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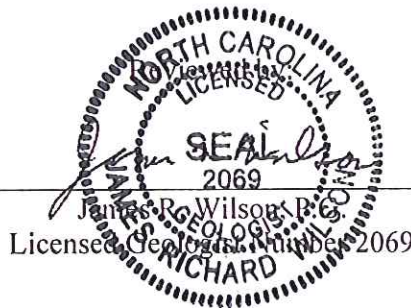
FINAL
2008-2009 ANNUAL MONITORING REPORT

**BUILDING 820
MARINE CORP BASE, CAMP LEJUENE
ONSLOW COUNTY, NORTH CAROLINA**

Contract No. N62470-02-D-3260

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ACRONYMS AND ABBREVIATIONS

AMR	Annual Monitoring Report
AS	Air Sparge
bls	below land surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAP	Corrective Action Plan
CATLIN	CATLIN Engineers and Scientists
COC	Contaminants of Concern
DRO	Diesel Range Organics
EPA	Environmental Protection Agency
EPH	Extractable Petroleum Hydrocarbons
GRO	Gasoline Range Organics
IPE	isopropyl ether
ISOC	in-situ submerged oxygen curtain
LAW	Law Engineering and Environmental Services
lbs/day	Pounds per day
LUST	Leaking Underground Storage Tank
MADEP	Massachusetts Department of Environmental Protection
MCB	Marine Corps Base
MSCC	Maximum Soil Contaminant Concentrations
MTBE	methyl tert-butyl ether
NCAC	North Carolina Administrative Code
NCDENR	North Carolina Department of Environment and Natural Resources
NCGWQS	North Carolina Groundwater Quality Standards
NGVD	National Geodetic Vertical Datum
PAHs	Polynuclear Aromatic Hydrocarbons
ppm	parts per million
RAO	Remedial Action Optimization
RCAP	Revised Corrective Action Plan
Shaw	Shaw Environmental, Inc.
SVE	Soil Vapor Extraction
SVOCs	Semi-Volatile Organic Compounds
TPH	Total Petroleum Hydrocarbons
µg/L	micrograms per liter
UST	Underground Storage Tank
VPH	Volatile Petroleum Hydrocarbons
VOCs	Volatile Organic Compounds

TITLE PAGE

The facility name, Underground Storage Tank (UST) owner, UST operator, and UST information are provided below:

UST Incident Number: 23135
Facility ID Number: Not Applicable
Risk Classification: Intermediate

UST Owner:

Commanding Officer, MCB
I&E/EMD/EQB
PSC Box 20004
Onslow County
Camp Lejeune, NC 28542
(910) 451-5068

UST Operator:

Commanding Officer, MCB
I&E/EMD/EQB
PSC Box 20004
Onslow County
Camp Lejeune, NC 28542
910) 451-5068

Primary Responsible Party Contact:

Thomas Burton
Environmental Control Specialist
I&E/EMD/EQB
PSC Box 20004
Onslow County
Camp Lejeune, NC 28542
(910) 451-9114

Date of Release: Unknown
Quantity of Release: Unknown
Source of Release: USTs/Line Leak
Latitude and Longitude: 34° 42' 0.662077" N
77° 21' 16.0669" W

Tank Number	Installation Date	Tank Capacity	Tank Dimensions	Last Contents	Previous Contents
820-1	Unknown	10,000	Unknown	Gasoline	Unknown
820-2	Unknown	10,000	Unknown	Gasoline	Unknown
820-3	Unknown	10,000	Unknown	Gasoline	Unknown
820-4	Unknown	10,000	Unknown	Diesel	Unknown

1.0 INTRODUCTION

This Annual Monitoring Report (AMR) describes the Air Sparge (AS)/Soil Vapor Extraction (SVE) treatment system performance results and groundwater analytical results for the reporting period of June 2008 through May 2009 at Building 820 located at Marine Corps Base (MCB) Camp Lejeune, North Carolina.

In the early 1990s, several environmental investigations were carried out in the vicinity of Building 820. Type II (shallow) wells were installed to investigate the presence of free product and dissolved contaminants in shallow groundwater. Type III (deep) wells were installed to investigate conditions deeper in the aquifer at depths as great as fifty feet below land surface (bls).

The current AS/SVE system was installed to remediate the release of petroleum constituents in the soil and groundwater. This report is submitted in accordance with the requirements of the *Corrective Action Plan (CAP)* dated October 29, 1996, as well as *Groundwater Section Guidelines for Assessment and Corrective Action, North Carolina, Underground Storage Tanks*, published by the State of North Carolina Department of Environment and Natural Resources (NCDENR), Division of Waste Management, UST Section, dated April 2001.

This AMR provides a brief overview of the environmental history of the site, summarizes the various CAPs prepared for the site, and describes the installation and operation of the recommended remedial alternative of the CAPs. This AMR provides a discussion of monitoring results of system operation and the current status of groundwater quality compared to baseline data and project remediation goals. This AMR also presents conclusions about remedial progress to date and makes recommendations for further site monitoring.

1.1 CAMP LEJEUNE MARINE CORPS BASE LOCATION AND DESCRIPTION

Located in Onslow County, North Carolina, MCB Camp Lejeune is a training base for the United States Marine Corps. The MCB covers approximately 236 square miles (153,000 acres) and includes fourteen miles of coastline. MCB Camp Lejeune is bounded to the southeast by the Atlantic Ocean and to the northeast by State Route 24. Wooded areas are located north, east, and west of the site. The town of Jacksonville, North Carolina, is located north of the MCB (**Figure 1.1**).

1.2 BUILDING 820 SITE DESCRIPTION

Building 820 is located in the Berkeley Manor residential area of the MCB, Camp Lejeune, Onslow County, North Carolina (**Figure 1.2**). The site is located on the west side of Stone Street. The site is determined to be a Category B site under the North Carolina's Site Priority Ranking System.

Building 820 is an active Marine Corps Exchange gas station. Four USTs are located south of the building. These include three 10,000-gallon gasoline USTs and one 10,000-gallon diesel UST. The USTs were upgraded in the summer of 1995.

1.3 SITE GEOLOGY/HYDROGEOLOGY

The project area is dominated by relatively flat topography gently sloping to the south toward Wallace Creek and west toward New River. Much of the area immediately surrounding Building 820 consists of asphalt parking lot with wooded areas to the west and south and residential areas to the east. The nearest mapped bodies of surface water are New River approximately one mile to the west and Wallace Creek approximately one mile to the south. Surface water runoff from the site is diverted into a network of storm drains located at the site. Storm water collected by this system of drains ultimately discharges to the New River.

Sediment and stratigraphy in the vicinity of the site indicates that near surface soils within six to eight feet bls generally consist of sandy clays to clayey fine sands with occasional fine sand or clay lenses. Below the surficial material, soils generally consist of relatively clean, fine to medium sands to a depth of approximately 50 feet bls.

The groundwater aquifer is classified as a Class GA groundwaters according to the North Carolina Administrative Code (NCAC) Title 2L Subchapter 15A, Section .0201 Groundwater Classifications. Depth to groundwater currently ranges from 12 to 19 feet bls in Type II (shallow) monitoring wells and 13 to 21 feet bls in 50 feet Type III (deep) monitoring wells. In general, the direction of the shallow groundwater flow at the site is to the south, while the deeper groundwater zone flow is to the northwest.

2.0 *CONTAMINATION INVESTIGATION HISTORY*

2.1 BUILDING 820 AREA

The original release was discovered when Jones and Frank pressure tested the UST's for tightness in 1990. UST Numbers 2 and 4 failed the pressure test. In 1991, ATEC Associates, Inc. installed four monitoring wells to investigate the groundwater beneath the site. Sampling and analysis of the groundwater indicated that the groundwater beneath the site was contaminated with petroleum constituents in excess of the North Carolina Groundwater Quality Standards (NCGWQS). In addition, 0.2 feet of free-phased gasoline was detected in monitoring well UST820-MW02 (**Figure 2**). In December 1992 Law Engineering and Environmental Services (Law) installed five Type II (shallow) and two Type III (deep) monitoring wells and then reported their findings in the "Leaking Underground Storage Tank (LUST) Site Assessment Report". In March 1994 Law installed ten additional Type II (shallow) and five type III (deep) wells to delineate the hydrocarbon plume at the site and reported their findings in the Addendum to the LUST Site Assessment Report.

Petroleum constituents were detected in both the shallow (Type II) and deep (Type III) wells. Plumes of dissolved petroleum constituents in excess of NCGWQS were identified in both zones. These constituents included benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tert-butyl ether (MTBE).

In both zones, the plumes appeared to originate from the vicinity of the USTs. In the shallow zone (0-50 feet-bls), the plume extends approximately 250 feet to the south. In the deep zone (>50 feet-bls) the plume extends 300 feet north to northwest (the inferred direction of groundwater flow). Near the point of origin, the concentration of dissolved total BTEX was initially detected at concentrations as high as 157,500 micrograms per liter (µg/L). This concentration is near the saturation level for these compounds. A passive free product recovery system installed at the site recovered approximately 43 gallons of free product from March 1994 through February 1997.

In response to a NCDENR request dated June 8, 2001, additional soil samples were collected in the vicinity of the fuel dispensers and fuel lines. The samples were analyzed for the presence of hydrocarbons by the Environmental Protection Agency (EPA) Method 5035/8015B and by the Massachusetts Department of Environmental Protection (MADEP) Methods for Volatile Petroleum Hydrocarbons (VPH). All soil analytical results were below

the NCDENR guidelines. A letter report presenting results of the soil investigation requested by the June 8, 2001 letter was submitted on August 24, 2001.

2.2 CORRECTIVE ACTION PLAN

LAW prepared a CAP dated October 29, 1996. Two potential receptors were identified at greatest apparent risk. One consists of two tributaries of Wallace Creek located approximately 1,500 feet south of the site. The other potential receptor is a drinking water supply well (well HP-623) located approximately 1,300 feet northeast of the site (**Figure 1.2**).

Several remedial objectives were developed for the site. They were:

- Primary Source(s): Eliminate future releases through closure or integrity testing and upgrading the existing UST system at Building 820.
- Secondary Sources:
 - i) Free Product: Remove free product to less than or equal to 1/8 inch as measured in free product recovery wells and groundwater monitoring wells.
 - ii) Vadose Zone Soil Contamination: Reduce Total Petroleum Hydrocarbons (TPH) in soil to 10 parts per million (ppm) as measured by EPA Method 5030 (TPH-Gasoline Range Organics [GRO]) and 40 ppm as measured by EPA Method 3550 (TPH-Diesel Range Organics [DRO]).
- Dissolved-phase Groundwater Contamination: Restore groundwater to quality consistent with NCGWQS. **Table 2.1** presents the Site Rehabilitation Goals which includes analytes of concern and their respective target concentrations in groundwater.
- Receptor Protection: Monitor surface waters in Wallace Creek tributaries to ensure that no violation of NCGWQS occurs due to this release.

LAW evaluated two alternative remedial strategies for the site. An AS/SVE pilot test was conducted east of Stone Street in the vicinity of monitoring wells UST820-MW07 and UST820-MW08 (**Figure 2**). Based on these studies, LAW recommended a combination of treatment technologies to meet the remedial goals at the site. These technologies included:

- Four fields of AS wells. The AS wells would be installed in areas displaying high concentrations of dissolved-phase petroleum constituents to remediate these constituents and prevent further migration of the plume. Their screened intervals would be placed from 47 to 50 feet bls to remediate the dissolved petroleum constituents in the Type II and Type III well zones.

- Four fields of SVE wells, with an individual SVE point located near each AS well. The SVE wells would remove any residual free product, capture fugitive emissions resulting from the air sparging, and remediate any adsorbed-phase petroleum in that portion of the vadose zone within each well's radius of influence.

The CAP estimated that the system would have to operate for 20 years from startup to successfully remediate the dissolved groundwater plume. Following approval of the CAP, the AS/SVE portion of the system was installed in 1997. The system was placed in operation during October 1997. The locations of the well fields and the treatment compound are shown in **Figure 2**.

2.3 REMEDIAL ACTION OPTIMIZATION AND REVISED CAP

CATLIN Engineers and Scientists (CATLIN) submitted a CAP Addendum entitled "*Remedial Action Optimization (RAO) and Revised Corrective Action Plan (RCAP) Building 820*" dated February 24, 2004 to the NCDENR. The addendum was prepared to present the results of a thorough review of available reports and field data since the AS/SVE remedial system was placed in operation as well as a field reconnaissance and interviews with the system operators.

The potential receptors were re-evaluated during preparation of the CAP Addendum 2004 using the North Carolina Risk Classification and Land Use Form. Based on the risk characterization, it was determined that the site meets the criteria to be classified as an Intermediate Risk and Residential Land Use site. A receptor survey performed during the risk characterization identified the following receptors within 1,500 feet of the site:

- Potable water supply well 623 (**Figure 1.2**) located approximately 1,300 feet northeast of the site.
- A tributary of Wallace Creek located approximately 1,200 feet southeast of the site.

The site is located in an area in which there is potential recharge to the deeper aquifer being used by the potable supply well. The Well Head Protection Plan Update (2002) stated water supply well 623 is 197 feet deep with the pump depth set at 70 feet bls.

- The site is located within a potential well head protection area.
- The closest residence is approximately 400 feet east of the site.
- A Youth Sports and Activities Center and a playground are located approximately 300 feet from the site.
- Athletic fields associated with a middle school are located approximately 500 feet northeast of the site.

Based on information provided by MCB Camp Lejeune, these potential receptors have not been adversely affected by the potentially contaminated soil and/or groundwater. The water supply well 623 was shut down on July 14, 2005 and was sampled in December 2005. Analytical results yielded non-detect results for volatile organic compounds using EPA Method 524.2 during the sampling event.

The intermediate risk is based on the location of the potable water supply well 623 and the deep groundwater contamination at the site. This ranking revises the target cleanup goals for soil to Residential or Soil-to-Groundwater (whichever is lower) Maximum Soil Contaminant Concentrations (MSCC). Groundwater target cleanup goals remain unchanged from the original CAP (i.e., 2L NCGWQS). A Notice of Residual Petroleum was not required for the site at this time.

Recommendations of the CAP Addendum 2004 included:

- Collection of soil samples from the capillary fringe at six locations for Risk Based Analysis.
- Shutting down a portion of the current groundwater remediation system.
- Semi-annual groundwater sample collection from shallow monitoring wells UST820-MW08, UST820-MW10, UST820-MW14, UST820-MW18, UST820-MW20, UST820-MW22, UST820-MW24 and UST820-MW26. The groundwater samples were to be analyzed for Volatile Organic Compounds (VOCs) using EPA Method 602 plus xylenes, Semi-Volatile Organic Compounds (SVOCs) using EPA Method 625 for Polynuclear Aromatic Hydrocarbons (PAHs) compounds only, and Standard Prep Method 3030C for lead.
- Install two, 50 feet deep Type III monitoring wells.
- Shutdown and properly abandon water supply well 623.
- Semi-annual groundwater sample collection from deep monitoring wells UST820-MW07, UST820-MW19, UST820-MW21, UST820-MW23, UST820-MW25, plus the two additional deep monitoring wells UST820-MW28 and UST820-MW29. The groundwater samples are to be analyzed for VOCs using EPA Method 602 plus xylenes, SVOCs using EPA Method 625 for PAH compounds only, and Standard Prep Method 3030C for lead.
- The remaining shallow monitoring wells UST820-MW02, UST820-MW03, UST820-MW04, UST820-MW05, UST820-MW06, UST820-MW11, UST820-MW12, UST820-MW13, UST820-MW15, UST820-MW16 and UST820-MW27 should be sampled on a semi-annual basis for one year. The groundwater samples are to be

analyzed for VOCs using EPA Method 602 plus xylenes, SVOCs using EPA Method 625 for PAH compounds only, and Standard Prep Method 3030C for lead.

- Semi-annual groundwater sample collection from deep monitoring well UST820-MW9D. The groundwater sample will be analyzed for VOCs using EPA Method 602 plus xylenes, SVOCs using EPA Method 625 for PAH compounds only, and Standard Prep Method 3030C for lead.

Per the CAP Addendum 2004 recommendations, in June 2004, 29 of the 48 AS/SVE monitoring wells were shut down to more effectively remediate the groundwater contamination above the 2L NCGWQS with the remaining monitoring wells. The AS/SVE monitoring well locations are shown in **Figure 2**.

2.4 CORRECTIVE ACTION PLAN ADDENDUM 2004 SOIL AND GROUNDWATER CONTAMINATION ASSESSMENT

During April 2005, Shaw Environmental, Inc. (Shaw) followed the CAP Addendum 2004 recommendations by collecting soil samples from the capillary fringe (10 feet bls) at six locations that were identified in the CAP Addendum 2004. The samples were analyzed for VOCs using EPA Method 8260B with isopropyl ether (IPE) and MTBE, SVOCs using EPA Method 8270C plus ten highest peaks, MADEP-Extractable Petroleum Hydrocarbons (EPH), and MADEP- VPH. In addition, Shaw installed two Type III monitoring wells (UST820-MW28 and UST820-MW29). Groundwater samples were collected from the two new monitoring wells and were analyzed for VOCs using EPA Method 8260B, SVOCs using EPA Method 8270C, MADEP-EPH, and MADEP-VPH.

Laboratory analytical results for the soil samples did not detect regulated hydrocarbon compounds in excess of North Carolina Residential, Industrial or Soil-to-Groundwater MSCC. Results of the April 2005 soil assessment work were provided in a report by Shaw titled "Soil Contamination Report, Building 820, Camp Lejeune, North Carolina", dated June 2005. Shaw also recommended that no further investigation of the soil at Building 820 site was required based on the results of the April 2005 soil assessment.

Groundwater analytical results from the two Type III monitoring wells detected benzene, MTBE and chloroform at concentrations in excess of North Carolina 2L NCGWQS. Based on the results of the additional assessment work it was determined that additional contamination assessment work would be required to delineate the horizontal extent of groundwater contamination in the 50 foot depth interval. CATLIN installed four additional deep Type III monitoring wells (UST820-MW30 through UST820-MW33) to 50 feet bls in

November 2005 and one Type III monitoring well (UST820-MW34) 100 feet bls in January 2006 for the additional assessment. Groundwater samples obtained from these monitoring wells indicated that the horizontal and vertical extent of dissolved contamination was now contained within the monitoring well network. In addition, potable supply well 623 was shut down on July 14, 2005 and is currently not being used.

2.5 REMEDIAL ACTION OPTIMIZATION AND REVISED CAP ADDENDUM REPORT

CATLIN submitted a CAP Addendum to the NCDENR titled “*Remedial Action Optimization and Revised Corrective Action Plan Addendum Report Building 820*” dated March 20, 2006. The addendum was prepared to provide relevant information to update the RAO & RCAP and review the effectiveness of the current remedial actions being conducted at Building 820. This report also included the delineation assessment of the horizontal extent of the 50-foot deep groundwater contamination in the downgradient direction and the vertical extent of the 100-foot deep groundwater contamination.

Recommendations of the RCAP Addendum included:

- Continue operation of the current AS/SVE system until the remediation end points are met.
- In conjunction with the active AS/SVE system, utilize the natural processes of attenuation and degradation to address dissolved contamination at 50 feet bls. An evaluation of this process will be performed by sampling the wells on a semi-annual basis for two years.
- Monitor the groundwater in both the shallow monitoring wells and the 50 feet deep monitoring wells until contaminant concentrations are at or below the 2L NCGWQS.

3.0 **REMEDIAL SYSTEM OPERATION AND RESULTS**

3.1 **AS/SVE SYSTEM OPERATION**

System operation began in October 1997 and has continued through April 2009. During the first 15 months of operation, the AS/SVE fields were operated alternately to attempt to optimize the initial remediation. Since that time, all fields have been operated concurrently. On occasion, it was necessary to intermittently shut down one or more fields (most commonly Fields 1 and 3) due to the effect of high groundwater conditions on SVE operations (i.e., groundwater entrainment). In June 2004, 29 of the 48 AS/SVE monitoring wells were shut down NCGWQS as recommended in the RCAP. This was done to more effectively remediate those wells for which groundwater contamination remained above the 2L NCGWQS. The operating and inactive AS/SVE wells are shown in **Figure 2**.

This report discusses the system's operation and the monitoring results collected in March 2009. During the 2008-2009 operating time period no significant downtimes (exceeding one to three days at a time) occurred. Minor downtime periods occurred as a result of routine maintenance and groundwater monitoring events. The remedial system was in operation a total of 337 days during May 2008 through April 2009 for an operational efficiency of 92 percent.

An operation and maintenance schedule has been established to obtain consistent system measurements and notes on system performance on the AS/SVE equipment compound. With the exception of some holidays and severe short duration storms, the AS/SVE equipment compound was essentially inspected every weekday that the system was in operation. During the site inspection, a checklist is used to record operational measurements and conditions, such as vacuum blower meter hours, inlet filter differential pressure, and bleed air valve position. This information is used to identify areas requiring maintenance (such as filter replacement) and to fine-tune system operation.

During the 2008-2009 period, the AS/SVE fields were inspected weekly. Included in this work was an inspection of each well vault. System components were checked and measurements such as vacuum, air velocity, and temperature were recorded. As with the equipment compound, these inspections helped to identify maintenance needs. Expanded compound measurements, including specific recovery conditions, were recorded concurrently with the weekly inspection of well vaults.

3.2 AS/SVE MONITORING RESULTS

Hydrocarbon recovery for the system is calculated from system operational parameters such as organic vapor concentrations, exhaust stack pressure, velocity, and temperature. These parameters are used to calculate the cumulative mass of hydrocarbons recovered.

Operational data collection for the AS/SVE system began on October 28, 1997, and has continued at regular intervals to the present. For purposes of this report, system operation data and results have been reviewed from startup through April 30, 2009. During the first week of December 2008 two of the systems were shut down for repairs and the technician recorded a concentration anomaly for the system adding 3,909 pounds of hydrocarbons to the data table, which was subtracted out for the total cumulative mass of hydrocarbons recovered. Within this period of operation, the system has recovered a corrected cumulative mass of 21,739 pounds of hydrocarbons. During 2008-2009, approximately 540 pounds of hydrocarbons were recovered by the remedial system. This is an increase from 345 pounds of hydrocarbons recovered in 2007-2008. Hydrocarbon vapor recovery data and graph is provided in **Table 3.1**.

During system operation for 2008-2009, hydrocarbon recovery rates ranged from 9.8 pounds per day (lbs/day) to <1 lbs/day. The average recovery rate increased from 0.95 lbs/day observed in 2007-2008 to 1.6 lbs/day observed in 2008-2009. This is probably due to the drop in the water table since the last sampling event in October 2007. This drop increased the vadose zone above the water table, which increased the mass of hydrocarbons recovered at the site. No major changes were made to the system configuration in the 2008-2009 monitoring period.

3.3 ISOC IMPLEMENTATION

In early 2009, ISOC (in-situ submerged oxygen curtain) units were installed in three (3) monitoring wells (UST820-MW09, UST820-MW17, and UST820-MW28) to enhance the natural attenuation of MTBE. Operation of the units commenced on February 5, 2009 and has continued through May 2009. Operation will continue and data will be collected and evaluated to determine the effectiveness of this strategy.

4.0 GROUNDWATER MONITORING METHODS AND RESULTS

Groundwater elevations at select monitoring wells were measured during the groundwater sampling event (March 2009). **Table 4.1** presents groundwater elevation data dating back to August 2005. **Figure 4.1** presents groundwater elevation contour maps from the March 2009 sampling event of the Type II (shallow) wells; while **Figure 4.2** presents groundwater elevation contour maps from the March 2009 sampling event of the Type III (deep) monitoring wells. The groundwater sample collection field logs are provided in **Appendix A**.

4.1 GROUNDWATER ELEVATION MEASUREMENTS

4.1.1 March 2009 Gauging Event

In March 2009, the depth to groundwater from top of casing was gauged in 16 Type II (shallow) monitoring wells at the site. The depth to groundwater ranged from 14.32 feet bls in monitoring well UST820-MW11 to 21.73 feet bls in monitoring well UST820-MW22. Groundwater elevations ranged from 9.09 feet National Geodetic Vertical Datum (NGVD) in monitoring well UST820-MW08 to 15.47 feet NGVD in monitoring well UST820-MW16. No detectable thickness of free product was observed in any of the 16 wells. **Figure 4.1** depicts the groundwater flow for Type II (shallow) monitoring wells.

Depth to groundwater was also measured in 10 Type III (deep) monitoring wells. The depth to groundwater ranged from 16.08 feet bls in monitoring well UST820-MW29 to 23.04 feet bls in monitoring well UST820-MW17. Groundwater elevations in the 10 wells ranged from 8.80 feet NGVD in monitoring well UST820-MW09 to 11.29 feet NGVD in monitoring well UST820-MW29. **Figure 4.2** depicts the groundwater flow for Type III (deep) monitoring wells.

4.2 MARCH 2009 GROUNDWATER SAMPLING AND ANALYTICAL RESULTS

Groundwater sample collection and analysis was performed at 15 Type II monitoring wells (UST820-MW02, UST820-MW03, UST820-MW04, UST820-MW06, UST820-MW08, UST820-MW10, UST820-MW11, UST820-MW12, UST820-MW13, UST820-MW15, UST820-MW16, UST820-MW18, UST820-MW20, UST820-MW24, and UST820-MW26) on March 20 through March 23, 2009 as recommended in the RCAP. Groundwater sample collection and analysis was not completed at monitoring well UST820-MW05, UST820-MW14, UST820-MW27, and UST820-PW01 due to purging dry and not recovering. The

AS system was turned off one week before sampling began. The samples were analyzed for VOCs using EPA Method 602, PAHs using EPA Method 625 and lead using SW846-6010B. Of the 15 monitoring wells sampled, the following six monitoring wells presented compounds in excess of 2L NCGWQS:

- UST820-MW02 [naphthalene 22.2 µg/L]
- UST820-MW03 [benzene, 2.9 µg/L; and naphthalene 36.2 µg/L]
- UST820-MW06 [benzene, 18.3 µg/L; ethylbenzene, 2,000 µg/L; and naphthalene 260 µg/L]
- UST820-MW11 [total xylenes, 4,390 µg/L; and naphthalene 98.7 µg/L]
- UST820-MW13 [total xylenes, 836 µg/L]
- UST820-MW16 [lead, 31.3 µg/L].

Groundwater field parameters and analytical results from the 15 Type II monitoring wells for the March 2009 sampling event are presented in **Tables 4.2 and 4.3**, and **Figure 4.3** (benzene), **Figure 4.4** (MTBE), **Figure 4.5** (total BTEX), and **Figure 4.6** (naphthalene). The laboratory analytical reports are provided in **Appendix B**.

Groundwater sample collection and analysis was performed at 9 Type III monitoring wells (UST820-MW07, UST820-MW09, UST820-MW09D, UST820-MW17, UST820-MW21, UST820-MW23, UST820-MW25, UST820-MW28, and UST820-MW29) on March 20 through March 23, 2009. Groundwater sample collection and analysis was not completed at monitoring well UST820-MW19 due to purging dry and not recovering. Groundwater samples were not collected from UST820-MW30, UST820-MW31, UST820-MW32, UST820-MW33, or UST820-MW34. The AS system was turned off one week before sampling began. The samples were analyzed for VOCs using EPA Method 602, PAHs using EPA Method 625, and lead using SW846-6010B. Of the 9 monitoring wells sampled, the following three monitoring wells presented compounds in excess of 2L NCGWQS:

- UST820-MW09 [benzene, 22 µg/L]
- UST820-MW17 [benzene, 148 µg/L; MTBE, 2,070 µg/L; and lead 45.8 µg/L]
- UST820-MW28 [benzene, 43.1 µg/L].

Groundwater field parameters and analytical results from the 9 Type III monitoring wells from the March 2009 sampling event are presented in **Tables 4.4 and 4.5**, and **Figure 4.7** (benzene), **Figure 4.8** (MTBE), and **Figure 4.9** (total BTEX), and **Figure 4.10** (naphthalene). The laboratory analytical reports are provided in **Appendix B**.

5.0 **CONCLUSIONS**

5.1 **AS/SVE SYSTEM OPERATION**

A total of 29 of the 48 wells in the AS/SVE system were shutdown in June 2004 in accordance with recommendations presented in the RCAP prepared by CATLIN. The inactive wells included AS/SVE wells 1, 5 through 8, 12 through 14, 21 through 25, 30 through 34, and 38 through 45. The average daily vapor recovery rate of the AS/SVE system increased from 0.95 lbs/day observed in 2007-2008 to 1.6 lbs/day observed in 2008-2009. This is probably due to the lowered water table which increased the vadose zone above the water table over the site, which increased the mass of hydrocarbons recovered at the site. Continued operation of the AS/SVE system will reduce adsorbed phase hydrocarbons in subsurface soil and also reduce the dissolved phase contaminants in groundwater at the site.

The AS/SVE remedial system continues to remove dissolved contaminants from the "shallow" surficial aquifer at the site as evidenced by the continued reduction in the dissolved contaminant concentrations observed during this monitoring period. As concentrations of contaminants of concern (COC) in the "shallow" zone continue to decrease, the deeper zones should begin to demonstrate a similar trend as the release of less contaminated concentrations migrate to the deeper areas in the groundwater.

5.2 **GROUNDWATER ELEVATION MEASUREMENTS**

Differences in water table elevations from the shallow and deep depth intervals indicate there is a significant downward vertical hydraulic gradient at the site. This downward gradient is probably responsible for the dissolved COC detected in the Type III monitoring wells that are screened at the deeper depth intervals. In general, this downward vertical gradient has historically been observed MCB Camp Lejeune wide and has been attributed to base groundwater flow discharging into the New River and water production wells on the MCB Camp Lejeune.

The Type II monitoring well contour map from March 2009, **Figure 4.1**, indicates the overall slope of the groundwater surface remains essentially the same from the previous year. The contour map from March 2009 indicates groundwater levels decreased 1 to 3 feet from levels observed in October 2007. The groundwater surface measured in the Type II wells slopes from a high point at monitoring wells UST820-MW16 toward a low point at UST820-MW08

for the monitoring events in March 2009. Based on this information, shallow groundwater at the site is inferred to flow to the south with a hydraulic gradient of approximately 0.014 ft/ft in March 2009. A comparison of historical groundwater elevations indicates the groundwater flow in the shallow aquifer has remained in a southerly direction and the COC have not migrated significantly any further downgradient in the last ten years.

The groundwater elevation exhibited by the Type III wells during March 2009, sloped from a high point at UST820-MW29 to a low point at UST820-MW9. The deeper groundwater at the site is generally inferred to flow from southeast to northwest with a hydraulic gradient of 0.018 ft/ft in March 2009. The vertical groundwater gradient at this site has a four to five foot change from the shallow wells to the deepest wells which indicates a significant downward trend.

5.3 GROUNDWATER ANALYTICAL CONCLUSIONS

Groundwater sampling and analysis continues to detect dissolved phase hydrocarbon components in groundwater at the site. In general, contaminant concentrations continue to demonstrate a decreasing trend over time. During the March 2009 groundwater sampling event, six shallow monitoring wells (UST820-MW02, UST820-MW03, UST820-MW06, UST820-MW11, and UST820-MW13, and UST820-MW16) and three deep monitoring wells (UST820-MW09, UST820-MW17, and UST820-MW28) presented COC above NCGWQS. While groundwater contaminant concentrations were detected in a number of monitoring wells in March 2009, the concentration of the contaminants were either considerably lower than the October 2007 groundwater concentrations or approximately the same. Historically, over the past three years, these referenced monitoring wells have mostly decreased in benzene groundwater concentrations. Benzene concentrations, the primary driver, have been reduced or stayed the same as follows:

- UST820-MW02 from <1.0 µg/L in 2004 to 6.8 µg/L in 2007 to <2.0µg/L in 2009 (decrease);
- UST820-MW03 from 42.4 µg/L in 2004 to 1.1 µg/ 2007 to 2.9 µg/ 2009 (decrease);
- UST820-MW06 from 212 µg/L in 2004 to 65.4 µg/L in 2007 to 18.3 µg/L in 2009 (decrease);
- UST820-MW11 from 7.4 µg/L in 2004 to <1.0 µg/Lin 2007 to <10 µg/L in 2009 (decrease);
- UST820-MW09 from 2,360 µg/L in 2004 to 92.6 µg/L in 2007 to 22 µg/L in 2009 (decrease);

- UST820-MW09D from <1.0 µg/L in 2004 to 1.2 µg/L in 2007 to <1.0 µg/L in 2009 (same);
- UST820-MW17 from 242 µg/L in 2004 to 53.4 µg/L in 2007 to 148 µg/L in 2009 (decrease), and
- UST820-MW28 from 1,110 µg/L in 2004 to 1.7 µg/L in 2007 to 43.1 µg/L in 2009 (decrease).

These trends will continue to be monitored as annual sampling and analysis events are completed. As stated in Section 5.1, Shaw believes that continued operation of the AS/SVE system will reduce adsorbed-phase hydrocarbons in subsurface soil and dissolved-phase contaminants in groundwater at the site. For reference, historical groundwater analytical results for individual monitoring wells are provided in **Appendix C**. Graphs comparing groundwater elevation versus total BTEX concentration in select monitoring wells that have displayed the presence of BTEX compounds above the NCGWQS are provided in **Appendix D**. In general, the graphs demonstrate a decreasing trend in BTEX concentrations in monitoring wells at the site. The sampling results support the conclusion that continued use of the AS/SVE system has resulted in a decrease in the dissolved BTEX concentrations over the site in the past year.

6.0 RECOMMENDATIONS

Results of the optimization survey completed by CATLIN in 2004, concluded that the site meets the criteria for classification as an Intermediate Risk and Residential Land Use site. This ranking revises the target cleanup goals for both soil and groundwater. The new target cleanup level for soil will be based on the Residential or Soil-to-Groundwater (whichever is lower) MSCC, and the target cleanup level for groundwater will remain 2L NCGWQS.

6.1 AS/SVE SYSTEM

The active portion of the AS/SVE system should remain operational for the foreseeable future. Shaw recommends continued operation of the AS/SVE system to reduce adsorbed phase hydrocarbons in subsurface soil and also reduce the dissolved phase contaminants in groundwater at the site.

Based on our experiences, Shaw recommends the following operating procedure for the AS / SVE system to maximize the removal efficiency:

- The AS system should be operated 100 percent of the time when the SVE system is operating.
- The SVE system should operate when the water level in Monitoring Well UST 820-MW05 is lower than eight feet below the top of the casing. When the water level is above the eight foot level, the SVE system should be turned off. This monitoring well is directly upgradient of the center of the hydrocarbon plume. Water levels above the eight foot level would introduce more water vapor and less hydrocarbon vapor thus reducing the efficiency of the SVE system.

6.2 GROUNDWATER LEVEL MEASUREMENTS

Depth to groundwater/product measurements should continue at all monitoring wells being sampled at the site. Results of the measurements will be used to update a groundwater elevation contour map of the site in both the "shallow" and "deep" aquifer zones. Shaw's practice is to turn off the AS system one week prior to sampling to allow the air to dissipate.

6.3 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

Shaw has completed the 2009 annual groundwater sampling and analysis and has compiled this data in the attached tables. The data indicates that the AS/SVE system is working to reduce hydrocarbon concentrations at the site. In addition, the Navy is utilizing the natural

process of attenuation to address the dissolved contamination at 50 feet bls. The natural attenuation process will continue to be evaluated by performing sampling and analysis of the monitoring wells on an annual basis. In addition, Shaw recommends only sampling the monitoring wells that have presented concentrations above the 2L NCGWQS consistently during the past three years. This recommendation would eliminate the following wells: Shallow wells UST820-MW05, UST820-MW08, UST820-MW10, UST820-MW12, UST820-MW14, UST820-MW15, UST820-MW18, UST820-MW20, UST820-MW22, UST820-MW24, UST820-MW26, UST820-MW27, and UST820-PW01; and deep wells UST820-MW07, UST820-MW19, UST820-MW21, UST820-MW23, UST820-MW25, UST820-MW29, UST820-MW30, UST820-MW31, UST820-MW32, UST820-MW33, and UST820-MW34.

The following bullets present the proposed groundwater monitoring plan for 2009:

- Annual groundwater sample collection from eight shallow monitoring wells UST820-MW02, UST820-MW03, UST820-MW04, UST820-MW06, UST820-MW11, UST820-MW12, UST820-MW13, and UST820-MW27. The groundwater samples are to be analyzed for VOCs using EPA Method 602 plus xylenes, SVOCs using EPA Method 625 for PAH compounds only..
- Annual groundwater sample collection from four deep monitoring wells UST820-MW09, UST820-MW09D, UST820-MW-17, and UST820-MW28. The groundwater samples are to be analyzed for VOCs using EPA Method 602 plus xylenes, SVOCs using EPA Method 625 for PAH compounds only.
- It is recommended that Lead analysis be removed from the monitoring plan until such time that the Site Closure sampling event is conducted.

The analytical results from the sampling events will be compared to the 2L NCGWQS to evaluate the remediation/natural attenuation process. **Tables 6.1 and 6.2** present a summary of the proposed annual groundwater sampling program for 2009.

A flow-through cell will continue to be used in the measurement of dissolved oxygen, pH, conductivity and oxygen-reduction potential in the field. This eliminates exposure of the purged groundwater to air that would yield erroneous, biased results. Analytical results from the sampling events will continue to be reviewed and recommendations for future remedial work at the site will be developed as appropriate.

It is recommended that operation and dissolved oxygen monitoring of the three ISOC units for wells UST820-MW09, UST820-MW17, and UST820-MW28 be continued.

It is recommended that monitoring of both the shallow and deeper groundwater be continued until contaminant concentrations are at or below the 2L NCGWQS.

