	2.41	1	7/17/2008	
2,4-Dinitrotoluene	BQL	5.73	0.871	1	7/17/2008	
2,6-Dinitrotoluene	BQL	5.73	0.808	1	7/17/2008	
Diphenylamine *	BQL	5.73	0.876	1	7/17/2008	
Fluoranthene	BQL	5.73	0.808	1	7/17/2008	
Fluorene	BQL	5.73	0.699	1	7/17/2008	
Hexachlorobenzene	BQL	5.73	0.699	1	7/17/2008	
Hexachlorobutadiene	BQL	5.73	0.905	1	7/17/2008	
Hexachlorocyclopentadiene	BQL	11.5	11.5	1	7/17/2008	
Hexachloroethane	BQL	5.73	0.905	1	7/17/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.73	2.62	1	7/17/2008	
Isophorone	BQL	5.73	0.727	1	7/17/2008	
Naphthalene	BQL	5.73	0.619	1	7/17/2008	
Nitrobenzene	BQL	5.73	0.756	1	7/17/2008	
2-Nitrophenol	BQL	5.73	2.02	1	7/17/2008	
4-Nitrophenol	BQL	28.6	1.82	1	7/17/2008	
N-Nitrosodi-n-propylamine	BQL	5.73	1.07	1	7/17/2008	
Pentachlorophenol	BQL	28.6	1.62	1	7/17/2008	
Phenanthrene	BQL	5.73	0.790	1	7/17/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW08
Client Project ID: CTO 015
Lab Sample ID: G649-46-5K
Lab Project ID: G649-46

Analyzed By: DES
Date Collected: 7/11/2008 11:15
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.73	1.94	1	7/17/2008	
Pyrene	BQL	5.73	1.19	1	7/17/2008	
1,2,4-Trichlorobenzene	BQL	5.73	0.762	1	7/17/2008	
2,4,6-Trichlorophenol	BQL	5.73	1.67	1	7/17/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	9.1	91		
2-Fluorophenol		10	7.6	76		
Nitrobenzene-d5		10	9.4	94		
Phenol-d6		10	8.5	85		
2,4,6-Tribromophenol		10	8.3	83		
4-Terphenyl-d14		10	8.9	89		

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

Results of Library Search for Semivolatile Compounds by GCMS

Client Sample ID: USTM232-236-MW08
Client Project ID: CTO 015
Lab Sample ID: G649-46-5K
Lab Project ID: G649-46
Sample Wt/Vol: 873 ML
Dilution: 1

Analyzed By: DES
Date Collected: 7/11/2008 11:15
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Date Analyzed: 7/17/2008
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	4.65			8.3
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: USTM232-236-MW18

Client Project ID: CTO 015

Lab Sample ID: G649-46-6J

Lab Project ID: G649-46

Analyzed By: DES

Date Collected: 7/11/2008 10:00

Date Received: 7/11/2008

Date Extracted: 7/15/2008

Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	4.63	5.45	0.664	1	7/17/2008	J
Acenaphthylene	BQL	5.45	0.610	1	7/17/2008	
Anthracene	BQL	5.45	0.953	1	7/17/2008	
Benzo[a]anthracene	BQL	5.45	0.741	1	7/17/2008	
Benzo[a]pyrene	BQL	5.45	0.692	1	7/17/2008	
Benzo[b]fluoranthene	BQL	5.45	0.779	1	7/17/2008	
Benzo[g,h,i]perylene	BQL	5.45	2.49	1	7/17/2008	
Benzo[k]fluoranthene	BQL	5.45	0.594	1	7/17/2008	
Bis(2-chloroethoxy)methane	BQL	5.45	0.605	1	7/17/2008	
Bis(2-chloroethyl)ether	BQL	5.45	0.594	1	7/17/2008	
Bis(2-chloroisopropyl)ether	BQL	5.45	0.855	1	7/17/2008	
Bis(2-ethylhexyl)phthalate	BQL	5.45	0.724	1	7/17/2008	
4-bromophenyl phenyl ether	BQL	5.45	1.08	1	7/17/2008	
Butylbenzylphthalate	BQL	5.45	0.833	1	7/17/2008	
2-Chloronaphthalene	BQL	5.45	0.681	1	7/17/2008	
2-Chlorophenol	BQL	5.45	2.30	1	7/17/2008	
4-Chloro-3-methylphenol	BQL	5.45	1.78	1	7/17/2008	
4-Chlorophenyl phenyl ether	BQL	5.45	0.773	1	7/17/2008	
Chrysene	BQL	5.45	0.605	1	7/17/2008	
Dibenzo[a,h]anthracene	BQL	5.45	2.65	1	7/17/2008	
Di-n-Butylphthalate	BQL	5.45	0.899	1	7/17/2008	
3,3'-Dichlorobenzidine	BQL	10.9	2.23	1	7/17/2008	
2,4-Dichlorophenol	BQL	5.45	2.04	1	7/17/2008	
Diethylphthalate	BQL	5.45	0.806	1	7/17/2008	
Dimethylphthalate	BQL	5.45	0.566	1	7/17/2008	
2,4-Dimethylphenol	BQL	5.45	5.04	1	7/17/2008	
Di-n-octylphthalate	BQL	5.45	0.632	1	7/17/2008	
4,6-Dinitro-2-methylphenol	BQL	27.2	2.02	1	7/17/2008	
2,4-Dinitrophenol	BQL	27.2	2.29	1	7/17/2008	
2,4-Dinitrotoluene	BQL	5.45	0.828	1	7/17/2008	
2,6-Dinitrotoluene	BQL	5.45	0.768	1	7/17/2008	
Diphenylamine *	BQL	5.45	0.833	1	7/17/2008	
Fluoranthene	BQL	5.45	0.768	1	7/17/2008	
Fluorene	7.41	5.45	0.664	1	7/17/2008	
Hexachlorobenzene	BQL	5.45	0.664	1	7/17/2008	
Hexachlorobutadiene	BQL	5.45	0.861	1	7/17/2008	
Hexachlorocyclopentadiene	BQL	10.9	10.9	1	7/17/2008	
Hexachloroethane	BQL	5.45	0.861	1	7/17/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.45	2.49	1	7/17/2008	
Isophorone	BQL	5.45	0.692	1	7/17/2008	
Naphthalene	3.49	5.45	0.588	1	7/17/2008	J
Nitrobenzene	BQL	5.45	0.719	1	7/17/2008	
2-Nitrophenol	BQL	5.45	1.92	1	7/17/2008	
4-Nitrophenol	BQL	27.2	1.73	1	7/17/2008	
N-Nitrosodi-n-propylamine	BQL	5.45	1.02	1	7/17/2008	
Pentachlorophenol	BQL	27.2	1.54	1	7/17/2008	
Phenanthrene	5.01	5.45	0.752	1	7/17/2008	J