7.0 REFERENCES

“Leaking Underground Storage Tank (LUST) Site Assessment Report” Law December 1992

Addendum to the LUST Site Assessment Report. Law March 1994

Corrective Action Plan (CAP) Law dated October 29, 1996

“*Remedial Action Optimization and Revised Corrective Action Plan Building 820*” dated February 24, 2004 Catlin USA

“Soil Contamination Report, Building 820, Camp Lejeune, North Carolina”, dated June 2005. Shaw

“*Remedial Action Optimization and Revised Corrective Action Plan Addendum Report Building 820*” dated March 20, 2006. Catlin

“2007-2008 Annual Monitoring report, Building 820, Marine Corp Base, Camp Lejeune, Onslow County, North Carolina”, dated May 2008. Shaw

TABLES

Table 2.1
MCB Camp Lejeune
Site Rehabilitation Goals

MEDIUM	COMPONENTS	2004 Conditions	2005 Conditions	2006 Conditions	2007 Conditions	2009 Conditions	Target Cleanup
Free Product	Gasoline/Diesel	No free product observed in any well	No free product observed in any well	No free product observed in any well	No free product observed in any well	No free product observed in any well	
Vadose Zone Soil	TPH 3550/5030	TPH soil contamination was measured in November 1992 at levels that range from <1 mg/kg to 2,700 mg/kg.	VOCs, SVOCs, & MADEP-EPH/VPH soil contamination was measured in April 2005 at levels that range from <0.0048 mg/kg to <8.2 mg/kg				Residential or Soil-to-Groundwater (Whichever is lower) MSCCs
Groundwater	Benzene	2,360 µg/l	1,130 µg/l	1,710 µg/l	92.6 µg/l	148 µg/l	1 µg/l
	Ethylbenzene	1,400 µg/l	1,980 µg/l	1,280 µg/l	1,880 µg/l	2,000 µg/l	550 µg/l
	Chlorobenzene	<1 µg/l	<1 µg/l	<1 µg/l	<1 µg/l	1.8 µg/l	50 µg/l
	Chrysene	<4.8 µg/l	<4.8 µg/l	<5.0 µg/l	<4.9 µg/l	<20 µg/l	4.79 µg/l
	Naphthalene	268 µg/l	281 µg/l	253 µg/l	322 µg/l	260 µg/l	21 µg/l
	Toluene	722 µg/l	1,478 µg/l	670 µg/l	797 µg/l	211 µg/l	1,000 µg/l
	Xylenes (Total)	2,450 µg/l	3,990 µg/l	2,030 µg/l	1,890 µg/l	4,390 µg/l	530 µg/l
	MTBE	3,930 µg/l	4,250 µg/l	4,520 µg/l	2,960 µg/l	2,070 µg/l	200 µg/l

TABLE 3.1
Cumulative Mass of Volatile Hydrocarbons Recovered
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
Data and Graph
MCB CAMP LEJEUNE - BM-820
SVE Stack

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc (PPM _{measured}) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Pressure (" Hg)	Absolute Temperature (degrees Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
12/02/05	12:20	60604	0	7600	285.92	545	4004	0.000	0.0	20593.4	
12/07/05	9:30	60720	0	7700	285.92	533	4148	0.000	0.0	20593.4	
12/16/05	10:45	60940	1	7600	285.92	545	4004	0.005	1.9	20602.1	
12/23/05	11:00	61107	0	7800	285.92	536	4178	0.000	0.0	20608.8	
12/29/05	14:30	61254	0	7500	285.92	551	3908	0.000	0.0	20608.8	
01/04/06	16:00	61423	0	8000	286.92	546	4207	0.000	0.0	20608.8	
01/12/06	9:45	61585	0	6700	286.92	550	3498	0.000	0.0	20608.8	
01/17/06	13:00	61709	0	6100	286.92	563	3111	0.000	0.0	20608.8	
01/24/06	15:30	61879	0	6200	286.92	551	3231	0.000	0.0	20608.8	
02/02/06	13:00	62086	0	5500	287.92	557	2835	0.000	0.0	20608.8	
02/08/06	12:30	62230	0	5300	287.92	542	2808	0.000	0.0	20608.8	
02/17/06	8:30	62442	0	5300	287.92	552	2757	0.000	0.0	20608.8	
02/24/06	8:15	62610	0	6900	287.92	539	3676	0.000	0.0	20608.8	
03/01/06	9:00	62730	1	6400	288.92	554	3317	0.005	1.6	20612.7	
03/08/06	10:00	62899	1	5300	288.92	541	2813	0.005	1.3	20623.0	
03/14/06	12:00	63047	1	6800	288.92	558	3499	0.005	1.7	20632.2	
03/21/06	13:00	63214	0	6400	288.92	542	3390	0.000	0.0	20638.0	
03/28/06	15:00	63384	1	6700	288.92	555	3466	0.005	1.6	20643.9	
04/05/06	14:45	63577	3	6400	289.92	568	3235	0.016	4.6	20669.1	
04/14/06	15:00	63791	2	5600	289.92	578	2782	0.011	2.6	20701.5	
04/18/06	11:00	63883	1	6400	289.92	557	3299	0.005	1.6	20709.6	
04/25/06	10:30	64076	0	6100	289.92	556	3150	0.000	0.0	20715.9	
05/02/06	13:00	64222	0	6400	290.92	570	3224	0.000	0.0	20715.9	
05/10/06	8:50	64387	1	6400	290.92	559	3287	0.005	1.6	20721.3	
05/15/06	12:00	64457	0	5900	290.92	573	2956	0.000	0.0	20723.5	
05/22/06	16:00	64575	1	5900	290.92	565	2998	0.005	1.4	20727.0	
06/02/06	15:00	64839	1	6500	291.92	572	3263	0.005	1.6	20743.4	
06/06/06	10:30	64928	0	5100	291.92	567	2583	0.000	0.0	20746.3	
06/12/06	12:00	65076	0	5900	291.92	584	2901	0.000	0.0	20746.3	
06/20/06	8:40	65263	1	6400	291.92	573	3207	0.005	1.5	20752.3	
06/29/06	15:05	65486	0	6600	291.92	578	3278	0.000	0.0	20759.3	
07/06/06	15:50	65655	2	6900	292.92	570	3476	0.011	3.3	20771.0	
07/12/06	8:50	65793	1	7100	292.92	574	3551	0.005	1.7	20785.4	
07/19/06	11:40	65964	0	6100	292.92	590	2968	0.000	0.0	20791.4	
07/27/06	10:40	66155	0	6400	292.92	587	3130	0.000	0.0	20791.4	

TABLE 3.1
Cumulative Mass of Volatile Hydrocarbons Recovered
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
Data and Graph
MCB CAMP LEJEUNE - BM-820
SVE Stack

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc (PPM _{measured}) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Pressure (" Hg)	Absolute Temperature (degrees Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
08/04/06	10:30	66344	0	6700	293.92	579	3322	0.000	0.0	20791.4	
08/08/06	16:00	66446	0	7400	293.92	587	3620	0.000	0.0	20791.4	
08/15/06	15:00	66613	0	6400	293.92	583	3152	0.000	0.0	20791.4	
08/22/06	14:00	66779	1	6300	293.92	574	3151	0.005	1.5	20796.6	
08/29/06	9:55	66943	1	7100	293.92	579	3521	0.005	1.7	20807.4	
09/06/06	12:30	67137	0	6400	294.92	568	3235	0.000	0.0	20814.2	
09/12/06	9:15	67277	0	6600	294.92	565	3354	0.000	0.0	20814.2	
09/23/06	9:30	67542	1	6400	294.92	569	3229	0.005	1.5	20822.7	
09/26/06	10:15	67614	0	6800	294.92	561	3480	0.000	0.0	20825.0	
10/03/06	9:00	67553	0	7500	295.92	571	3771	0.000	0.0	20825.0	
10/11/06	14:20	67978	0	8000	295.92	571	4023	0.000	0.0	20825.0	
10/18/06	14:30	68142	0	7600	295.92	569	3835	0.000	0.0	20825.0	
10/25/06	16:10	68311	0	7100	295.92	550	3706	0.000	0.0	20825.0	
10/31/06	15:00	68456	0	7300	295.92	563	3723	0.000	0.0	20825.0	
11/06/06	10:50	68596	0	7800	296.92	555	4035	0.000	0.0	20825.0	
11/13/06	11:00	68763	0	6900	296.92	557	3557	0.000	0.0	20825.0	
11/22/06	11:55	68980	0	6700	296.92	555	3466	0.000	0.0	20825.0	
11/28/06	11:30	69124	0	7500	296.92	573	3758	0.000	0.0	20825.0	
12/05/06	13:45	69295	0	7400	297.92	558	3808	0.000	0.0	20825.0	
12/12/06	14:30	69463	0	6900	297.92	568	3488	0.000	0.0	20825.0	
12/18/06	14:30	69607	0	7600	297.92	574	3802	0.000	0.0	20825.0	
12/29/06	10:15	69866	0	7600	297.92	563	3876	0.000	0.0	20825.0	
01/02/07	10:00	69962	0	6900	298.92	551	3595	0.000	0.0	20825.0	
01/10/07	15:45	70158	0	7600	298.92	553	3946	0.000	0.0	20825.0	
01/16/07	13:15	70302	0	7400	298.92	568	3741	0.000	0.0	20825.0	
01/24/07	13:30	70494	1	7200	298.92	554	3731	0.005	1.8	20832.1	
01/31/07	15:05	70663	0	7200	298.92	546	3786	0.000	0.0	20838.3	
02/07/07	9:45	70826	0	7200	299.92	558	3705	0.000	0.0	20838.3	
02/14/07	11:15	70995	0	7200	299.92	552	3745	0.000	0.0	20838.3	
02/20/07	11:30	71139	0	7300	299.92	565	3710	0.000	0.0	20838.3	
02/28/07	14:05	71335	0	7200	299.92	568	3639	0.000	0.0	20838.3	

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Data and Graph
MCB CAMP LEJEUNE - BM-820
SVE Stack

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc (PPM _{measured}) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Pressure (" Hg)	Absolute Temperature (degrees Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
03/07/07	13:15	71500	0	6800	300.92	566	3449	0.000	0.0	20838.3	5/9 System Down 5/17 System Down
03/15/07	9:30	71689	0	7100	300.92	570	3576	0.000	0.0	20838.3	
03/20/07	10:00	71810	0	7400	300.92	567	3747	0.000	0.0	20838.3	
03/26/07	12:15	71957	1	7400	300.92	571	3721	0.005	1.8	20843.8	
04/04/07	14:20	72113	1	7200	300.92	582	3552	0.005	1.7	20855.0	
04/10/07	11:15	72315	0	7400	300.92	562	3781	0.000	0.0	20862.1	
04/18/07	11:40	72507	0	7800	300.92	564	3971	0.000	0.0	20862.1	
04/24/07	11:45	72651	0	7800	300.92	574	3902	0.000	0.0	20862.1	
05/04/07	10:10	72796	0	7600	300.92	571	3821	0.000	0.0	20862.1	
05/23/07	16:15	72800	1	7400	300.92	576	3689	0.005	1.8	20862.3	
05/31/07	9:55	72903	2	7600	300.92	581	3756	0.011	3.6	20873.7	
06/07/07	10:25	73071	2	7400	300.92	588	3613	0.011	3.4	20898.3	
06/13/07	10:05	73215	0	7700	300.92	583	3792	0.000	0.0	20908.6	
06/21/07	10:36	73364	3	7800	300.92	585	3828	0.016	5.5	20925.6	
06/27/07	12:30	73510	1	7800	300.92	591	3789	0.005	1.8	20947.7	
07/06/07	10:45	73725	2	7800	300.92	586	3822	0.011	3.6	20972.0	
07/13/07	9:30	73890	0	7900	300.92	581	3904	0.000	0.0	20984.5	
07/19/07	9:45	74030	0	7800	300.92	587	3815	0.000	0.0	20984.5	
07/26/07	12:40	74200	1	7800	300.92	594	3770	0.005	1.8	20990.9	
08/02/07	13:50	74369	2	7900	300.92	592	3831	0.011	3.6	21010.1	
08/09/07	9:45	74533	0	8100	300.92	594	3915	0.000	0.0	21022.5	
08/16/07	9:50	74701	2	8400	300.92	590	4088	0.011	3.9	21036.1	
08/24/07	11:40	74895	1	7900	300.92	592	3831	0.005	1.8	21059.2	
08/31/07	11:45	75011	0	7600	300.92	584	3736	0.000	0.0	21063.6	
09/07/07	9:15	75174	2	7800	300.92	585	3828	0.011	3.6	21076.0	
09/13/07	9:40	75318	0	7900	300.92	580	3911	0.000	0.0	21087.0	
09/20/07	10:45	75487	0	8100	300.92	577	4031	0.000	0.0	21087.0	
09/28/07	11:40	75683	2	7900	300.92	588	3857	0.011	3.7	21101.9	
10/05/07	12:15	75805	0	7700	300.92	577	3832	0.000	0.0	21111.3	11/23 no readings
10/11/07	10:15	75948	0	7900	300.92	564	4022	0.000	0.0	21111.3	
10/17/07	9:45	76090	0	7700	300.92	572	3865	0.000	0.0	21111.3	
10/26/07	8:30	76305	0	7800	300.92	559	4006	0.000	0.0	21111.3	
10/30/07	10:05	76403	0	7700	300.92	555	3983	0.000	0.0	21111.3	
11/07/07	14:05	76600	0	7900	300.92	557	4072	0.000	0.0	21111.3	11/23 no readings
11/14/07	10:40	76763	0	8100	300.92	567	4102	0.000	0.0	21111.3	
11/30/07	12:45	77150	0	8300	300.92	556	4286	0.000	0.0	21111.3	

TABLE 3.1
Cumulative Mass of Volatile Hydrocarbons Recovered
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
Data and Graph
MCB CAMP LEJEUNE - BM-820
SVE Stack

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc (PPM _{measured}) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Pressure (" Hg)	Absolute Temperature (degrees Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
12/06/07	13:10	77295	0	8300	300.92	542	4397	0.000	0.0	21111.3	
12/13/07	8:30	77455	0	8500	300.92	551	4429	0.000	0.0	21111.3	
12/20/07	12:05	77627	0	8300	300.92	548	4349	0.000	0.0	21111.3	12/28 no readings
01/11/08	9:50	77905	0	8400	300.92	561	4299	0.000	0.0	21111.3	01/04 no readings
01/16/08	14:55	78032	0	8100	300.92	550	4228	0.000	0.0	21111.3	
01/24/08	12:10	78159	0	8100	300.92	540	4307	0.000	0.0	21111.3	
01/31/08	10:50	78326	1	8100	300.92	556	4183	0.005	2.0	21118.2	
02/13/08	13:45	78639	1	8400	300.92	573	4209	0.005	2.0	21144.2	02/08 no readings
02/21/08	10:50	78694	0	7800	300.92	541	4140	0.000	0.0	21146.5	
02/27/08	9:45	78810	0	8100	300.92	558	4168	0.000	0.0	21146.5	
03/18/08	11:40	78856	0	8400	300.92	563	4284	0.000	0.0	21146.5	03/07 and 03/14 no readings
03/27/08	10:45	79028	0	8700	300.92	561	4453	0.000	0.0	21146.5	
04/04/08	11:05	79219	2	8800	300.92	534	4731	0.011	4.5	21164.5	
04/10/08	11:05	79295	2	8800	300.92	576	4386	0.011	4.2	21178.2	
04/17/08	10:20	79462	0	8500	300.92	580	4208	0.000	0.0	21192.7	
04/26/08	9:40	79545	2	8200	300.92	585	4025	0.011	3.8	21199.4	
05/08/08	10:10	79567	1	7800	300.92	563	3978	0.005	1.9	21202.0	05/01 no readings
05/14/08	9:05	79711	0	8200	300.92	562	4189	0.000	0.0	21207.7	
05/20/08	13:50	79859	0	8100	300.92	576	4038	0.000	0.0	21207.7	
05/28/08	10:35	80045	0	8400	300.92	570	4231	0.000	0.0	21207.7	
06/06/08	10:10	80261	2	8300	300.92	580	4109	0.011	3.9	21225.3	
06/11/08	10:30	80382	1	8200	300.92	580	4059	0.005	1.9	21240.0	
06/18/08	11:50	80550	2	7900	300.92	573	3958	0.011	3.8	21259.9	
06/25/08	12:55	80719	2	8200	300.92	579	4066	0.011	3.9	21286.8	
06/30/08	14:55	80840	1	8100	300.92	582	3996	0.005	1.9	21301.4	07/06 no readings
07/17/08	14:55	81250	0	8200	300.92	583	4038	0.000	0.0	21317.6	07/13 no readings
07/22/08	12:50	81365	1	8400	300.92	585	4123	0.005	2.0	21322.3	
07/29/08	12:20	81533	0	8700	300.92	581	4299	0.000	0.0	21329.2	
08/15/08	14:35	81943	2	8900	300.92	576	4436	0.011	4.2	21365.3	08/8 no readings
08/21/08	11:05	82084	2	8900	300.92	579	4413	0.011	4.2	21390.0	08/29 no readings
09/03/08	10:00	82366	2	8900	300.92	577	4429	0.011	4.2	21439.5	
09/10/08	9:30	82507	1	8900	300.92	575	4444	0.005	2.1	21458.1	
09/17/08	11:30	82648	1	8900	300.92	576	4436	0.005	2.1	21470.5	
09/24/08	10:15	82789	3	8900	300.92	578	4421	0.016	6.3	21495.2	
09/30/08	10:00	82942	3	8700	300.92	575	4344	0.015	5.8	21533.8	
10/09/08	10:00	83092	0	8600	300.92	580	4257	0.000	0.0	21551.9	

TABLE 3.1
Cumulative Mass of Volatile Hydrocarbons Recovered
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
Data and Graph
MCB CAMP LEJEUNE - BM-820
SVE Stack

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc (PPM _{measured}) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Pressure (^o Hg)	Absolute Temperature (degrees Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
10/17/08	11:19	83377	0	7000	300.92	583	3446	0.000	0.0	21551.9	
10/21/08	10:50	83472	0	8600	300.92	569	4343	0.000	0.0	21551.9	
11/01/08	15:30	83740	0	8600	300.92	572	4318	0.000	0.0	21551.9	
11/08/08	10:21	83903	5	8500	300.92	580	4209	0.026	9.8	21585.3	
11/14/08	15:45	84053	3	8800	300.92	582	4339	0.015	6.0	21634.7	
11/20/08	15:55	84183	0	7900	300.92	567	4004	0.000	0.0	21650.9	
11/24/08	15:50	84279	0	8200	300.92	568	4142	0.000	0.0	21650.9	
12/04/08	16:10	84506	370	6330	300.92	577	3151	1.968	555.0	24275.5	
12/10/08	13:00	84616	4	6140	300.92	568	3104	0.019	5.3	25559.5	
12/19/08	16:38	84696	0	7000	300.92	564	3563	0.000	0.0	25568.3	
12/31/08	11:00	84862	0	3000	300.92	536	1607	0.000	0.0	25568.3	12/31 compressor not working properly
01/08/09	10:35	85054	0	1500	300.92	539	799	0.000	0.0	25568.3	
01/22/09	15:10	85388	0	1500	300.92	529	814	0.000	0.0	25568.3	no reading week of 1/16
01/28/09	9:45	85506	3	0	300.92	546	0	0.016	0.0	25568.3	velocity meter not working
02/06/09	13:50	85659	1	7100	300.92	539	3783	0.003	1.1	25571.8	
02/13/09	14:20	85808	1	7000	300.92	540	3723	0.005	1.6	25580.1	
02/19/09	10:50	85926	0	7300	300.92	554	3783	0.000	0.0	25584.0	
02/27/09	11:10	86117	0	8100	300.92	553	4205	0.000	0.0	25584.0	
03/06/09	12:00	86288	0	8200	300.92	555	4242	0.000	0.0	25584.0	
03/11/09	14:20	86407	2	950	300.92	570	479	0.008	0.3	25584.8	
03/19/09	13:15	86598	36	1100	300.92	571	553	0.191	9.5	25623.9	
03/27/09	11:00	86708	1	1300	300.92	564	662	0.007	0.4	25646.6	
04/06/09	9:45	86947	0	8400	300.92	563	4284	0.000	0.0	25648.8	
04/23/09	9:15	87355	0	6900	300.92	555	3570	0.000	0.0	25648.8	
04/30/09	9:15	87479	0	7650	300.92	559	3929	0.000	0.0	25648.8	Extrapolated Data

Notes:

$C = (PPM_{measured}) \times K \times (M_g/K_g) / 1000$

C: vapor concentration (mg/l)

PPM_{measured}: FID reading (PPM)

K: number of carbon atoms in calibration gas
(1 in methane)

TH: total hydrocarbons calculated as gasoline
(GRO)

$Q = (1-B) \times V \times A \times (P/P_{std}) \times (T_{std}/T)$

Q: vapor flowrate (SCFM)

B: percent water vapor in flowstream

V: vapor velocity (ft/min)

A: cross-sectional area (sq. ft)

P: absolute pressure of flowstream (^o Hg)

P_{std}: standard pressure (29.92^o Hg)

T: absolute temperature of flowstream (degrees Rankine)

$M = Q \times C \times 0.0895$

M: hydrocarbon recovery rate (lb/day)

Assumptions:

Mg = 128 mg/mg-mole

Kg = 24.07 dsm³/10⁶ gm -mole

B = 0.003 from Perry's Chemical Handbook

A = 0.545 sq. ft

TABLE 3.1
Cumulative Mass of Volatile Hydrocarbons Recovered
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
Data and Graph
MCB CAMP LEJEUNE - BM-820
SVE Stack

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc (PPM _{measured}) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Pressure (" Hg)	Absolute Temperature (degrees Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments

percent water vapor by volume 0.003 T_{std}: standard temperature (528 degrees Rankine)
SVE Stack pipe diameter 10 at 68 degrees F (from Perry's handbook)
* Estimated value due to malfunctioning instrument

TABLE 3.1
Cummulative Mass of Volatile Hydrocarbons Recovered
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
Data and Graph
MCB Camp Lejeune - BM-820

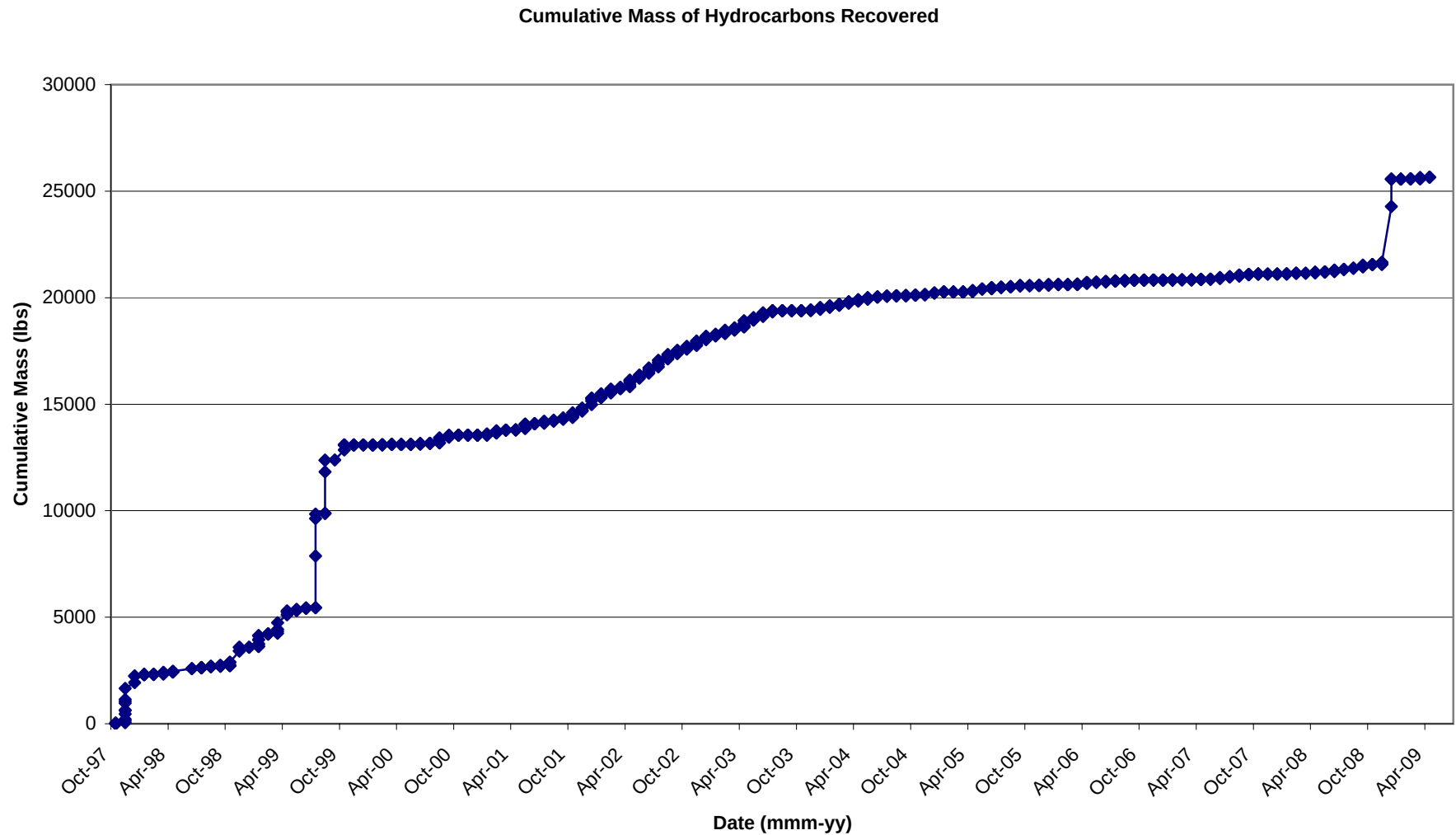


Table 4.1
Groundwater Elevation Table
Building 820
Camp LeJeune, North Carolina

		Revised				Revised				Revised				Revised				Revised
Well No.	Well Type (depth)	Top of Casing	Date Measured	Depth (BTC)	Elev. (NGVD)	Date Measured	Depth (BTC)	Elev. (NGVD)	Date Measured	Depth (BTC)	Elev. (NGVD)	Date Measured	Depth (BTC)	Elev. (NGVD)	Date Measured	Depth (BTC)	Elev. (NGVD)	
UST820-MW02	shallow	32.26	Aug-05	14.45	17.81	Feb-06	11.10	21.16	Oct-06	11.83	20.43	Oct-07	16.46	15.80	Mar-09	18.44	13.82	
UST820-MW03	shallow	32.41	Aug-05	14.63	17.78	Feb-06	11.18	21.23	Oct-06	12.02	20.39	Oct-07	16.42	15.99	Mar-09	19.11	13.30	
UST820-MW04	shallow	32.86	Aug-05	14.62	18.24	Feb-06	11.20	21.66	Oct-06	12.15	20.71	Oct-07	16.38	16.48	Mar-09	18.15	14.71	
UST820-MW05	shallow	29.92	Aug-05	11.38	18.54	Feb-06	7.71	22.21	Oct-06	8.57	21.35	Oct-07	13.07	16.85	Mar-09	NM	----	
UST820-MW06	shallow	31.74	Aug-05	15.20	16.54	Feb-06	11.62	20.12	Oct-06	12.56	19.18	Oct-07	16.77	14.97	Mar-09	18.48	13.26	
UST820-MW08	shallow	26.79	Aug-05	13.62	13.17	Feb-06	10.61	16.18	Oct-06	11.41	15.38	Oct-07	15.72	11.07	Mar-09	17.71	9.08	
UST820-MW10	shallow	31.37	Aug-05	NM	---	Feb-06	8.86	22.51	Oct-06	9.57	21.80	Oct-07	15.98	15.39	Mar-09	18.94	12.43	
UST820-MW11	shallow	29.12	Aug-05	10.58	18.54	Feb-06	7.16	21.96	Oct-06	7.92	21.20	Oct-07	12.21	16.91	Mar-09	14.32	14.80	
UST820-MW12	shallow	31.49	Aug-05	14.21	17.28	Feb-06	11.64	19.85	Oct-06	11.63	19.86	Oct-07	15.75	15.74	Mar-09	17.46	14.03	
UST820-MW13	shallow	28.79	Aug-05	13.35	15.44	Feb-06	9.01	19.78	Oct-06	9.87	18.92	Oct-07	14.10	14.69	Mar-09	15.80	12.99	
UST820-MW14	shallow	31.64	Aug-05	13.75	17.89	Feb-06	11.80	19.84	Oct-06	12.56	19.08	Oct-07	16.92	14.72	Mar-09	NM	----	
UST820-MW15	shallow	29.88	Aug-05	10.36	19.52	Feb-06	7.10	22.78	Oct-06	14.28	15.60	Oct-07	12.73	17.15	Mar-09	14.75	15.13	
UST820-MW16	shallow	31.85	Aug-05	13.29	18.56	Feb-06	9.08	22.77	Oct-06	10.06	21.79	Oct-07	14.92	16.93	Mar-09	16.39	15.46	
UST820-MW18	shallow	31.30	Aug-05	13.69	17.61	Feb-06	9.68	21.62	Oct-06	10.81	20.49	Oct-07	15.22	16.08	Mar-09	17.18	14.12	
UST820-MW20	shallow	31.17	Aug-05	15.55	15.62	Feb-06	11.62	19.55	Oct-06	12.56	18.61	Oct-07	16.93	14.24	Mar-09	20.40	10.77	
UST820-MW22	shallow	31.53	Aug-05	13.69	17.84	Feb-06	14.42	17.11	Oct-06	15.31	16.22	Oct-07	19.38	12.15	Mar-09	21.73	9.80	
UST820-MW24	shallow	29.34	Aug-05	16.19	13.15	Feb-06	13.20	16.14	Oct-06	13.82	15.52	Oct-07	17.03	12.31	Mar-09	18.91	10.43	
UST820-MW26	shallow	28.48	Aug-05	12.00	16.48	Feb-06	9.19	19.29	Oct-06	10.09	18.39	Oct-07	13.72	14.76	Mar-09	17.83	10.65	
UST820-MW27	shallow	29.91	Aug-05	11.30	18.61	Feb-06	7.81	22.10	Oct-06	8.65	21.26	Oct-07	13.13	16.78	Mar-09	NM	----	
UST820-MW7	deep	26.86	Aug-05	12.72	14.14	Feb-06	9.68	17.18	Oct-06	10.46	16.40	Oct-07	14.81	12.05	Mar-09	16.84	10.02	
UST820-MW9	deep	31.20	Aug-05	18.81	12.39	Feb-06	11.40	19.80	Oct-06	NM	NM	Oct-07	19.78	11.42	Mar-09	22.41	8.79	
UST820-MW9D	deep	32.52	Aug-05	20.90	11.62	Feb-06	16.24	16.28	Oct-06	17.42	15.10	Oct-07	20.57	11.95	Mar-09	22.30	10.22	
UST820-MW17	deep	32.16	Aug-05	19.81	12.35	Feb-06	16.46	15.70	Oct-06	17.32	14.84	Oct-07	20.57	11.59	Mar-09	23.04	9.12	
UST820-MW19	deep	31.34	Aug-05	18.95	12.39	Feb-06	NM	---	Oct-06	16.62	14.72	Oct-07	19.78	11.56	Mar-09	NM	----	
UST820-MW21	deep	31.48	Aug-05	18.80	12.68	Feb-06	14.86	16.62	Oct-06	13.33	18.15	Oct-07	19.51	11.97	Mar-09	21.83	9.65	
UST820-MW23	deep	30.85	Aug-05	17.83	13.02	Feb-06	14.84	16.01	Oct-06	15.63	15.22	Oct-07	19.78	11.07	Mar-09	20.84	10.01	
UST820-MW25	deep	28.17	Aug-05	15.51	12.66	Feb-06	12.35	15.82	Oct-06	13.13	15.04	Oct-07	16.29	11.88	Mar-09	18.14	10.03	
UST820-MW28	deep	28.85	Aug-05	16.21	12.64	Feb-06	15.05	13.80	Oct-06	13.67	15.18	Oct-07	13.62	15.23	Mar-09	19.65	9.20	
UST820-MW29	deep	27.36	Aug-05	13.75	13.61	Feb-06	10.60	16.76	Oct-06	11.28	16.08	Oct-07	14.41	12.95	Mar-09	16.08	11.28	
UST820-MW30	deep	29.42								Oct-06	17.29	12.13	Oct-07	17.69	11.73	Mar-09	19.68	9.74
UST820-MW31	deep	29.96								Oct-06	17.81	12.15	Oct-07	16.25	13.71	Mar-09	NM	----
UST820-MW32	deep	29.16								Oct-06	11.97	17.19	Oct-07	16.73	12.43	Mar-09	NM	----
UST820-MW33	deep	31.30								Oct-06	14.06	17.24	Oct-07	21.10	10.20	Mar-09	NM	----
UST820-MW34	deep	30.18								Oct-06	13.72	16.46	Oct-07	17.99	12.19	Mar-09	NM	----

** NGVD = National Geodetic Vertical Datum
Measurement not used due to suspected

Table 4.2
Field Data Summary
MCB Camp Lejeune
 B-820 Year 11 Annual
March 2009 Field Data Shallow

Client Sample ID:		UST820-MW02	UST820-MW3	UST820-MW04	UST820-MW05	UST820-MW06	UST820-MW08	UST820-MW10	UST820-MW11	UST820-MW12	UST820-MW13
Date Sampled:		03/22/09	03/20/09	03/22/09	03/23/09	03/20/09	03/22/09	03/23/09	03/22/09	03/20/09	03/22/09
Analyte	Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters											
Depth to Water	feet	18.44	19.11	18.15	NS	18.48	17.71	18.94	14.32	17.46	15.8
pH	-	6.07	7.09	4.58	NS	6.89	5.76	2.98	5.58	4.31	5.48
Conductivity	mS/m	0.671	0.602	0.300	NS	0.401	0.100	0.843	0.96	0.230	0.093
Turbidity	NTU	0.0	2.7	0.0	NS	7.9	0.0	165.7	1.6	107.0	0.6
Dissolved Oxygen	mg/L	0.32	1.05	6.39	NS	1.18	0.68	7.85	1.27	4.23	2.87
Temperature	°C	20.69	19.28	20.88	NS	18.87	18.61	18.93	20.7	18.02	17.93
Oxidation-Reduction Potential	mV	-157.3	-79.2	270.1	NS	-90.2	99.1	399.9	-34.1	158.3	69.3

NS = not sampled
 MW-27 low yield well

Table 4.2
Field Data Summary
MCB Camp Lejeune
 B-820 Year 11 Annual
March 2009 Field Data Shallow

Client Sample ID:		UST820-MW14	UST820-MW15	UST820-MW16	UST820-MW18	UST820-MW20	UST820-MW22	UST820-MW24	UST820-MW26	UST820-MW27	UST820-PW01
Date Sampled:		03/22/09	03/22/09	03/22/09	03/22/09	03/22/09	03/23/09	03/22/09	03/22/09	03/22/09	03/23/09
Analyte	Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters											
Depth to Water	feet	NS	14.75	16.39	17.18	20.4	21.73	18.91	17.83	NS	NS
pH	-	NS	5.52	3.51	3.37	4.17	NS	3.56	4.55	NS	NS
Conductivity	mS/m	NS	0.180	1.812	0.449	0.118	NS	0.101	0.106	NS	NS
Turbidity	NTU	NS	14.0	19.9	7.4	32.0	NS	3.6	22.1	NS	NS
Dissolved Oxygen	mg/L	NS	4.89	4.56	2.13	4.94	NS	0.79	8.65	NS	NS
Temperature	°C	NS	18.5	19.2	18.23	17.61	NS	18.79	18.39	NS	NS
Oxidation-Reduction Potential	mV	NS	87.4	223.4	252.8	168.3	NS	229.1	240.2	NS	NS

NS = not sampled
 MW-27 low yield well

Table 4.3
Analytical Data Summary
MCB Camp Lejeune
B-820 Year 11 Annual
March 2009 Shallow

Client Sample ID:		UST820-MW02	UST820-MW03	UST820-MW04	UST820-MW05	UST820-MW06	UST820-MW08	UST820-MW10	UST820-MW11	UST820-MW12	UST820-MW13
Lab ID:		F64150-13	F64124-1	F64150-12		F64124-3	F64150-15	F64150-19	F64150-7	F64124-2	F64150-9
Date Sampled:		03/22/09	03/20/09	03/22/09	03/23/09	03/20/09	03/22/09	03/23/09	03/22/09	03/20/09	03/22/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602											
Benzene	1	<2.0	2.9	<1.0	NS	18.3	<1.0	<1.0	<10	<1.0	<5.0
Chlorobenzene	50	<2.0	<1.0	<1.0	NS	1.8	<1.0	<1.0	<10	<1.0	<5.0
Methyl tert-butyl ether	200	7.2	10.7	<1.0	NS	10.5	<1.0	43.6	21	<1.0	<5.0
Ethylbenzene	550	29	58.3	<1.0	NS	2000	<1.0	<1.0	118	<1.0	42.5
Xylenes (total)	530	155	112	<3.0	NS	267	<3.0	<3.0	4390	<3.0	836
Toluene	1000	211	5.0	<1.0	NS	115	<1.0	<1.0	8.5 J	<1.0	45.0
Total BTEX		395	178.2			2400			4516.5		923.5
EPA 625											
Chrysene	4.79	<4.8	<4.8	<4.8	NS	<19	<4.8	<4.8	<20	<4.8	<4.8
Naphthalene	21	22.2	36.2	<4.8	NS	260	<4.8	<4.8	98.7	<4.8	9.8
Acenaphthene	80	<4.8	<4.8	<4.8	NS	<19	<4.8	<4.8	<20	<4.8	<4.8
Acenaphthylene	210	<4.8	<4.8	<4.8	NS	<19	<4.8	<4.8	<20	<4.8	<4.8
Benzo(a)anthracene	0.0479	<4.8	<4.8	<4.8	NS	<19	<4.8	<4.8	<20	<4.8	<4.8
Pyrene	210	<4.8	<4.8	<4.8	NS	<19	<4.8	<4.8	<20	<4.8	<4.8
Fluorene	280	<4.8	<4.8	<4.8	NS	<19	<4.8	<4.8	<20	<4.8	<4.8
Anthracene	2100	<4.8	<4.8	<4.8	NS	<19	<4.8	<4.8	<20	<4.8	<4.8
Fluoranthene	280	<4.8	<4.8	<4.8	NS	<19	<4.8	<4.8	<20	<4.8	<4.8
Phenanthrene	210	<4.8	<4.8	<4.8	NS	<19	<4.8	<4.8	<20	<4.8	<4.8
SW846-6010B											
Lead	15	<2.0	<2.0	<2.0	NS	<2.0	<2.0	4.6 B	11.5	7.7	8.2
		Bold type indicates detectable concentrations.									
		Shaded area indicates detectable concentrations above the groundwater quality standard (GWQS).									

B = detected in blank

J = estimated below RL

NS = not sampled - See Section 4.2.1

Table 4.3
Analytical Data Summary
MCB Camp Lejeune
 B-820 Year 11 Annual
March 2009 Shallow

Client Sample ID:		UST820-MW14	UST820-MW15	UST820-MW16	UST820-MW18	UST820-MW20	UST820-MW22	UST820-MW24	UST820-MW26	UST820-MW27	UST820-PW01
Lab ID:			F64150-8	F64150-2	F64150-1	F64150-3		F64150-5	F64150-11		
Date Sampled:		03/22/09	03/22/09	03/22/09	03/22/09	03/22/09	3/23/09	03/22/09	03/22/09	03/22/09	03/23/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602											
Benzene	1	NS	<1.0	<1.0	<1.0	<1.0	NS	<1.0	<1.0	NS	NS
Chlorobenzene	50	NS	<1.0	<1.0	<1.0	<1.0	NS	<1.0	<1.0	NS	NS
Methyl tert-butyl ether	200	NS	<1.0	<1.0	<1.0	<1.0	NS	<1.0	<1.0	NS	NS
Ethylbenzene	550	NS	<1.0	<1.0	<1.0	<1.0	NS	<1.0	<1.0	NS	NS
Xylenes (total)	530	NS	<3.0	<3.0	<3.0	<3.0	NS	<3.0	<3.0	NS	NS
Toluene	1000	NS	<1.0	<1.0	<1.0	<1.0	NS	<1.0	<1.0	NS	NS
Total BTEX											
EPA 625											
Chrysene	4.79	NS	<4.8	<4.8	<4.8	<4.9	NS	<4.8	<4.8	NS	NS
Naphthalene	21	NS	<4.8	<4.8	<4.8	<4.9	NS	<4.8	<4.8	NS	NS
Acenaphthene	80	NS	<4.8	<4.8	<4.8	<4.9	NS	<4.8	<4.8	NS	NS
Acenaphthylene	210	NS	<4.8	<4.8	<4.8	<4.9	NS	<4.8	<4.8	NS	NS
Benzo(a)anthracene	0.0479	NS	<4.8	<4.8	<4.8	<4.9	NS	<4.8	<4.8	NS	NS
Pyrene	210	NS	<4.8	<4.8	<4.8	<4.9	NS	<4.8	<4.8	NS	NS
Fluorene	280	NS	<4.8	<4.8	<4.8	<4.9	NS	<4.8	<4.8	NS	NS
Anthracene	2100	NS	<4.8	<4.8	<4.8	<4.9	NS	<4.8	<4.8	NS	NS
Fluoranthene	280	NS	<4.8	<4.8	<4.8	<4.9	NS	<4.8	<4.8	NS	NS
Phenanthrene	210	NS	<4.8	<4.8	<4.8	<4.9	NS	<4.8	<4.8	NS	NS
SW846-6010B											
Lead	15	NS	6.6	31.3	9.4	<2.0	NS	<2.0	5.7	NS	NS
			Bold type indicates detectable concentrations.								
			Shaded area indicates detectable concentrations above the groundwater quality standard (GWQS).								

B = detected in blank

J = estimated below RL

NS = not sampled - See Section 4.2.1

Table 4.4
Field Data Summary
MCB Camp Lejeune
 B-820 Year 11 Annual
March 2009 Field Data Deep

Client Sample ID:		UST820-MW07	UST820-MW09	UST820-MW09D	UST820-MW17	UST820-MW19	UST820-MW21	UST820-MW23	UST820-MW25
Date Sampled:		03/22/09	03/20/09	3/20/09	3/23/09	3/23/09	03/22/09	03/23/09	03/22/09
Analyte	Unit	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters									
Depth to Water	feet	16.84	22.41	22.30	23.04	17.18	21.83	20.84	18.14
pH	-	5.37	2.78	7.31	2.47	NS	3.24	3.78	3.7
Conductivity	mS/m	0.230	5.581	0.327	9.893	NS	0.665	0.246	0.359
Turbidity	NTU	0.0	15.5	1.6	35.7	NS	7.9	3.1	5.2
Dissolved Oxygen	mg/L	1.71	17.22	3.07	13.60	NS	3.17	0.91	1.06
Temperature	°C	18.59	22.83	22.41	21.11	NS	18.83	17.89	19.18
Oxidation-Reduction Potential	mV	11.1	436.5	79.7	487.3	NS	310.8	161.7	217.2

Table 4.4
Field Data Summary
MCB Camp Lejeune
 B-820 Year 11 Annual
March 2009 Field Data Deep

Client Sample ID:		UST820-MW28	UST820-MW29	UST820-MW30	UST820-MW31	UST820-MW32	UST820-MW33	UST820-MW34
Date Sampled:		03/23/09	03/22/09	03/23/09	03/23/09	03/23/09	03/23/09	03/23/09
Analyte	Unit	Result	Result	Result	Result	Result	Result	Result
Field Parameters								
Depth to Water	feet	19.65	16.08	19.68	NS	NS	NS	NS
pH	-	6.60	3.52	NS	NS	NS	NS	NS
Conductivity	mS/m	0.220	0.750	NS	NS	NS	NS	NS
Turbidity	NTU	40.5	0.0	NS	NS	NS	NS	NS
Dissolved Oxygen	mg/L	30.37	0.39	NS	NS	NS	NS	NS
Temperature	°C	21.25	19.44	NS	NS	NS	NS	NS
Oxidation-Reduction Potential	mV	108.1	293.2	NS	NS	NS	NS	NS

Table 4.5
Analytical Data Summary
MCB Camp Lejeune
 B-820 Year 11 Annual
March 2009 Deep

Client Sample ID:		UST820-MW07	UST820-MW09	UST820-MW09D	UST820-MW17	UST820-MW19	UST820-MW21	UST820-MW23	UST820-MW25
Lab ID:		F64150-14	F64124-5	F64124-6	F64150-17		F64150-4	F64150-16	F64150-6
Date Sampled:		3/22/09	3/20/09	3/20/09	3/23/09	3/23/09	3/22/09	3/23/09	3/22/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602									
Benzene	1	<1.0	22	<1.0	148	NS	<1.0	<1.0	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<10	NS	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	<1.0	19.1	28.5	2070	NS	1.2	1.3	<1.0
Ethylbenzene	550	<1.0	4.6	<1.0	<10	NS	<1.0	<1.0	<1.0
Xylenes (total)	530	<3.0	10.1	<3.0	<10	NS	<3.0	<3.0	<3.0
Toluene	1000	<1.0	<1.0	<1.0	<30	NS	<1.0	<1.0	<1.0
Total BTEX			36.7		148				
EPA 625									
Chrysene	4.79	<4.8	<4.8	<4.8	<4.8	NS	<4.8	<4.8	<4.8
Naphthalene	21	<4.8	2.4 J	<4.8	<4.8	NS	<4.8	<4.8	<4.8
Acenaphthene	80	<4.8	<4.8	<4.8	<4.8	NS	<4.8	<4.8	<4.8
Acenaphthylene	210	<4.8	<4.8	<4.8	<4.8	NS	<4.8	<4.8	<4.8
Benzo(a)anthracene	0.0479	<4.8	<4.8	<4.8	<4.8	NS	<4.8	<4.8	<4.8
Pyrene	210	<4.8	<4.8	<4.8	<4.8	NS	<4.8	<4.8	<4.8
Fluorene	280	<4.8	<4.8	<4.8	<4.8	NS	<4.8	<4.8	<4.8
Anthracene	2100	<4.8	<4.8	<4.8	<4.8	NS	<4.8	<4.8	<4.8
Fluoranthene	280	<4.8	<4.8	<4.8	<4.8	NS	<4.8	<4.8	<4.8
Phenanthrene	210	<4.8	<4.8	<4.8	<4.8	NS	<4.8	<4.8	<4.8
SW846-6010B									
Lead	15	10.9	<20	<2.0	45.8 B	NS	<2.0	<2.0	<2.0
		Bold type indicates detectable concentrations.							
		Shaded area indicates detectable concentrations above the groundwater quality standard (GWQS).							

B = detected in blank
 J = estimated below RL
 NS = not sampled - See Section 4.2.1

Table 4.5
Analytical Data Summary
MCB Camp Lejeune
 B-820 Year 11 Annual
March 2009 Deep

Client Sample ID:		UST820-MW28	UST820-MW29	UST820-MW30	UST820-MW31	UST820-MW32	UST820-MW33	UST820-MW34
Lab ID:		F64150-18	F64150-10					
Date Sampled:		3/23/09	3/22/09	3/23/09	3/23/09	3/23/09	3/23/09	3/23/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result
EPA 602								
Benzene	1	43.1	<1.0	NS	NS	NS	NS	NS
Chlorobenzene	50	<1.0	<1.0	NS	NS	NS	NS	NS
Methyl tert-butyl ether	200	161	20.5	NS	NS	NS	NS	NS
Ethylbenzene	550	<1.0	<1.0	NS	NS	NS	NS	NS
Xylenes (total)	530	<3.0	1.3 J	NS	NS	NS	NS	NS
Toluene	1000	<1.0	<1.0	NS	NS	NS	NS	NS
Total BTEX		43.1	1.3					
EPA 625								
Chrysene	4.79	<4.8	<4.8	NS	NS	NS	NS	NS
Naphthalene	21	<4.8	<4.8	NS	NS	NS	NS	NS
Acenaphthene	80	<4.8	<4.8	NS	NS	NS	NS	NS
Acenaphthylene	210	<4.8	<4.8	NS	NS	NS	NS	NS
Benzo(a)anthracene	0.0479	<4.8	<4.8	NS	NS	NS	NS	NS
Pyrene	210	<4.8	<4.8	NS	NS	NS	NS	NS
Fluorene	280	<4.8	<4.8	NS	NS	NS	NS	NS
Anthracene	2100	<4.8	<4.8	NS	NS	NS	NS	NS
Fluoranthene	280	<4.8	<4.8	NS	NS	NS	NS	NS
Phenanthrene	210	<4.8	<4.8	NS	NS	NS	NS	NS
SW846-6010B								
Lead	15	<2.0	<2.0	NS	NS	NS	NS	NS
		Bold type indicates detectable concentrations.						
		Shaded area indicates detectable concentrations above the groundwater quality standard (GWQS).						

B = detected in blank

J = estimated below RL

NS = not sampled - See Section 4.2.1

Table 6.1
Building 820 Annual Schedule for Groundwater Sample Collection and Analysis for 2009
MCB Camp Lejeune
Type II Shallow Monitoring Wells

Analysis	UST820-MW02	UST820-MW03	UST820-MW04	UST820-MW05	UST820-MW06	UST820-MW08	UST820-MW10	UST820-MW11	UST820-MW12	UST820-MW13
Field Screening										
Temperature	X	X	X	-	X	X	X	X	X	X
Conductivity	X	X	X	-	X	X	X	X	X	X
Turbidity	X	X	X	-	X	X	X	X	X	X
pH	X	X	X	-	X	X	X	X	X	X
Dissolved Oxygen	X	X	X	-	X	X	X	X	X	X
OPR	X	X	X	-	X	X	X	X	X	X
<u>VOCs Method 602</u>	X	X	X	-	X	X	X	X	X	X
<u>PAHs Method 645</u>	X	X	X	-	X	X	X	X	X	X
<u>Lead Method 6010B</u>	X	X	X	-	X	X	X	X	X	X

Table 6.1
Building 820 Annual Schedule for Groundwater Sample Collection and Analysis for 2009
MCB Camp Lejeune
Type II Shallow Monitoring Wells

Analysis	UST820-MW14	UST820-MW15	UST820-MW16	UST820-MW18	UST820-MW20	UST820-MW22	UST820-MW24	UST820-MW26	UST820-MW27	UST820-PW01
Field Screening										
Temperature	-	X	X	X	X	X	X	X	-	-
Conductivity	-	X	X	X	X	-	X	X	-	-
Turbidity	-	X	X	X	X	-	X	X	-	-
pH	-	X	X	X	X	-	X	X	-	-
Dissolved Oxygen	-	X	X	X	X	-	X	X	-	-
OPR	-	X	X	X	X	-	X	X	-	-
VOCs Method 602	-	X	X	X	X	-	X	X	-	-
PAHs Method 645	-	X	X	X	X	-	X	X	-	-
Lead Method 6010B	-	X	X	X	X	-	X	X	-	-

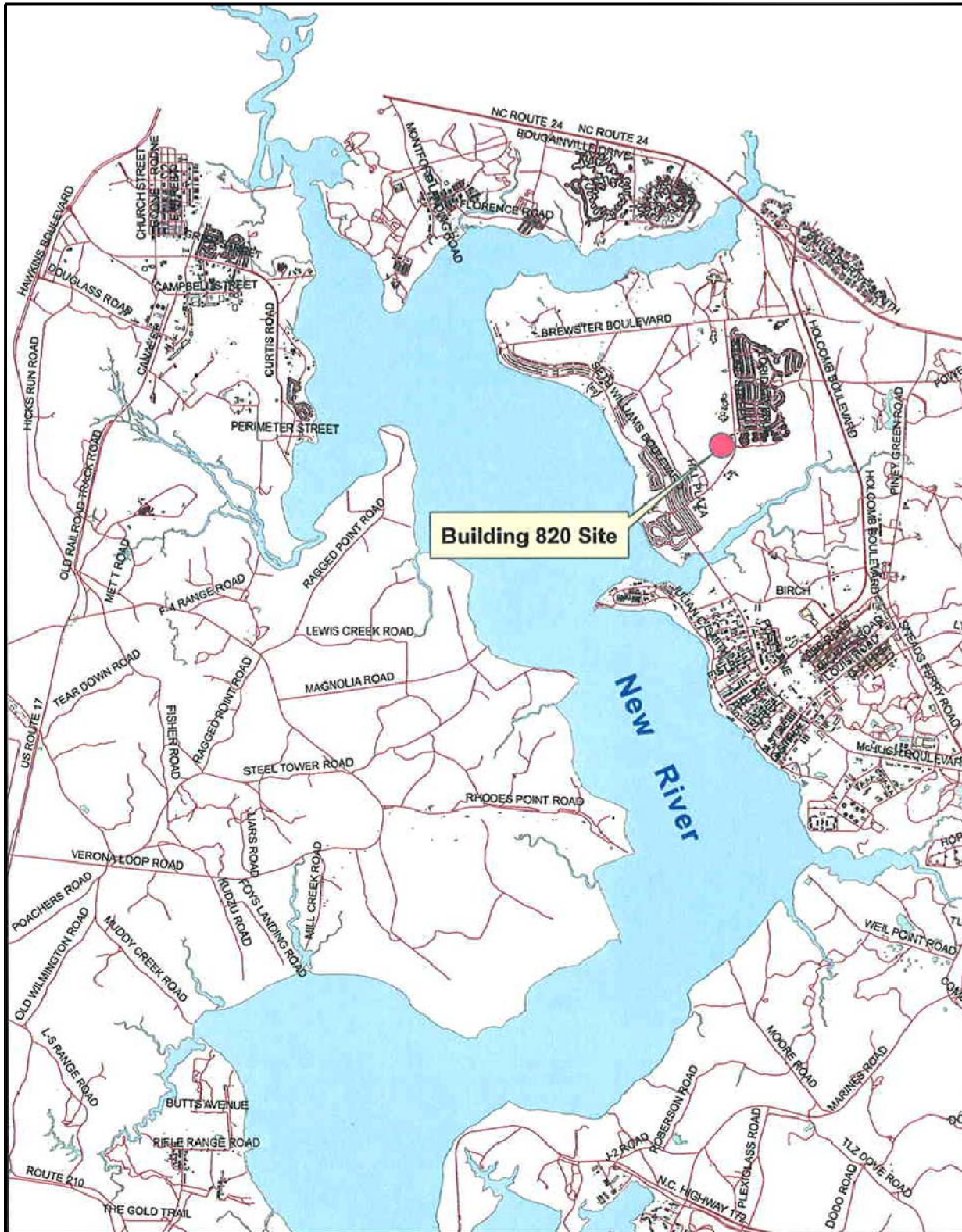
Table 6.2
Building 820 Annual Schedule for Groundwater Sample Collection and Analysis for 2009
MCB Camp Lejeune
Type III Deep Monitoring Wells

Analysis	UST820-MW07	UST820-MW09	UST820-MW09D	UST820-MW17	UST820-MW19	UST820-MW21	UST820-MW23	UST820-MW25
<u>Field Screening</u>								
Temperature	X	X	X	X	X	X	X	X
Conductivity	X	X	X	X	-	X	X	X
Turbidity	X	X	X	X	-	X	X	X
pH	X	X	X	X	-	X	X	X
Dissolved Oxygen	X	X	X	X	-	X	X	X
OPR	X	X	X	X	-	X	X	X
<u>VOCs Method 602</u>	X	X	X	X	-	X	X	X
<u>PAHs Method 645</u>	X	X	X	X	-	X	X	X
<u>Lead Method 6010B</u>	X	X	X	X	-	X	X	X

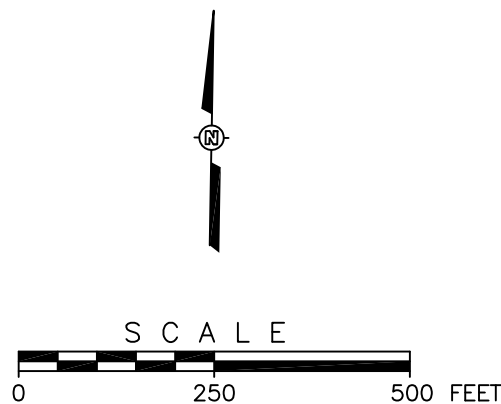
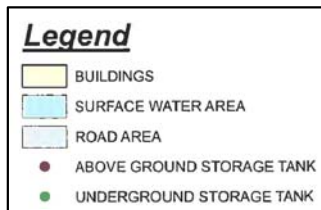
Table 6.2
Building 820 Annual Schedule for Groundwater Sample Collection and Analysis for 2009
MCB Camp Lejeune
Type III Deep Monitoring Wells

Analysis	UST820-MW28	UST820-MW29	UST820-MW30	UST820-MW31	UST820-MW32	UST820-MW33	UST820-MW34
<u>Field Screening</u>							
Temperature	X	X	X	-	-	-	-
Conductivity	X	X	-	-	-	-	-
Turbidity	X	X	-	-	-	-	-
pH	X	X	-	-	-	-	-
Dissolved Oxygen	X	X	-	-	-	-	-
OPR	X	X	-	-	-	-	-
<u>VOCs Method 602</u>	X	X	-	-	-	-	-
<u>PAHs Method 645</u>	X	X	-	-	-	-	-
<u>Lead Method 6010B</u>	X	X	-	-	-	-	-

FIGURES

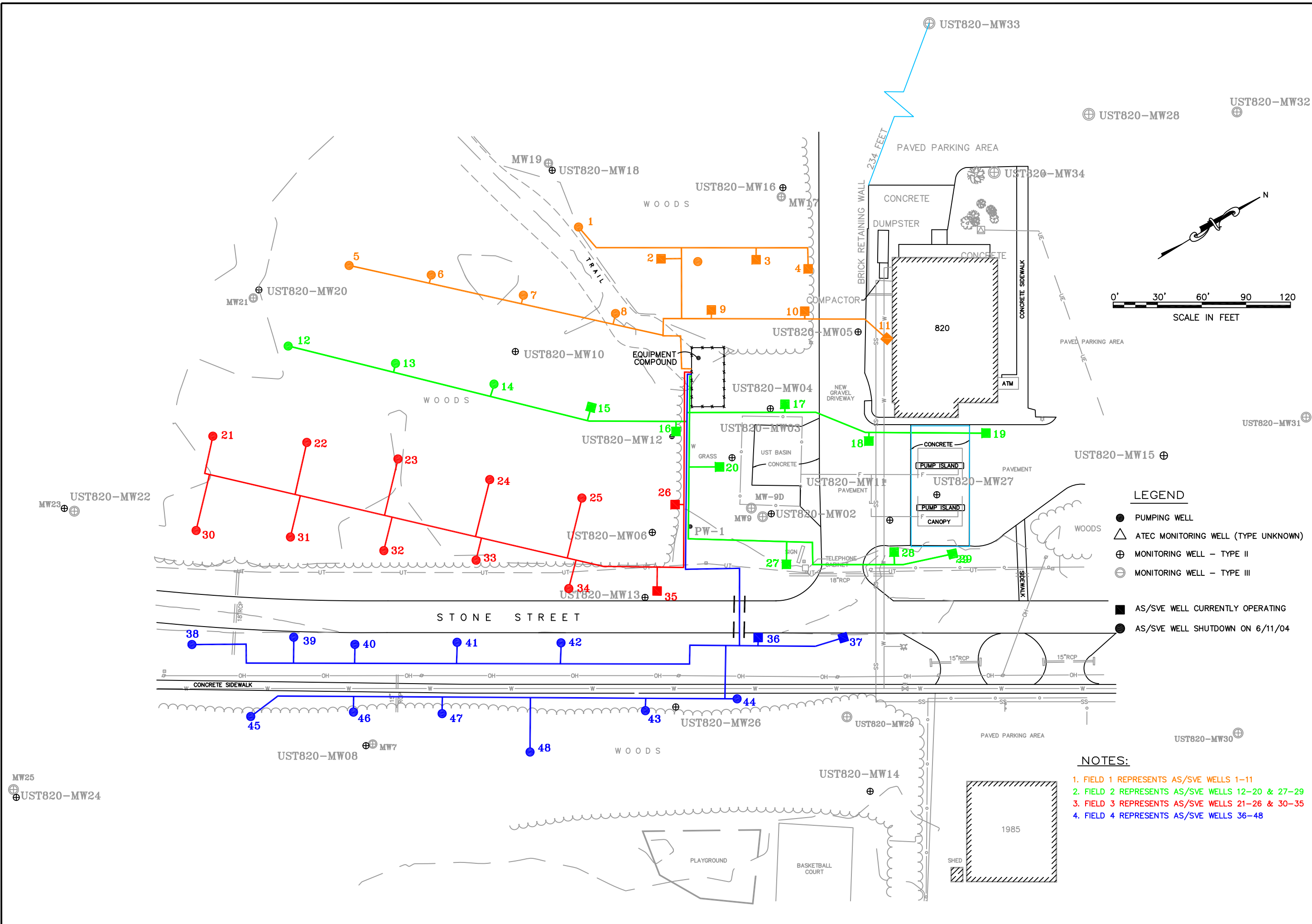


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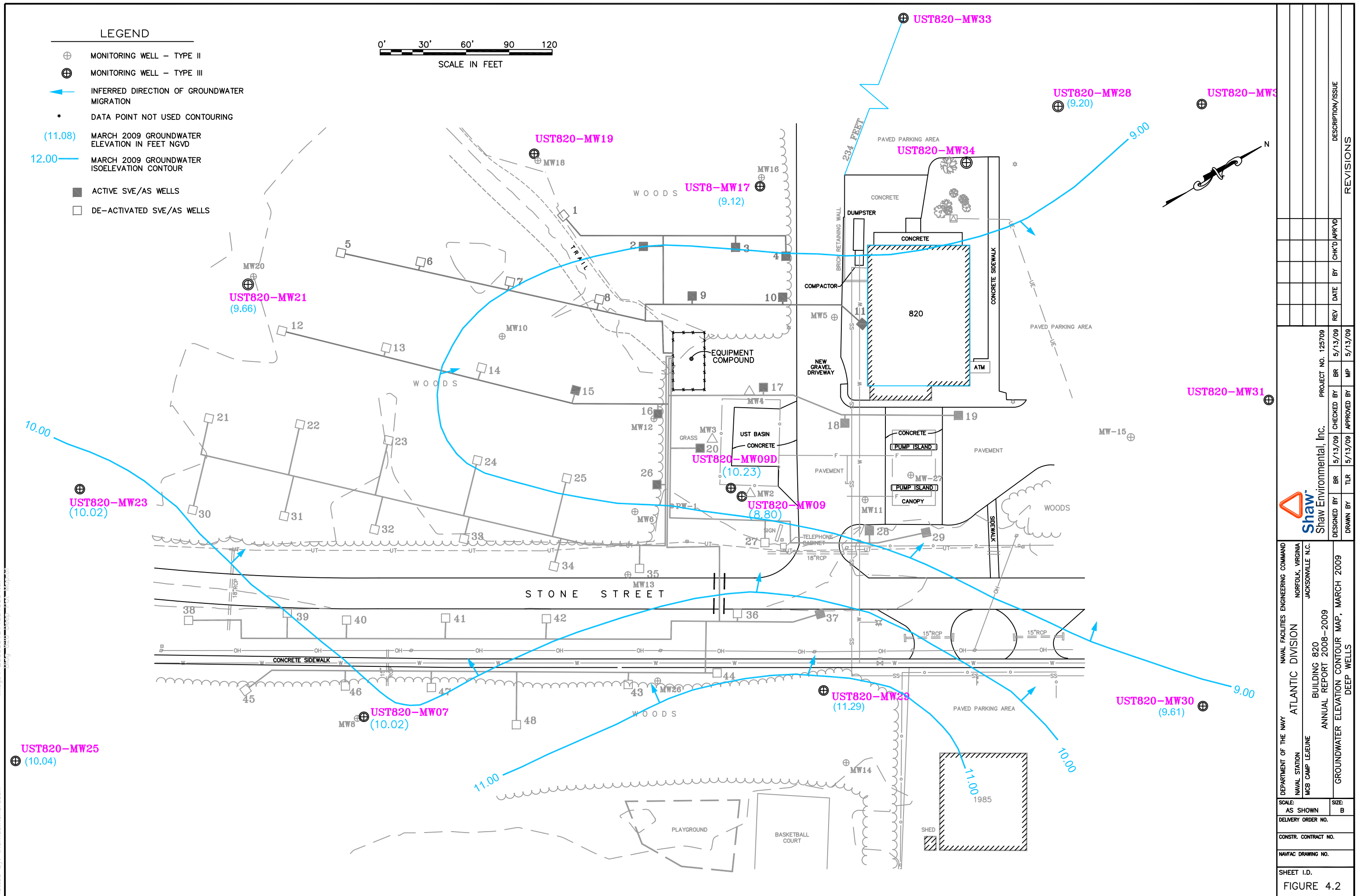


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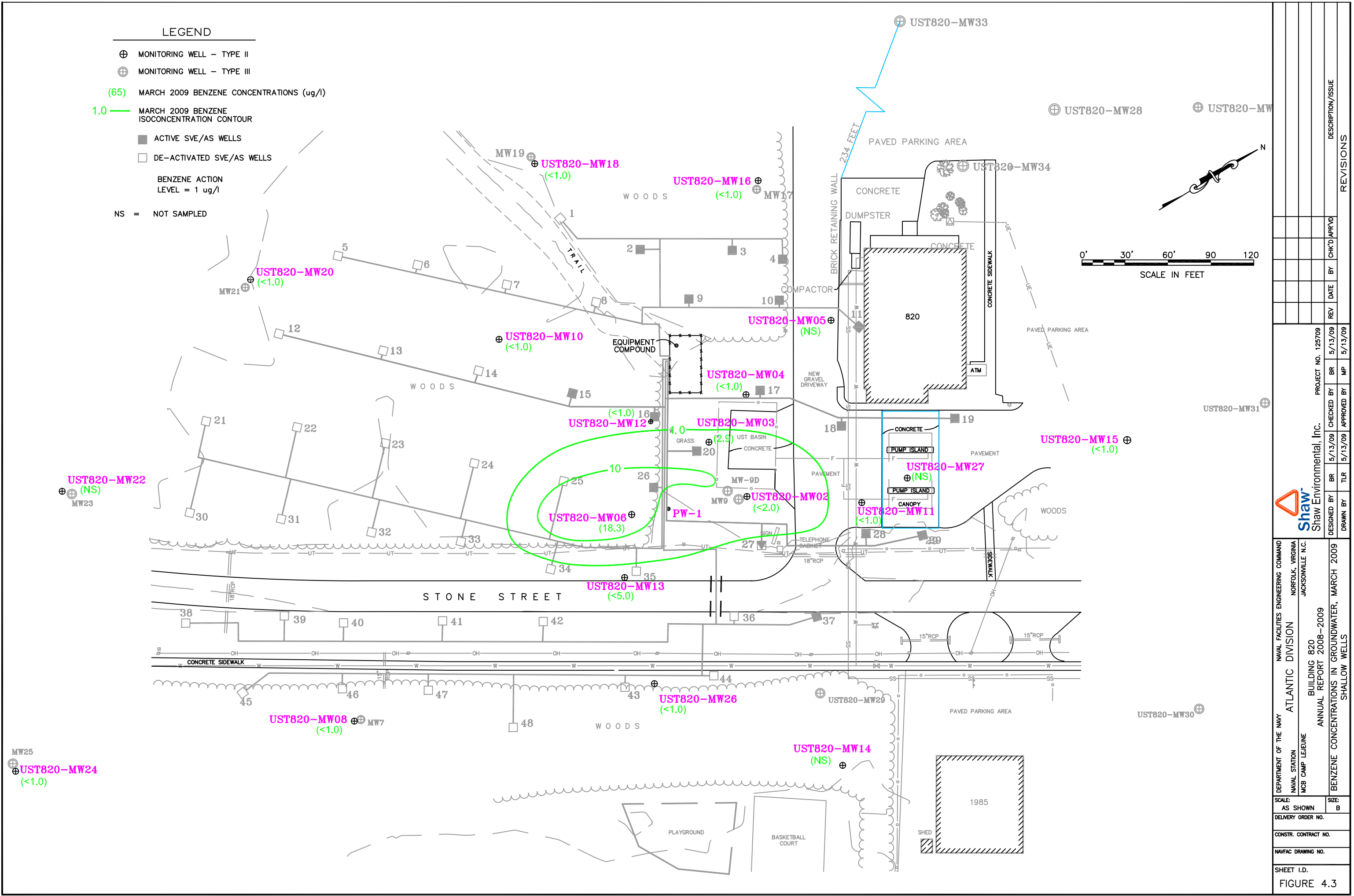
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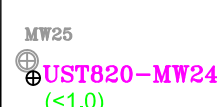
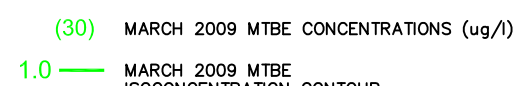


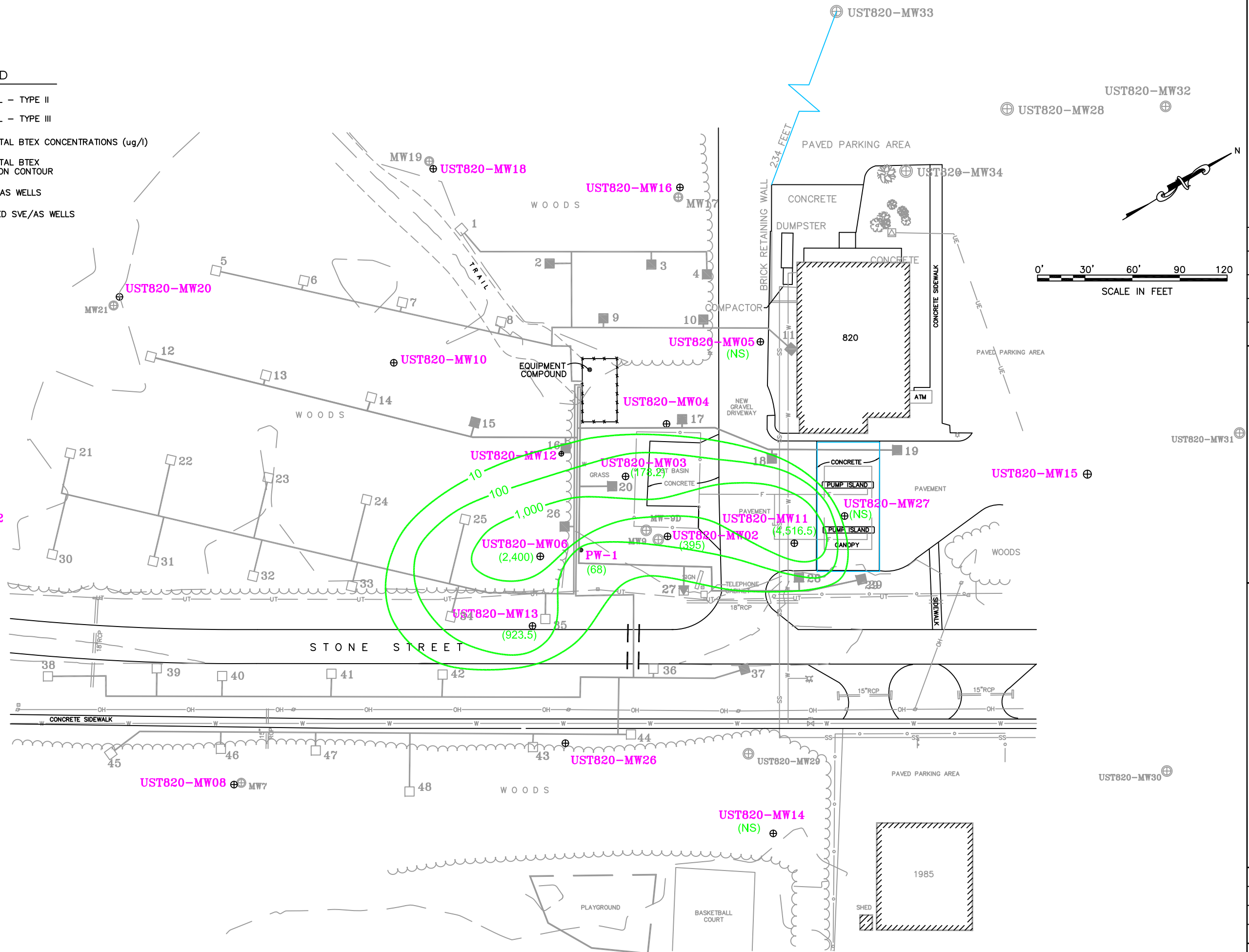
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NAVAL STATION		NORFOLK, VIRGINIA																			
ATLANTIC DIVISION		JACKSONVILLE N.C.																			
MCB CAMP LEJEUNE																					
SCALE:		AS SHOWN		SIZE:		B															
DELIVERY ORDER NO.																					
CONSTR. CONTRACT NO.																					
NAVFAC DRAWING NO.																					
SHEET I.D.				FIGURE 2																	



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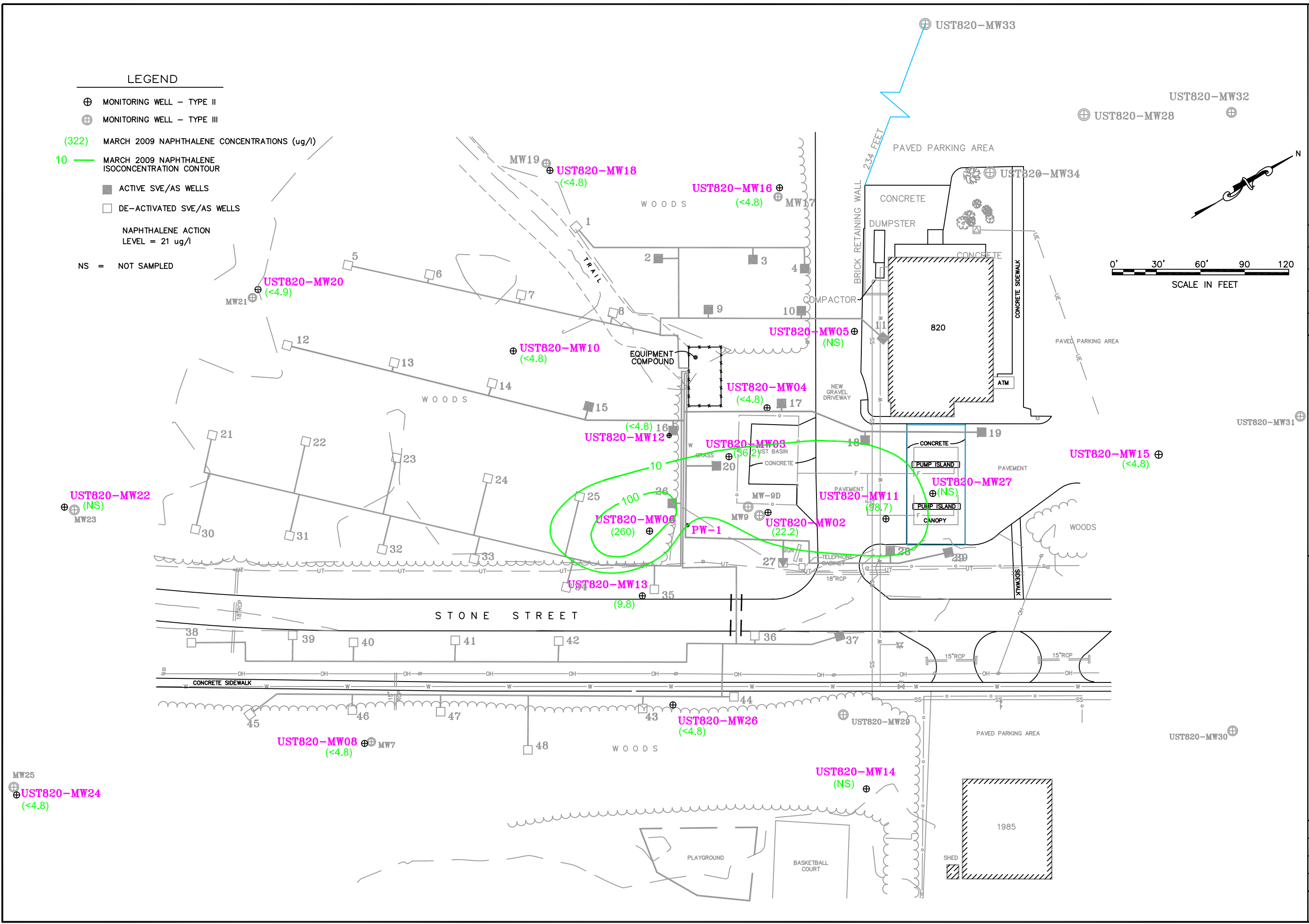






SHEET 1.D.										FIGURE 4.5											
NAVFAC DRAWING NO.																					
CONSTR. CONTRACT NO.																					
DELIVERY ORDER NO.					SCALE: AS SHOWN					TOTAL BTEX CONCENTRATIONS IN GROUNDWATER, MARCH 2009, SHALLOW WELLS					SIZE: B						
NAVAL STATION MCB CAMP LEJEUNE					BUILDING 820 ANNUAL REPORT 2008-2009					NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC DIVISION					NORFOLK, VIRGINIA JACKSONVILLE N.C.						
 Shaw Environmental, Inc.										PROJECT NO. 125709											
										DESIGNED BY	BR	5/14/09	CHECKED BY	BR	5/14/09	REV	DATE	BY	CHK'D	APPR'D	DESCRIPTION/ISSUE
										DRAWN BY	TLR	5/14/09	APPROVED BY	MP	5/14/09	REVISIONS					

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MCR CAMP LEJEUNE		BUILDING 820		CHECKED BY	
		ANNUAL REPORT 2008-2009		DRAWN BY	
		NAPHTHALENE CONCENTRATIONS IN GROUNDWATER,		TDR	
		MARCH 2009, SHALLOW WELLS		APPROVED BY	
				DATE	
				REV	
				BY	
				CHK'D	
				APR'D	
				DESCRIPTION/ISSUE	
				REVISIONS	



Shaw Environmental, Inc.
NORFOLK, VIRGINIA
JACKSONVILLE, N.C.

NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC DIVISION

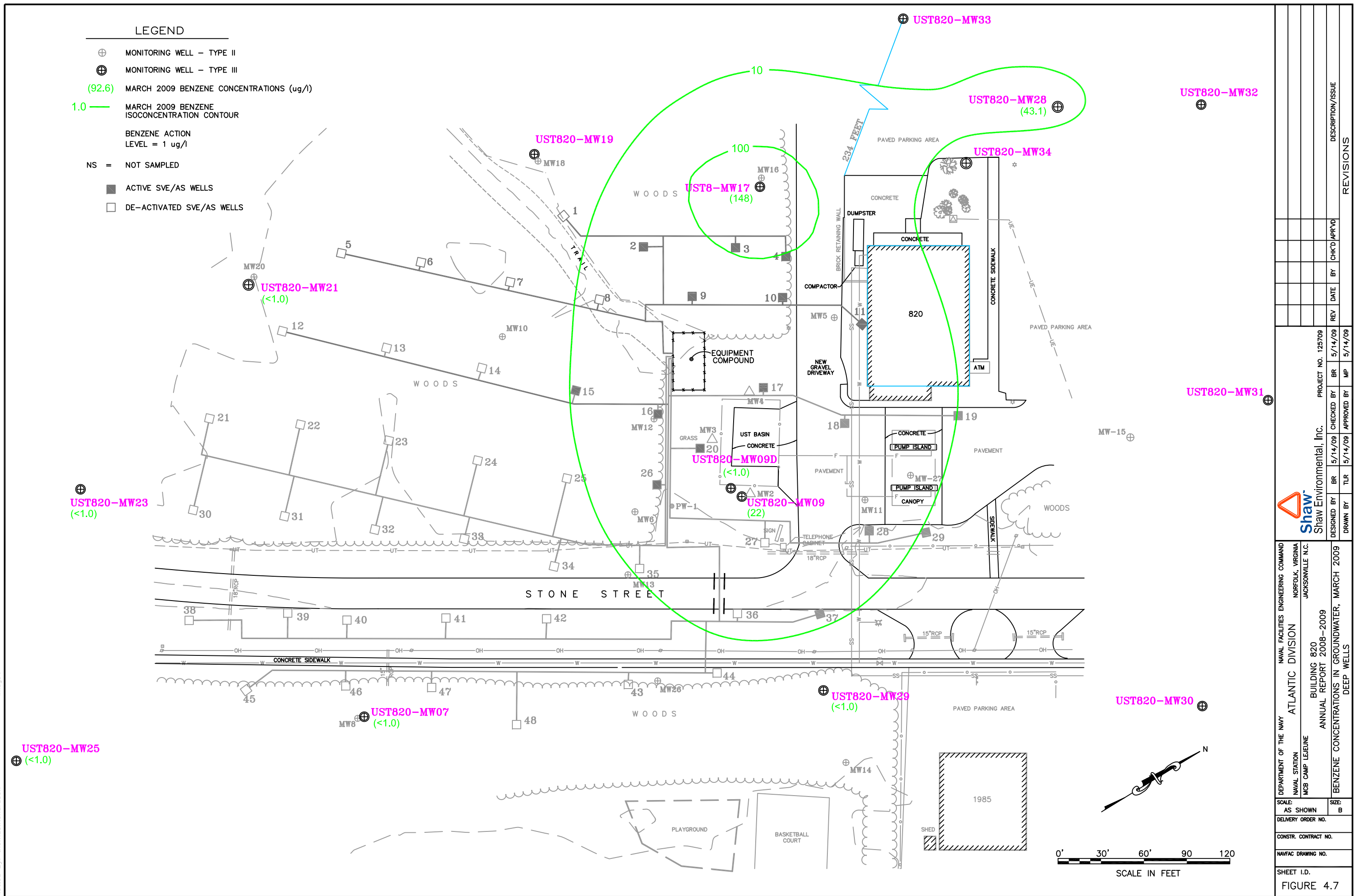
BUILDING 820
ANNUAL REPORT 2008-2009

NAPHTHALENE CONCENTRATIONS IN GROUNDWATER,
MARCH 2009, SHALLOW WELLS

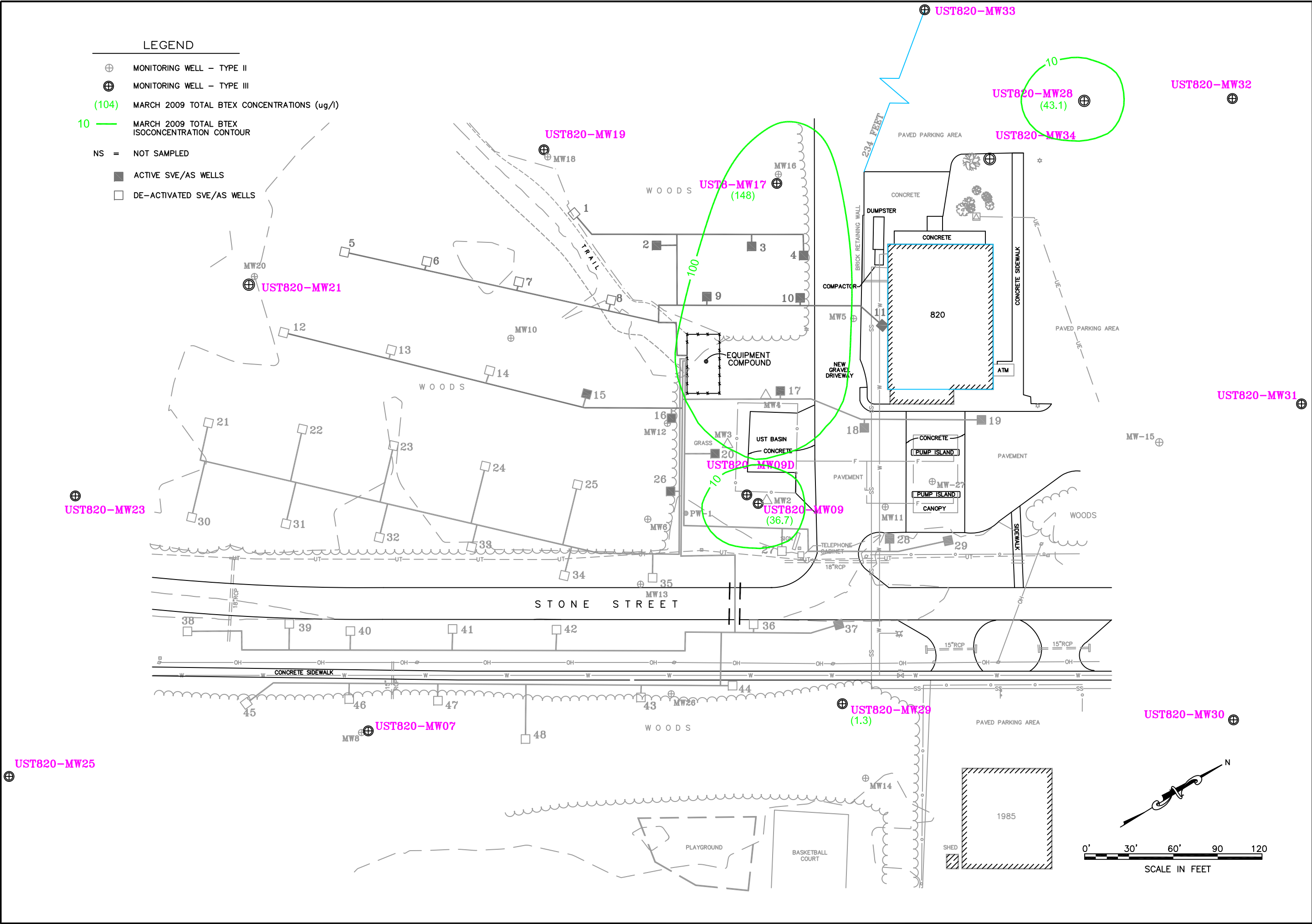
SCALE: AS SHOWN
DELIVERY ORDER NO.

CONSTR. CONTRACT NO.
NAVFAC DRAWING NO.

SHEET I.D.
FIGURE 4.6



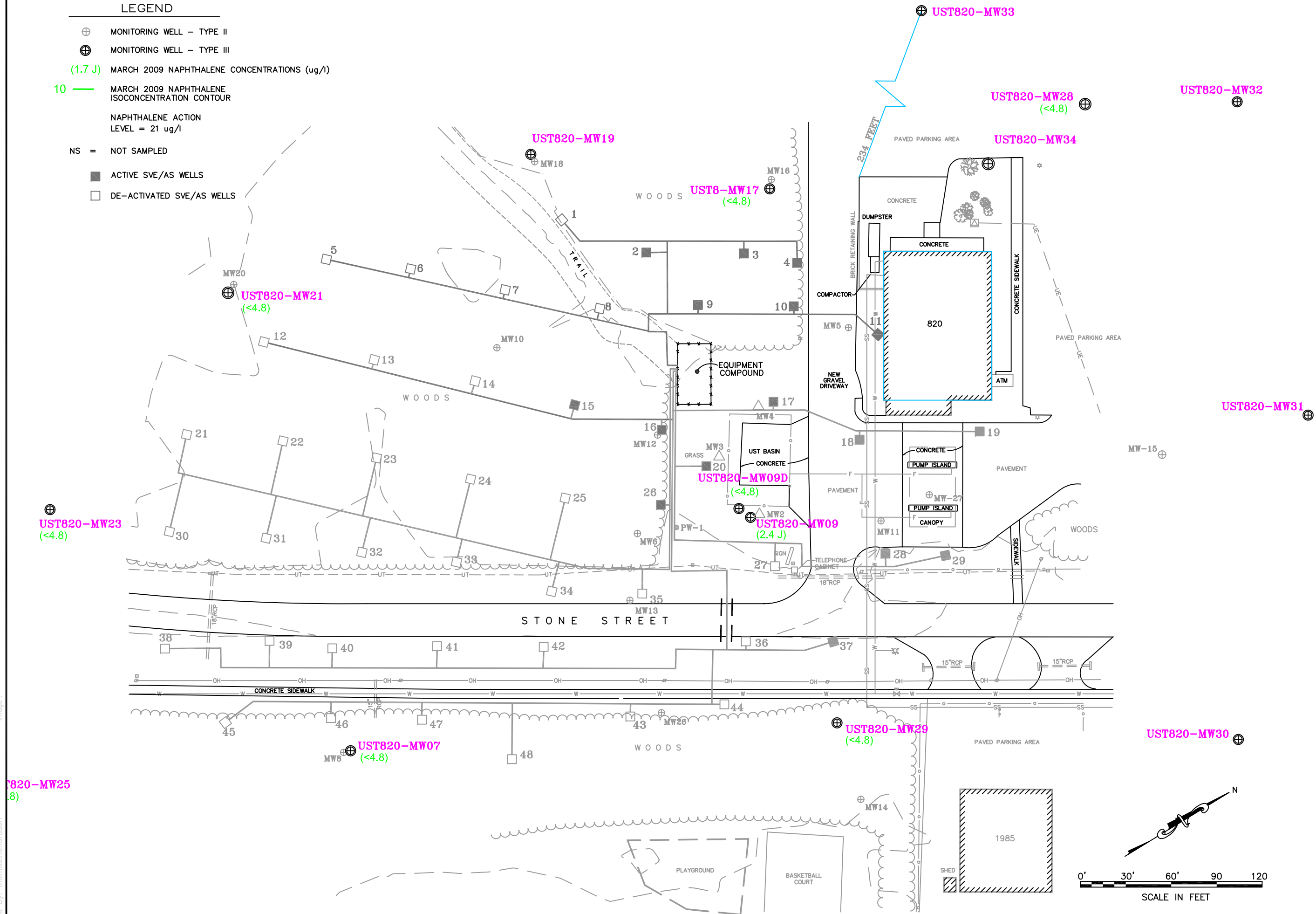
File: N:\Camp Lejeune _Jacksonville N.C.\Site 820\Figure 4.9_BTEX T3-March-2009.DWG
Plot Date/Time: May 21, 2009 - 2:32pm
Xref: Image : Revised 4.9.tif
Plotted By: thomas.richardson



DEPARTMENT OF THE NAVY		NAVAL FACILITIES ENGINEERING COMMAND		 Shaw Environmental, Inc.		PROJECT NO. 125709																					
NAVAL STATION		ATLANTIC DIVISION				DESIGNED BY		BR		5/14/09		CHECKED BY		BR		5/14/09		REV		BY		CHK'D		APR'D		DESCRIPTION/ISSUE	
MCB CAMP LEJEUNE						DRAWN BY		TLR		5/14/09		APPROVED BY		MP		5/14/09											
SCALE:		AS SHOWN		SIZE:		B																					
DELIVERY ORDER NO.																											
CONSTR. CONTRACT NO.																											
NAVFAC DRAWING NO.																											
SHEET I.D.																											
FIGURE 4.9																											

LEGEND

- ⊕ MONITORING WELL - TYPE II
- ⊕ MONITORING WELL - TYPE III
- (1.7 J) MARCH 2009 NAPHTHALENE CONCENTRATIONS (ug/l)
- 10 MARCH 2009 NAPHTHALENE ISOCONCENTRATION CONTOUR
- NAPHTHALENE ACTION LEVEL = 21 ug/l
- NS = NOT SAMPLED
- ACTIVE SVE/AS WELLS
- DE-ACTIVATED SVE/AS WELLS



DEPARTMENT OF THE NAVY		NAVAL FACILITIES ENGINEERING COMMAND		 Shaw Shaw Environmental, Inc.		PROJECT NO. 125709																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								</	

File: N:\T.Richardson\Government\Camp Lejeune\Site 820_Figures\Figure 4.10_NAPH T3-March 2009.DWG
Plot Date/Time: May 14, 2009 - 10:34am
Plotted By: thomas.richardson

DEPARTMENT OF THE NAVY		NAVAL FACILITIES ENGINEERING COMMAND		NORFOLK, VIRGINIA	
NAVAL STATION		ATLANTIC DIVISION		JACKSONVILLE, N.C.	
MCB CAMP LEJEUNE		BUILDING 820		ANNUAL REPORT 2008-2009	
		NAPHTHALENE CONCENTRATIONS IN GROUNDWATER,		MARCH 2009, DEEP WELLS	
SCALE:		AS SHOWN		SIZE:	
DELIVERY ORDER NO.				B	
CONSTR. CONTRACT NO.					
NAVFAC DRAWING NO.					
SHEET I.D.					
				FIGURE 4.10	

APPENDIX A

GROUNDWATER SAMPLE COLLECTION FIELD LOGS

Well ID	DTW
MW-02	18.44
MW-03	19.11
MW-04	18.15
MW-05	DRY
MW-06	18.48
MW-07	16.84
MW-08	17.71
MW-09	22.41
MW-09D	22.30
MW-10	18.94
MW-11	14.32
MW-12	17.46
MW-13	15.80
MW-14	DRY
MW-15	14.00
MW-16	75.00
MW-17	16.39
MW-18	23.04
MW-19	17.18
MW-20	DRY
MW-21	21.83
MW-22	21.05
MW-23	20.48
MW-24	18.91
MW-25	18.14
MW-26	17.83
MW-27	DRY
MW-28	19.65
MW-29	16.08
MW-30	19.68



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW 02

SAMPLE NO.: UST820-MW 02

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 3/22/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1500
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 60

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailor

FIELD MEASUREMENTS

	1	2	3	4		
pH	5.49	6.06	6.07	6.07		(STD)
Specific Conductivity	0.661	0.670	0.671	0.671		(m S/cm)
Turbidity (Turb)	14.6	1.3	0.0	0.0		(NTU)
Dissolved Oxygen (DO)	1.98	0.41	0.33	0.32		(mg/l)
Temperature (Temp)	20.84	20.68	20.69	20.69		(°C)
ORP	-65.3	-157.2	-157.3	-157.3		

Depth to Bottom	27600	(In) (Minus)	Depth to Water	221.28	(In) =	48.72	HT (in)
Depth to Bottom	22.50	(Ft) (Minus)	Depth to Water	18.44	(Ft) =	4.06	HT (ft)
Product in Well? ☐ Yes ☒ No							
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft) =		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together						Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			48.72	1	3.14	153	.0043	0.7	2.0	2
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW 02	3-40ml	HCL, 4°C
PAH	UST820-MW 02	2-1 Liter Amber	4°C

COMMENTS:

Well went dry during purging, and did not recharge? ☐ Yes ☒ NoBubbles is purge water? ☐ Yes ☒ No Organic Matter in Sample? ☐ Yes ☐ NoColor of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling?
☐ Yes ☐ NoOdor? ☐ Yes ☒ No If yes, describe: _____Duplicate in Sample taken? ☐ Yes ☒ No

PURGE DISCHARGED:

DRUM: ☐

DRUM#

SITE TREATMENT: [X]

OTHER: ☐

	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: BM-820
			WELL NO.: UST820-MW03
			SAMPLE NO.: UST820-MW03
PROJECT LOCATION: Camp Lejeune, NC		LOGGER: Mark Martin/John MacLeod	DATE: 03/20/09 (month/day/year)
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin/John MacLeod	TIME: 1030 (military time)
PHONE: 910-451-2390		WEATHER: ☐ Sunny ☒ Cloudy ☐ Rainy ☐ Snow Temperature: 45°F	
LEL:			Well Locked: ☒ Yes ☐ No
PID:		Sampling Device: Bailer	

FIELD MEASUREMENTS						
	1	2	3	4		
pH	6.66	7.01	7.06	7.09		(STD)
Specific Conductivity	0.587	0.595	0.597	0.602		(m S/cm)
Turbidity (Turb)	15.5	8.8	6.8	2.7		(NTU)
Dissolved Oxygen (DO)	1.23	1.03	1.07	1.05		(mg/l)
Temperature (Temp)	18.35	19.09	19.44	19.28		(°C)
ORP	68.2	-2.5	-45.5	-79.2		

Depth to Bottom	271.80	(In) (Minus)	Depth to Water	229.32	(In)	=	42.48	HT (in)
Depth to Bottom	22.65	(Ft) (Minus)	Depth to Water	19.11	(Ft)	=	3.54	HT (ft)
Product in Well? ☐ Yes ☒ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 4 MEASUREMENTS (IN INCHES)										
r = 2 Multiply Together										
d/2 = 2	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			42.48	1	3.14	534	.0043	2.3	6.9	7
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW03	3-40ml	HCL, 4°C
PAH	UST820-MW03	2-1 Liter Amber	4°C
COMMENTS:			
Well went dry during purging, and did not recharge? ☐ Yes ☐ No			
Bubbles is purge water? ☒ Yes ☐ No Organic Matter in Sample? ☐ Yes ☒ No			
Color of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling? ☐ Yes ☐ No			
Odor? ☐ Yes ☒ No If yes, describe: _____			
Duplicate in Sample taken? ~~Yes~~ ☒ No			
PURGE DISCHARGED: DRUM: ☐ DRUM# SITE TREATMENT: [X]			
OTHER: ☐			



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW 04

SAMPLE NO.: UST820-MW04

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 3/22/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1400
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 60

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	5.69	4.65	4.59	4.58		(STD)
Specific Conductivity	0.305	0.298	0.300	0.300		(m S/cm)
Turbidity (Turb)	2.6	0.7	0.0	0.0		(NTU)
Dissolved Oxygen (DO)	7.88	6.67	6.40	6.39		(mg/l)
Temperature (Temp)	21.10	20.80	20.88	20.88		(°C)
ORP	188.5	251.7	269.8	270.1		

Depth to Bottom	271.80	(In) (Minus)	Depth to Water	217.80	(In) =	54.00	HT (in)
Depth to Bottom	22.65	(Ft) (Minus)	Depth to Water	18.15	(Ft) =	4.50	HT (ft)
Product in Well? ☐ Yes ☒ No							
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft) =		Product Thickness HT (ft)

d = 4	MEASUREMENTS (IN INCHES)										
r = 2	Multiply Together						Vol.				
d/2 = 4	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
	TOP		54.00	1	3.14	678	.0043	2.9		8.7	9
	Middle				3.14		.0043				
	Bottom				3.14		.0043				
	Total				3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW	3-40ml	HCL, 4°C
PAH	UST820-MW	2-1Liter Amber	4°C
COMMENTS:			
Well went dry during purging, and did not recharge? ☐ Yes ☒ No			
Bubbles is purge water? ☐ Yes ☒ No Organic Matter in Sample? ☐ Yes ☐ No			
Color of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling? ☐ Yes ☐ No			
Odor? ☐ Yes ☒ No If yes, describe: _____			
Duplicate in Sample taken? ☐ Yes ☒ No			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW06

SAMPLE NO.: UST820-MW06

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 03/20/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1200
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 50 °F

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	6.36	6.81	6.87	6.89		(STD)
Specific Conductivity	0.461	0.416	0.406	0.401		(m S/cm)
Turbidity (Turb)	24.6	12.2	5.8	7.9		(NTU)
Dissolved Oxygen (DO)	0.70	0.91	0.84	1.18		(mg/l)
Temperature (Temp)	18.72	18.85	18.88	18.87		(°C)
ORP	-66.9	-92.0	-89.5	-90.2		

Depth to Bottom	339.96	(In) (Minus)	Depth to Water	221.76	(In)	=	118.20	HT (in)
Depth to Bottom	28.33	(Ft) (Minus)	Depth to Water	18.48	(Ft)	=	9.85	HT (ft)
Product in Well? ☐ Yes ☒ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2	MEASUREMENTS (IN INCHES)									
r = 1	Multiply Together					Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			118.20	1	3.14	371	.0043	1.6	4.8	5
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW06	3-40ml	HCL, 4°C
PAH	UST820-MW06	2-1Liter Amber	4°C

COMMENTS:

Well went dry during purging, and did not recharge? ☐ Yes ☒ NoBubbles in purge water? ☒ Yes ☐ NoOrganic Matter in Sample? ☐ Yes ☐ NoColor of Water: ☐ Clear ☐ Cloudy ☒ Black ☐ Other _____ If not clear, did water change to clear prior to sampling?
☒ Yes ☐ NoOdor? ☒ Yes ☐ No If yes, describe: GasolineDuplicate in Sample taken? ☒ Yes ☐ No

PURGE DISCHARGED:

DRUM: ☐

DRUM#

SITE TREATMENT: [X]

OTHER: ☐



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW 07

SAMPLE NO.: UST820-MW07

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin/John MacLeod	DATE: 3/22/09 (month/day/year)
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin/John MacLeod	TIME: 1600 (military time)
PHONE: 910-451-2390	WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 60.5	
LEL:	Well Locked: ☒ Yes ☐ No	
PID:	Sampling Device: Bailer	

FIELD MEASUREMENTS

	1	2	3	4		
pH	6.58	5.43	5.37	5.37		(STD)
Specific Conductivity	0.236	0.230	0.230	0.230		(m S/cm)
Turbidity (Turb)	57.4	0.0	0.0	0.0		(NTU)
Dissolved Oxygen (DO)	4.98	3.29	1.77	1.71		(mg/l)
Temperature (Temp)	18.48	18.57	18.58	18.59		(°C)
ORP	37.4	12.9	11.8	11.1		

Depth to Bottom	280.92	(In) (Minus)	Depth to Water	202.08	(In)	=	78.84	HT (in)
Depth to Bottom	23.41	(Ft) (Minus)	Depth to Water	14.84	(Ft)	=	6.57	HT (ft)
Product in Well? ☐ Yes ☒ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together Vol.										
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			78.84	1	3.14	248	.0043	1.1	3.2	4
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW 07	3-40ml	HCL, 4°C
PAH	UST820-MW 07	2-1 Liter Amber	4°C
COMMENTS:			
Well went dry during purging, and did not recharge? ☐ Yes ☒ No			
Bubbles in purge water? ☐ Yes ☒ No Organic Matter in Sample? ☐ Yes ☒ No			
Color of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling? ☐ Yes ☐ No			
Odor? ☐ Yes ☒ No If yes, describe: _____			
Duplicate in Sample taken? ☐ Yes ☒ No			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW 08

SAMPLE NO.: UST820-MW 08

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 3/22/09

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1700

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 60.5

LEL:

Well Locked: ☐ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	6.38	5.77	5.76	5.76		(STD)
Specific Conductivity	0.109	0.101	0.101	0.100		(m S/cm)
Turbidity (Turb)	27.6	0.0	0.0	0.0		(NTU)
Dissolved Oxygen (DO)	6.29	3.87	0.69	0.68		(mg/l)
Temperature (Temp)	18.52	18.60	18.59	18.61		(°C)
ORP	75.9	82.4	98.7	99.1		

Depth to Bottom	604.80	(In) (Minus)	Depth to Water	212.52	(In)	=	392.88	HT (in)
Depth to Bottom	50.40	(Ft) (Minus)	Depth to Water	17.71	(Ft)	=	32.69	HT (ft)
Product in Well? ☐ Yes ☐ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1

Multiply Together

Vol.

d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			392.28	1	3.14	1232	.0043	5.3	15.9	16
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW	3-40ml	HCL, 4°C
PAH	UST820-MW	2-1 Liter Amber	4°C

COMMENTS:

Well went dry during purging, and did not recharge? ☐ Yes ☐ NoBubbles in purge water? ☐ Yes ☐ NoOrganic Matter in Sample? ☐ Yes ☐ NoColor of Water: ☐ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling? ☐ Yes ☐ NoOdor? ☐ Yes ☐ No If yes, describe: _____Duplicate in Sample taken? ☐ Yes ☐ No

PURGE DISCHARGED:

DRUM: ☐

DRUM#

SITE TREATMENT: [X]

OTHER: ☐



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW09

SAMPLE NO.: UST820-MW09

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 03/26/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1315
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 50°F

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	2.72	2.73	2.76	2.78		(STD)
Specific Conductivity	6.207	6.049	5.943	5.851		(m S/cm)
Turbidity (Turb)	23.4	22.5	10.8	15.5		(NTU)
Dissolved Oxygen (DO)	35.48	26.70	20.95	17.22		(mg/l)
Temperature (Temp)	22.04	22.86	22.93	22.83		(°C)
ORP	454.7	458.5	447.3	426.5		

Depth to Bottom	615.60	(In) (Minus)	Depth to Water	268.92	(In)	=	346.68	HT (in)
Depth to Bottom	51.30	(Ft) (Minus)	Depth to Water	22.41	(Ft)	=	28.89	HT (ft)
Product in Well? ☐ Yes ☒ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together						Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			346.68	1	3.14	1085	.0043	4.7	14	14
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW09	3-40ml	HCL, 4°C
PAH	UST820-MW09	2-1 Liter Amber	4°C
COMMENTS: ISOC Well			
Well went dry during purging, and did not recharge? ☐ Yes ☐ No			
Bubbles in purge water? ☒ Yes ☐ No Organic Matter in Sample? ☐ Yes ☒ No			
Color of Water: ☐ Clear ☐ Cloudy ☐ Rusty ☐ Black ☒ Other Amber If not clear, did water change to clear prior to sampling? ☐ Yes ☐ No			
Odor? ☐ Yes ☒ No If yes, describe: _____			
Duplicate in Sample taken? ☐ Yes ☒ No			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW 09 D

SAMPLE NO.: UST820-MW 09 D

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 03/20/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1420
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 55 °F

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	4.63	7.17	7.26	7.31		(STD)
Specific Conductivity	0.420	0.328	0.327	0.327		(m S/cm)
Turbidity (Turb)	1.9	2.1	1.7	1.6		(NTU)
Dissolved Oxygen (DO)	3.73	3.34	3.25	3.07		(mg/l)
Temperature (Temp)	22.54	22.49	22.39	22.41		(°C)
ORP	220.8	75.9	78.5	79.7		

Depth to Bottom	1200.00	(In) (Minus)	Depth to Water	267.60	(In)	=	932.40	HT (in)
Depth to Bottom	100.00	(Ft) (Minus)	Depth to Water	22.30	(Ft)	=	77.70	HT (ft)
Product in Well? ☐ Yes ☒ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2	MEASUREMENTS (IN INCHES)									
r = 1	Multiply Together					Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
	TOP		932.40	1	3.14	28.28	.0043	12.6	37.8	38
	Middle				3.14		.0043			
	Bottom				3.14		.0043			
	Total				3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW 09 D	3-40ml	HCL, 4°C
PAH	UST820-MW 09 D	2-1 Liter Amber	4°C

COMMENTS:

Well went dry during purging, and did not recharge? ☐ Yes ☒ NoBubbles in purge water? ☒ Yes ☐ NoOrganic Matter in Sample? ☐ Yes ☒ NoColor of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling?
☐ Yes ☐ NoOdor? ☐ Yes ☒ No If yes, describe: _____Duplicate in Sample taken? ☐ Yes ☒ No

PURGE DISCHARGED:

DRUM: ☐

DRUM#

SITE TREATMENT: [X]

OTHER: ☐



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW 10

SAMPLE NO.: UST820-MW 10

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 03/23/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1230
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 65°F

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	8.12	3.10	2.97	2.98		(STD)
Specific Conductivity	0.806	0.828	0.838	0.843		(m S/cm)
Turbidity (Turb)	39.7	243.0	195.9	165.7		(NTU)
Dissolved Oxygen (DO)	9.29	7.61	7.88	7.85		(mg/l)
Temperature (Temp)	18.73	18.64	18.87	18.93		(°C)
ORP	365.5	241.9	398.9	399.9		

Depth to Bottom	337.80	(In) (Minus)	Depth to Water	227.28	(In)	=	110.52	HT (in)
Depth to Bottom	28.15	(Ft) (Minus)	Depth to Water	18.94	(Ft)	=	9.21	HT (ft)
Product in Well? ☐ Yes ☒ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together						Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			110.52	1	3.14	347	.0043	1.5	4.5	5
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW 10	3-40ml	HCL, 4°C
PAH	UST820-MW 10	2-1 Liter Amber	4°C
COMMENTS:			
Well went dry during purging, and did not recharge? ☐ Yes ☒ No			
Bubbles in purge water? ☒ Yes ☐ No Organic Matter in Sample? ☒ Yes ☐ No Smelly Flakes			
Color of Water: ☐ Clear ☐ Cloudy ☐ Rusty ☐ Black ☒ Other Yellow If not clear, did water change to clear prior to sampling? ☐ Yes ☒ No			
Odor? ☐ Yes ☒ No If yes, describe: _____			
Duplicate in Sample taken? ☐ Yes ☒ No			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW //

SAMPLE NO.: UST820-MW//

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 3/22/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 0900
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 30'S

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	6.96	5.58	5.58	5.58		(STD)
Specific Conductivity	0.077	0.089	0.96	0.96		(m S/cm)
Turbidity (Turb)	120.7	20.3	1.7	1.6		(NTU)
Dissolved Oxygen (DO)	2.82	0.96	1.26	1.27		(mg/l)
Temperature (Temp)	20.20	20.74	20.70	20.70		(°C)
ORP	2.3	-30.7	-34.0	-34.1		

Depth to Bottom	279.60	(In) (Minus)	Depth to Water	171.84	(In) =	107.76	HT (in)
Depth to Bottom	23.30	(Ft) (Minus)	Depth to Water	14.32	(Ft) =	8.98	HT (ft)
Product in Well? ☐ Yes ☒ No							
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft) =		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together						Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			107.76	1	3.14	338	.0043	1.5	4.4	5
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW	3-40ml	HCL, 4°C
PAH	UST820-MW	2-1 Liter Amber	4°C

COMMENTS:

Well went dry during purging, and did not recharge? ☐ Yes ☐ NoBubbles in purge water? ☐ Yes ☒ NoOrganic Matter in Sample? ☐ Yes ☐ NoColor of Water: ☐ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling?
☐ Yes ☐ NoOdor? ☒ Yes ☐ No If yes, describe: GASOLINEDuplicate in Sample taken? ☐ Yes ☒ No

PURGE DISCHARGED:

DRUM: ☐

DRUM#

SITE TREATMENT: [X]

OTHER: ☐



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW 12

SAMPLE NO.: UST820-MW/2

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 03/20/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1110
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 45°F

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailor

FIELD MEASUREMENTS

	1	2	3	4		
pH	6.44	4.59	4.36	4.31		(STD)
Specific Conductivity	0.214	0.230	0.232	0.230		(m S/cm)
Turbidity (Turb)	324.7	260.0	179.8	107.0		(NTU)
Dissolved Oxygen (DO)	5.02	4.58	4.34	4.23		(mg/l)
Temperature (Temp)	17.85	18.00	18.03	18.02		(°C)
ORP	161.6	149.7	155.7	158.3		

Depth to Bottom	300.00	(In) (Minus)	Depth to Water	209.52	(In)	=	90.48	HT (in)
Depth to Bottom	25.00	(Ft) (Minus)	Depth to Water	17.46	(Ft)	=	7.54	HT (ft)
Product in Well? ☐ Yes ☒ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together						Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			90.48	1	3.14	284	.0043	1.2	3.7	4
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW12	3-40ml	HCL, 4°C
PAH	UST820-MW 12	2-1Liter Amber	4°C

COMMENTS:

Well went dry during purging, and did not recharge? ☐ Yes ☒ NoBubbles in purge water? ☒ Yes ☐ NoOrganic Matter in Sample? ☐ Yes ☒ NoColor of Water: ☐ Clear ☒ Cloudy ☐ Rusty ☐ Black ☐ Other Yellow
☒ Yes ☐ No If not clear, did water change to clear prior to sampling?
Sediment?Odor? ☒ Yes ☐ No If yes, describe: GasolineDuplicate in Sample taken? ☐ Yes ☒ No

PURGE DISCHARGED:

DRUM: ☐

DRUM#

SITE TREATMENT: [X]

OTHER: ☐



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW 13

SAMPLE NO.: UST820-MW/13

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 3/22/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1100
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 40.5

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	6.08	5.54	5.49	5.48		(STD)
Specific Conductivity	0.069	0.086	0.093	0.093		(m S/cm)
Turbidity (Turb)	47.4	11.2	5.8	0.6		(NTU)
Dissolved Oxygen (DO)	4.24	2.34	2.88	2.87		(mg/l)
Temperature (Temp)	17.62	17.91	17.93	17.93		(°C)
ORP	65.06	64.6	69.2	69.3		

Depth to Bottom	276.00	(In) (Minus)	Depth to Water	189.60	(In)	=	86.40	HT (in)
Depth to Bottom	23.00	(Ft) (Minus)	Depth to Water	15.80	(Ft)	=	7.20	HT (ft)
Product in Well? ☐ Yes ☒ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1

Multiply Together

Vol.

d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			86.40	1	3.14	271	.0043	1.12	3.5	4
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW13	3-40ml	HCL, 4°C
PAH	UST820-MW13	2-1 Liter Amber	4°C

COMMENTS: Well sampled twice

Well went dry during purging, and did not recharge? ☐ Yes ☒ NoBubbles in purge water? ☒ Yes ☐ NoOrganic Matter in Sample? ☐ Yes ☒ NoColor of Water: ☐ Clear ☒ Cloudy ☐ Rusty ☐ Black ☐ Other If not clear, did water change to clear prior to sampling?
☐ Yes ☐ NoOdor? ☐ Yes ☒ No If yes, describe:Duplicate in Sample taken? ☐ Yes ☒ No

PURGE DISCHARGED:

DRUM: ☐

DRUM#

SITE TREATMENT: [X]

OTHER: ☐



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709
PROJECT NAME: BM-820
WELL NO.: UST820-MW 15
SAMPLE NO.: UST820-MW 15

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin/John MacLeod	DATE: 3/22/09 (month/day/year)
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin/John MacLeod	TIME: 1000 (military time)
PHONE: 910-451-2390	WEATHER: ☐ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: _____	
LEL:	Well Locked: ☒ Yes ☐ No	
PID:	Sampling Device: Bailor	

FIELD MEASUREMENTS

	1	2	3	4	
pH	5.91	5.55	5.52	5.52	(STD)
Specific Conductivity	0.193	0.185	0.180	0.180	(m S/cm)
Turbidity (Turb)	370.4	35.1	14.5	14.0	(NTU)
Dissolved Oxygen (DO)	5.86	4.92	4.89	4.89	(mg/l)
Temperature (Temp)	18.42	18.54	18.49	18.50	(°C)
ORP	46.8	80.4	87.5	87.4	

Depth to Bottom	285.96	(In) (Minus)	Depth to Water	177.00	(In) =	108.96	HT (in)
Depth to Bottom	23.83	(Ft) (Minus)	Depth to Water	14.75	(Ft) =	9.08	HT (ft)
Product in Well? ☐ Yes ☒ No							
Depth to Water	?	(Ft) (Minus)	Depth to Product		(Ft) =		Product Thickness HT (ft)

d = 2	MEASUREMENTS (IN INCHES)									
r = 1	Multiply Together					Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			108.96	1	3.14	342	.0043	1.5	4.4	5
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW 15	3-40ml	HCL, 4°C
PAH	UST820-MW 15	2-1 Liter Amber	4°C

COMMENTS:			
Well went dry during purging, and did not recharge? ☐ Yes ☒ No			
Bubbles is purge water? ☐ Yes ☒ No Organic Matter in Sample? ☐ Yes ☐ No			
Color of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling? ☐ Yes ☐ No			
Odor? ☐ Yes ☒ No If yes, describe: _____			
Duplicate in Sample taken? ☐ Yes ☒ No			
PURGE DISCHARGED: DRUM: ☐ DRUM# SITE TREATMENT: [X]			
OTHER: ☐			



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW 16

SAMPLE NO.: UST820-MW16

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 03/22/09

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1010

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 55°F

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	3.47	3.49	3.50	3.51		(STD)
Specific Conductivity	2.577	2.167	1.955	1.812		(m S/cm)
Turbidity (Turb)	43.0	52.8	31.2	19.9		(NTU)
Dissolved Oxygen (DO)	5.07	5.41	6.36	4.56		(mg/l)
Temperature (Temp)	18.49	19.03	19.12	19.20		(°C)
ORP	258.3	243.7	232.2	223.4		