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW18
Client Project ID: CTO 015
Lab Sample ID: G649-46-6J
Lab Project ID: G649-46

Analyzed By: DES
Date Collected: 7/11/2008 10:00
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.45	1.84	1	7/17/2008	
Pyrene	BQL	5.45	1.13	1	7/17/2008	
1,2,4-Trichlorobenzene	BQL	5.45	0.724	1	7/17/2008	
2,4,6-Trichlorophenol	BQL	5.45	1.59	1	7/17/2008	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	9.1	91
2-Fluorophenol	10	8.4	84
Nitrobenzene-d5	10	9.8	98
Phenol-d6	10	9	90
2,4,6-Tribromophenol	10	9	90
4-Terphenyl-d14	10	8.8	88

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

Results of Library Search for Semivolatile Compounds by GCMS

Client Sample ID: USTM232-236-MW18
Client Project ID: CTO 015
Lab Sample ID: G649-46-6K
Lab Project ID: G649-46
Sample Wt/Vol: 918 ML
Dilution: 1

Analyzed By: DES
Date Collected: 7/11/2008 10:00
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Date Analyzed: 7/17/2008
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Indane	4.40	000496-11-7	91	35
2	Indan, 1-methyl-	5.18	000767-58-8	91	26.1
3	Naphthalene, 1,4-dimethyl-	6.90	000571-58-4	97	14
4	1H-Indene, 2,3-dihydro-1,2-dimethyl-	5.91	017057-82-8	92	13.4
5	1,1'-Biphenyl, 2-methyl-	7.91	000643-58-3	91	11
6	Unknown	9.26			10.5
7	Naphthalene, 1,2,3,4-tetrahydro-2-methyl-	5.64	003877-19-8	90	10.4
8	9H-Fluorene, 2-methyl-	8.45	001430-97-3	92	10.4
9	Cyclohexane, 1,2-dichloro-, trans-	4.65	000822-86-6	90	9.55
10	Aromatic, Unknown	4.44			8.95

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: 

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTM232-236-MW21

Client Project ID: CTO 015

Lab Sample ID: G649-46-7J

Lab Project ID: G649-46

Analyzed By: DES

Date Collected: 7/11/2008 8:15

Date Received: 7/11/2008

Date Extracted: 7/15/2008

Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	2.00	6.08	0.741	1	7/17/2008	J
Acenaphthylene	BQL	6.08	0.680	1	7/17/2008	
Anthracene	BQL	6.08	1.06	1	7/17/2008	
Benzo[a]anthracene	BQL	6.08	0.826	1	7/17/2008	
Benzo[a]pyrene	BQL	6.08	0.772	1	7/17/2008	
Benzo[b]fluoranthene	BQL	6.08	0.869	1	7/17/2008	
Benzo[g,h,i]perylene	BQL	6.08	2.78	1	7/17/2008	
Benzo[k]fluoranthene	BQL	6.08	0.662	1	7/17/2008	
Bis(2-chloroethoxy)methane	BQL	6.08	0.674	1	7/17/2008	
Bis(2-chloroethyl)ether	BQL	6.08	0.662	1	7/17/2008	
Bis(2-chloroisopropyl)ether	BQL	6.08	0.954	1	7/17/2008	
Bis(2-ethylhexyl)phthalate	BQL	6.08	0.808	1	7/17/2008	
4-bromophenyl phenyl ether	BQL	6.08	1.21	1	7/17/2008	
Butylbenzylphthalate	BQL	6.08	0.930	1	7/17/2008	
2-Chloronaphthalene	BQL	6.08	0.759	1	7/17/2008	
2-Chlorophenol	BQL	6.08	2.56	1	7/17/2008	
4-Chloro-3-methylphenol	BQL	6.08	1.98	1	7/17/2008	
4-Chlorophenyl phenyl ether	BQL	6.08	0.863	1	7/17/2008	
Chrysene	BQL	6.08	0.674	1	7/17/2008	
Dibenzo[a,h]anthracene	BQL	6.08	2.96	1	7/17/2008	
Di-n-Butylphthalate	BQL	6.08	1.00	1	7/17/2008	
3,3'-Dichlorobenzidine	BQL	12.2	2.49	1	7/17/2008	
2,4-Dichlorophenol	BQL	6.08	2.28	1	7/17/2008	
Diethylphthalate	BQL	6.08	0.899	1	7/17/2008	
Dimethylphthalate	BQL	6.08	0.632	1	7/17/2008	
2,4-Dimethylphenol	BQL	6.08	5.62	1	7/17/2008	
Di-n-octylphthalate	BQL	6.08	0.705	1	7/17/2008	
4,6-Dinitro-2-methylphenol	BQL	30.4	2.25	1	7/17/2008	
2,4-Dinitrophenol	BQL	30.4	2.55	1	7/17/2008	
2,4-Dinitrotoluene	BQL	6.08	0.923	1	7/17/2008	
2,6-Dinitrotoluene	BQL	6.08	0.857	1	7/17/2008	
Diphenylamine *	BQL	6.08	0.930	1	7/17/2008	
Fluoranthene	BQL	6.08	0.857	1	7/17/2008	
Fluorene	2.19	6.08	0.741	1	7/17/2008	J
Hexachlorobenzene	BQL	6.08	0.741	1	7/17/2008	
Hexachlorobutadiene	BQL	6.08	0.960	1	7/17/2008	
Hexachlorocyclopentadiene	BQL	12.2	12.2	1	7/17/2008	
Hexachloroethane	BQL	6.08	0.960	1	7/17/2008	
Indeno(1,2,3-c,d)pyrene	BQL	6.08	2.78	1	7/17/2008	
Isophorone	BQL	6.08	0.772	1	7/17/2008	
Naphthalene	2.25	6.08	0.656	1	7/17/2008	J
Nitrobenzene	BQL	6.08	0.802	1	7/17/2008	
2-Nitrophenol	BQL	6.08	2.14	1	7/17/2008	
4-Nitrophenol	BQL	30.4	1.93	1	7/17/2008	
N-Nitrosodi-n-propylamine	BQL	6.08	1.14	1	7/17/2008	
Pentachlorophenol	BQL	30.4	1.72	1	7/17/2008	
Phenanthrene	BQL	6.08	0.838	1	7/17/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW21
Client Project ID: CTO 015
Lab Sample ID: G649-46-7J
Lab Project ID: G649-46