Depth to Bottom	296.52	(In) (Minus)	Depth to Water	196.68	(In) =	99.84	HT (in)
Depth to Bottom	24.71	(Ft) (Minus)	Depth to Water	16.39	(Ft) =	8.32	HT (ft)
Product in Well? ☐ Yes ☒ No							
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft) =		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together						Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			99.84	1	3.14	313	.0043	1.3	4	4
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW 16	3-40ml	HCL, 4°C
PAH	UST820-MW 16	2-1 Liter Amber	4°C

COMMENTS:

Well went dry during purging, and did not recharge? ☐ Yes ☒ NoBubbles in purge water? ☒ Yes ☐ NoOrganic Matter in Sample? ☐ Yes ☒ NoColor of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling? ☐ Yes ☐ NoOdor? ☐ Yes ☒ No If yes, describe: _____Duplicate in Sample taken? ☐ Yes ☒ No

PURGE DISCHARGED:

DRUM: ☐

DRUM#

SITE TREATMENT: [X]

OTHER: ☐



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW 17

SAMPLE NO.: UST820-MW 17

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 03/23/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1030
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 60 °F

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	2.50	2.48	2.47	2.47		(STD)
Specific Conductivity	9.566	9.821	9.926	9.893		(m S/cm)
Turbidity (Turb)	124.2	164.8	40.8	35.7		(NTU)
Dissolved Oxygen (DO)	33.61	24.29	16.73	13.60		(mg/l)
Temperature (Temp)	20.24	20.90	20.98	21.11		(°C)
ORP	523.7	521.1	497.4	487.3		

Depth to Bottom	621.29	(In) (Minus)	Depth to Water	276.48	(In) =	344.76	HT (in)
Depth to Bottom	57.77	(Ft) (Minus)	Depth to Water	23.04	(Ft) =	28.73	HT (ft)
Product in Well? ☐ Yes ☒ No							
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft) =		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1

Multiply Together

Vol.

d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP			344.76	1	3.14	1083	.0043	4.7		14	14
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW 17	3-40ml	HCL, 4°C
PAH	UST820-MW 17	2-1Liter Amber	4°C

COMMENTS: ISOC

Well went dry during purging, and did not recharge? ☐ Yes ☒ NoBubbles in purge water? ☒ Yes ☐ No Organic Matter in Sample? ☒ Yes ☐ No Stringy FlakesColor of Water: ☐ Clear ☐ Cloudy ☐ Rusty ☐ Black ☒ Other Amber If not clear, did water change to clear prior to sampling?
☐ Yes ☐ NoOdor? ☐ Yes ☒ No If yes, describe:Duplicate in Sample taken? ☐ Yes ☒ No

PURGE DISCHARGED:

DRUM: ☐

DRUM#

SITE TREATMENT: [X]

OTHER: ☐



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW18

SAMPLE NO.: UST820-MW18

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 03/22/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 0920
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 50 °F

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	3.06	3.40	3.38	3.37		(STD)
Specific Conductivity	0.425	0.441	0.442	0.449		(m S/cm)
Turbidity (Turb)	16.7	7.3	6.4	7.4		(NTU)
Dissolved Oxygen (DO)	4.82	3.36	2.94	2.13		(mg/l)
Temperature (Temp)	17.08	17.44	18.09	18.23		(°C)
ORP	282.0	277.9	263.4	252.8		

Depth to Bottom	302.40	(In) (Minus)	Depth to Water	206.16	(In) =	96.24	HT (in)
Depth to Bottom	25.20	(Ft) (Minus)	Depth to Water	17.18	(Ft) =	8.02	HT (ft)
Product in Well? ☐ Yes ☒ No							
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft) =		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together						Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			96.24	1	3.14	302	.0043	1.3	3.9	4
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW 18	3-40ml	HCL, 4°C
PAH	UST820-MW 18	2-1 Liter Amber	4°C

COMMENTS:

Well went dry during purging, and did not recharge? ☐ Yes ☒ NoBubbles in purge water? ☒ Yes ☐ No Organic Matter in Sample? ☐ Yes ☒ NoColor of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling?
☐ Yes ☐ NoOdor? ☐ Yes ☒ No If yes, describe: _____Duplicate in Sample taken? ☐ Yes ☒ No

PURGE DISCHARGED:

DRUM: ☐

DRUM#

SITE TREATMENT: [X]

OTHER: ☐



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW20

SAMPLE NO.: UST820-MW20

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 03/22/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1110
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 60°F

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	4.07	4.14	4.16	4.17		(STD)
Specific Conductivity	0.142	0.120	0.119	0.118		(m S/cm)
Turbidity (Turb)	71.1	87.2	52.2	32.0		(NTU)
Dissolved Oxygen (DO)	3.83	4.80	5.13	4.94		(mg/l)
Temperature (Temp)	17.19	17.55	17.63	17.61		(°C)
ORP	184.5	173.7	170.7	168.3		

Depth to Bottom	292.80	(In) (Minus)	Depth to Water	244.80	(In)	=	48.00	HT (in)
Depth to Bottom	244.40	(Ft) (Minus)	Depth to Water	20.40	(Ft)	=	4.00	HT (ft)
Product in Well? ☐ Yes ☒ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together						Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			48.00	1	3.14	157	.0043	0.6	1.9	2
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW20	3-40ml	HCL, 4°C
PAH	UST820-MW20	2-1Liter Amber	4°C
COMMENTS:			
Well went dry during purging, and did not recharge? ☐ Yes ☒ No			
Bubbles in purge water? ☒ Yes ☐ No Organic Matter in Sample? ☒ Yes ☐ No Red			
Color of Water: ☒ Clear ☐ Cloudy ☒ Rusty ☐ Black ☐ Other If not clear, did water change to clear prior to sampling? ☒ Yes ☐ No			
Odor? ☐ Yes ☒ No If yes, describe:			
Duplicate in Sample taken? ☐ Yes ☒ No			
PURGE DISCHARGED: DRUM: ☐ DRUM# SITE TREATMENT: [X]			
OTHER: ☐			



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW 21

SAMPLE NO.: UST820-MW 21

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 03/22/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1200
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 60°F

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	3.13	3.11	3.20	3.24		(STD)
Specific Conductivity	0.722	0.731	0.685	0.665		(m S/cm)
Turbidity (Turb)	2.4	2.5	11.5	7.4		(NTU)
Dissolved Oxygen (DO)	5.73	4.98	3.75	3.17		(mg/l)
Temperature (Temp)	18.52	18.69	18.78	18.83		(°C)
ORP	304.7	333.0	323.8	310.8		

Depth to Bottom	622.80	(In) (Minus)	Depth to Water	261.96	(In) =	360.84	HT (in)
Depth to Bottom	51.90	(Ft) (Minus)	Depth to Water	21.83	(Ft) =	30.07	HT (ft)
Product in Well? ☐ Yes ☒ No							
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft) =		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together						Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			360.84	1	3.14	1133	.0043	4.9	14.6	15
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW 21	3-40ml	HCL, 4°C
PAH	UST820-MW 21	2-1 Liter Amber	4°C
COMMENTS:			
Well went dry during purging, and did not recharge? ☐ Yes ☒ No			
Bubbles in purge water? ☒ Yes ☐ No Organic Matter in Sample? ☐ Yes ☒ No			
Color of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling? ☐ Yes ☐ No			
Odor? ☐ Yes ☒ No If yes, describe: _____			
Duplicate in Sample taken? ☐ Yes ☒ No			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			

	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: BM-820
			WELL NO.: UST820-MW22
			SAMPLE NO.: UST820-MW22
PROJECT LOCATION: Camp Lejeune, NC		LOGGER: Mark Martin/John MacLeod	DATE: 03/23/09 (month/day/year)
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin/John MacLeod	TIME: (military time)
PHONE: 910-451-2390		WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 55°F	
LEL:			Well Locked: ☒ Yes ☐ No
PID:		Sampling Device: Bailer	

FIELD MEASUREMENTS						
	1	2	3	4		
pH						(STD)
Specific Conductivity						(m S/cm)
Turbidity (Turb)						(NTU)
Dissolved Oxygen (DO)						(mg/l)
Temperature (Temp)						(°C)
ORP						

Depth to Bottom		(In) (Minus)	Depth to Water		(In)	=		HT (in)
Depth to Bottom	21.73	(Ft) (Minus)	Depth to Water	21.73	(Ft)	=	0.4	HT (ft)
Product in Well? ☐ Yes ☐ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together Vol.										
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	II	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP				1	3.14		.0043			
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW22	3-40ml	HCL, 4°C
PAH	UST820-MW22	2-1Liter Amber	4°C
COMMENTS: DRY NOT SAMPLED			
Well went dry during purging, and did not recharge? ☐ Yes ☐ No			
Bubbles in purge water? ☒ Yes ☐ No Organic Matter in Sample? ☐ Yes ☐ No			
Color of Water: ☐ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling? ☐ Yes ☐ No			
Odor? ☐ Yes ☐ No If yes, describe: _____			
Duplicate in Sample taken? ☐ Yes ☒ No			
PURGE DISCHARGED: DRUM: ☐ DRUM# SITE TREATMENT: [X]			
OTHER: ☐			



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709
PROJECT NAME: BM-820
WELL NO.: UST820-MW23
SAMPLE NO.: UST820-MW23

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin/John MacLeod	DATE: 03/23/09 (month/day/year)
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin/John MacLeod	TIME: 0900 (military time)
PHONE: 910-451-2390	WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 55°F	
LEL:	Well Locked: ☒ Yes ☐ No	
PID:	Sampling Device: Bailor	

FIELD MEASUREMENTS

	1	2	3	4		
pH	3.66	3.80	3.79	3.78		(STD)
Specific Conductivity	0.236	0.241	0.244	0.246		(m S/cm)
Turbidity (Turb)	7.3	6.1	4.0	3.1		(NTU)
Dissolved Oxygen (DO)	2.92	1.71	0.86	0.91		(mg/l)
Temperature (Temp)	17.08	17.77	17.86	17.89		(°C)
ORP	179.9	167.8	163.3	161.7		

Depth to Bottom	610.08	(In) (Minus)	Depth to Water	250.08	(In)	=	360.00	HT (in)
Depth to Bottom	50.84	(Ft) (Minus)	Depth to Water	20.84	(Ft)	=	30.00	HT (ft)
Product in Well? ☐ Yes ☒ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together Vol.										
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			360.06	1	3.14	1130	.0043	4.5	14.6	15
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW23	3-40ml	HCL, 4°C
PAH	UST820-MW23	2-1Liter Amber	4°C

COMMENTS:

Well went dry during purging, and did not recharge? ☐ Yes ☒ No

Bubbles in purge water? ☒ Yes ☐ No Organic Matter in Sample? ☐ Yes ☒ No

Color of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling?
☐ Yes ☐ No

Odor? ☐ Yes ☒ No If yes, describe: _____

Duplicate in Sample taken? ☐ Yes ☒ No

PURGE DISCHARGED: DRUM: ☐ DRUM# SITE TREATMENT: [X]

OTHER: ☐



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW24

SAMPLE NO.: UST820-MW24

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 03/22/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1350
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 60 °F

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	4.29	4.20	3.80	3.56		(STD)
Specific Conductivity	0.107	0.099	0.100	0.101		(m S/cm)
Turbidity (Turb)	35.6	15.3	6.6	3.6		(NTU)
Dissolved Oxygen (DO)	1.62	1.00	0.89	0.79		(mg/l)
Temperature (Temp)	19.03	18.79	18.84	18.79		(°C)
ORP	212.5	183.2	211.2	229.1		

Depth to Bottom	306.00	(In) (Minus)	Depth to Water	226.92	(In) =	73.08	HT (in)
Depth to Bottom	25.00	(Ft) (Minus)	Depth to Water	18.91	(Ft) =	6.09	HT (ft)
Product in Well? ☐ Yes ☒ No							
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft) =		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together						Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			73.08	1	3.14	229	.0043	1.0	3.0	3
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW 24	3-40ml	HCL, 4°C
PAH	UST820-MW 24	2-1 Liter Amber	4°C
COMMENTS:			
Well went dry during purging, and did not recharge? ☐ Yes ☒ No			
Bubbles in purge water? ☒ Yes ☐ No Organic Matter in Sample? ☐ Yes ☒ No			
Color of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling? ☐ Yes ☐ No			
Odor? ☐ Yes ☒ No If yes, describe: _____			
Duplicate in Sample taken? ☐ Yes ☒ No			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW 25

SAMPLE NO.: UST820-MW25

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 03/22/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1430
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 60 °F

LEL:

Well Locked: ☐ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	3.33	3.65	3.68	3.70		(STD)
Specific Conductivity	0.421	0.357	0.355	0.354		(m S/cm)
Turbidity (Turb)	4.1	9.0	9.0	5.2		(NTU)
Dissolved Oxygen (DO)	4.46	1.39	1.30	1.06		(mg/l)
Temperature (Temp)	19.55	19.23	19.27	19.18		(°C)
ORP	214.6	222.4	216.7	217.2		

Depth to Bottom	597.36	(In) (Minus)	Depth to Water	217.68	(In)	=	379.68	HT (in)
Depth to Bottom	49.78	(Ft) (Minus)	Depth to Water	18.14	(Ft)	=	31.64	HT (ft)
Product in Well? ☐ Yes ☒ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2	MEASUREMENTS (IN INCHES)									
r = 1	Multiply Together					Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			379.68	1	3.14	1192	.0043	5.1	15.4	16
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW 25	3-40ml	HCL, 4°C
PAH	UST820-MW 25	2-1 Liter Amber	4°C

COMMENTS:

Well went dry during purging, and did not recharge? ☐ Yes ☒ NoBubbles in purge water? ☒ Yes ☐ No Organic Matter in Sample? ☐ Yes ☒ NoColor of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling?
☐ Yes ☐ NoOdor? ☐ Yes ☒ No If yes, describe: _____Duplicate in Sample taken? ☐ Yes ☒ No

PURGE DISCHARGED:

DRUM: ☐

DRUM#

SITE TREATMENT: [X]

OTHER: ☐



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709
PROJECT NAME: BM-820
WELL NO.: UST820-MW 26
SAMPLE NO.: UST820-MW 26

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin/John MacLeod	DATE: 3/22/09 (month/day/year)
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin/John MacLeod	TIME: 1300 (military time)
PHONE: 910-451-2390	WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 40's	
LEL:		Well Locked: ☒ Yes ☐ No
PID:	Sampling Device: Bailer	

FIELD MEASUREMENTS

	1	2	3	4	
pH	4.45	4.59	4.55	4.55	(STD)
Specific Conductivity	0.129	0.107	0.106	0.106	(m S/cm)
Turbidity (Turb)	983.6	444.1	23.4	22.1	(NTU)
Dissolved Oxygen (DO)	8.26	8.62	8.66	8.65	(mg/l)
Temperature (Temp)	18.19	18.24	18.38	18.39	(°C)
ORP	218.2	221.9	239.9	240.2	

Depth to Bottom	300.24	(In) (Minus)	Depth to Water	213.96	(In) =	86.28	HT (in)
Depth to Bottom	25.02	(Ft) (Minus)	Depth to Water	17.83	(Ft) =	7.19	HT (ft)
Product in Well? ☐ Yes ☒ No							
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft) =		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together Vol.										
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			86.28	1	3.14	271	.0043	1.2	3.5	4
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW 26	3-40ml	HCL, 4°C
PAH	UST820-MW 26	2-1 Liter Amber	4°C

COMMENTS: Pulled Roots from well inside of well

Well went dry during purging, and did not recharge? ☐ Yes ☒ No

Bubbles in purge water? ☐ Yes ☒ No Organic Matter in Sample? ☒ Yes ☐ No

Color of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other Brn If not clear, did water change to clear prior to sampling? ☒ Yes ☐ No

Odor? ☐ Yes ☒ No If yes, describe:

Duplicate in Sample taken? ☐ Yes ☒ No

PURGE DISCHARGED: DRUM: ☐ DRUM# SITE TREATMENT: [X]

OTHER: ☐



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW28

SAMPLE NO.: UST820-MW28

PROJECT LOCATION: Camp Lejeune, NC	LOGGER: Mark Martin/John MacLeod	DATE: 03/23/09 (month/day/year)
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin/John MacLeod	TIME: 1130 (military time)
PHONE: 910-451-2390	WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 60°F	
LEL:	Well Locked: ☒ Yes ☐ No	
PID:	Sampling Device: Bailer	

FIELD MEASUREMENTS

	1	2	3	4		
pH	5.63	6.71	7.14	6.60		(STD)
Specific Conductivity	0.192	0.155	0.182	0.220		(m S/cm)
Turbidity (Turb)	16.7	27.2	36.7	40.5		(NTU)
Dissolved Oxygen (DO)	35.66	35.17	34.95	30.37		(mg/l)
Temperature (Temp)	20.84	20.77	20.81	21.25		(°C)
ORP	224.0	176.2	167.0	108.1		

Depth to Bottom	518.40	(In) (Minus)	Depth to Water	235.80	(In) =	282.60	HT (in)
Depth to Bottom	432.0	(Ft) (Minus)	Depth to Water	19.65	(Ft) =	23.55	HT (ft)
Product in Well? ☐ Yes ☒ No							
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft) =		Product Thickness HT (ft)

d = 2	MEASUREMENTS (IN INCHES)									
r = 1	Multiply Together					Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			282.60	1	3.14	887	.0043	3.8	11.4	12
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW28	3-40ml	HCL, 4°C
PAH	UST820-MW28	2-1Liter Amber	4°C
COMMENTS: Isoc			
Well went dry during purging, and did not recharge? ☐ Yes ☒ No			
Bubbles in purge water? ☒ Yes ☐ No Organic Matter in Sample? ☐ Yes ☒ No			
Color of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling? ☒ Yes ☐ No			
Odor? ☐ Yes ☒ No If yes, describe: _____			
Duplicate in Sample taken? ☐ Yes ☒ No			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW 29

SAMPLE NO.: UST820-MW 29

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 3/22/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1200
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 40'S

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH	3.55	3.52	3.52	3.52		(STD)
Specific Conductivity	0.736	0.748	0.749	0.750		(m S/cm)
Turbidity (Turb)	18.3	0.0	0.0	0.0		(NTU)
Dissolved Oxygen (DO)	1.11	0.38	0.38	0.39		(mg/l)
Temperature (Temp)	19.19	19.49	19.45	19.44		(°C)
ORP	311.4	292.3	293.2	293.2		

Depth to Bottom	602.40	(In) (Minus)	Depth to Water	192.96	(In) =	409.44	HT (in)
Depth to Bottom	50.20	(Ft) (Minus)	Depth to Water	16.08	(Ft) =	34.12	HT (ft)
Product in Well? ☐ Yes ☒ No							
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft) =		Product Thickness HT (ft)

d = 2	MEASUREMENTS (IN INCHES)									
r = 1	Multiply Together					Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP			409.44	1	3.14	1286	.0043	5.5	16.6	17
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW 29	3-40ml	HCL, 4°C
PAH	UST820-MW 29	2-1Liter Amber	4°C
COMMENTS:			
Well went dry during purging, and did not recharge? ☐ Yes ☒ No			
Bubbles in purge water? ☐ Yes ☒ No Organic Matter in Sample? ☐ Yes ☐ No			
Color of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling? ☐ Yes ☐ No			
Odor? ☐ Yes ☒ No If yes, describe: _____			
Duplicate in Sample taken? ☐ Yes ☒ No			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW / 7

SAMPLE NO.: UST820-MW / 7

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE:

(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME:

(military time)

PHONE: 910-451-2390

WEATHER: ☐ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: _____

LEL:

Well Locked: ☐ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH						(STD)
Specific Conductivity						(m S/cm)
Turbidity (Turb)						(NTU)
Dissolved Oxygen (DO)						(mg/l)
Temperature (Temp)						(°C)
ORP						

Depth to Bottom		(In) (Minus)	Depth to Water		(In)	=		HT (in)
Depth to Bottom		(Ft) (Minus)	Depth to Water		(Ft)	=		HT (ft)
Product in Well? ☐ Yes ☐ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)

r = 1

Multiply Together

Vol.

d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP				1	3.14		.0043			
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW	3-40ml	HCL, 4°C
PAH	UST820-MW	2-1Liter Amber	4°C

COMMENTS: Well Dry NOT SAMPLED

Well went dry during purging, and did not recharge? ☐ Yes ☐ NoBubbles is purge water? ☐ Yes ☐ No Organic Matter in Sample? ☐ Yes ☐ NoColor of Water: ☐ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling?
☐ Yes ☐ NoOdor? ☐ Yes ☐ No If yes, describe: _____Duplicate in Sample taken? ☐ Yes ☐ No

PURGE DISCHARGED:

DRUM: ☐

DRUM#

SITE TREATMENT: [X]

OTHER: ☐

	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: BM-820
			WELL NO.: UST820-MW 05
			SAMPLE NO.: UST820-MW 05
PROJECT LOCATION: Camp Lejeune, NC		LOGGER: Mark Martin/John MacLeod	DATE: (month/day/year)
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin/John MacLeod	TIME: (military time)
PHONE: 910-451-2390		WEATHER: ☐ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: _____	
LEL: _____		Well Locked: ☐ Yes ☐ No	
PID: _____		Sampling Device: Bailor	

FIELD MEASUREMENTS						
	1	2	3	4		
pH						(STD)
Specific Conductivity						(m S/cm)
Turbidity (Turb)						(NTU)
Dissolved Oxygen (DO)						(mg/l)
Temperature (Temp)						(°C)
ORP						

Depth to Bottom		(In) (Minus)	Depth to Water		(In)	=		HT (in)
Depth to Bottom		(Ft) (Minus)	Depth to Water		(Ft)	=		HT (ft)
Product in Well? ☐ Yes ☐ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = <u>2</u> MEASUREMENTS (IN INCHES)											
r = <u>1</u> Multiply Together						Vol.					
d/2 = <u>1</u>	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP				1	3.14		.0043				
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW	3-40ml	HCL, 4°C
PAH	UST820-MW	2-1Liter Amber	4°C
COMMENTS: <u>Well Dry. NOT SAMPLED</u>			
Well went dry during purging, and did not recharge? ☐ Yes ☐ No			
Bubbles in purge water? ☐ Yes ☐ No Organic Matter in Sample? ☐ Yes ☐ No			
Color of Water: ☐ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling? ☐ Yes ☐ No			
Odor? ☐ Yes ☐ No If yes, describe: _____			
Duplicate in Sample taken? ☐ Yes ☐ No			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			

	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: BM-820
			WELL NO.: UST820-MW 27
			SAMPLE NO.: UST820-MW ~~22~~ 27
PROJECT LOCATION: Camp Lejeune, NC		LOGGER: Mark Martin/John MacLeod	DATE: 3/22/07 (month/day/year)
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin/John MacLeod	TIME: (military time)
PHONE: 910-451-2390		WEATHER: ☐ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: _____	
LEL: _____			Well Locked: ☐ Yes ☐ No
PID: _____		Sampling Device: Bailor	

FIELD MEASUREMENTS						
	1	2	3	4		
pH						(STD)
Specific Conductivity						(m S/cm)
Turbidity (Turb)						(NTU)
Dissolved Oxygen (DO)						(mg/l)
Temperature (Temp)						(°C)
ORP						

Depth to Bottom		(In) (Minus)	Depth to Water		(In)	=		HT (in)
Depth to Bottom		(Ft) (Minus)	Depth to Water		(Ft)	=		HT (ft)
Product in Well? ☐ Yes ☐ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2	MEASUREMENTS (IN INCHES)										
r = 1	Multiply Together					Vol.					
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS		Purge Vol.	Vol. Purged
TOP				1	3.14		.0043				
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW	3-40ml	HCL, 4°C
PAH	UST820-MW	2-1Liter Amber	4°C
COMMENTS: <i>Well Dry. NOT SAMPLED</i>			
Well went dry during purging, and did not recharge? ☐ Yes ☐ No			
Bubbles in purge water? ☐ Yes ☐ No Organic Matter in Sample? ☐ Yes ☐ No			
Color of Water: ☐ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling? ☐ Yes ☐ No			
Odor? ☐ Yes ☐ No If yes, describe: _____			
Duplicate in Sample taken? ☐ Yes ☐ No			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			



WELL OR GROUND WATER DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: BM-820

WELL NO.: UST820-MW 14

SAMPLE NO.: UST820-MW14

PROJECT LOCATION: Camp Lejeune, NC

LOGGER: Mark Martin/John MacLeod

DATE: 3/22/09
(month/day/year)

PROJECT CONTACT: Mark Martin

SAMPLER: Mark Martin/John MacLeod

TIME: 1600
(military time)

PHONE: 910-451-2390

WEATHER: ☒ Sunny ☐ Cloudy ☐ Rainy ☐ Snow Temperature: 60°

LEL:

Well Locked: ☒ Yes ☐ No

PID:

Sampling Device: Bailer

FIELD MEASUREMENTS

	1	2	3	4		
pH						(STD)
Specific Conductivity						(m S/cm)
Turbidity (Turb)						(NTU)
Dissolved Oxygen (DO)						(mg/l)
Temperature (Temp)						(°C)
ORP						

Depth to Bottom		(In) (Minus)	Depth to Water		(In)	=		HT (in)
Depth to Bottom		(Ft) (Minus)	Depth to Water		(Ft)	=		HT (ft)
Product in Well? ☐ Yes ☒ No								
Depth to Water		(Ft) (Minus)	Depth to Product		(Ft)	=		Product Thickness HT (ft)

d = 2 MEASUREMENTS (IN INCHES)										
r = 1 Multiply Together						Vol.				
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged
TOP				1	3.14		.0043			
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 8260	UST820-MW	3-40ml	HCL, 4°C
PAH	UST820-MW	2-1Liter Amber	4°C
COMMENTS: Well DRY NOT SAMPLED			
Well went dry during purging, and did not recharge? ☐ Yes ☐ No			
Bubbles is purge water? ☐ Yes ☒ No Organic Matter in Sample? ☐ Yes ☒ No			
Color of Water: ☒ Clear ☐ Cloudy ☐ Rusty ☐ Black ☐ Other _____ If not clear, did water change to clear prior to sampling? ☐ Yes ☐ No			
Odor? ☐ Yes ☒ No If yes, describe: _____			
Duplicate in Sample taken? ☐ Yes ☒ No			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			

APPENDIX B

MARCH 2009 GROUNDWATER LABORATORY ANALYTICAL REPORTS



04/07/09

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-BM 820

125709

Accutest Job Number: F64124

Sampling Date: 03/20/09

Report to:

Shaw E & I, Inc.
500 E Main St Suite 1630
Norfolk, VA 23510
natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: **46**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Heather Wandrey 407-425-6700

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK
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Test results relate only to samples analyzed.

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Sample Summary

Shaw E & I, Inc.

Job No: F64124

Camp Lejeune-BM 820
Project No: 125709

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F64124-1	03/20/09	10:30 JM	03/21/09	AQ	Ground Water	UST820-MW03
F64124-2	03/20/09	11:10 JM	03/21/09	AQ	Ground Water	UST820-MW12
F64124-3	03/20/09	12:00 JM	03/21/09	AQ	Ground Water	UST820-MW06
F64124-4	03/20/09	12:00 JM	03/21/09	AQ	Ground Water	UST820-MW06D
F64124-5	03/20/09	13:15 JM	03/21/09	AQ	Ground Water	UST820-MW09
F64124-6	03/20/09	14:20 JM	03/21/09	AQ	Ground Water	UST820-MW09D
F64124-7	03/20/09	15:00 JM	03/21/09	AQ	Ground Water	UST820-MW13
F64124-8	03/20/09	00:00 JM	03/21/09	AQ	Trip Blank Water	UST820-TRIP BLANK03202009



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	UST820-MW03	Date Sampled:	03/20/09
Lab Sample ID:	F64124-1	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043979.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	4.2	4.8	0.96	ug/l	J
91-57-6	2-Methylnaphthalene	4.6	4.8	0.96	ug/l	J
91-20-3	Naphthalene	36.2	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		42-108%
321-60-8	2-Fluorobiphenyl	66%		40-106%
1718-51-0	Terphenyl-d14	65%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW03	Date Sampled:	03/20/09
Lab Sample ID:	F64124-1	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	EF091277.D	1	03/23/09	CW	n/a	n/a	GEF5113
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2.9	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene ^b	ND	6.0	6.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	58.3	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	10.7	1.0	0.50	ug/l	
108-88-3	Toluene	5.0	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	112	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	112%		70-120%
98-08-8	aaa-Trifluorotoluene	107%		73-118%

(a) All hits confirmed by GC/MS.

(b) Elevated reporting limit due to matrix interference.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW03	Date Sampled:	03/20/09
Lab Sample ID:	F64124-1	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.0 U	5.0	2.0	ug/l	1	03/23/09	03/23/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7123
(2) Prep QC Batch: MP16095

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: UST820-MW12
Lab Sample ID: F64124-2
Matrix: AQ - Ground Water
Method: EPA 625 EPA 625
Project: Camp Lejeune-BM 820

Date Sampled: 03/20/09
Date Received: 03/21/09
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043980.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%		42-108%
321-60-8	2-Fluorobiphenyl	72%		40-106%
1718-51-0	Terphenyl-d14	65%		39-121%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW12	Date Sampled:	03/20/09
Lab Sample ID:	F64124-2	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EF091278.D	1	03/23/09	CW	n/a	n/a	GEF5113
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	104%		70-120%
98-08-8	aaa-Trifluorotoluene	102%		73-118%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW12	Date Sampled:	03/20/09
Lab Sample ID:	F64124-2	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	7.7	5.0	2.0	ug/l	1	03/23/09	03/23/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7123
(2) Prep QC Batch: MP16095

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW06	Date Sampled:	03/20/09
Lab Sample ID:	F64124-3	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043981.D	4	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	19	3.8	ug/l	
208-96-8	Acenaphthylene	ND	19	3.8	ug/l	
120-12-7	Anthracene	ND	19	3.8	ug/l	
56-55-3	Benzo(a)anthracene	ND	19	3.8	ug/l	
50-32-8	Benzo(a)pyrene	ND	19	3.8	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	19	3.8	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	19	3.8	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	19	3.8	ug/l	
218-01-9	Chrysene	ND	19	3.8	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	19	3.8	ug/l	
206-44-0	Fluoranthene	ND	19	3.8	ug/l	
86-73-7	Fluorene	ND	19	3.8	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	19	4.2	ug/l	
90-12-0	1-Methylnaphthalene	48.9	19	3.8	ug/l	
91-57-6	2-Methylnaphthalene	80.1	19	3.8	ug/l	
91-20-3	Naphthalene	260	19	3.8	ug/l	
85-01-8	Phenanthrene	ND	19	3.8	ug/l	
129-00-0	Pyrene	ND	19	3.8	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		42-108%
321-60-8	2-Fluorobiphenyl	70%		40-106%
1718-51-0	Terphenyl-d14	58%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW06
Lab Sample ID: F64124-3
Matrix: AQ - Ground Water
Method: EPA 602
Project: Camp Lejeune-BM 820

Date Sampled: 03/20/09
Date Received: 03/21/09
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EF091281.D	1	03/23/09	CW	n/a	n/a	GEF5113
Run #2 ^a	EF091336.D	20	03/25/09	CW	n/a	n/a	GEF5116

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	18.3	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	1.8	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene ^b	ND	40	40	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	2000 ^c	20	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	10.5	1.0	0.50	ug/l	
108-88-3	Toluene	115 ^c	20	10	ug/l	
1330-20-7	Xylenes (total)	267 ^c	60	20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	118%	107%	70-120%
98-08-8	aaa-Trifluorotoluene	110%	100%	73-118%

(a) All hits confirmed by GC/MS.

(b) Elevated reporting limit due to matrix interference.

(c) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW06	Date Sampled:	03/20/09
Lab Sample ID:	F64124-3	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.0 U	5.0	2.0	ug/l	1	03/23/09	03/23/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7123
(2) Prep QC Batch: MP16095

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: UST820-MW06D
Lab Sample ID: F64124-4
Matrix: AQ - Ground Water
Method: EPA 625 EPA 625
Project: Camp Lejeune-BM 820

Date Sampled: 03/20/09
Date Received: 03/21/09
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043982.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2	X005860.D	4	03/30/09	NAF	03/26/09	OP28504	SX301

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2	1050 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.95	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.95	ug/l	
120-12-7	Anthracene	ND	4.8	0.95	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.95	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.95	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.95	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.95	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.95	ug/l	
218-01-9	Chrysene	ND	4.8	0.95	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.95	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.95	ug/l	
86-73-7	Fluorene	ND	4.8	0.95	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.0	ug/l	
90-12-0	1-Methylnaphthalene	48.0	4.8	0.95	ug/l	
91-57-6	2-Methylnaphthalene	74.9	4.8	0.95	ug/l	
91-20-3	Naphthalene	284 ^a	19	3.8	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.95	ug/l	
129-00-0	Pyrene	ND	4.8	0.95	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	62%	73%	42-108%
321-60-8	2-Fluorobiphenyl	66%	77%	40-106%
1718-51-0	Terphenyl-d14	63%	71%	39-121%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW06D	Date Sampled:	03/20/09
Lab Sample ID:	F64124-4	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EF091282.D	1	03/23/09	CW	n/a	n/a	GEF5113
Run #2 ^a	EF091342.D	50	03/25/09	CW	n/a	n/a	GEF5116

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	18.6	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	1.8	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene ^b	ND	40	40	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	1960 ^c	50	25	ug/l	
1634-04-4	Methyl Tert Butyl Ether	10.2	1.0	0.50	ug/l	
108-88-3	Toluene	123 ^c	50	25	ug/l	
1330-20-7	Xylenes (total)	270 ^c	150	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	117%	106%	70-120%
98-08-8	aaa-Trifluorotoluene	110%	101%	73-118%

(a) All hits confirmed by GC/MS.

(b) Elevated reporting limit due to matrix interference.

(c) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW06D	Date Sampled:	03/20/09
Lab Sample ID:	F64124-4	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.0 U	5.0	2.0	ug/l	1	03/23/09	03/23/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7123
(2) Prep QC Batch: MP16095

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW09	Date Sampled:	03/20/09
Lab Sample ID:	F64124-5	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X005861.D	1	03/30/09	NAF	03/26/09	OP28504	SX301
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.9	0.97	ug/l	
208-96-8	Acenaphthylene	ND	4.9	0.97	ug/l	
120-12-7	Anthracene	ND	4.9	0.97	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.9	0.97	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.9	0.97	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.9	0.97	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.97	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.9	0.97	ug/l	
218-01-9	Chrysene	ND	4.9	0.97	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.97	ug/l	
206-44-0	Fluoranthene	ND	4.9	0.97	ug/l	
86-73-7	Fluorene	ND	4.9	0.97	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.9	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.9	0.97	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.9	0.97	ug/l	
91-20-3	Naphthalene	2.4	4.9	0.97	ug/l	J
85-01-8	Phenanthrene	ND	4.9	0.97	ug/l	
129-00-0	Pyrene	ND	4.9	0.97	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		42-108%
321-60-8	2-Fluorobiphenyl	66%		40-106%
1718-51-0	Terphenyl-d14	58%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW09	Date Sampled:	03/20/09
Lab Sample ID:	F64124-5	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	EF091345.D	1	03/25/09	CW	n/a	n/a	GEF5116
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	22.0	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene ^b	ND	2.0	2.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	4.6	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	19.1	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	10.1	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%		70-120%
98-08-8	aaa-Trifluorotoluene	103%		73-118%

(a) All hits confirmed by GC/MS.

(b) Elevated reporting limit due to matrix interference.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW09
Lab Sample ID: F64124-5
Matrix: AQ - Ground Water
Project: Camp Lejeune-BM 820

Date Sampled: 03/20/09
Date Received: 03/21/09
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead ^a	20 U	50	20	ug/l	10	03/23/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125
(2) Prep QC Batch: MP16095

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit
U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: UST820-MW09D
Lab Sample ID: F64124-6
Matrix: AQ - Ground Water
Method: EPA 625 EPA 625
Project: Camp Lejeune-BM 820

Date Sampled: 03/20/09
Date Received: 03/21/09
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043984.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		42-108%
321-60-8	2-Fluorobiphenyl	62%		40-106%
1718-51-0	Terphenyl-d14	62%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW09D	Date Sampled:	03/20/09
Lab Sample ID:	F64124-6	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	EF091339.D	1	03/25/09	CW	n/a	n/a	GEF5116
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	28.5	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%		70-120%
98-08-8	aaa-Trifluorotoluene	102%		73-118%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW09D	Date Sampled:	03/20/09
Lab Sample ID:	F64124-6	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.0 U	5.0	2.0	ug/l	1	03/23/09	03/23/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7123
(2) Prep QC Batch: MP16095

RL = Reporting Limit
MDL = Method Detection Limit
U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW13	Date Sampled:	03/20/09
Lab Sample ID:	F64124-7	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043985.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	1.4	4.8	0.96	ug/l	J
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		42-108%
321-60-8	2-Fluorobiphenyl	62%		40-106%
1718-51-0	Terphenyl-d14	65%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW13	Date Sampled:	03/20/09
Lab Sample ID:	F64124-7	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	EF091340.D	1	03/25/09	CW	n/a	n/a	GEF5116
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene ^b	ND	3.0	3.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	7.5	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.4	1.0	0.50	ug/l	
108-88-3	Toluene	5.0	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	125	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	107%		70-120%
98-08-8	aaa-Trifluorotoluene	101%		73-118%

(a) All hits confirmed by GC/MS.

(b) Elevated reporting limit due to matrix interference.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW13	Date Sampled:	03/20/09
Lab Sample ID:	F64124-7	Date Received:	03/21/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	4.7 B	5.0	2.0	ug/l	1	03/23/09	03/23/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7123
(2) Prep QC Batch: MP16095

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-TRIP BLANK03202009			Date Sampled:	03/20/09
Lab Sample ID:	F64124-8			Date Received:	03/21/09
Matrix:	AQ - Trip Blank Water			Percent Solids:	n/a
Method:	EPA 602				
Project:	Camp Lejeune-BM 820				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EF091341.D	1	03/25/09	CW	n/a	n/a	GEF5116
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		70-120%
98-08-8	aaa-Trifluorotoluene	100%		73-118%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

COC Number:
125709-820-032009

F64124
Shaw

Shaw Environmental & Infrastructure, Inc.