Analyzed By: DES
Date Collected: 7/11/2008 8:15
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	6.08	2.05	1	7/17/2008	
Pyrene	BQL	6.08	1.26	1	7/17/2008	
1,2,4-Trichlorobenzene	BQL	6.08	0.808	1	7/17/2008	
2,4,6-Trichlorophenol	BQL	6.08	1.77	1	7/17/2008	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.7	87
2-Fluorophenol	10	8.4	84
Nitrobenzene-d5	10	9.6	96
Phenol-d6	10	9	90
2,4,6-Tribromophenol	10	8.9	89
4-Terphenyl-d14	10	8.7	87

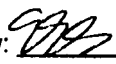
Comments:

* 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: USTM232-236-MW21
Client Project ID: CTO 015
Lab Sample ID: G649-46-7J
Lab Project ID: G649-46
Sample Wt/Vol: 823 ML
Dilution: 1

Analyzed By: DES
Date Collected: 7/11/2008 8:15
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Date Analyzed: 7/17/2008
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Unknown	4.65			20.1
2	Naphthalene, 1,5-dimethyl-	6.90	000571-61-9	97	19.7
3	1H-Inden-1-one, 2,3-dihydro-	6.03	000083-33-0	96	14.8
4	1,1'-Biphenyl, 3-methyl-	7.91	000643-93-6	92	14.8
5	3(2H)-Benzofuranone	5.58	007169-34-8	90	14.2
6	Dodecane, 2,7,10-trimethyl-	8.25	074645-98-0	90	12.3
7	Unknown	5.18			11.4
8	Naphthalene, 1,4,5-trimethyl-	7.60	002131-41-1	95	11.3
9	Benzene, 1,2,3,5-tetramethyl-	4.96	000527-53-7	94	10.2
10	Aromatic, Unknown	6.71			9.94

Comment:

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

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

Reviewed by: 

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTM232-236-MW20
Client Project ID: CTO 015
Lab Sample ID: G649-46-8J
Lab Project ID: G649-46