CHAIN-OF-CUSTODY RECORD

Shaw E & I - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390										Receiving LAB: Accutest									
Project Name				Project Location						Analysis Desired									
CAMP LEJEUNE - BM 820				CAMP LEJEUNE, NC															
Project Number		Contact		P.O. Number		Reviewed by													
125709		Mark Martin																	
Client Rep				Project Manager															
US NAVY - LANTDIV				Mark Pisarcik															
Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description		Number of Containers	602 + Xylenes	PAHs 625	Total Lead by 3030C								
1	UST820-MW03	3/20/09	10:30		X	UST820-MW03		6	X	X	X								
2	UST820-MW12	3/20/09	11:10		X	UST820-MW12		6	X	X	X								
3	UST820-MW06	3/20/09	12:00		X	UST820-MW06		6	X	X	X								
4	UST820-MW06D	3/20/09	12:00		X	UST820-MW06D		6	X	X	X								
5	UST820-MW09	3/20/09	13:15		X	UST820-MW09		6	X	X	X								
6	UST820-MW09D	3/20/09	14:20		X	UST820-MW09D		6	X	X	X								
7	UST820-MW13	3/20/09	15:00		X	UST820-MW13		6	X	X	X								
8	UST820-Trip Blank032009	3/20/09			X	UST820-Trip Blank032009		2	X										
9																			
10																			

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 - 8	<i>M.A. Melle</i>	FedEx 8684 4334 2279, 8684 4334 2268	03/20/09	16:00	14 Day TAT
2		FX 3/21/09 9:00	<i>AR Moutest</i>	3/21/09	9:00	
3						

2.4 2.6

F64124: Chain of Custody

Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F64124 CLIENT: Shaw PROJECT: Camp Lejeune
 DATE/TIME RECEIVED: 3/21/09 9:00 # OF COOLERS RECEIVED: 2 COOLER TEMPS: 2.4 2.6
 METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER
 AIRBILL NUMBERS: 8684 4334 2279

COOLER INFORMATION

- ☐ CUSTODY SEAL NOT PRESENT OR NOT INTACT
- ☐ CHAIN OF CUSTODY NOT RECEIVED (COC)
- ☐ ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- ☐ SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- ☐ TEMPERATURE CRITERIA NOT MET
- ☐ WET ICE RECEIVED IN COOLER

TRIP BLANK INFORMATION

- ☒ TRIP BLANK PROVIDED
- ☐ TRIP BLANK NOT PROVIDED
- ☐ TRIP BLANK NOT ON COC
- ☒ TRIP BLANK INTACT
- ☐ TRIP BLANK NOT INTACT
- ☒ RECEIVED WATER TRIP BLANK
- ☐ RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 8
 NUMBER OF 5035 FIELD KITS ? 8
 NUMBER OF LAB FILTERED METALS ? 8

SUMMARY OF COMMENTS: _____

SAMPLE INFORMATION

- ☐ SAMPLE LABELS NOT PRESENT ON ALL BOTTLES
- ☐ CORRECT NUMBER OF CONTAINERS USED
- ☐ SAMPLE RECEIVED IMPROPERLY PRESERVED
- ☐ INSUFFICIENT VOLUME FOR ANALYSIS
- ☐ TIMES ON COC DOES NOT MATCH LABEL(S)
- ☐ ID'S ON COC DOES NOT MATCH LABEL(S)
- ☐ VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- ☐ BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- ☐ NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- ☐ UNCLEAR FILTERING INSTRUCTIONS
- ☐ UNCLEAR COMPOSITING INSTRUCTIONS
- ☐ SAMPLE CONTAINER(S) RECEIVED BROKEN
- ☐ % SOLIDS JAR NOT RECEIVED
- ☐ 5035 FIELD KIT NOT FROZEN WITHIN 48 HOUR'S
- ☐ RESIDUAL CHLORINE PRESENT

(APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

TECHNICIAN SIGNATURE/DATE

Chaf 3/21/09

TECHNICIAN SIGNATURE/DATE

E.T. 3-21-09

ASBD 12/17/07

F64124: Chain of Custody

Page 2 of 2



GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: F64124

Account: ITVAVAB Shaw E & I, Inc.

Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28504-MB	L043978.D	1	03/30/09	RB	03/26/09	OP28504	SL2230

The QC reported here applies to the following samples:

Method: EPA 625

F64124-1, F64124-2, F64124-3, F64124-4, F64124-5, F64124-6, F64124-7

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	1.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.0	ug/l	
120-12-7	Anthracene	ND	5.0	1.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	1.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	1.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	1.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	1.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	1.0	ug/l	
218-01-9	Chrysene	ND	5.0	1.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	1.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	1.0	ug/l	
86-73-7	Fluorene	ND	5.0	1.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	1.0	ug/l	
129-00-0	Pyrene	ND	5.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	74% 42-108%
321-60-8	2-Fluorobiphenyl	77% 40-106%
1718-51-0	Terphenyl-d14	75% 39-121%

Method Blank Summary

Page 1 of 1

Job Number: F64124
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28504-MB	X005859.D	1	03/30/09	NAF	03/26/09	OP28504	SX301

The QC reported here applies to the following samples:

Method: EPA 625

F64124-1, F64124-2, F64124-3, F64124-4, F64124-5, F64124-6, F64124-7

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	1.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.0	ug/l	
120-12-7	Anthracene	ND	5.0	1.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	1.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	1.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	1.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	1.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	1.0	ug/l	
218-01-9	Chrysene	ND	5.0	1.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	1.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	1.0	ug/l	
86-73-7	Fluorene	ND	5.0	1.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	1.0	ug/l	
129-00-0	Pyrene	ND	5.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	79% 42-108%
321-60-8	2-Fluorobiphenyl	76% 40-106%
1718-51-0	Terphenyl-d14	78% 39-121%

Blank Spike Summary

Page 1 of 1

Job Number: F64124

Account: ITVAVAB Shaw E & I, Inc.

Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28504-BS	L043977.D	1	03/30/09	RB	03/26/09	OP28504	SL2230

The QC reported here applies to the following samples:

Method: EPA 625

F64124-1, F64124-2, F64124-3, F64124-4, F64124-5, F64124-6, F64124-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	43.2	86	58-106
208-96-8	Acenaphthylene	50	41.7	83	58-105
120-12-7	Anthracene	50	43.3	87	65-108
56-55-3	Benzo(a)anthracene	50	43.6	87	63-111
50-32-8	Benzo(a)pyrene	50	45.3	91	62-106
205-99-2	Benzo(b)fluoranthene	50	45.0	90	63-109
191-24-2	Benzo(g,h,i)perylene	50	46.6	93	61-111
207-08-9	Benzo(k)fluoranthene	50	49.8	100	64-111
218-01-9	Chrysene	50	46.7	93	64-111
53-70-3	Dibenzo(a,h)anthracene	50	43.9	88	62-112
206-44-0	Fluoranthene	50	45.7	91	65-114
86-73-7	Fluorene	50	44.6	89	61-106
193-39-5	Indeno(1,2,3-cd)pyrene	50	41.2	82	61-113
90-12-0	1-Methylnaphthalene	50	38.1	76	52-102
91-57-6	2-Methylnaphthalene	50	40.3	81	56-112
91-20-3	Naphthalene	50	36.6	73	50-104
85-01-8	Phenanthrene	50	46.6	93	65-108
129-00-0	Pyrene	50	45.4	91	60-113

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	78%	42-108%
321-60-8	2-Fluorobiphenyl	80%	40-106%
1718-51-0	Terphenyl-d14	78%	39-121%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F64124
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28504-MS	L043988.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
OP28504-MSD	L043989.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
F64150-2	L043987.D	1	03/30/09	RB	03/26/09	OP28504	SL2230

The QC reported here applies to the following samples:

Method: EPA 625

F64124-1, F64124-2, F64124-3, F64124-4, F64124-5, F64124-6, F64124-7

CAS No.	Compound	F64150-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		98	85.8	88	85.1	87	1	58-106/21
208-96-8	Acenaphthylene	ND		98	82.9	85	82.0	84	1	58-105/21
120-12-7	Anthracene	ND		98	85.7	87	82.8	84	3	65-108/19
56-55-3	Benzo(a)anthracene	ND		98	86.8	89	82.3	84	5	63-111/19
50-32-8	Benzo(a)pyrene	ND		98	86.1	88	82.7	84	4	62-106/20
205-99-2	Benzo(b)fluoranthene	ND		98	89.1	91	84.3	86	6	63-109/20
191-24-2	Benzo(g,h,i)perylene	ND		98	91.7	94	89.7	91	2	61-111/21
207-08-9	Benzo(k)fluoranthene	ND		98	97.5	99	96.0	98	2	64-111/20
218-01-9	Chrysene	ND		98	91.8	94	87.3	89	5	64-111/19
53-70-3	Dibenzo(a,h)anthracene	ND		98	86.0	88	83.5	85	3	62-112/20
206-44-0	Fluoranthene	ND		98	92.2	94	87.1	89	6	65-114/21
86-73-7	Fluorene	ND		98	87.1	89	85.3	87	2	61-106/19
193-39-5	Indeno(1,2,3-cd)pyrene	ND		98	81.0	83	76.6	78	6	61-113/20
90-12-0	1-Methylnaphthalene	ND		98	80.8	82	79.2	81	2	52-102/25
91-57-6	2-Methylnaphthalene	ND		98	80.8	82	81.2	83	0	56-112/26
91-20-3	Naphthalene	ND		98	79.9	81	78.8	80	1	50-104/28
85-01-8	Phenanthrene	ND		98	91.4	93	88.3	90	3	65-108/20
129-00-0	Pyrene	ND		98	91.0	93	89.9	92	1	60-113/20

CAS No.	Surrogate Recoveries	MS	MSD	F64150-2	Limits
4165-60-0	Nitrobenzene-d5	77%	78%	62%	42-108%
321-60-8	2-Fluorobiphenyl	78%	78%	62%	40-106%
1718-51-0	Terphenyl-d14	77%	76%	60%	39-121%



GC Volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: F64124
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEF5113-MB	EF091270.D	1	03/23/09	CW	n/a	n/a	GEF5113

The QC reported here applies to the following samples:

Method: EPA 602

F64124-1, F64124-2, F64124-3, F64124-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	104% 70-120%
98-08-8	aaa-Trifluorotoluene	104% 73-118%

Method Blank Summary

Page 1 of 1

Job Number: F64124
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEF5116-MB	EF091335.D	1	03/25/09	CW	n/a	n/a	GEF5116

The QC reported here applies to the following samples:

Method: EPA 602

F64124-3, F64124-4, F64124-5, F64124-6, F64124-7, F64124-8

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	93% 70-120%
98-08-8	aaa-Trifluorotoluene	91% 73-118%

Blank Spike Summary

Job Number: F64124
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEF5113-BS	EF091269.D	1	03/23/09	CW	n/a	n/a	GEF5113

The QC reported here applies to the following samples: Method: EPA 602

F64124-1, F64124-2, F64124-3, F64124-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	22.5	113	80-120
108-90-7	Chlorobenzene	20	21.2	106	79-118
95-50-1	1,2-Dichlorobenzene	20	21.0	105	76-117
541-73-1	1,3-Dichlorobenzene	20	21.3	107	78-120
106-46-7	1,4-Dichlorobenzene	20	21.3	107	78-117
100-41-4	Ethylbenzene	20	22.3	112	79-121
1634-04-4	Methyl Tert Butyl Ether	20	20.2	101	72-113
108-88-3	Toluene	20	22.2	111	79-121
1330-20-7	Xylenes (total)	60	63.9	107	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	106%	70-120%
98-08-8	aaa-Trifluorotoluene	104%	73-118%

Blank Spike Summary

Job Number: F64124
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEF5116-BS	EF091334.D	1	03/25/09	CW	n/a	n/a	GEF5116

The QC reported here applies to the following samples: Method: EPA 602

F64124-3, F64124-4, F64124-5, F64124-6, F64124-7, F64124-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.6	103	80-120
108-90-7	Chlorobenzene	20	20.8	104	79-118
95-50-1	1,2-Dichlorobenzene	20	20.2	101	76-117
541-73-1	1,3-Dichlorobenzene	20	20.7	104	78-120
106-46-7	1,4-Dichlorobenzene	20	20.5	103	78-117
100-41-4	Ethylbenzene	20	21.9	110	79-121
1634-04-4	Methyl Tert Butyl Ether	20	19.7	99	72-113
108-88-3	Toluene	20	21.3	107	79-121
1330-20-7	Xylenes (total)	60	62.5	104	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	104%	70-120%
98-08-8	aaa-Trifluorotoluene	100%	73-118%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F64124
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F64092-1MS	EF091275.D	1	03/23/09	CW	n/a	n/a	GEF5113
F64092-1MSD	EF091276.D	1	03/23/09	CW	n/a	n/a	GEF5113
F64092-1	EF091271.D	1	03/23/09	CW	n/a	n/a	GEF5113

The QC reported here applies to the following samples:

Method: EPA 602

F64124-1, F64124-2, F64124-3, F64124-4

CAS No.	Compound	F64092-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	1.0 U	20	22.2	111	21.5	108	3	80-120/10
108-90-7	Chlorobenzene	1.0 U	20	21.1	106	21.1	106	0	79-118/10
95-50-1	1,2-Dichlorobenzene	1.0 U	20	20.3	102	20.2	101	0	76-117/18
541-73-1	1,3-Dichlorobenzene	1.0 U	20	21.0	105	20.9	105	0	78-120/13
106-46-7	1,4-Dichlorobenzene	1.0 U	20	20.7	104	20.6	103	0	78-117/11
100-41-4	Ethylbenzene	1.0 U	20	22.1	111	22.0	110	0	79-121/9
1634-04-4	Methyl Tert Butyl Ether	1.0 U	20	20.0	100	20.1	101	0	72-113/13
108-88-3	Toluene	1.0 U	20	22.1	111	21.8	109	1	79-121/10
1330-20-7	Xylenes (total)	3.0 U	60	63.3	106	63.1	105	0	80-119/8

CAS No.	Surrogate Recoveries	MS	MSD	F64092-1	Limits
460-00-4	4-Bromofluorobenzene	107%	108%	102%	70-120%
98-08-8	aaa-Trifluorotoluene	105%	105%	100%	73-118%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F64124
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F64124-6MS	EF091346.D	1	03/25/09	CW	n/a	n/a	GEF5116
F64124-6MSD	EF091347.D	1	03/25/09	CW	n/a	n/a	GEF5116
F64124-6 ^a	EF091339.D	1	03/25/09	CW	n/a	n/a	GEF5116

The QC reported here applies to the following samples:

Method: EPA 602

F64124-3, F64124-4, F64124-5, F64124-6, F64124-7, F64124-8

CAS No.	Compound	F64124-6 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	21.3	107	21.0	105	1	80-120/10
108-90-7	Chlorobenzene	ND	20	21.0	105	20.7	104	1	79-118/10
95-50-1	1,2-Dichlorobenzene	ND	20	20.2	101	19.8	99	2	76-117/18
541-73-1	1,3-Dichlorobenzene	ND	20	20.8	104	20.3	102	2	78-120/13
106-46-7	1,4-Dichlorobenzene	ND	20	20.5	103	20.0	100	2	78-117/11
100-41-4	Ethylbenzene	ND	20	22.0	110	21.6	108	2	79-121/9
1634-04-4	Methyl Tert Butyl Ether	28.5	20	47.5	95	43.9	77	8	72-113/13
108-88-3	Toluene	ND	20	21.8	109	21.4	107	2	79-121/10
1330-20-7	Xylenes (total)	ND	60	62.5	104	61.5	103	2	80-119/8

CAS No.	Surrogate Recoveries	MS	MSD	F64124-6	Limits
460-00-4	4-Bromofluorobenzene	107%	108%	102%	70-120%
98-08-8	aaa-Trifluorotoluene	103%	104%	102%	73-118%

(a) All hits confirmed by dual column analysis.



Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F64124
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

QC Batch ID: MP16095
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 03/23/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	11	11		
Antimony	6.0	4.5	4.5		
Arsenic	10	3.6	5.4		
Barium	200	5	5		
Beryllium	4.0	1	1		
Cadmium	5.0	1	1		
Calcium	1000	100	100		
Chromium	10	1.6	2		
Cobalt	50	.83	1		
Copper	25	2.1	5		
Iron	300	23	23		
Lead	5.0	2	2	0.19	<5.0
Magnesium	5000	100	100		
Manganese	15	.5	1		
Molybdenum	50	2.8	5		
Nickel	40	2.3	2.3		
Potassium	10000	100	100		
Selenium	10	3.1	3.4		
Silver	10	1.2	1.4		
Sodium	10000	500	500		
Thallium	10	3.4	3.6		
Tin	50	2.8	2.8		
Vanadium	50	.66	.9		
Zinc	20	3.8	7.4		

Associated samples MP16095: F64124-1, F64124-2, F64124-3, F64124-4, F64124-5, F64124-6, F64124-7

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F64124
 Account: ITVAVAB - Shaw E & I, Inc.
 Project: Camp Lejeune-BM 820

QC Batch ID: MP16095
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 03/23/09

03/23/09

Metal	F64124-1 Original	DUP	RPD	QC Limits	F64124-1 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead	0.0	0.0	NC	0-20	0.0	495	500	99.0	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Tin									
Vanadium									
Zinc									

Associated samples MP16095: F64124-1, F64124-2, F64124-3, F64124-4, F64124-5, F64124-6, F64124-7

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F64124
 Account: ITVAVAB - Shaw E & I, Inc.
 Project: Camp Lejeune-BM 820

QC Batch ID: MP16095
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 03/23/09

Metal	BSP Result	Spike lot MPFLICP1	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	512	500	102.4	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Thallium				
Tin				
Vanadium				
Zinc				

Associated samples MP16095: F64124-1, F64124-2, F64124-3, F64124-4, F64124-5, F64124-6, F64124-7

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F64124
 Account: ITVAVAB - Shaw E & I, Inc.
 Project: Camp Lejeune-BM 820

QC Batch ID: MP16095
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 03/23/09

Metal	F64124-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Thallium				
Tin				
Vanadium				
Zinc				

Associated samples MP16095: F64124-1, F64124-2, F64124-3, F64124-4, F64124-5, F64124-6, F64124-7

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested



04/08/09

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-BM 820

125709

Accutest Job Number: F64150

Sampling Dates: 03/22/09 - 03/23/09

Report to:

Shaw E & I, Inc.
500 E Main St Suite 1630
Norfolk, VA 23510
natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: **89**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Heather Wandrey 407-425-6700

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK
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Test results relate only to samples analyzed.

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Sample Summary

Shaw E & I, Inc.

Job No: F64150

Camp Lejeune-BM 820
Project No: 125709

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F64150-1	03/22/09	09:20 MM	03/24/09	AQ	Ground Water	UST820-MW18
F64150-2	03/22/09	10:10 MM	03/24/09	AQ	Ground Water	UST820-MW16
F64150-3	03/22/09	11:10 MM	03/24/09	AQ	Ground Water	UST820-MW20
F64150-4	03/22/09	12:00 MM	03/24/09	AQ	Ground Water	UST820-MW21
F64150-5	03/22/09	13:50 MM	03/24/09	AQ	Ground Water	UST820-MW24
F64150-6	03/22/09	14:30 MM	03/24/09	AQ	Ground Water	UST820-MW25
F64150-7	03/22/09	09:00 MM	03/24/09	AQ	Ground Water	UST820-MW11
F64150-8	03/22/09	10:00 MM	03/24/09	AQ	Ground Water	UST820-MW15
F64150-9	03/22/09	11:00 MM	03/24/09	AQ	Ground Water	UST820-MW13
F64150-10	03/22/09	12:00 MM	03/24/09	AQ	Ground Water	UST820-MW29
F64150-11	03/22/09	13:00 MM	03/24/09	AQ	Ground Water	UST820-MW26
F64150-12	03/22/09	14:00 MM	03/24/09	AQ	Ground Water	UST820-MW04
F64150-13	03/22/09	15:00 MM	03/24/09	AQ	Ground Water	UST820-MW02



Sample Summary
(continued)

Shaw E & I, Inc.

Job No: F64150

Camp Lejeune-BM 820
Project No: 125709

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F64150-14	03/22/09	16:00 MM	03/24/09	AQ	Ground Water	UST820-MW07
F64150-15	03/22/09	17:00 MM	03/24/09	AQ	Ground Water	UST820-MW08
F64150-16	03/23/09	09:00 MM	03/24/09	AQ	Ground Water	UST820-MW23
F64150-17	03/23/09	10:30 MM	03/24/09	AQ	Ground Water	UST820-MW17
F64150-18	03/23/09	11:30 MM	03/24/09	AQ	Ground Water	UST820-MW28
F64150-19	03/23/09	12:30 MM	03/24/09	AQ	Ground Water	UST820-MW10
F64150-20	03/23/09	00:00 MM	03/24/09	AQ	Trip Blank Water	UST820-TB-032309



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: UST820-MW18
Lab Sample ID: F64150-1
Matrix: AQ - Ground Water
Method: EPA 625 EPA 625
Project: Camp Lejeune-BM 820

Date Sampled: 03/22/09
Date Received: 03/24/09
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043986.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	57%		42-108%
321-60-8	2-Fluorobiphenyl	59%		40-106%
1718-51-0	Terphenyl-d14	64%		39-121%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW18	Date Sampled:	03/22/09
Lab Sample ID:	F64150-1	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ044884.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	93%		70-120%
98-08-8	aaa-Trifluorotoluene	107%		73-118%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW18	Date Sampled:	03/22/09
Lab Sample ID:	F64150-1	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	9.4	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125
(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit
U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW16	Date Sampled:	03/22/09
Lab Sample ID:	F64150-2	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043987.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	62%		42-108%
321-60-8	2-Fluorobiphenyl	62%		40-106%
1718-51-0	Terphenyl-d14	60%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW16	Date Sampled:	03/22/09
Lab Sample ID:	F64150-2	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ044885.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		70-120%
98-08-8	aaa-Trifluorotoluene	107%		73-118%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW16	Date Sampled:	03/22/09
Lab Sample ID:	F64150-2	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead ^a	31.3	20	8.0	ug/l	4	03/24/09	03/25/09 RS	SW846 6010B ¹	SM 3030C ²

- (1) Instrument QC Batch: MA7127
(2) Prep QC Batch: MP16114

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: UST820-MW20
Lab Sample ID: F64150-3
Matrix: AQ - Ground Water
Method: EPA 625 EPA 625
Project: Camp Lejeune-BM 820

Date Sampled: 03/22/09
Date Received: 03/24/09
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043990.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.9	0.97	ug/l	
208-96-8	Acenaphthylene	ND	4.9	0.97	ug/l	
120-12-7	Anthracene	ND	4.9	0.97	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.9	0.97	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.9	0.97	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.9	0.97	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.97	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.9	0.97	ug/l	
218-01-9	Chrysene	ND	4.9	0.97	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.97	ug/l	
206-44-0	Fluoranthene	ND	4.9	0.97	ug/l	
86-73-7	Fluorene	ND	4.9	0.97	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.9	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.9	0.97	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.9	0.97	ug/l	
91-20-3	Naphthalene	ND	4.9	0.97	ug/l	
85-01-8	Phenanthrene	ND	4.9	0.97	ug/l	
129-00-0	Pyrene	ND	4.9	0.97	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	66%		42-108%
321-60-8	2-Fluorobiphenyl	66%		40-106%
1718-51-0	Terphenyl-d14	63%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW20	Date Sampled:	03/22/09
Lab Sample ID:	F64150-3	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ044886.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		70-120%
98-08-8	aaa-Trifluorotoluene	107%		73-118%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW20	Date Sampled:	03/22/09
Lab Sample ID:	F64150-3	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.0 U	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125
(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit
U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: UST820-MW21
Lab Sample ID: F64150-4
Matrix: AQ - Ground Water
Method: EPA 625 EPA 625
Project: Camp Lejeune-BM 820

Date Sampled: 03/22/09
Date Received: 03/24/09
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043991.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		42-108%
321-60-8	2-Fluorobiphenyl	61%		40-106%
1718-51-0	Terphenyl-d14	65%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW21	Date Sampled:	03/22/09
Lab Sample ID:	F64150-4	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ044887.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.2	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		70-120%
98-08-8	aaa-Trifluorotoluene	106%		73-118%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW21	Date Sampled:	03/22/09
Lab Sample ID:	F64150-4	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.0 U	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125
(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: UST820-MW24
Lab Sample ID: F64150-5
Matrix: AQ - Ground Water
Method: EPA 625 EPA 625
Project: Camp Lejeune-BM 820

Date Sampled: 03/22/09
Date Received: 03/24/09
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043992.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	57%		42-108%
321-60-8	2-Fluorobiphenyl	58%		40-106%
1718-51-0	Terphenyl-d14	56%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW24	Date Sampled:	03/22/09
Lab Sample ID:	F64150-5	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ044888.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		70-120%
98-08-8	aaa-Trifluorotoluene	106%		73-118%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW24	Date Sampled:	03/22/09
Lab Sample ID:	F64150-5	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.0 U	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125
(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: UST820-MW25
Lab Sample ID: F64150-6
Matrix: AQ - Ground Water
Method: EPA 625 EPA 625
Project: Camp Lejeune-BM 820

Date Sampled: 03/22/09
Date Received: 03/24/09
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043993.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	59%		42-108%
321-60-8	2-Fluorobiphenyl	59%		40-106%
1718-51-0	Terphenyl-d14	59%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW25	Date Sampled:	03/22/09
Lab Sample ID:	F64150-6	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ044889.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	93%		70-120%
98-08-8	aaa-Trifluorotoluene	108%		73-118%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW25	Date Sampled:	03/22/09
Lab Sample ID:	F64150-6	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.0 U	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125
(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit
U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW11	Date Sampled:	03/22/09
Lab Sample ID:	F64150-7	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	L043994.D	4	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	20	3.9	ug/l	
208-96-8	Acenaphthylene	ND	20	3.9	ug/l	
120-12-7	Anthracene	ND	20	3.9	ug/l	
56-55-3	Benzo(a)anthracene	ND	20	3.9	ug/l	
50-32-8	Benzo(a)pyrene	ND	20	3.9	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	20	3.9	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	20	3.9	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	20	3.9	ug/l	
218-01-9	Chrysene	ND	20	3.9	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	20	3.9	ug/l	
206-44-0	Fluoranthene	ND	20	3.9	ug/l	
86-73-7	Fluorene	ND	20	3.9	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	20	4.3	ug/l	
90-12-0	1-Methylnaphthalene	22.9	20	3.9	ug/l	
91-57-6	2-Methylnaphthalene	29.7	20	3.9	ug/l	
91-20-3	Naphthalene	98.7	20	3.9	ug/l	
85-01-8	Phenanthrene	ND	20	3.9	ug/l	
129-00-0	Pyrene	ND	20	3.9	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	70%		42-108%
321-60-8	2-Fluorobiphenyl	76%		40-106%
1718-51-0	Terphenyl-d14	66%		39-121%

(a) Dilution required due to matrix interference.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW11	Date Sampled:	03/22/09
Lab Sample ID:	F64150-7	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ044894.D	10	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2	QQ044932.D	20	04/04/09	NJ	n/a	n/a	GQQ1680

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	10	5.0	ug/l	
108-90-7	Chlorobenzene	ND	10	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene ^b	ND	85	85	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	10	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	10	5.0	ug/l	
100-41-4	Ethylbenzene	118	10	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	21.0	10	5.0	ug/l	
108-88-3	Toluene	8.5	10	5.0	ug/l	J
1330-20-7	Xylenes (total)	4390 ^c	60	20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	109%	109%	70-120%
98-08-8	aaa-Trifluorotoluene	108%	114%	73-118%

(a) All hits confirmed by GC/MS.

(b) Elevated reporting limit due to matrix interference.

(c) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW11	Date Sampled:	03/22/09
Lab Sample ID:	F64150-7	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	11.5	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125
(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: UST820-MW15
Lab Sample ID: F64150-8
Matrix: AQ - Ground Water
Method: EPA 625 EPA 625
Project: Camp Lejeune-BM 820

Date Sampled: 03/22/09
Date Received: 03/24/09
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043995.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		42-108%
321-60-8	2-Fluorobiphenyl	69%		40-106%
1718-51-0	Terphenyl-d14	50%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW15	Date Sampled:	03/22/09
Lab Sample ID:	F64150-8	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ044895.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		70-120%
98-08-8	aaa-Trifluorotoluene	107%		73-118%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW15	Date Sampled:	03/22/09
Lab Sample ID:	F64150-8	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	6.6	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125
(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit
U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: UST820-MW13
Lab Sample ID: F64150-9
Matrix: AQ - Ground Water
Method: EPA 625 EPA 625
Project: Camp Lejeune-BM 820

Date Sampled: 03/22/09
Date Received: 03/24/09
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043996.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	1.1	4.8	0.96	ug/l	J
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	9.8	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	59%		42-108%
321-60-8	2-Fluorobiphenyl	61%		40-106%
1718-51-0	Terphenyl-d14	57%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW13
Lab Sample ID: F64150-9
Matrix: AQ - Ground Water
Method: EPA 602
Project: Camp Lejeune-BM 820

Date Sampled: 03/22/09
Date Received: 03/24/09
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ044933.D	5	04/04/09	NJ	n/a	n/a	GQQ1680
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	2.5	ug/l	
108-90-7	Chlorobenzene	ND	5.0	2.5	ug/l	
95-50-1	1,2-Dichlorobenzene ^b	ND	14	14	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	2.5	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	2.5	ug/l	
100-41-4	Ethylbenzene	42.5	5.0	2.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.5	ug/l	
108-88-3	Toluene	45.0	5.0	2.5	ug/l	
1330-20-7	Xylenes (total)	836	15	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	104%		70-120%
98-08-8	aaa-Trifluorotoluene	109%		73-118%

(a) All hits confirmed by GC/MS.

(b) Elevated reporting limit due to matrix interference.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW13	Date Sampled:	03/22/09
Lab Sample ID:	F64150-9	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	8.2	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125
(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW29	Date Sampled:	03/22/09
Lab Sample ID:	F64150-10	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043997.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		42-108%
321-60-8	2-Fluorobiphenyl	65%		40-106%
1718-51-0	Terphenyl-d14	54%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW29	Date Sampled:	03/22/09
Lab Sample ID:	F64150-10	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ044897.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	20.5	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	1.3	3.0	1.0	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	90%		70-120%
98-08-8	aaa-Trifluorotoluene	108%		73-118%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW29
Lab Sample ID: F64150-10
Matrix: AQ - Ground Water
Project: Camp Lejeune-BM 820

Date Sampled: 03/22/09
Date Received: 03/24/09
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.0 U	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125

(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW26	Date Sampled:	03/22/09
Lab Sample ID:	F64150-11	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043998.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%		42-108%
321-60-8	2-Fluorobiphenyl	69%		40-106%
1718-51-0	Terphenyl-d14	63%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW26	Date Sampled:	03/22/09
Lab Sample ID:	F64150-11	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ044898.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		70-120%
98-08-8	aaa-Trifluorotoluene	107%		73-118%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW26
Lab Sample ID: F64150-11
Matrix: AQ - Ground Water
Project: Camp Lejeune-BM 820

Date Sampled: 03/22/09
Date Received: 03/24/09
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	5.7	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125

(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW04	Date Sampled:	03/22/09
Lab Sample ID:	F64150-12	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L043999.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		42-108%
321-60-8	2-Fluorobiphenyl	64%		40-106%
1718-51-0	Terphenyl-d14	54%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW04	Date Sampled:	03/22/09
Lab Sample ID:	F64150-12	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ044899.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	90%		70-120%
98-08-8	aaa-Trifluorotoluene	108%		73-118%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW04
Lab Sample ID: F64150-12
Matrix: AQ - Ground Water
Project: Camp Lejeune-BM 820

Date Sampled: 03/22/09
Date Received: 03/24/09
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.0 U	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125

(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW02	Date Sampled:	03/22/09
Lab Sample ID:	F64150-13	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L044000.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	18.8	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	25.4	4.8	0.96	ug/l	
91-20-3	Naphthalene	22.2	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		42-108%
321-60-8	2-Fluorobiphenyl	67%		40-106%
1718-51-0	Terphenyl-d14	61%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW02	Date Sampled:	03/22/09
Lab Sample ID:	F64150-13	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ044900.D	2	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2	QQ044934.D	5	04/04/09	NJ	n/a	n/a	GQQ1680

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	2.0	1.0	ug/l	
108-90-7	Chlorobenzene	ND	2.0	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	45.4	2.0	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	29.0	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	7.2	2.0	1.0	ug/l	
108-88-3	Toluene	211 ^b	5.0	2.5	ug/l	
1330-20-7	Xylenes (total)	155	6.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%	97%	70-120%
98-08-8	aaa-Trifluorotoluene	115%	108%	73-118%

(a) All hits confirmed by dual column analysis.

(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW02	Date Sampled:	03/22/09
Lab Sample ID:	F64150-13	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.0 U	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125
(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit
U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW07	Date Sampled:	03/22/09
Lab Sample ID:	F64150-14	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X005866.D	1	03/31/09	NAF	03/27/09	OP28518	SX302
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		42-108%
321-60-8	2-Fluorobiphenyl	79%		40-106%
1718-51-0	Terphenyl-d14	77%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW07	Date Sampled:	03/22/09
Lab Sample ID:	F64150-14	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ044901.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		70-120%
98-08-8	aaa-Trifluorotoluene	115%		73-118%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW07
Lab Sample ID: F64150-14
Matrix: AQ - Ground Water
Project: Camp Lejeune-BM 820

Date Sampled: 03/22/09
Date Received: 03/24/09
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	10.9	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125

(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW08	Date Sampled:	03/22/09
Lab Sample ID:	F64150-15	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X005867.D	1	03/31/09	NAF	03/27/09	OP28518	SX302
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	71%		42-108%
321-60-8	2-Fluorobiphenyl	71%		40-106%
1718-51-0	Terphenyl-d14	84%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW08	Date Sampled:	03/22/09
Lab Sample ID:	F64150-15	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ044902.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	100%		70-120%
98-08-8	aaa-Trifluorotoluene	115%		73-118%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW08	Date Sampled:	03/22/09
Lab Sample ID:	F64150-15	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-BM 820		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.0 U	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125
(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW23	Date Sampled:	03/23/09
Lab Sample ID:	F64150-16	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X005868.D	1	03/31/09	NAF	03/27/09	OP28518	SX302
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	74%		42-108%
321-60-8	2-Fluorobiphenyl	76%		40-106%
1718-51-0	Terphenyl-d14	81%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW23	Date Sampled:	03/23/09
Lab Sample ID:	F64150-16	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ044903.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.3	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		70-120%
98-08-8	aaa-Trifluorotoluene	110%		73-118%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW23
Lab Sample ID: F64150-16
Matrix: AQ - Ground Water
Project: Camp Lejeune-BM 820

Date Sampled: 03/23/09
Date Received: 03/24/09
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.0 U	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125

(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW17	Date Sampled:	03/23/09
Lab Sample ID:	F64150-17	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X005871.D	1	03/31/09	NAF	03/27/09	OP28518	SX302
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	75%		42-108%
321-60-8	2-Fluorobiphenyl	77%		40-106%
1718-51-0	Terphenyl-d14	62%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW17	Date Sampled:	03/23/09
Lab Sample ID:	F64150-17	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ044935.D	10	04/04/09	NJ	n/a	n/a	GQQ1680
Run #2	QQ044906.D	50	04/03/09	NJ	n/a	n/a	GQQ1678

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	148	10	5.0	ug/l	
108-90-7	Chlorobenzene	ND	10	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	10	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	10	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	10	5.0	ug/l	
100-41-4	Ethylbenzene	ND	10	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2070 ^b	50	25	ug/l	
108-88-3	Toluene	ND	10	5.0	ug/l	
1330-20-7	Xylenes (total)	ND	30	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	100%	94%	70-120%
98-08-8	aaa-Trifluorotoluene	114%	109%	73-118%

(a) All hits confirmed by dual column analysis.

(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW17
Lab Sample ID: F64150-17
Matrix: AQ - Ground Water
Project: Camp Lejeune-BM 820

Date Sampled: 03/23/09
Date Received: 03/24/09
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead ^a	45.8 B	100	40	ug/l	20	03/24/09	03/26/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7131

(2) Prep QC Batch: MP16114

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW28	Date Sampled:	03/23/09
Lab Sample ID:	F64150-18	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X005872.D	1	03/31/09	NAF	03/27/09	OP28518	SX302
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		42-108%
321-60-8	2-Fluorobiphenyl	81%		40-106%
1718-51-0	Terphenyl-d14	84%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW28	Date Sampled:	03/23/09
Lab Sample ID:	F64150-18	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ044907.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2	QQ044936.D	5	04/04/09	NJ	n/a	n/a	GQQ1680

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	43.1	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	161 ^b	5.0	2.5	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%	95%	70-120%
98-08-8	aaa-Trifluorotoluene	112%	108%	73-118%

(a) All hits confirmed by dual column analysis.

(b) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW28
Lab Sample ID: F64150-18
Matrix: AQ - Ground Water
Project: Camp Lejeune-BM 820

Date Sampled: 03/23/09
Date Received: 03/24/09
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.0 U	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125
(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit
U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-MW10	Date Sampled:	03/23/09
Lab Sample ID:	F64150-19	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X005873.D	1	03/31/09	NAF	03/27/09	OP28518	SX302
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	0.96	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.96	ug/l	
120-12-7	Anthracene	ND	4.8	0.96	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.96	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.96	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.96	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.96	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.96	ug/l	
218-01-9	Chrysene	ND	4.8	0.96	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.96	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.96	ug/l	
86-73-7	Fluorene	ND	4.8	0.96	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	0.96	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.96	ug/l	
129-00-0	Pyrene	ND	4.8	0.96	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		42-108%
321-60-8	2-Fluorobiphenyl	64%		40-106%
1718-51-0	Terphenyl-d14	60%		39-121%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST820-MW10	Date Sampled:	03/23/09
Lab Sample ID:	F64150-19	Date Received:	03/24/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ044908.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	43.6	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		70-120%
98-08-8	aaa-Trifluorotoluene	109%		73-118%

(a) All hits confirmed by dual column analysis.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: UST820-MW10
Lab Sample ID: F64150-19
Matrix: AQ - Ground Water
Project: Camp Lejeune-BM 820

Date Sampled: 03/23/09
Date Received: 03/24/09
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	4.6 B	5.0	2.0	ug/l	1	03/24/09	03/24/09 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA7125

(2) Prep QC Batch: MP16114

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	UST820-TB-032309	Date Sampled:	03/23/09
Lab Sample ID:	F64150-20	Date Received:	03/24/09
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-BM 820		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ044909.D	1	04/03/09	NJ	n/a	n/a	GQQ1678
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		70-120%
98-08-8	aaa-Trifluorotoluene	107%		73-118%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

COC Number:
125709-820-032209-1



Shaw Environmental & Infrastructure, Inc.