Analyzed By: DES
Date Collected: 7/10/2008 16:30
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	1.90	5.59	0.682	1	7/17/2008	J
Acenaphthylene	BQL	5.59	0.626	1	7/17/2008	
Anthracene	BQL	5.59	0.978	1	7/17/2008	
Benzo[a]anthracene	BQL	5.59	0.760	1	7/17/2008	
Benzo[a]pyrene	BQL	5.59	0.709	1	7/17/2008	
Benzo[b]fluoranthene	BQL	5.59	0.799	1	7/17/2008	
Benzo[g,h,i]perylene	BQL	5.59	2.55	1	7/17/2008	
Benzo[k]fluoranthene	BQL	5.59	0.609	1	7/17/2008	
Bis(2-chloroethoxy)methane	BQL	5.59	0.620	1	7/17/2008	
Bis(2-chloroethyl)ether	BQL	5.59	0.609	1	7/17/2008	
Bis(2-chloroisopropyl)ether	BQL	5.59	0.877	1	7/17/2008	
Bis(2-ethylhexyl)phthalate	BQL	5.59	0.743	1	7/17/2008	
4-bromophenyl phenyl ether	BQL	5.59	1.11	1	7/17/2008	
Butylbenzylphthalate	BQL	5.59	0.855	1	7/17/2008	
2-Chloronaphthalene	BQL	5.59	0.698	1	7/17/2008	
2-Chlorophenol	BQL	5.59	2.36	1	7/17/2008	
4-Chloro-3-methylphenol	BQL	5.59	1.82	1	7/17/2008	
4-Chlorophenyl phenyl ether	BQL	5.59	0.793	1	7/17/2008	
Chrysene	BQL	5.59	0.620	1	7/17/2008	
Dibenzo[a,h]anthracene	BQL	5.59	2.72	1	7/17/2008	
Di-n-Butylphthalate	BQL	5.59	0.922	1	7/17/2008	
3,3'-Dichlorobenzidine	BQL	11.2	2.29	1	7/17/2008	
2,4-Dichlorophenol	BQL	5.59	2.09	1	7/17/2008	
Diethylphthalate	BQL	5.59	0.827	1	7/17/2008	
Dimethylphthalate	BQL	5.59	0.581	1	7/17/2008	
2,4-Dimethylphenol	BQL	5.59	5.17	1	7/17/2008	
Di-n-octylphthalate	BQL	5.59	0.648	1	7/17/2008	
4,6-Dinitro-2-methylphenol	BQL	27.9	2.07	1	7/17/2008	
2,4-Dinitrophenol	BQL	27.9	2.35	1	7/17/2008	
2,4-Dinitrotoluene	BQL	5.59	0.849	1	7/17/2008	
2,6-Dinitrotoluene	BQL	5.59	0.788	1	7/17/2008	
Diphenylamine *	BQL	5.59	0.855	1	7/17/2008	
Fluoranthene	BQL	5.59	0.788	1	7/17/2008	
Fluorene	1.84	5.59	0.682	1	7/17/2008	J
Hexachlorobenzene	BQL	5.59	0.682	1	7/17/2008	
Hexachlorobutadiene	BQL	5.59	0.883	1	7/17/2008	
Hexachlorocyclopentadiene	BQL	11.2	11.2	1	7/17/2008	
Hexachloroethane	BQL	5.59	0.883	1	7/17/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.59	2.55	1	7/17/2008	
Isophorone	BQL	5.59	0.709	1	7/17/2008	
Naphthalene	BQL	5.59	0.603	1	7/17/2008	
Nitrobenzene	BQL	5.59	0.737	1	7/17/2008	
2-Nitrophenol	BQL	5.59	1.97	1	7/17/2008	
4-Nitrophenol	BQL	27.9	1.77	1	7/17/2008	
N-Nitrosodi-n-propylamine	BQL	5.59	1.04	1	7/17/2008	
Pentachlorophenol	BQL	27.9	1.58	1	7/17/2008	
Phenanthrene	BQL	5.59	0.771	1	7/17/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW20
Client Project ID: CTO 015
Lab Sample ID: G649-46-8J
Lab Project ID: G649-46

Analyzed By: DES
Date Collected: 7/10/2008 16:30
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.59	1.89	1	7/17/2008	
Pyrene	BQL	5.59	1.16	1	7/17/2008	
1,2,4-Trichlorobenzene	BQL	5.59	0.743	1	7/17/2008	
2,4,6-Trichlorophenol	BQL	5.59	1.63	1	7/17/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	9.5	95		
2-Fluorophenol		10	9	90		
Nitrobenzene-d5		10	10.1	101		
Phenol-d6		10	9.4	94		
2,4,6-Tribromophenol		10	9.1	91		
4-Terphenyl-d14		10	8.9	89		

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

**Results of Library Search for Semivolatile Compounds
by GCMS**

Client Sample ID: USTM232-236-MW20
Client Project ID: CTO 015
Lab Sample ID: G649-46-8J
Lab Project ID: G649-46
Sample Wt/Vol: 895 ML
Dilution: 1

Analyzed By: DES
Date Collected: 7/10/2008 16:30
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Date Analyzed: 7/17/2008
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Alkane, Unknown	4.65			9.28
2	Benzene, 2-ethenyl-1,4-dimethyl-	5.18	002039-89-6	93	7.03
3	Aromatic, Unknown	7.91			6
4	Aromatic, Unknown	6.11			5.3
5	Aromatic, Unknown	4.39			4.33
6	Unknown	5.92			4.19
7					
8					
9					
10					

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: 

Results for Semivolatiles
by GCMS 625

Client Sample ID: USTM232-236-MW22

Client Project ID: CTO 015

Lab Sample ID: G649-46-9J

Lab Project ID: G649-46

Analyzed By: DES

Date Collected: 7/10/2008 15:10

Date Received: 7/11/2008

Date Extracted: 7/15/2008

Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	3.05	5.98	0.730	1	7/17/2008	J
Acenaphthylene	BQL	5.98	0.670	1	7/17/2008	
Anthracene	BQL	5.98	1.05	1	7/17/2008	
Benzo[a]anthracene	BQL	5.98	0.813	1	7/17/2008	
Benzo[a]pyrene	BQL	5.98	0.760	1	7/17/2008	
Benzo[b]fluoranthene	BQL	5.98	0.855	1	7/17/2008	
Benzo[g,h,i]perylene	BQL	5.98	2.73	1	7/17/2008	
Benzo[k]fluoranthene	BQL	5.98	0.652	1	7/17/2008	
Bis(2-chloroethoxy)methane	BQL	5.98	0.664	1	7/17/2008	
Bis(2-chloroethyl)ether	BQL	5.98	0.652	1	7/17/2008	
Bis(2-chloroisopropyl)ether	BQL	5.98	0.939	1	7/17/2008	
Bis(2-ethylhexyl)phthalate	BQL	5.98	0.795	1	7/17/2008	
4-bromophenyl phenyl ether	BQL	5.98	1.19	1	7/17/2008	
Butylbenzylphthalate	BQL	5.98	0.915	1	7/17/2008	
2-Chloronaphthalene	BQL	5.98	0.748	1	7/17/2008	
2-Chlorophenol	BQL	5.98	2.52	1	7/17/2008	
4-Chloro-3-methylphenol	BQL	5.98	1.95	1	7/17/2008	
4-Chlorophenyl phenyl ether	BQL	5.98	0.849	1	7/17/2008	
Chrysene	BQL	5.98	0.664	1	7/17/2008	
Dibenzo[a,h]anthracene	BQL	5.98	2.91	1	7/17/2008	
Di-n-Butylphthalate	BQL	5.98	0.987	1	7/17/2008	
3,3'-Dichlorobenzidine	BQL	12.0	2.45	1	7/17/2008	
2,4-Dichlorophenol	BQL	5.98	2.24	1	7/17/2008	
Diethylphthalate	BQL	5.98	0.885	1	7/17/2008	
Dimethylphthalate	BQL	5.98	0.622	1	7/17/2008	
2,4-Dimethylphenol	BQL	5.98	5.53	1	7/17/2008	
Di-n-octylphthalate	BQL	5.98	0.694	1	7/17/2008	
4,6-Dinitro-2-methylphenol	BQL	29.9	2.22	1	7/17/2008	
2,4-Dinitrophenol	BQL	29.9	2.51	1	7/17/2008	
2,4-Dinitrotoluene	BQL	5.98	0.909	1	7/17/2008	
2,6-Dinitrotoluene	BQL	5.98	0.843	1	7/17/2008	
Diphenylamine *	BQL	5.98	0.915	1	7/17/2008	
Fluoranthene	BQL	5.98	0.843	1	7/17/2008	
Fluorene	3.47	5.98	0.730	1	7/17/2008	J
Hexachlorobenzene	BQL	5.98	0.730	1	7/17/2008	
Hexachlorobutadiene	BQL	5.98	0.945	1	7/17/2008	
Hexachlorocyclopentadiene	BQL	12.0	12.0	1	7/17/2008	
Hexachloroethane	BQL	5.98	0.945	1	7/17/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.98	2.73	1	7/17/2008	
Isophorone	BQL	5.98	0.760	1	7/17/2008	
Naphthalene	8.13	5.98	0.646	1	7/17/2008	
Nitrobenzene	BQL	5.98	0.789	1	7/17/2008	
2-Nitrophenol	BQL	5.98	2.11	1	7/17/2008	
4-Nitrophenol	BQL	29.9	1.90	1	7/17/2008	
N-Nitrosodi-n-propylamine	BQL	5.98	1.12	1	7/17/2008	
Pentachlorophenol	BQL	29.9	1.69	1	7/17/2008	
Phenanthrene	2.27	5.98	0.825	1	7/17/2008	J

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTM232-236-MW22
Client Project ID: CTO 015
Lab Sample ID: G649-46-9J
Lab Project ID: G649-46

Analyzed By: DES
Date Collected: 7/10/2008 15:10
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.98	2.02	1	7/17/2008	
Pyrene	BQL	5.98	1.24	1	7/17/2008	
1,2,4-Trichlorobenzene	BQL	5.98	0.795	1	7/17/2008	
2,4,6-Trichlorophenol	BQL	5.98	1.75	1	7/17/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	9.1	91		
2-Fluorophenol		10	8.1	81		
Nitrobenzene-d5		10	9.3	93		
Phenol-d6		10	8.6	86		
2,4,6-Tribromophenol		10	9.2	92		
4-Terphenyl-d14		10	8.5	85		

Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

**Results of Library Search for Semivolatile Compounds**
by GCMS

Client Sample ID: USTM232-236-MW22
Client Project ID: CTO 015
Lab Sample ID: G649-46-9J
Lab Project ID: G649-46
Sample Wt/Vol: 836 ML
Dilution: 1

Analyzed By: DES
Date Collected: 7/10/2008 15:10
Date Received: 7/11/2008
Date Extracted: 7/15/2008
Date Analyzed: 7/17/2008
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Naphthalene, 1,3-dimethyl-	6.90	000575-41-7	96	19.3
2	Aromatic, Unknown	5.18			14.8
3	Naphthalene, 2,3-dimethyl-	6.82	000581-40-8	97	13.2
4	Cyclohexane, 1,2-dichloro-, trans-	4.66	000822-86-6	90	10.7
5	Naphthalene, 1,4-dimethyl-	7.02	000571-58-4	97	8.06
6	Aromatic, Unknown	7.91			7.83
7	Naphthalene, 1,5-dimethyl-	6.93	000571-61-9	90	5.3
8	Naphthalene, 1,2-dimethyl-	7.11	000573-98-8	94	4.81
9	Unknown	6.76			4.74
10					

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: 

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB11870
Lab Project ID:

Analyzed By: DES
Date Collected:
Date Received:
Date Extracted: 7/15/2008
Matrix: WATER