CHAIN-OF-CUSTODY RECORD

F64150

Shaw E & I - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390										Receiving LAB: Accutest									
Project Name				Project Location						Analysis Desired									
CAMP LEJEUNE - BM 820				CAMP LEJEUNE, NC															
Project Number		Contact		P.O. Number		Reviewed by													
125709		Mark Martin																	
Client Rep				Project Manager															
US NAVY - LANTDIV				Mark Pisarcik															
Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description		Number of Containers	602 + Xylenes	PAHs 625	Total Lead by 3030C								
①	UST820-MW18	3/22/09	9:20		X	UST820-MW18		6	X	X	X								
②	UST820-MW16	3/22/09	10:10		X	UST820-MW16		6	X	X	X								
③	UST820-MW20	3/22/09	11:10		X	UST820-MW20		6	X	X	X								
④	UST820-MW21	3/22/09	12:00		X	UST820-MW21		6	X	X	X								
⑤	UST820-MW24	3/22/09	13:50		X	UST820-MW24		6	X	X	X								
⑥	UST820-MW25	3/22/09	14:30		X	UST820-MW25		6	X	X	X								
⑦	UST820-MW11	3/22/09	9:00		X	UST820-MW11		6	X	X	X								
⑧	UST820-MW15	3/22/09	10:00		X	UST820-MW15		6	X	X	X								
⑨	UST820-MW13	3/22/09	11:00		X	UST820-MW13		6	X	X	X								
⑩	UST820-MW29	3/22/09	12:00		X	UST820-MW29		6	X	X	X								

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 -- 10	<i>[Signature]</i>	FedEx	03/23/09	17:00	14 Day TAT Fed Ex 8684 4334 2224, 8684 4334 2235, 8684 4334 2246, 8684 4334 2257
2		<i>[Signature]</i>	<i>[Signature]</i>	3-24-09	10:00	
3						

2.4 2.6 2.6
2.2

F64150: Chain of Custody

Page 1 of 3

COC Number:
125709-820-032209-2



CHAIN-OF-CUSTODY RECORD

F64150

Shaw E & I - Piney Green Rd. Lot 203 Bld 626 - 910-451-2390										Receiving LAB: Accutest											
Project Name				Project Location						Analysis Desired											
CAMP LEJEUNE - BM 820				CAMP LEJEUNE, NC																	
Project Number		Contact		P.O. Number		Reviewed by															
125709		Mark Martin																			
Client Rep				Project Manager																	
US NAVY - LANTDIV				Mark Pisarcik																	
Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description		Number of Containers	602 + Xylenes	PAHs 625	Total Lead by 3030C										
11	UST820-MW26	3/22/09	13:00		X	UST820-MW26		6	X	X	X										
12	UST820-MW04	3/22/09	14:00		X	UST820-MW04		6	X	X	X										
13	UST820-MW02	3/22/09	15:00		X	UST820-MW02		6	X	X	X										
14	UST820-MW07	3/22/09	16:00		X	UST820-MW07		6	X	X	X										
15	UST820-MW08	3/22/09	17:00		X	UST820-MW08		6	X	X	X										
16	UST820-MW23	3/23/09	9:00		X	UST820-MW23		6	X	X	X										
17	UST820-MW17	3/23/09	10:30		X	UST820-MW17		6	X	X	X										
18	UST820-MW28	3/23/09	11:30		X	UST820-MW28		6	X	X	X										
19	UST820-MW10	3/23/09	12:30		X	UST820-MW10		6	X	X	X										
20	UST820-TB-032309	3/23/09			X	Trip Blank		2	X												

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 -- 10		FedEx	03/23/09	17:00	14 Day TAT Fed Ex 8684 4334 2224, 8684 4334 2235, 8684 4334 2246, 8684 4334 2257
2				3/24/09	10:00	
3						

242626
22

F64150: Chain of Custody

Page 2 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F64150 CLIENT: Shaw PROJECT: Amplexone
 DATE/TIME RECEIVED: 3-24-09 10:00 # OF COOLERS RECEIVED: 4 COOLER TEMPS: 2.4 2.6 2.0 2.2
 METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER
 AIRBILL NUMBERS: 8684 4334 2257

COOLER INFORMATION

- ☐ CUSTODY SEAL NOT PRESENT OR NOT INTACT
- ☐ CHAIN OF CUSTODY NOT RECEIVED (COC)
- ☐ ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- ☐ SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- ☐ TEMPERATURE CRITERIA NOT MET
- ☐ WET ICE RECEIVED IN COOLER

TRIP BLANK INFORMATION

- ☒ TRIP BLANK PROVIDED
- ☐ TRIP BLANK NOT PROVIDED
- ☐ TRIP BLANK NOT ON COC
- ☒ TRIP BLANK INTACT
- ☒ TRIP BLANK NOT INTACT
- ☒ RECEIVED WATER TRIP BLANK
- ☐ RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 0
 NUMBER OF 5035 FIELD KITS ? 0
 NUMBER OF LAB FILTERED METALS ? 0

SUMMARY OF COMMENTS:

SAMPLE INFORMATION

- ☐ SAMPLE LABELS NOT PRESENT ON ALL BOTTLES
 - ☐ CORRECT NUMBER OF CONTAINERS USED
 - ☐ SAMPLE RECEIVED IMPROPERLY PRESERVED
 - ☐ INSUFFICIENT VOLUME FOR ANALYSIS
 - ☐ TIMES ON COC DOES NOT MATCH LABEL(S)
 - ☐ ID'S ON COC DOES NOT MATCH LABEL(S)
 - ☐ VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
 - ☐ BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
 - ☐ NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
 - ☐ UNCLEAR FILTERING INSTRUCTIONS
 - ☐ UNCLEAR COMPOSITING INSTRUCTIONS
 - ☐ SAMPLE CONTAINER(S) RECEIVED BROKEN
 - ☐ % SOLIDS JAR NOT RECEIVED
 - ☐ 5035 FIELD KIT NOT FROZEN WITHIN 48 HOUR'S
 - ☐ RESIDUAL CHLORINE PRESENT
- (APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

TECHNICIAN SIGNATURE/DATE E.T. 3-24-09 TECHNICIAN SIGNATURE/DATE JE 3-24-09

ASBD 12/17/07

F64150: Chain of Custody

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GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: F64150

Account: ITVAVAB Shaw E & I, Inc.

Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28504-MB	L043978.D	1	03/30/09	RB	03/26/09	OP28504	SL2230

The QC reported here applies to the following samples:

Method: EPA 625

F64150-1, F64150-2, F64150-3, F64150-4, F64150-5, F64150-6, F64150-7, F64150-8, F64150-9, F64150-10, F64150-11, F64150-12, F64150-13

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	1.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.0	ug/l	
120-12-7	Anthracene	ND	5.0	1.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	1.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	1.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	1.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	1.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	1.0	ug/l	
218-01-9	Chrysene	ND	5.0	1.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	1.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	1.0	ug/l	
86-73-7	Fluorene	ND	5.0	1.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	1.0	ug/l	
129-00-0	Pyrene	ND	5.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	74% 42-108%
321-60-8	2-Fluorobiphenyl	77% 40-106%
1718-51-0	Terphenyl-d14	75% 39-121%

Method Blank Summary

Page 1 of 1

Job Number: F64150

Account: ITVAVAB Shaw E & I, Inc.

Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28504-MB	X005859.D	1	03/30/09	NAF	03/26/09	OP28504	SX301

The QC reported here applies to the following samples:

Method: EPA 625

F64150-1, F64150-2, F64150-3, F64150-4, F64150-5, F64150-6, F64150-7, F64150-8, F64150-9, F64150-10, F64150-11, F64150-12, F64150-13

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	1.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.0	ug/l	
120-12-7	Anthracene	ND	5.0	1.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	1.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	1.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	1.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	1.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	1.0	ug/l	
218-01-9	Chrysene	ND	5.0	1.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	1.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	1.0	ug/l	
86-73-7	Fluorene	ND	5.0	1.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	1.0	ug/l	
129-00-0	Pyrene	ND	5.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	79% 42-108%
321-60-8	2-Fluorobiphenyl	76% 40-106%
1718-51-0	Terphenyl-d14	78% 39-121%

Method Blank Summary

Page 1 of 1

Job Number: F64150

Account: ITVAVAB Shaw E & I, Inc.

Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28518-MB	X005865.D	1	03/31/09	NAF	03/27/09	OP28518	SX302

The QC reported here applies to the following samples:

Method: EPA 625

F64150-14, F64150-15, F64150-16, F64150-17, F64150-18, F64150-19

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	1.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.0	ug/l	
120-12-7	Anthracene	ND	5.0	1.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	1.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	1.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	1.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	1.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	1.0	ug/l	
218-01-9	Chrysene	ND	5.0	1.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	1.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	1.0	ug/l	
86-73-7	Fluorene	ND	5.0	1.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.1	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	1.0	ug/l	
129-00-0	Pyrene	ND	5.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	88% 42-108%
321-60-8	2-Fluorobiphenyl	86% 40-106%
1718-51-0	Terphenyl-d14	89% 39-121%

Blank Spike Summary

Page 1 of 1

Job Number: F64150

Account: ITVAVAB Shaw E & I, Inc.

Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28504-BS	L043977.D	1	03/30/09	RB	03/26/09	OP28504	SL2230

The QC reported here applies to the following samples:

Method: EPA 625

F64150-1, F64150-2, F64150-3, F64150-4, F64150-5, F64150-6, F64150-7, F64150-8, F64150-9, F64150-10, F64150-11, F64150-12, F64150-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	43.2	86	58-106
208-96-8	Acenaphthylene	50	41.7	83	58-105
120-12-7	Anthracene	50	43.3	87	65-108
56-55-3	Benzo(a)anthracene	50	43.6	87	63-111
50-32-8	Benzo(a)pyrene	50	45.3	91	62-106
205-99-2	Benzo(b)fluoranthene	50	45.0	90	63-109
191-24-2	Benzo(g,h,i)perylene	50	46.6	93	61-111
207-08-9	Benzo(k)fluoranthene	50	49.8	100	64-111
218-01-9	Chrysene	50	46.7	93	64-111
53-70-3	Dibenzo(a,h)anthracene	50	43.9	88	62-112
206-44-0	Fluoranthene	50	45.7	91	65-114
86-73-7	Fluorene	50	44.6	89	61-106
193-39-5	Indeno(1,2,3-cd)pyrene	50	41.2	82	61-113
90-12-0	1-Methylnaphthalene	50	38.1	76	52-102
91-57-6	2-Methylnaphthalene	50	40.3	81	56-112
91-20-3	Naphthalene	50	36.6	73	50-104
85-01-8	Phenanthrene	50	46.6	93	65-108
129-00-0	Pyrene	50	45.4	91	60-113

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	78%	42-108%
321-60-8	2-Fluorobiphenyl	80%	40-106%
1718-51-0	Terphenyl-d14	78%	39-121%

Blank Spike Summary

Page 1 of 1

Job Number: F64150

Account: ITVAVAB Shaw E & I, Inc.

Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28518-BS	X005864.D	1	03/31/09	NAF	03/27/09	OP28518	SX302

The QC reported here applies to the following samples:

Method: EPA 625

F64150-14, F64150-15, F64150-16, F64150-17, F64150-18, F64150-19

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	42.6	85	58-106
208-96-8	Acenaphthylene	50	41.6	83	58-105
120-12-7	Anthracene	50	40.5	81	65-108
56-55-3	Benzo(a)anthracene	50	43.1	86	63-111
50-32-8	Benzo(a)pyrene	50	43.3	87	62-106
205-99-2	Benzo(b)fluoranthene	50	44.6	89	63-109
191-24-2	Benzo(g,h,i)perylene	50	43.7	87	61-111
207-08-9	Benzo(k)fluoranthene	50	44.6	89	64-111
218-01-9	Chrysene	50	43.2	86	64-111
53-70-3	Dibenzo(a,h)anthracene	50	45.3	91	62-112
206-44-0	Fluoranthene	50	43.4	87	65-114
86-73-7	Fluorene	50	42.5	85	61-106
193-39-5	Indeno(1,2,3-cd)pyrene	50	44.0	88	61-113
90-12-0	1-Methylnaphthalene	50	40.5	81	52-102
91-57-6	2-Methylnaphthalene	50	43.3	87	56-112
91-20-3	Naphthalene	50	39.3	79	50-104
85-01-8	Phenanthrene	50	43.1	86	65-108
129-00-0	Pyrene	50	42.5	85	60-113

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	80%	42-108%
321-60-8	2-Fluorobiphenyl	80%	40-106%
1718-51-0	Terphenyl-d14	81%	39-121%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F64150
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28504-MS	L043988.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
OP28504-MSD	L043989.D	1	03/30/09	RB	03/26/09	OP28504	SL2230
F64150-2	L043987.D	1	03/30/09	RB	03/26/09	OP28504	SL2230

The QC reported here applies to the following samples:

Method: EPA 625

F64150-1, F64150-2, F64150-3, F64150-4, F64150-5, F64150-6, F64150-7, F64150-8, F64150-9, F64150-10, F64150-11, F64150-12, F64150-13

CAS No.	Compound	F64150-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		98	85.8	88	85.1	87	1	58-106/21
208-96-8	Acenaphthylene	ND		98	82.9	85	82.0	84	1	58-105/21
120-12-7	Anthracene	ND		98	85.7	87	82.8	84	3	65-108/19
56-55-3	Benzo(a)anthracene	ND		98	86.8	89	82.3	84	5	63-111/19
50-32-8	Benzo(a)pyrene	ND		98	86.1	88	82.7	84	4	62-106/20
205-99-2	Benzo(b)fluoranthene	ND		98	89.1	91	84.3	86	6	63-109/20
191-24-2	Benzo(g,h,i)perylene	ND		98	91.7	94	89.7	91	2	61-111/21
207-08-9	Benzo(k)fluoranthene	ND		98	97.5	99	96.0	98	2	64-111/20
218-01-9	Chrysene	ND		98	91.8	94	87.3	89	5	64-111/19
53-70-3	Dibenzo(a,h)anthracene	ND		98	86.0	88	83.5	85	3	62-112/20
206-44-0	Fluoranthene	ND		98	92.2	94	87.1	89	6	65-114/21
86-73-7	Fluorene	ND		98	87.1	89	85.3	87	2	61-106/19
193-39-5	Indeno(1,2,3-cd)pyrene	ND		98	81.0	83	76.6	78	6	61-113/20
90-12-0	1-Methylnaphthalene	ND		98	80.8	82	79.2	81	2	52-102/25
91-57-6	2-Methylnaphthalene	ND		98	80.8	82	81.2	83	0	56-112/26
91-20-3	Naphthalene	ND		98	79.9	81	78.8	80	1	50-104/28
85-01-8	Phenanthrene	ND		98	91.4	93	88.3	90	3	65-108/20
129-00-0	Pyrene	ND		98	91.0	93	89.9	92	1	60-113/20

CAS No.	Surrogate Recoveries	MS	MSD	F64150-2	Limits
4165-60-0	Nitrobenzene-d5	77%	78%	62%	42-108%
321-60-8	2-Fluorobiphenyl	78%	78%	62%	40-106%
1718-51-0	Terphenyl-d14	77%	76%	60%	39-121%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F64150

Account: ITVAVAB Shaw E & I, Inc.

Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP28518-MS	X005869.D	1	03/31/09	NAF	03/27/09	OP28518	SX302
OP28518-MSD	X005870.D	1	03/31/09	NAF	03/27/09	OP28518	SX302
F64150-16	X005868.D	1	03/31/09	NAF	03/27/09	OP28518	SX302

The QC reported here applies to the following samples:

Method: EPA 625

F64150-14, F64150-15, F64150-16, F64150-17, F64150-18, F64150-19

CAS No.	Compound	F64150-16 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND	96.2	90.5	94	78.1	81	15	58-106/21
208-96-8	Acenaphthylene	ND	96.2	88.6	92	76.2	79	15	58-105/21
120-12-7	Anthracene	ND	96.2	88.0	92	83.7	87	5	65-108/19
56-55-3	Benzo(a)anthracene	ND	96.2	94.3	98	89.7	93	5	63-111/19
50-32-8	Benzo(a)pyrene	ND	96.2	94.8	99	90.0	94	5	62-106/20
205-99-2	Benzo(b)fluoranthene	ND	96.2	99.5	103	95.9	100	4	63-109/20
191-24-2	Benzo(g,h,i)perylene	ND	96.2	96.4	100	90.2	94	7	61-111/21
207-08-9	Benzo(k)fluoranthene	ND	96.2	96.6	100	92.6	96	4	64-111/20
218-01-9	Chrysene	ND	96.2	96.1	100	90.3	94	6	64-111/19
53-70-3	Dibenzo(a,h)anthracene	ND	96.2	99.4	103	92.5	96	7	62-112/20
206-44-0	Fluoranthene	ND	96.2	93.3	97	89.2	93	4	65-114/21
86-73-7	Fluorene	ND	96.2	91.7	95	83.3	87	10	61-106/19
193-39-5	Indeno(1,2,3-cd)pyrene	ND	96.2	96.1	100	89.9	93	7	61-113/20
90-12-0	1-Methylnaphthalene	ND	96.2	84.3	88	70.2	73	18	52-102/25
91-57-6	2-Methylnaphthalene	ND	96.2	89.7	93	75.5	79	17	56-112/26
91-20-3	Naphthalene	ND	96.2	82.7	86	68.9	72	18	50-104/28
85-01-8	Phenanthrene	ND	96.2	93.9	98	89.0	93	5	65-108/20
129-00-0	Pyrene	ND	96.2	93.0	97	89.8	93	4	60-113/20

CAS No.	Surrogate Recoveries	MS	MSD	F64150-16	Limits
4165-60-0	Nitrobenzene-d5	84%	71%	74%	42-108%
321-60-8	2-Fluorobiphenyl	87%	72%	76%	40-106%
1718-51-0	Terphenyl-d14	89%	85%	81%	39-121%



GC Volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

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Job Number: F64150

Account: ITVAVAB Shaw E & I, Inc.

Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1678-MB	QQ044883.D 1		04/03/09	NJ	n/a	n/a	GQQ1678

The QC reported here applies to the following samples:

Method: EPA 602

F64150-1, F64150-2, F64150-3, F64150-4, F64150-5, F64150-6, F64150-7, F64150-8, F64150-10, F64150-11, F64150-12, F64150-13, F64150-14, F64150-15, F64150-16, F64150-17, F64150-18, F64150-19, F64150-20

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	92% 70-120%
98-08-8	aaa-Trifluorotoluene	106% 73-118%

Method Blank Summary

Page 1 of 1

Job Number: F64150

Account: ITVAVAB Shaw E & I, Inc.

Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1680-MB	QQ044931.D 1		04/04/09	NJ	n/a	n/a	GQQ1680

The QC reported here applies to the following samples:

Method: EPA 602

F64150-7, F64150-9, F64150-13, F64150-17, F64150-18

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	93% 70-120%
98-08-8	aaa-Trifluorotoluene	106% 73-118%

Blank Spike Summary

Page 1 of 1

Job Number: F64150
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1678-BS	QQ044882.D 1		04/03/09	NJ	n/a	n/a	GQQ1678

The QC reported here applies to the following samples:

Method: EPA 602

F64150-1, F64150-2, F64150-3, F64150-4, F64150-5, F64150-6, F64150-7, F64150-8, F64150-10, F64150-11, F64150-12, F64150-13, F64150-14, F64150-15, F64150-16, F64150-17, F64150-18, F64150-19, F64150-20

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.8	104	80-120
108-90-7	Chlorobenzene	20	20.5	103	79-118
95-50-1	1,2-Dichlorobenzene	20	19.2	96	76-117
541-73-1	1,3-Dichlorobenzene	20	19.9	100	78-120
106-46-7	1,4-Dichlorobenzene	20	19.7	99	78-117
100-41-4	Ethylbenzene	20	21.8	109	79-121
1634-04-4	Methyl Tert Butyl Ether	20	20.1	101	72-113
108-88-3	Toluene	20	21.4	107	79-121
1330-20-7	Xylenes (total)	60	63.9	107	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	94%	70-120%
98-08-8	aaa-Trifluorotoluene	108%	73-118%

Blank Spike Summary

Page 1 of 1

Job Number: F64150
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1678-BS	QQ044910.D1		04/03/09	NJ	n/a	n/a	GQQ1678

The QC reported here applies to the following samples:

Method: EPA 602

F64150-1, F64150-2, F64150-3, F64150-4, F64150-5, F64150-6, F64150-7, F64150-8, F64150-10, F64150-11, F64150-12, F64150-13, F64150-14, F64150-15, F64150-16, F64150-17, F64150-18, F64150-19, F64150-20

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	21.0	105	80-120
108-90-7	Chlorobenzene	20	20.7	104	79-118
95-50-1	1,2-Dichlorobenzene	20	19.6	98	76-117
541-73-1	1,3-Dichlorobenzene	20	20.0	100	78-120
106-46-7	1,4-Dichlorobenzene	20	19.6	98	78-117
100-41-4	Ethylbenzene	20	21.9	110	79-121
1634-04-4	Methyl Tert Butyl Ether	20	21.2	106	72-113
108-88-3	Toluene	20	21.5	108	79-121
1330-20-7	Xylenes (total)	60	64.2	107	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	94%	70-120%
98-08-8	aaa-Trifluorotoluene	109%	73-118%

Blank Spike Summary

Page 1 of 1

Job Number: F64150
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1680-BS	QQ044930.D 1		04/04/09	NJ	n/a	n/a	GQQ1680

The QC reported here applies to the following samples:

Method: EPA 602

F64150-7, F64150-9, F64150-13, F64150-17, F64150-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.8	104	80-120
108-90-7	Chlorobenzene	20	20.4	102	79-118
95-50-1	1,2-Dichlorobenzene	20	18.9	95	76-117
541-73-1	1,3-Dichlorobenzene	20	19.7	99	78-120
106-46-7	1,4-Dichlorobenzene	20	19.5	98	78-117
100-41-4	Ethylbenzene	20	21.8	109	79-121
1634-04-4	Methyl Tert Butyl Ether	20	20.4	102	72-113
108-88-3	Toluene	20	21.3	107	79-121
1330-20-7	Xylenes (total)	60	63.9	107	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	95%	70-120%
98-08-8	aaa-Trifluorotoluene	108%	73-118%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F64150
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F64150-2MS	QQ044890.D 1		04/03/09	NJ	n/a	n/a	GQQ1678
F64150-2MSD	QQ044891.D 1		04/03/09	NJ	n/a	n/a	GQQ1678
F64150-2	QQ044885.D 1		04/03/09	NJ	n/a	n/a	GQQ1678

The QC reported here applies to the following samples:

Method: EPA 602

F64150-1, F64150-2, F64150-3, F64150-4, F64150-5, F64150-6, F64150-7, F64150-8, F64150-10, F64150-11, F64150-12, F64150-13, F64150-14, F64150-15, F64150-16, F64150-17, F64150-18, F64150-19, F64150-20

CAS No.	Compound	F64150-2 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	20.9	105	20.7	104	1	80-120/10
108-90-7	Chlorobenzene	ND	20	20.3	102	20.3	102	0	79-118/10
95-50-1	1,2-Dichlorobenzene	ND	20	18.8	94	19.4	97	3	76-117/18
541-73-1	1,3-Dichlorobenzene	ND	20	19.7	99	20.0	100	2	78-120/13
106-46-7	1,4-Dichlorobenzene	ND	20	19.3	97	19.8	99	3	78-117/11
100-41-4	Ethylbenzene	ND	20	21.6	108	21.7	109	0	79-121/9
1634-04-4	Methyl Tert Butyl Ether	ND	20	21.4	107	21.1	106	1	72-113/13
108-88-3	Toluene	ND	20	21.4	107	21.2	106	1	79-121/10
1330-20-7	Xylenes (total)	ND	60	63.7	106	63.6	106	0	80-119/8

CAS No.	Surrogate Recoveries	MS	MSD	F64150-2	Limits
460-00-4	4-Bromofluorobenzene	93%	94%	92%	70-120%
98-08-8	aaa-Trifluorotoluene	108%	108%	107%	73-118%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F64150

Account: ITVAVAB Shaw E & I, Inc.

Project: Camp Lejeune-BM 820

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F64150-18MS	QQ044937.D	5	04/04/09	NJ	n/a	n/a	GQQ1680
F64150-18MSD	QQ044938.D	5	04/04/09	NJ	n/a	n/a	GQQ1680
F64150-18	QQ044936.D	5	04/04/09	NJ	n/a	n/a	GQQ1680

The QC reported here applies to the following samples:

Method: EPA 602

F64150-7, F64150-9, F64150-13, F64150-17, F64150-18

CAS No.	Compound	F64150-18 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	34.3	100	138	104	138	104	0	80-120/10
108-90-7	Chlorobenzene	ND	100	101	101	102	102	1	79-118/10
95-50-1	1,2-Dichlorobenzene	ND	100	93.3	93	95.1	95	2	76-117/18
541-73-1	1,3-Dichlorobenzene	ND	100	97.4	97	99.0	99	2	78-120/13
106-46-7	1,4-Dichlorobenzene	ND	100	96.4	96	97.3	97	1	78-117/11
100-41-4	Ethylbenzene	ND	100	108	108	108	108	0	79-121/9
1634-04-4	Methyl Tert Butyl Ether	161	100	265	104	266	105	0	72-113/13
108-88-3	Toluene	ND	100	106	106	106	106	0	79-121/10
1330-20-7	Xylenes (total)	ND	300	316	105	316	105	0	80-119/8

CAS No.	Surrogate Recoveries	MS	MSD	F64150-18	Limits
460-00-4	4-Bromofluorobenzene	96%	96%	95%	70-120%
98-08-8	aaa-Trifluorotoluene	110%	109%	108%	73-118%



Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F64150
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

QC Batch ID: MP16114
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 03/24/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	11	11		
Antimony	6.0	4.5	4.5		
Arsenic	10	3.6	5.4		
Barium	200	5	5		
Beryllium	4.0	1	1		
Cadmium	5.0	1	1		
Calcium	1000	100	100		
Chromium	10	1.6	2		
Cobalt	50	.83	1		
Copper	25	2.1	5		
Iron	300	23	23		
Lead	5.0	2	2	1.1	<5.0
Magnesium	5000	100	100		
Manganese	15	.5	1		
Molybdenum	50	2.8	5		
Nickel	40	2.3	2.3		
Potassium	10000	100	100		
Selenium	10	3.1	3.4		
Silver	10	1.2	1.4		
Sodium	10000	500	500		
Thallium	10	3.4	3.6		
Tin	50	2.8	2.8		
Vanadium	50	.66	.9		
Zinc	20	3.8	7.4		

Associated samples MP16114: F64150-1, F64150-2, F64150-3, F64150-4, F64150-5, F64150-6, F64150-7, F64150-8, F64150-9, F64150-10, F64150-11, F64150-12, F64150-13, F64150-14, F64150-15, F64150-16, F64150-17, F64150-18, F64150-19

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F64150
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

QC Batch ID: MP16114
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 03/24/09

03/24/09

Metal	F64150-1 Original	DUP	RPD	QC Limits	F64150-1 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead	9.4	9.2	2.2	0-20	9.4	531	500	104.3	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Tin									
Vanadium									
Zinc									

Associated samples MP16114: F64150-1, F64150-2, F64150-3, F64150-4, F64150-5, F64150-6, F64150-7, F64150-8, F64150-9, F64150-10, F64150-11, F64150-12, F64150-13, F64150-14, F64150-15, F64150-16, F64150-17, F64150-18, F64150-19

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F64150
 Account: ITVAVAB - Shaw E & I, Inc.
 Project: Camp Lejeune-BM 820

QC Batch ID: MP16114
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 03/24/09

Metal	F64150-1 Original	MSD	SpikeLot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead	9.4	519	500	101.9	2.3	20
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Thallium						
Tin						
Vanadium						
Zinc						

Associated samples MP16114: F64150-1, F64150-2, F64150-3, F64150-4, F64150-5, F64150-6, F64150-7, F64150-8, F64150-9, F64150-10, F64150-11, F64150-12, F64150-13, F64150-14, F64150-15, F64150-16, F64150-17, F64150-18, F64150-19

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

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Methods: SW846 6010B
Units: ug/l

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	543	500	108.6	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Thallium				
Tin				
Vanadium				
Zinc				

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F64150
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-BM 820

QC Batch ID: MP16114
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 03/24/09

Metal	F64150-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	9.39	0.00	100.0(a)	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Thallium				
Tin				
Vanadium				
Zinc				

Associated samples MP16114: F64150-1, F64150-2, F64150-3, F64150-4, F64150-5, F64150-6, F64150-7, F64150-8, F64150-9, F64150-10, F64150-11, F64150-12, F64150-13, F64150-14, F64150-15, F64150-16, F64150-17, F64150-18, F64150-19

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

APPENDIX C

HISTORICAL GROUNDWATER ANALYTICAL RESULTS

Analytical Data Summary

Type III Well: **MW-34**

Client Sample ID:		UST820-MW34	UST820-MW34	UST820-MW34
Date Sampled:		10/18/06	10/15/07	3/23/09
Analyte (ug/l)	GWQS	Result	Result	Result
EPA 602				
Benzene	1	<1.0	<1.0	NS
Chlorobenzene	50	<1.0	<1.0	NS
Methyl tert-butyl ether	200	<1.0	1.3	NS
Ethylbenzene	550	<1.0	<1.0	NS
Xylenes (total)	530	<3.0	<3.0	NS
Toluene	1000	<1.0	<1.0	NS
Total BTEX+ MTBE				
Di-Isopropyl ether	70		<1.0	
EPA 610				
Chrysene	4.79	1.2 J	<4.8	NS
Naphthalene	21	<4.8	<4.8	NS
Acenaphthene	80	<4.8	<4.8	NS
Acenaphthylene	210	<4.8	<4.8	NS
Benzo(a)anthracene	0.0479	<4.8	<4.8	NS
Pyrene	210	1.6 J	<4.8	NS
Fluorene	280	<4.8	<4.8	NS
Anthracene	2100	<4.8	<4.8	NS
Fluoranthene	280	2.1 J	<4.8	NS
Phenanthrene	210	<4.8	<4.8	NS
SW846-3010A				
Lead	15	<1.7	<2.1	NS
Bold type indicates detectable concentrations.				
Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).				

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary

Type III Well: **MW-33**

Client Sample ID:		UST820-MW33	UST820-MW33	UST820-MW33
Date Sampled:		10/18/06	10/24/07	3/23/09
Analyte (ug/l)	GWQS	Result	Result	Result
EPA 602				
Benzene	1	0.83 J	<1.0	NS
Chlorobenzene	50	<1.0	<1.0	NS
Methyl tert-butyl ether	200	<1.0	<1.0	NS
Ethylbenzene	550	<1.0	<1.0	NS
Xylenes (total)	530	<3.0	<3.0	NS
Toluene	1000	<1.0	<1.0	NS
Total BTEX+ MTBE		0.83		
Di-Isopropyl ether	70		<1.0	
EPA 610				
Chrysene	4.79	<5.0	<4.9	NS
Naphthalene	21	<5.0	<4.9	NS
Acenaphthene	80	<5.0	<4.9	NS
Acenaphthylene	210	<5.0	<4.9	NS
Benzo(a)anthracene	0.0479	<5.0	<4.9	NS
Pyrene	210	<5.0	<4.9	NS
Fluorene	280	<5.0	<4.9	NS
Anthracene	2100	<5.0	<4.9	NS
Fluoranthene	280	<5.0	<4.9	NS
Phenanthrene	210	<5.0	<4.9	NS
SW846-3010A				
Lead	15	2.6 B	<2.1	NS
Bold type indicates detectable concentrations.				
Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).				

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary

Type III Well: **MW-32**

Client Sample ID:		UST820-MW32	UST820-MW32	UST820-MW32
Date Sampled:		10/14/06	10/15/07	3/23/09
Analyte (ug/l)	GWQS	Result	Result	Result
EPA 602				
Benzene	1	<1.0	<1.0	NS
Chlorobenzene	50	<1.0	<1.0	NS
Methyl tert-butyl ether	200	<1.0	<1.0	NS
Ethylbenzene	550	<1.0	<1.0	NS
Xylenes (total)	530	<3.0	<3.0	NS
Toluene	1000	<1.0	<1.0	NS
Total BTEX+ MTBE				
Di-Isopropyl ether	70		<1.0	
EPA 610				
Chrysene	4.79	<4.8	<4.8	NS
Naphthalene	21	<4.8	<4.8	NS
Acenaphthene	80	<4.8	<4.8	NS
Acenaphthylene	210	<4.8	<4.8	NS
Benzo(a)anthracene	0.0479	<4.8	<4.8	NS
Pyrene	210	<4.8	<4.8	NS
Fluorene	280	<4.8	<4.8	NS
Anthracene	2100	<4.8	<4.8	NS
Fluoranthene	280	<4.8	<4.8	NS
Phenanthrene	210	<4.8	<4.8	NS
SW846-3010A				
Lead	15	<3.4	<2.1	NS
Bold type indicates detectable concentrations.				
Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).				

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary

Type III Well: **MW-31**

Client Sample ID:		UST820-MW31	UST820-MW31	UST820-MW31
Date Sampled:		10/14/06	10/15/07	3/23/09
Analyte (ug/l)	GWQS	Result	Result	Result
EPA 602				
Benzene	1	<1.0	<1.0	NS
Chlorobenzene	50	<1.0	<1.0	NS
Methyl tert-butyl ether	200	<1.0	<1.0	NS
Ethylbenzene	550	<1.0	<1.0	NS
Xylenes (total)	530	<3.0	<3.0	NS
Toluene	1000	<1.0	<1.0	NS
Total BTEX+ MTBE				
Di-Isopropyl ether	70		<1.0	
EPA 610				
Chrysene	4.79	<4.8	<4.8	NS
Naphthalene	21	<4.8	<4.8	NS
Acenaphthene	80	<4.8	<4.8	NS
Acenaphthylene	210	<4.8	<4.8	NS
Benzo(a)anthracene	0.0479	<4.8	<4.8	NS
Pyrene	210	<4.8	<4.8	NS
Fluorene	280	<4.8	<4.8	NS
Anthracene	2100	<4.8	<4.8	NS
Fluoranthene	280	<4.8	<4.8	NS
Phenanthrene	210	<4.8	<4.8	NS
SW846-3010A				
Lead	15	<3.4	<2.1	NS
Bold type indicates detectable concentrations.				
Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).				

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary

Type III Well: **MW-30**

Client Sample ID:		UST820-MW30	UST820-MW30	UST820-MW30
Date Sampled:		10/14/06	10/18/07	3/23/09
Analyte (ug/l)	GWQS	Result	Result	Result
EPA 602				
Benzene	1	<1.0	<1.0	NS
Chlorobenzene	50	<1.0	<1.0	NS
Methyl tert-butyl ether	200	5.6	6	NS
Ethylbenzene	550	<1.0	<1.0	NS
Xylenes (total)	530	<3.0	<3.0	NS
Toluene	1000	<1.0	<1.0	NS
Total BTEX+ MTBE		5.6	6.0	
Di-Isopropyl ether	70		<1.0	
EPA 610				
Chrysene	4.79	<4.8	<4.9	NS
Naphthalene	21	<4.8	<4.9	NS
Acenaphthene	80	<4.8	<4.9	NS
Acenaphthylene	210	<4.8	<4.9	NS
Benzo(a)anthracene	0.0479	<4.8	<4.9	NS
Pyrene	210	<4.8	<4.9	NS
Fluorene	280	<4.8	<4.9	NS
Anthracene	2100	<4.8	<4.9	NS
Fluoranthene	280	<4.8	<4.9	NS
Phenanthrene	210	<4.8	<4.9	NS
SW846-3010A				
Lead	15	<3.4	<2.1	NS
Bold type indicates detectable concentrations.				
Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).				

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary
Type II Well: **MW-2**

Client Sample ID:		UST820-MW02-02B	UST820-MW02-02C	UST820-MW02	UST820-MW02	UST820-MW02	UST820-MW02	UST820-MW02	UST820-MW02	UST820-MW02	UST820-MW02
Date Sampled:		04/26/02	10/30/02	04/18/03	10/13/03	04/14/04	11/03/04	08/06/05	02/01/06	10/13/06	10/21/07
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602											
Benzene	1	19.4	95.2	0.84 J	<1.0	<1.0	0.7 J	<1.0	<10	<1.0	6.8
Chlorobenzene	50	<10	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
Methyl tert-butyl ether	200	<10	22.5	<5.0	<1.0	1.7	<1.0	2.3	589	9.2	<1.0
Ethylbenzene	550	34.9	212	21.1	5.4	0.83 J	14.8	7.0	<10	<1.0	2.7
Xylenes (total)	530	285	778	100	31.6	9.1	116	97.8	<30	18.8	172.0
Toluene	1000	402	966	82	8.6	1.2	66.9	52.3	<10	<1.0	5.5
Total BTEX +MTBE		741.3	2073.7	203.94	45.6	12.8	198.4	159.4	589.0	28.0	187.0
Di-Isopropyl ether	70										<2.0
EPA 610											
Chrysene	4.79	<50	<56	<5.4	<5.0	<5.4	<4.8	<1.9	<4.8	<4.9	<4.8
Naphthalene	21	52.9	167	<5.4	3.2 J	3.4 J	11.1	10.2	<4.8	4.2 J	29.5
Acenaphthene	80	<50	<56	<5.4	<5.0	<5.4	<4.8	<3.8	<4.8	<4.9	<4.8
Acenaphthylene	210	<50	<56	<5.4	<5.0	<5.4	<4.8	<3.8	<4.8	<4.9	<4.8
Benzo(a)anthracene	0.0479	<50	<56	<5.4	<5.0	<5.4	<4.8	<0.19	<4.8	<4.9	<4.8
Pyrene	210	<50	<56	<5.4	<5.0	<5.4	<4.8	<1.9	<4.8	<4.9	<4.8
Fluorene	280	<50	<56	<5.4	<5.0	<5.4	<4.8	<1.9	<4.8	<4.9	<4.8
Anthracene	2100	<50	<56	<5.4	<5.0	<5.4	<4.8	<1.9	<4.8	<4.9	<4.8
Fluoranthene	280	<50	<56	<5.4	<5.0	<5.4	<4.8	<1.9	<4.8	<4.9	<4.8
Phenanthrene	210	<50	<56	<5.4	<5.0	<5.4	<4.8	<1.9	<4.8	<4.9	<4.8
SW846-3010A											
Lead	15	NA	NA	NA	NA	NA	<5.0	<5.0	<1.2	<1.7	<2.1
Bold type indicates detectable concentrations.											
Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).											