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.00	0.610	1	7/17/2008	
Acenaphthylene	BQL	5.00	0.560	1	7/17/2008	
Anthracene	BQL	5.00	0.875	1	7/17/2008	
Benzo[a]anthracene	BQL	5.00	0.680	1	7/17/2008	
Benzo[a]pyrene	BQL	5.00	0.635	1	7/17/2008	
Benzo[b]fluoranthene	BQL	5.00	0.715	1	7/17/2008	
Benzo[g,h,i]perylene	BQL	5.00	2.29	1	7/17/2008	
Benzo[k]fluoranthene	BQL	5.00	0.545	1	7/17/2008	
Bis(2-chloroethoxy)methane	BQL	5.00	0.555	1	7/17/2008	
Bis(2-chloroethyl)ether	BQL	5.00	0.545	1	7/17/2008	
Bis(2-chloroisopropyl)ether	BQL	5.00	0.785	1	7/17/2008	
Bis(2-ethylhexyl)phthalate	BQL	5.00	0.665	1	7/17/2008	
4-bromophenyl phenyl ether	BQL	5.00	0.995	1	7/17/2008	
Butylbenzylphthalate	BQL	5.00	0.765	1	7/17/2008	
2-Chloronaphthalene	BQL	5.00	0.625	1	7/17/2008	
2-Chlorophenol	BQL	5.00	2.11	1	7/17/2008	
4-Chloro-3-methylphenol	BQL	5.00	1.63	1	7/17/2008	
4-Chlorophenyl phenyl ether	BQL	5.00	0.710	1	7/17/2008	
Chrysene	BQL	5.00	0.555	1	7/17/2008	
Dibenzo[a,h]anthracene	BQL	5.00	2.44	1	7/17/2008	
Di-n-Butylphthalate	BQL	5.00	0.825	1	7/17/2008	
3,3'-Dichlorobenzidine	BQL	10.0	2.05	1	7/17/2008	
2,4-Dichlorophenol	BQL	5.00	1.87	1	7/17/2008	
Diethylphthalate	BQL	5.00	0.740	1	7/17/2008	
Dimethylphthalate	BQL	5.00	0.520	1	7/17/2008	
2,4-Dimethylphenol	BQL	5.00	4.62	1	7/17/2008	
Di-n-octylphthalate	BQL	5.00	0.580	1	7/17/2008	
4,6-Dinitro-2-methylphenol	BQL	25.0	1.86	1	7/17/2008	
2,4-Dinitrophenol	BQL	25.0	2.10	1	7/17/2008	
2,4-Dinitrotoluene	BQL	5.00	0.760	1	7/17/2008	
2,6-Dinitrotoluene	BQL	5.00	0.705	1	7/17/2008	
Diphenylamine *	BQL	5.00	0.765	1	7/17/2008	
Fluoranthene	BQL	5.00	0.705	1	7/17/2008	
Fluorene	BQL	5.00	0.610	1	7/17/2008	
Hexachlorobenzene	BQL	5.00	0.610	1	7/17/2008	
Hexachlorobutadiene	BQL	5.00	0.790	1	7/17/2008	
Hexachlorocyclopentadiene	BQL	10.0	10.0	1	7/17/2008	
Hexachloroethane	BQL	5.00	0.790	1	7/17/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.00	2.29	1	7/17/2008	
Isophorone	BQL	5.00	0.635	1	7/17/2008	
Naphthalene	BQL	5.00	0.540	1	7/17/2008	
Nitrobenzene	BQL	5.00	0.660	1	7/17/2008	
2-Nitrophenol	BQL	5.00	1.76	1	7/17/2008	
4-Nitrophenol	BQL	25.0	1.59	1	7/17/2008	
N-Nitrosodi-n-propylamine	BQL	5.00	0.935	1	7/17/2008	
Pentachlorophenol	BQL	25.0	1.41	1	7/17/2008	
Phenanthrene	BQL	5.00	0.690	1	7/17/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB11870
Lab Project ID:

Analyzed By: DES
Date Collected:
Date Received:
Date Extracted: 7/15/2008
Matrix: WATER

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.00	1.69	1	7/17/2008	
Pyrene	BQL	5.00	1.04	1	7/17/2008	
1,2,4-Trichlorobenzene	BQL	5.00	0.665	1	7/17/2008	
2,4,6-Trichlorophenol	BQL	5.00	1.46	1	7/17/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.9	88		
2-Fluorophenol		10	8.3	83		
Nitrobenzene-d5		10	9.3	93		
Phenol-d6		10	8.8	88		
2,4,6-Tribromophenol		10	8.1	81		
4-Terphenyl-d14		10	8.8	88		

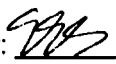
Comments:

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

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 



SGS ENVIRONMENTAL SERVICES, INC.

SGS Environmental Services, Inc.

LABORATORY CONTROL SAMPLE SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: SGS Environmental Services, Inc.

Lab Code: NC00919

Case No.:

SAS No.:

SDG No:

Matrix: (soil/water) WATER

Lab Sample ID: LCS11870

DUP Sample ID: LCS11870

Sample wt/vol: 0.5 (L)

Lab File ID: 0717619.D

DUP File ID: 0717621.D

Level: (low/med) LOW

% Moisture: NA Decanted: (Y/N) NA

Date Analyzed: 07/17/08 1 DUP Date Analyzed: 07/17/08 16:56

Concentrated Extract Volume: 5000 (µL)

Dilution Factor: 1

Injection Volume: 1 (µL)

Extraction: (Type) CONT

GPC Cleanup: N

CAS NO.	COMPOUND	SPIKE AMT (µg/L)	LCS (µg/L)	LCS % REC	LCS1 (µg/L)	LCS1 % REC	% RPD	QC LIMITS
83-32-9	Acenaphthene	50.0	40.8	81.7	43.7	87.5	6.86	72.4-98.1
208-96-8	Acenaphthylene	50.0	41.3	82.7	44.5	88.9	7.23	68.9-101
120-12-7	Anthracene	50.0	38.9	77.7	39.7	79.4	2.16	66.5-92.5
56-55-3	Benzo[a]anthracene	50.0	43.4	86.9	44.7	89.3	2.72	74.6-102
50-32-8	Benzo[a]pyrene	50.0	38.0	76.0	38.0	76.0	0.00	66.9-101
205-99-2	Benzo[b]fluoranthene	50.0	43.7	87.4	41.1	82.2	6.13	70.8-107
191-24-2	Benzo[g,h,i]perylene	50.0	46.4	92.8	49.1	98.3	5.76	56.1-130
207-08-9	Benzo[k]fluoranthene	50.0	44.1	88.1	47.5	95.1	7.64	74.3-111
65-85-0	Benzoic Acid	50.0	28.1	56.3	41.3	82.7	38.0*	0.00-157
100-51-6	Benzyl Alcohol	50.0	41.8	83.6	45.4	90.9	8.37	67.6-97.3
111-91-1	Bis(2-chloroethoxy)methane	50.0	43.4	86.8	47.4	94.7	8.71	64.2-105
111-44-4	Bis(2-chloroethyl) ether	50.0	41.4	82.9	45.8	91.6	9.97	61.6-101
108-60-1	Bis(2-chloroisopropyl) ether	50.0	42.3	84.5	46.7	93.3	9.90	54.6-103
117-81-7	Bis(2-ethylhexyl)phthalate	50.0	44.9	89.7	45.8	91.6	2.10	79.6-107
101-55-3	4-bromophenyl phenyl ether	50.0	40.8	81.6	42.6	85.2	4.32	67.7-102
85-68-7	Butylbenzylphthalate	50.0	44.6	89.2	46.4	92.7	3.85	77.6-106
106-47-8	4-Chloroaniline	50.0	37.8	75.7	40.9	81.8	7.75	44.3-108
59-50-7	4-Chloro-3-methylphenol	50.0	46.2	92.3	49.4	98.9	6.90	71.2-116
91-58-7	2-Chloronaphthalene	50.0	32.2	64.5	35.3	70.5	8.89	56.6-80.6
95-57-8	2-Chlorophenol	50.0	39.7	79.4	44.9	89.8	12.3	50.2-99.5
7005-72-3	4-Chlorophenyl phenyl ether	50.0	40.8	81.5	42.6	85.3	4.56	69.7-103
218-01-9	Chrysene	50.0	43.8	87.6	45.0	90.0	2.70	75.1-102
84-74-2	Di-n-Butylphthalate	50.0	45.2	90.4	46.9	93.9	3.80	77.3-101
117-84-0	Di-n-octylphthalate	50.0	43.1	86.2	43.0	85.9	0.349	69.6-119
53-70-3	Dibenzo[a,h]anthracene	50.0	45.8	91.6	46.7	93.4	1.95	67.8-119
132-64-9	Dibenzofuran	50.0	41.7	83.3	44.6	89.2	6.84	75.3-99.6
95-50-1	1,2-Dichlorobenzene	50.0	24.6	49.1	30.5	61.0	21.6	34.5-82.1
541-73-1	1,3-Dichlorobenzene	50.0	21.5	43.0	27.1	54.2	23.0	28.7-76.7
106-46-7	1,4-Dichlorobenzene	50.0	22.6	45.3	28.9	57.8	24.2	31.4-79.7
91-94-1	3,3'-Dichlorobenzidine	50.0	39.3	78.6	43.3	86.5	9.57	59.7-101
120-83-2	2,4-Dichlorophenol	50.0	42.5	85.0	46.0	92.0	7.91	62.9-107
84-66-2	Diethylphthalate	50.0	44.3	88.5	45.4	90.8	2.57	75.9-105
105-67-9	2,4-Dimethylphenol	50.0	36.1	72.2	35.2	70.4	2.52	31.6-95.6
131-11-3	Dimethylphthalate	50.0	43.9	87.8	45.5	91.0	3.58	75.7-102
534-52-1	4,6-Dinitro-2-methylphenol	50.0	40.2	80.3	43.3	86.6	7.55	40.1-112
51-28-5	2,4-Dinitrophenol	50.0	34.3	68.6	38.4	76.8	11.3	7.14-118
121-14-2	2,4-Dinitrotoluene	50.0	42.1	84.2	43.7	87.5	3.84	72.7-106
606-20-2	2,6-Dinitrotoluene	50.0	43.4	86.8	45.3	90.6	4.28	71.2-105
206-44-0	Fluoranthene	50.0	43.7	87.5	45.1	90.1	2.93	72.4-102
86-73-7	Fluorene	50.0	42.5	84.9	44.1	88.2	3.81	74.8-103
118-74-1	Hexachlorobenzene	50.0	41.7	83.4	44.1	88.1	5.48	69.3-103



SGS ENVIRONMENTAL SERVICES, INC.

SGS Environmental Services, Inc.

LABORATORY CONTROL SAMPLE SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: SGS Environmental Services, Inc.

Lab Code: NC00919

Case No.:

SAS No.:

SDG No:

Matrix: (soil/water) WATER

Lab Sample ID: LCS11870

Sample wt/vol: 0.5 (L)

Lab File ID: 0717619.D

Level: (low/med) LOW

% Moisture: NA Decanted: (Y/N) NA

Date Analyzed: 07/17/08 16:11

Concentrated Extract Volume: 5000 (µL)

Dilution Factor: 1

Injection Volume: 1 (µL)

Extraction: (Type) CONT

GPC Cleanup: N

CAS NO.	COMPOUND	SPIKE AMT (µg/L)	LCS (µg/L)	LCS % REC #	LCSD (µg/L)	LCSD % REC #	% RPD #	QC LIMITS
87-68-3	Hexachlorobutadiene	50.0	20.4	40.8*	25.1	50.3	20.9	41.2-96.0
77-47-4	Hexachlorocyclopentadiene	50.0	30.5	61.1	33.2	66.5	8.46	0.00-417
67-72-1	Hexachloroethane	50.0	17.4	34.9	22.5	45.0	25.3	21.2-79.7
193-39-5	Indeno(1,2,3-c,d)pyrene	50.0	45.4	90.9	46.9	93.8	3.14	67.4-122
78-59-1	Isophorone	50.0	40.0	80.0	42.6	85.2	6.30	74.2-106
90-12-0	1-Methylnaphthalene	50.0	37.0	73.9	41.7	83.4	12.1	69.3-96.7
91-57-6	2-Methylnaphthalene	50.0	37.9	75.8	42.4	84.8	11.2	70.4-101
95-48-7	2-Methylphenol	50.0	40.5	81.0	43.7	87.4	7.60	55.3-103
108-39-4	3-, 4-Methylphenol	100	83.4	83.4	89.2	89.2	6.66	57.3-109
621-64-7	N-Nitrosodi-n-propylamine	50.0	42.1	84.2	44.4	88.7	5.21	59.4-109
86-30-6	Diphenylamine	50.0	41.5	83.1	43.6	87.2	4.82	63.8-99.5
91-20-3	Naphthalene	50.0	35.5	70.9	41.0	81.9	14.4	62.2-100
88-74-4	2-Nitroaniline	50.0	37.4	74.8	39.3	78.6	4.95	55.0-114
99-09-2	3-Nitroaniline	50.0	39.7	79.4	43.1	86.2	8.21	65.4-96.9
100-01-6	4-Nitroaniline	50.0	44.1	88.2	45.2	90.5	2.57	66.7-103
98-95-3	Nitrobenzene	50.0	41.8	83.7	45.9	91.8	9.23	69.7-103
88-75-5	2-Nitrophenol	50.0	43.2	86.3	46.6	93.1	7.58	64.3-104
100-02-7	4-Nitrophenol	50.0	39.6	79.1	42.3	84.6	6.72	48.4-115
87-86-5	Pentachlorophenol	50.0	42.4	84.8	43.6	87.3	2.91	44.3-113
85-01-8	Phenanthrene	50.0	44.3	88.6	46.0	91.9	3.66	74.8-101
108-95-2	Phenol	50.0	42.2	84.3	46.1	92.2	8.95	54.5-99.3
129-00-0	Pyrene	50.0	43.2	86.3	44.7	89.4	3.53	76.2-102
110-86-1	Pyridine	50.0	0.700	1.40	0.750	1.50	6.90	0.00-101
120-82-1	1,2,4-Trichlorobenzene	50.0	27.7	55.3	33.1	66.1	17.8	51.6-91.7
95-95-4	2,4,5-Trichlorophenol	50.0	42.0	84.0	44.8	89.5	6.34	67.7-101
88-06-2	2,4,6-Trichlorophenol	50.0	41.3	82.7	45.2	90.4	8.90	66.9-102

System Monitoring Compound Results

		Spike Added (µg/L)	LCS Result (µg/L)	LCS Rec. (%)	LCSD Result (µg/L)	LCSD Rec. (%)	Percent Recovery (%)
118-79-6	2,4,6-Tribromophenol	10	85.4	85.4	87.8	87.8	29.3-152
321-60-8	2-Fluorobiphenyl	10	84.9	84.9	90.8	90.8	61.0-112
367-12-4	2-Fluorophenol	10	77.7	77.7	88.1	88.1	33.1-118
1718-51-0	4-Terphenyl-d14	10	86.9	86.9	88.4	88.4	22.1-142
4165-60-0	Nitrobenzene-d5	10	88	88.0	94.9	94.9	46.0-118
13127-88-3	Phenol-d6	10	85.9	85.9	94	94.0	49.0-120

Analyst:

1 CLIENT: OSAGE OF VIRGINIA CONTACT: Theresa Elkmann PHONE NO.: 757 224-4949 PROJECT: CTD 015 SITE/PWSID#: M232-36 REPORTS TO: Mike Cree E-MAIL: mcree@osageva.com FAX NO.: 757 440-0411 INVOICE TO: Mike Cree QUOTE # 2618 Bolton Ave Ste 1 Norfolk VA 23517 P.O. NUMBER						SGS Reference: G649-46 PAGE 1 OF 1												
						No CONTAINERS SAMPLE TYPE Preservatives Used Analysis Required C= COMP G= GRAB (3)												
						100% w/xlenes VPH EPH 625 + 10 plates Non												
LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX														REMARKS
	USTM232-236-MW03	7-10-08	1405	W	9	G	X	X	X	X								
	USTM232-236-MW15	7-10-08	1840	W	9	G	X	X	X	X								
	USTM232-236-MW01	7-11-08	0845	W	9	G	X	X	X	X								
	USTM232-236-MW05	7-11-08	0950	W	9	G	X	X	X	X								
	USTM232-236-MW08	7-11-08	1115	W	9	G	X	X	X	X								
	USTM232-236-MW18	7-11-08	1000	W	9	G	X	X	X	X								
	USTM232-236-MW21	7-10-08	0815	W	9	G	X	X	X	X								
	USTM232-236-MW20	7-10-08	1630	W	9	G	X	X	X	X								
	USTM232-236-MW22	7-10-08	1510	W	9	G	X	X	X	X								
	TRIP BLANK																	
5						4												
Collected/Relinquished By: Willard		Date: 7-11-08	Time: 15:55	Received By: Willard		Date: 7/11/08	Time: 15:55	Shipping Carrier: COURIER				Samples Received Cold? (Circle) YES NO						
Relinquished By: (2) Willard		Date: 7/11/08	Time: 17:20	Received By: [Signature]		Date: 7/11/08	Time: 17:20	Shipping Ticket No:				Temperature: C: 15 F: 59						
Relinquished By: (3)		Date:	Time:	Received By:		Date:	Time:	Special Deliverable Requirements: EDD FORMAT				Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT						
Relinquished By: (4)		Date:	Time:	Received By:		Date:	Time:	Special Instructions: email results to SWhitworth@osageva.com + nhall@catlinusa.com										
Requested Turnaround Time:								☐ RUSH ☒ STD										
								Date Needed										

N.C. CERTIFICATION #481

89 of 89

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

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

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