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary

Type II Well: **MW-2**

Client Sample ID:		UST820-MW02
Date Sampled:		03/22/09
Analyte (ug/l)	GWQS	Result
EPA 602		
Benzene	1	<2.0
Chlorobenzene	50	<2.0
Methyl tert-butyl ether	200	7.2
Ethylbenzene	550	29
Xylenes (total)	530	155
Toluene	1000	211.0
Total BTEX +MTBE		395
Di-Isopropyl ether	70	
EPA 610		
Chrysene	4.79	<4.8
Naphthalene	21	22.2
Acenaphthene	80	<4.8
Acenaphthylene	210	<4.8
Benzo(a)anthracene	0.0479	<4.8
Pyrene	210	<4.8
Fluorene	280	<4.8
Anthracene	2100	<4.8
Fluoranthene	280	<4.8
Phenanthrene	210	<4.8
SW846-3010A		
Lead	15	<2.0
Bold type indicates detectable concentrations		
Shaded area indicates detectable concentrations		

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary
Type II Well: **MW-3**

Client Sample ID:		UST820-MW03	UST820-MW03	UST820-MW03	UST820-MW03	UST820-MW03	UST820-MW03
Date Sampled:		11/03/04	08/08/05	02/01/06	10/13/06	10/17/07	03/20/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result
EPA 602							
Benzene	1	42.4	1.9	<1.0	<1.0	1.1	2.9
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	4.8	7.1	1590	9.5	7.3	10.7
Ethylbenzene	550	7.4	71	0.79 J	<1.0	9.0	58.3
Xylenes (total)	530	52.5	407 J	86.9	2.0 J	163.0	112
Toluene	1000	19.4	60.7	10.0	<1.0	26.1	5.0
Total BTEX + MTBE		126.5	547.7	1686.9	11.5	206.5	178.2
Di-Isopropyl ether	70					<1.0	
EPA 610							
Chrysene	4.79	<4.8	<1.9	<4.8	<4.8	<4.9	<4.8
Naphthalene	21	<4.8	19.8	<4.8	<4.8	<4.9	36.2
Acenaphthene	80	<4.8	<3.8	<4.8	<4.8	<4.9	<4.8
Acenaphthylene	210	<4.8	<3.8	<4.8	<4.8	<4.9	<4.8
Benzo(a)anthracene	0.0479	<4.8	<0.19	<4.8	<4.8	<4.9	<4.8
Pyrene	210	<4.8	<1.9	<4.8	<4.8	<4.9	<4.8
Fluorene	280	<4.8	<1.9	<4.8	<4.8	<4.9	<4.8
Anthracene	2100	<4.8	<1.9	<4.8	<4.8	<4.9	<4.8
Fluoranthene	280	<4.8	<1.9	<4.8	<4.8	<4.9	<4.8
Phenanthrene	210	<4.8	<1.9	<4.8	<4.8	<4.9	<4.8
SW846-3010A							
Lead	15	<5.0	<5.0	<1.2	<1.7	<2.1	<2.0
Bold type indicates detectable concentrations.							
Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).							

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary
Type II Well: **MW-4**

Client Sample ID:		UST820-MW04-01C3	UST820-MW04-02B	UST820-MW04-02C	UST820-MW04	UST820-MW04	UST820-MW04	UST820-MW04	UST820-MW04	UST820-MW04	UST820-MW04	UST820-MW04
Date Sampled:		10/02/01	04/26/02	10/28/02	04/14/03	10/07/03	04/15/04	11/06/04	08/10/05	02/05/06	10/12/06	10/18/07
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602												
Benzene	1	9.6	<1.0	5.2	<1.0	<1.0	<1.0	1.6	<1.0	2.1	<1.0	<1.0
Chlorobenzene	50	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	36	0.75 J	0.68 J	<1.0	1.5	<1.0	<1.0	<1.0	0.91 J	1.1	<1.0
Ethylbenzene	550	16	<1.0	3.1	<1.0	<1.0	<1.0	0.63 J	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	530	100	5.4	9.3	<3.0	<3.0	<3.0	1.3 J	<3.0	<3.0	<3.0	<3.0
Toluene	1000	72	<1.0	5.4	<1.0	<1.0	<1.0	0.74 J	<1.0	<1.0	<1.0	<1.0
Total BTEX + MTBE		233.6	6.15	24		1.5		4.27		3.01	1.10	
Di-Isopropyl ether	70											<1.0
EPA 610												
Chrysene	4.79	<0.10	<5.0	<5.2	<5.2	<5.0	<5.2	<4.8	<1.9	<4.9	<4.8	<4.9
Naphthalene	21	<2.0	<5.0	<5.2	<5.2	<5.0	<5.2	<4.8	<1.9	<4.9	<4.8	<4.9
Acenaphthene	80	<1.0	<5.0	<5.2	<5.2	<5.0	<5.2	<4.8	<3.9	<4.9	<4.8	<4.9
Acenaphthylene	210	<1.0	<5.0	<5.2	<5.2	<5.0	<5.2	<4.8	<3.9	<4.9	<4.8	<4.9
Benzo(a)anthracene	0.0479	<0.10	<5.0	<5.2	<5.2	<5.0	<5.2	<4.8	<0.19	<4.9	<4.8	<4.9
Pyrene	210	<0.25	<5.0	<5.2	<5.2	<5.0	<5.2	<4.8	<1.9	<4.9	<4.8	<4.9
Fluorene	280	<2.0	<5.0	<5.2	<5.2	<5.0	<5.2	<4.8	<1.9	<4.9	<4.8	<4.9
Anthracene	2100	<1.0	<5.0	<5.2	<5.2	<5.0	<5.2	<4.8	<1.9	<4.9	<4.8	<4.9
Fluoranthene	280	<0.25	<5.0	<5.2	<5.2	<5.0	<5.2	<4.8	<1.9	<4.9	<4.8	<4.9
Phenanthrene	210	<1.0	<5.0	<5.2	<5.2	<5.0	<5.2	<4.8	<1.9	<4.9	<4.8	<4.9
SW846-3010A												
Lead	15	NA	NA	NA	NA	NA	NA	<5.0	9.5	2.0 B	1.7 B	<2.1
		Bold type indicates detectable concentrations.										
		Shaded area indicates detectable concentrations above the groundwater quality standards.										

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary

Type II Well: **MW-4**

Client Sample ID:		UST820-MW04
Date Sampled:		03/22/09
Analyte (ug/l)	GWQS	Result
EPA 602		
Benzene	1	<1.0
Chlorobenzene	50	<1.0
Methyl tert-butyl ether	200	<1.0
Ethylbenzene	550	<1.0
Xylenes (total)	530	<3.0
Toluene	1000	<1.0
Total BTEX + MTBE		
Di-Isopropyl ether	70	
EPA 610		
Chrysene	4.79	<4.8
Naphthalene	21	<4.8
Acenaphthene	80	<4.8
Acenaphthylene	210	<4.8
Benzo(a)anthracene	0.0479	<4.8
Pyrene	210	<4.8
Fluorene	280	<4.8
Anthracene	2100	<4.8
Fluoranthene	280	<4.8
Phenanthrene	210	<4.8
SW846-3010A		
Lead	15	<2.0

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary
Type II Well: **MW-5**

Client Sample ID:		Well Dry	Well Dry	UST820-MW05	UST820-MW05	UST820-MW05	UST820-MW05	UST820-MW05	UST820-MW05	UST820-MW05	UST820-MW05
Date Sampled:		04/26/02	10/28/02	04/08/03	10/09/03	04/13/04	11/20/04	08/06/05	02/05/06	10/12/06	10/18/07
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602											
Benzene	1			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	50			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	550			<1.0	<1.0	0.62 J	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	530			<3.0	<3.0	3.4	<3.0	<3.0	<3.0	<3.0	<3.0
Toluene	1000			<1.0	<1.0	1.5	<1.0	<1.0	<1.0	<1.0	<1.0
Total BTEX + MTBE						5.52					
Di-Isopropyl ether	70										<1.0
EPA 610											
Chrysene	4.79			<5.2	<5.3	<5.4	<4.8	<1.9	1.0 J	<4.8	<4.8
Naphthalene	21			<5.2	<5.3	<5.4	<4.8	<1.9	<4.8	<4.8	<4.8
Acenaphthene	80			<5.2	<5.3	<5.4	<4.8	<3.9	<4.8	<4.8	<4.8
Acenaphthylene	210			<5.2	<5.3	<5.4	<4.8	<3.9	<4.8	<4.8	<4.8
Benzo(a)anthracene	0.0479			<5.2	<5.3	<5.4	<4.8	0.078 J	<4.8	<4.8	<4.8
Pyrene	210			<5.2	<5.3	<5.4	<4.8	<1.9	1.3 J	<4.8	<4.8
Fluorene	280			<5.2	<5.3	<5.4	<4.8	<1.9	<4.8	<4.8	<4.8
Anthracene	2100			<5.2	<5.3	<5.4	<4.8	<1.9	<4.8	<4.8	<4.8
Fluoranthene	280			<5.2	<5.3	<5.4	<4.8	<1.9	1.7 J	<4.8	<4.8
Phenanthrene	210			<5.2	<5.3	<5.4	<4.8	<1.9	<4.8	<4.8	<4.8
SW846-3010A											
Lead	15			NA	NA	NA	<5.0	<5.0	3.5 B	<1.7	8.8
		Bold type indicates detectable concentrations.									
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).									

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary

Type II Well: **MW-5**

Client Sample ID:		UST820-MW05
Date Sampled:		03/23/09
Analyte (ug/l)	GWQS	Result
EPA 602		
Benzene	1	NS
Chlorobenzene	50	NS
Methyl tert-butyl ether	200	NS
Ethylbenzene	550	NS
Xylenes (total)	530	NS
Toluene	1000	NS
Total BTEX + MTBE		
Di-Isopropyl ether	70	
EPA 610		
Chrysene	4.79	NS
Naphthalene	21	NS
Acenaphthene	80	NS
Acenaphthylene	210	NS
Benzo(a)anthracene	0.0479	NS
Pyrene	210	NS
Fluorene	280	NS
Anthracene	2100	NS
Fluoranthene	280	NS
Phenanthrene	210	NS
SW846-3010A		
Lead	15	NS

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Printed: 5/11/2009

Samples analyzed by Compuchem, STL, or Accutest

Analytical Data Summary
Type II Well: **MW-6**

Client Sample ID:		UST820-MW06	UST820-MW06	UST820-MW06	UST820-MW06	UST820-MW06	UST820-MW06
Date Sampled:		11/06/04	08/08/05	02/02/06	10/14/06	10/21/07	03/20/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result
EPA 602							
Benzene	1	212	150	92	103	65	18.3
Chlorobenzene	50	<20	2.9	<10	<20	<20	1.8
Methyl tert-butyl ether	200	12.1 J	31.7	32.9	252.0	30.0	10.5
Ethylbenzene	550	1400	1980	1130	1280	1880	2000
Xylenes (total)	530	906	1480	1070	2030	1890	267
Toluene	1000	217	411	164	670	797	115
Total BTEX + MTBE		2747.1	4053	2489	4335	4662	2400
Di-Isopropyl ether	70					31.8	
EPA 610							
Chrysene	4.79	<4.8	<1.9	<4.8	<4.8	<4.8	<19
Naphthalene	21	268	281	230	253	322	260
Acenaphthene	80	<4.8	<3.8	<4.8	<4.8	<4.8	<19
Acenaphthylene	210	<4.8	<15	<4.8	<4.8	<4.8	<19
Benzo(a)anthracene	0.0479	<4.8	<0.19	<4.8	<4.8	<4.8	<19
Pyrene	210	<4.8	<1.9	<4.8	<4.8	<4.8	<19
Fluorene	280	<4.8	<1.9	<4.8	<4.8	<4.8	<19
Anthracene	2100	<4.8	<1.9	<4.8	<4.8	<4.8	<19
Fluoranthene	280	<4.8	<1.9	<4.8	<4.8	<4.8	<19
Phenanthrene	210	<4.8	<1.9	<4.8	<4.8	<4.8	<19
SW846-3010A							
Lead	15	<5.0	<5.0	<1.2	<3.4	<2.1	<2.0
Bold type indicates detectable concentrations.							
Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).							

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary
Type III Well: **MW-7**

Client Sample ID:		UST820-MW07-01C3	UST820-MW07-02B	UST820-MW07-02C	UST820-MW07	UST820-MW07	UST820-MW07	UST820-MW07
Date Sampled:		09/27/01	04/26/02	10/30/02	04/18/03	10/23/03	04/20/04	11/20/04
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result
EPA 602								
Benzene	1	<2.0	<1.0	<1.0	<1.0	5.3	<1.0	0.56 J
Chlorobenzene	50	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	<2.0	48.3	14.1	2.9	1.6	<1.0	<1.0
Ethylbenzene	550	<2.0	<1.0	<1.0	<1.0	1.3	<1.0	<1.0
Xylenes (total)	530	<4.0	1.8 J	<3.0	<3.0	9.4	<3.0	<3.0
Toluene	1000	<2.0	1.8	<1.0	<1.0	3.6	<1.0	<1.0
Total BTEX			3.6			19.6		0.56
Di-Isopropyl ether	70							
EPA 610								
Chrysene	4.79	<0.10	<5.5	<5.3	<5.0	<5.1	<5.3	<4.8
Naphthalene	21	<2.0	<5.5	<5.3	<5.0	<5.1	<5.3	<4.8
Acenaphthene	80	<1.0	<5.5	<5.3	<5.0	<5.1	<5.3	<4.8
Acenaphthylene	210	<1.0	<5.5	<5.3	<5.0	<5.1	<5.3	<4.8
Benzo(a)anthracene	0.0479	<0.10	<5.5	<5.3	<5.0	<5.1	<5.3	<4.8
Pyrene	210	<0.25	<5.5	<5.3	<5.0	<5.1	<5.3	<4.8
Fluorene	280	<2.0	<5.5	<5.3	<5.0	<5.1	<5.3	<4.8
Anthracene	2100	<1.0	<5.5	<5.3	<5.0	<5.1	<5.3	<4.8
Fluoranthene	280	<0.25	<5.5	<5.3	<5.0	<5.1	<5.3	<4.8
Phenanthrene	210	<1.0	<5.5	<5.3	<5.0	<5.1	<5.3	<4.8
SW846-3010A								
Lead	15	NA	NA	NA	NA	NA	NA	7.7
Bold type indicates detectable concentrations.								
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).						

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary
Type III Well: **MW-7**

Client Sample ID:		UST820-MW07	UST820-MW07	UST820-MW07	UST820-MW07	UST820-MW07	UST820-MW07	UST820-MW07
Date Sampled:		3/1/05	5/31/05	8/9/05	2/1/06	10/13/06	10/24/07	3/22/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result
EPA 602								
Benzene	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	550	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	530	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Toluene	1000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total BTEX								
Di-Isopropyl ether	70						<1.0	
EPA 610								
Chrysene	4.79	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Naphthalene	21	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Acenaphthene	80	<4.8	<4.8	<3.8	<4.8	<4.8	<4.8	<4.8
Acenaphthylene	210	<4.8	<4.8	<3.8	<4.8	<4.8	<4.8	<4.8
Benzo(a)anthracene	0.0479	<4.8	<4.8	<0.19	<4.8	<4.8	<4.8	<4.8
Pyrene	210	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Fluorene	280	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Anthracene	2100	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Fluoranthene	280	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Phenanthrene	210	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
SW846-3010A								
Lead	15	5.9	6.3	9.0	3.6 B	3.5 B	<2.1	10.9
Bold type indicates detectable concentrations					Bold type indicates detectable concentrations.			
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).						

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary

Type II Well: **MW-8**

Client Sample ID:		GW-238	UST820-MW08-01C3	UST820-MW08-02B	UST820-MW08-02C	UST820-MW08	UST820-MW08	UST820-MW08
Date Sampled:		06/26/01	09/27/01	04/26/02	10/30/02	04/18/03	10/23/03	04/20/04
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result
EPA 602								
Benzene	1	3.2 J	5.4	<1.0	<1.0	<1.0	12.9	1.4
Chlorobenzene	50	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	180	140	172	95.8	2.7	33.2	50.2
Ethylbenzene	550	<5.0	<5.0	<1.0	<1.0	<1.0	2.1	<1.0
Xylenes (total)	530	<5.0	<5.0	<3.0	<3.0	<3.0	12.2	<3.0
Toluene	1000	1.6 J	<5.0	1.3	<1.0	<1.0	6.7	<1.0
Total BTEX + MTBE		184.8	145.4	173.3	95.8	2.7	67.1	51.6
Di-Isopropyl ether	70							
EPA 610								
Chrysene	4.79	<0.10	<0.10	<5.5	<5.2	<5.1	<5.1	<5.3
Naphthalene	21	<2.0	<2.0	<5.5	<5.2	<5.1	<5.1	<5.3
Acenaphthene	80	<1.0	<1.0	<5.5	<5.2	<5.1	<5.1	<5.3
Acenaphthylene	210	<1.0	<1.0	<5.5	<5.2	<5.1	<5.1	<5.3
Benzo(a)anthracene	0.0479	<0.10	<0.10	<5.5	<5.2	<5.1	<5.1	<5.3
Pyrene	210	<0.10	<0.25	<5.5	<5.2	<5.1	<5.1	<5.3
Fluorene	280	<2.0	<2.0	<5.5	<5.2	<5.1	<5.1	<5.3
Anthracene	2100	<1.0	<1.0	<5.5	<5.2	<5.1	<5.1	<5.3
Fluoranthene	280	<0.20	<0.25	<5.5	<5.2	<5.1	<5.1	<5.3
Phenanthrene	210	<1.0	<1.0	<5.5	<5.2	<5.1	<5.1	<5.3
SW846-3010A								
Lead	15	NA	NA	NA	NA	NA	NA	NA
		Bold type indicates detectable concentrations.						
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).						

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary
Type II Well: **MW-8**

Client Sample ID:		UST820-MW08	UST820-MW08	UST820-MW08	UST820-MW08	UST820-MW08	UST820-MW08	UST820-MW08	UST820-MW08
Date Sampled:		11/20/04	03/01/05	05/31/05	08/09/05	02/03/06	10/16/06	10/24/07	03/22/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602									
Benzene	1	1.3	<1.0	<1.0	<1.0	0.55 J	0.67 J	<1.0	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	15.1	5.4	3.0	2.0	2.3	4.1	<1.0	<1.0
Ethylbenzene	550	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	530	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Toluene	1000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total BTEX + MTBE		16.4	5.4	3.0	2.0	2.85	4.77		
Di-Isopropyl ether	70							<1.0	
EPA 610									
Chrysene	4.79	<4.8	<4.8	<4.9	<1.9	<4.9	<4.8	<4.9	<4.8
Naphthalene	21	<4.8	<4.8	<4.9	<1.9	<4.9	<4.8	<4.9	<4.8
Acenaphthene	80	<4.8	<4.8	<4.9	<3.8	<4.9	<4.8	<4.9	<4.8
Acenaphthylene	210	<4.8	<4.8	<4.9	<3.8	<4.9	<4.8	<4.9	<4.8
Benzo(a)anthracene	0.0479	<4.8	<4.8	<4.9	<0.19	<4.9	<4.8	<4.9	<4.8
Pyrene	210	<4.8	<4.8	<4.9	<1.9	<4.9	<4.8	<4.9	<4.8
Fluorene	280	<4.8	<4.8	<4.9	<1.9	<4.9	<4.8	<4.9	<4.8
Anthracene	2100	<4.8	<4.8	<4.9	<1.9	<4.9	<4.8	<4.9	<4.8
Fluoranthene	280	<4.8	<4.8	<4.9	<1.9	<4.9	<4.8	<4.9	<4.8
Phenanthrene	210	<4.8	<4.8	<4.9	<1.9	<4.9	<4.8	<4.9	<4.8
SW846-3010A									
Lead	15	27	<5.0	8.5	<5.0	2.1 B	<3.4	<2.1	<2.0
		Bold type indicates detectable concentrations.							
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).							

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary
Type III Well: **MW-9**

Client Sample ID:		UST820-MW09-01C3	UST820-MW09-02B	UST820-MW09-02C	UST820-MW09	UST820-MW09	UST820-MW09	UST820-MW09
Date Sampled:		10/01/01	04/24/02	10/28/02	04/16/03	10/21/03	04/14/04	11/3/04
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result
EPA 602								
Benzene	1	2600	1770	1450	2340	1960	1170	2360
Chlorobenzene	50	<200	<50	<50	<1.0	<50	<20	<5.0
Methyl tert-butyl ether	200	7000	4070	4200	4530	4110	2620	3930
Ethylbenzene	550	250	159	125	241	155	225	222
Xylenes (total)	530	690	447	348	556	389	532	495
Toluene	1000	1100	645	488	466	416	375	428
Total BTEX		4640	3021	2411	3603	2920	2302	3505
Di-Isopropyl ether	70							
EPA 610								
Chrysene	4.79	<0.10	<5.0	<5.2	<5.1	<5.1	<5.4	<4.8
Naphthalene	21	24	9.6	15.6	24.4	15.9	14.8	16.8
Acenaphthene	80	<1.0	<5.0	<5.2	<5.1	<5.1	<5.4	<4.8
Acenaphthylene	210	<1.0	<5.0	<5.2	<5.1	<5.1	<5.4	<4.8
Benzo(a)anthracene	0.0479	<0.10	<5.0	<5.2	<5.1	<5.1	<5.4	<4.8
Pyrene	210	<0.25	<5.0	<5.2	<5.1	<5.1	<5.4	<4.8
Fluorene	280	<2.0	<5.0	<5.2	<5.1	<5.1	<5.4	<4.8
Anthracene	2100	<1.0	<5.0	<5.2	<5.1	<5.1	<5.4	<4.8
Fluoranthene	280	<0.25	<5.0	<5.2	<5.1	<5.1	<5.4	<4.8
Phenanthrene	210	<1.0	<5.0	<5.2	<5.1	<5.1	<5.4	<4.8
SW846-3010A								
Lead	15	NA	NA	NA	NA	NA	NA	<5.0
		Bold type indicates detectable concentrations.						
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).						

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary
Type III Well: **MW-9**

Client Sample ID:		UST820-MW09	UST820-MW09	UST820-MW09	UST820-MW09	UST820-MW09
Date Sampled:		8/6/05	2/1/06	1/3/07	10/21/07	3/20/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result
EPA 602						
Benzene	1	1820	1710	723	93	22
Chlorobenzene	50	<1.0	<50	<10	<10	<1.0
Methyl tert-butyl ether	200	2410	2130	1000	583	19.1
Ethylbenzene	550	168	119	25	6.8 J	4.6
Xylenes (total)	530	297	242	49	<30.0	10.1
Toluene	1000	224	76	20	11.2	<1.0
Total BTEX		2509	2147	817	104	36.7
Di-Isopropyl ether	70				<10	
EPA 610						
Chrysene	4.79	<2.0	<4.8	<4.8	<4.8	<4.8
Naphthalene	21	13.9	6.2	2.3 J	1.7 J	2.4 J
Acenaphthene	80	<3.9	<4.8	<4.8	<4.8	<4.8
Acenaphthylene	210	<3.9	<4.8	<4.8	<4.8	<4.8
Benzo(a)anthracene	0.0479	<0.2	<4.8	<4.8	<4.8	<4.8
Pyrene	210	<2.0	<4.8	<4.8	<4.8	<4.8
Fluorene	280	<2.0	<4.8	<4.8	<4.8	<4.8
Anthracene	2100	<2.0	<4.8	<4.8	<4.8	<4.8
Fluoranthene	280	<2.0	<4.8	<4.8	<4.8	<4.8
Phenanthrene	210	<2.0	<4.8	<4.8	<4.8	<4.8
SW846-3010A						
Lead	15	<20	1.8 B	<6.8	<2.1	<20

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary

Type III Well: **MW-9D**

Client Sample ID:		UST820-MW19D 01C3	UST820-MW09D 02B	UST820-MW09D 02C	UST820-MW09D	UST820-MW09D	UST820-MW09D	UST820-MW09D	UST820-MW09D	UST820-MW09D	UST820-MW09D	UST820-MW09D	UST820-MW09D
Date Sampled:		10/03/01	04/24/02	10/28/02	04/14/03	10/13/03	04/14/04	11/3/04	8/6/05	2/1/06	10/14/06	10/21/07	3/20/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602													
Benzene	1	<1.0	2	19.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	<10	1.2	2.5	<10	<10	<10	<1.0	<1.0	<1.0	3.9	9.5	28.5
Ethylbenzene	550	<1.0	0.73 J	7.8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	55.2	<1.0
Xylenes (total)	530	<2.0	1.8 J	22	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	79	<3.0
Toluene	1000	<1.0	1.7	17.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	14.8	<1.0
Total BTEX + MTBE			7.43	70							3.9	151.0	
Di-Isopropyl ether	70											<1.0	
EPA 610													
Chrysene	4.79	<0.10	<5.5	<5.2	<5.2	<5.1	<5.4	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Naphthalene	21	<2.0	<5.5	<5.2	<5.2	<5.1	<5.4	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Acenaphthene	80	<1.0	<5.5	<5.2	<5.2	<5.1	<5.4	<4.8	<3.8	<4.8	<4.8	<4.8	<4.8
Acenaphthylene	210	<1.0	<5.5	<5.2	<5.2	<5.1	<5.4	<4.8	<3.8	<4.8	<4.8	<4.8	<4.8
Benzo(a)anthracene	0.0479	<0.10	<5.5	<5.2	<5.2	<5.1	<5.4	<4.8	<0.19	<4.8	<4.8	<4.8	<4.8
Pyrene	210	<0.25	<5.5	<5.2	<5.2	<5.1	<5.4	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Fluorene	280	<2.0	<5.5	<5.2	<5.2	<5.1	<5.4	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Anthracene	2100	<1.0	<5.5	<5.2	<5.2	<5.1	<5.4	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Fluoranthene	280	<0.25	<5.5	<5.2	<5.2	<5.1	<5.4	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Phenanthrene	210	<1.0	<5.5	<5.2	<5.2	<5.1	<5.4	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
SW846-3010A													
Lead	15	NA	NA	NA	NA	NA	NA	<5.0	<5.0	<1.2	<3.4	<2.1	<2.0
		Bold type indicates detectable concentrations.											
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).											

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary
Type II Well: **MW-10**

Client Sample ID:		UST820-MW10-01C3	UST820-MW10-02B	UST820-MW10-02C	UST820-MW10	No Sample	No Sample	No Sample	No Sample	UST820-MW10	UST820-MW10	No Sample
Date Sampled:		09/26/01	04/24/02	10/30/02	04/14/03	10/09/03	04/13/04	11/15/2004	8/8/2005	2/2/2006	10/17/2006	10/23/2007
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602												
Benzene	1	<1.0	<1.0	<1.0	<1.0					<1.0	<1.0	
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0					<1.0	<1.0	
Methyl tert-butyl ether	200	<10	7	9.0	6.9					22.5	24	
Ethylbenzene	550	<1.0	<1.0	<1.0	<1.0					<1.0	<1.0	
Xylenes (total)	530	<2.0	<2.0	<2.0	<3.0					<2.0	<3.0	
Toluene	1000	<1.0	<1.0	<1.0	<1.0					<1.0	<1.0	
Total BTEX + MTBE			7.00	9.00	6.90					22.50	24.00	
Di-Isopropyl ether	70											
EPA 610												
Chrysene	4.79	<0.10	<5.5	<5.1	<5.0					<4.8	<5.0	
Naphthalene	21	<2.0	<5.5	<5.1	<5.0					<4.8	<5.0	
Acenaphthene	80	<1.0	<5.5	<5.1	<5.0					<4.8	<5.0	
Acenaphthylene	210	<1.0	<5.5	<5.1	<5.0					<4.8	<5.0	
Benzo(a)anthracene	0.0479	<0.10	<5.5	<5.1	<5.0					<4.8	<5.0	
Pyrene	210	<0.25	<5.5	<5.1	<5.0					<4.8	<5.0	
Fluorene	280	<2.0	<5.5	<5.1	<5.0					<4.8	<5.0	
Anthracene	2100	<1.0	<5.5	<5.1	<5.0					<4.8	<5.0	
Fluoranthene	280	<0.25	<5.5	<5.1	<5.0					<4.8	<5.0	
Phenanthrene	210	<1.0	<5.5	<5.1	<5.0					<4.8	<5.0	
SW846-6010B												
Lead										4.3 B	6.0	
		Bold type indicates detectable concentrations.										
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).										

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary
Type II Well: **MW-10**

Client Sample ID:		UST820-MW10
Date Sampled:		03/23/09
Analyte (ug/l)	GWQS	Result
EPA 602		
Benzene	1	<1.0
Chlorobenzene	50	<1.0
Methyl tert-butyl ether	200	43.6
Ethylbenzene	550	<1.0
Xylenes (total)	530	<3.0
Toluene	1000	<1.0
Total BTEX + MTBE		
Di-Isopropyl ether	70	
EPA 610		
Chrysene	4.79	<4.8
Naphthalene	21	<4.8
Acenaphthene	80	<4.8
Acenaphthylene	210	<4.8
Benzo(a)anthracene	0.0479	<4.8
Pyrene	210	<4.8
Fluorene	280	<4.8
Anthracene	2100	<4.8
Fluoranthene	280	<4.8
Phenanthrene	210	<4.8
SW846-6010B		
Lead		4.6 B

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary
Type II Well: **MW-11**

Client Sample ID:		UST820-MW11-01C3	UST820-MW11-02B	UST820-MW11-02C	UST820-MW11	UST820-MW11	UST820-MW11	UST820-MW11	UST820-MW11	UST820-MW11	UST820-MW11	UST820-MW11
Date Sampled:		10/02/01	04/26/02	10/30/02	04/18/03	10/21/03	04/16/04	11/22/04	08/10/05	02/05/06	10/17/06	10/18/07
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602												
Benzene	1	130	45.1	49.3	7.5 J	84.7	<20	7.4	<20	1.3	1.1	0.85 J
Chlorobenzene	50	<50	<10	1.1	<10	<10	<20	<1.0	<20	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	<500	<10	20.2	89.7	20.7	<20	<1.0	<20	<1.0	<1.0	1.9
Ethylbenzene	550	340	481	91.5	35.6	42.2	31.6	111	78	55	57.2	46.2
Xylenes (total)	530	2600	3270	1580	1290	1610	2180	2450	3990	1390	1860	1400 B
Toluene	1000	2900	2900	594	284	310	264	722	1478	249	177	6
Total BTEX + MTBE		5970	6696.1	2335.0	1706.8	2067.6	2475.6	3290.4	5546.1	1695.5	2095.3	1452.6
Di-Isopropyl ether	70											3.6
EPA 610												
Chrysene	4.79	<0.10	<20	<53	<40	<20	<5.6	<4.8	<1.9	<4.9	<4.8	1.8 J
Naphthalene	21	7.5	163	271	140	81.1	92.3	139	179	3.4 J	156	188
Acenaphthene	80	1.2 P	<20	<53	<40	<20	<5.6	<4.8	<16	<4.9	<4.8	<4.9
Acenaphthylene	210	11	<20	<53	<40	<20	<5.6	<4.8	<16	<4.9	<4.8	<4.9
Benzo(a)anthracene	0.0479	<0.10	<20	<53	<40	<20	<5.6	<4.8	<0.19	<4.9	<4.8	1.0 J
Pyrene	210	<0.25	<20	<53	<40	<20	<5.6	<4.8	1.6 J	<4.9	<4.8	1.5 J
Fluorene	280	<2.0	<20	<53	<40	<20	<5.6	<4.8	<1.9	<4.9	<4.8	<4.9
Anthracene	2100	<1.0	<20	<53	<40	<20	<5.6	<4.8	<1.9	<4.9	<4.8	<4.9
Fluoranthene	280	<0.25	<20	<53	<40	<20	<5.6	<4.8	1.6 J	<4.9	<4.8	1.6 J
Phenanthrene	210	<1.0	<20	<53	<40	<20	<5.6	<4.8	<1.9	<4.9	<4.8	<4.9
SW846-3010A												
Lead	15	NA	NA	NA	NA	NA	NA	<5.0	<5.0	7.7	3.6 B	2.1 B
		Bold type indicates detectable concentrations.										
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).										

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary
Type II Well: **MW-11**

Client Sample ID:		UST820-MW11
Date Sampled:		03/22/09
Analyte (ug/l)	GWQS	Result
EPA 602		
Benzene	1	<10
Chlorobenzene	50	<10
Methyl tert-butyl ether	200	21
Ethylbenzene	550	118
Xylenes (total)	530	4390
Toluene	1000	8.5 J
Total BTEX + MTBE		4516.5
Di-Isopropyl ether	70	
EPA 610		
Chrysene	4.79	<20
Naphthalene	21	98.7
Acenaphthene	80	<20
Acenaphthylene	210	<20
Benzo(a)anthracene	0.0479	<20
Pyrene	210	<20
Fluorene	280	<20
Anthracene	2100	<20
Fluoranthene	280	<20
Phenanthrene	210	<20
SW846-3010A		
Lead	15	11.5

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary
Type II Well: **MW-12**

Client Sample ID:		UST820-MW12-01C3	UST820-MW12-02B	UST820-MW12-02C	UST820-MW12	UST820-MW12	UST820-MW12	UST820-MW12	UST820-MW12	UST820-MW12	UST820-MW12	UST820-MW12
Date Sampled:		09/26/01	04/25/02	10/28/02	04/09/03	10/21/03	04/14/04	11/06/04	08/08/05	02/02/06	10/13/06	10/18/07
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602												
Benzene	1	<1.0	<1.0	<1.0	<1.0	0.83 J	<1.0	1.9	<1.0	<1.0	<2.0	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0
Methyl tert-butyl ether	200	<1.0	2.2	<1.0	<1.0	<1.0	<1.0	0.7	<1.0	4.9	120	<1.0
Ethylbenzene	550	<1.0	<1.0	1.7	<1.0	<1.0	<1.0	17	<1.0	<1.0	<2.0	<1.0
Xylenes (total)	530	<2.0	<3.0	47.8	<3.0	<3.0	<3.0	9.5	<3.0	<3.0	<6.0	<3.0
Toluene	1000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.8	<1.0	<1.0	<2.0	<1.0
Total BTEX + MTBE			2.2	49.5		0.83		30.9		4.9	120.0	
Di-Isopropyl ether	70											<1.0
EPA 610												
Chrysene	4.79	<0.10	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<1.9	<4.8	<4.8	<4.8
Naphthalene	21	<2.0	<5.0	<5.2	<5.1	<5.1	<5.2	2.9 J	<1.9	<4.8	<4.8	<4.8
Acenaphthene	80	<1.0	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<3.8	<4.8	<4.8	<4.8
Acenaphthylene	210	<1.0	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<3.8	<4.8	<4.8	<4.8
Benzo(a)anthracene	0.0479	<0.10	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<0.19	<4.8	<4.8	<4.8
Pyrene	210	<0.25	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<1.9	<4.8	<4.8	<4.8
Fluorene	280	<2.0	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<1.9	<4.8	<4.8	<4.8
Anthracene	2100	<1.0	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<1.9	<4.8	<4.8	<4.8
Fluoranthene	280	<0.25	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<1.9	<4.8	<4.8	<4.8
Phenanthrene	210	<1.0	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<1.9	<4.8	<4.8	<4.8
SW846-3010A												
Lead	15	NA	NA	NA	NA	NA	NA	<5.0	<5.0	<1.2	<1.7	2.3 B
		Bold type indicates detectable concentrations.										
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).										

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary
Type II Well: **MW-12**

Client Sample ID:		UST820-MW12
Date Sampled:		03/20/09
Analyte (ug/l)	GWQS	Result
EPA 602		
Benzene	1	<1.0
Chlorobenzene	50	<1.0
Methyl tert-butyl ether	200	<1.0
Ethylbenzene	550	<1.0
Xylenes (total)	530	<3.0
Toluene	1000	<1.0
Total BTEX + MTBE		
Di-Isopropyl ether	70	
EPA 610		
Chrysene	4.79	<4.8
Naphthalene	21	<4.8
Acenaphthene	80	<4.8
Acenaphthylene	210	<4.8
Benzo(a)anthracene	0.0479	<4.8
Pyrene	210	<4.8
Fluorene	280	<4.8
Anthracene	2100	<4.8
Fluoranthene	280	<4.8
Phenanthrene	210	<4.8
SW846-3010A		
Lead	15	7.7

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary
Type II Well: **MW-13**

Client Sample ID:		UST820-MW13-02B	UST820-MW13-02C	UST820-MW13	UST820-MW13	UST820-MW13	UST820-MW13	UST820-MW13	UST820-MW13	UST820-MW13	UST820-MW13
Date Sampled:		04/26/02	10/29/02	04/08/03	10/09/03	04/14/04	11/06/04	08/06/05	02/02/06	10/13/06	10/18/07
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602											
Benzene	1	0.63 J	<1.0	0.55 J	4.3	12.5	2.8	1.8	8.8	<1.0	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0
Methyl tert-butyl ether	200	18.3	6.7	4.4	<1.0	<1.0	1.5	<1.0	<5.0	2.6	8.4
Ethylbenzene	550	5	0.73 J	3.9	48.4	145	19.5	21.7	60.8	6.7	13.5
Xylenes (total)	530	24.8	7.2	103	531	1290	63.6	148	903	41.2	86.0
Toluene	1000	17.5	2.1	62.5	53.3	474	19.1	41.6	304.0	10.8	27.4
Total BTEX + MTBE		66.23	16.76	174.35	637	1922	107	213.1	1277	61.3	135.3
Di-Isopropyl ether	70										<1.0
EPA 610											
Chrysene	4.79	<5.0	<5.4	<5.1	<5.1	<5.2	<4.8	<1.9	<4.8	<4.9	<4.9
Naphthalene	21	<5.0	<5.4	7.2	34.2	48.4	3.2 J	1.1 J	12.4	4.8 J	2.9 J
Acenaphthene	80	<5.0	<5.4	<5.1	<5.1	<5.2	<4.8	<3.9	<4.8	<4.9	<4.9
Acenaphthylene	210	<5.0	<5.4	<5.1	<5.1	<5.2	<4.8	<3.9	<4.8	<4.9	<4.9
Benzo(a)anthracene	0.0479	<5.0	<5.4	<5.1	<5.1	<5.2	<4.8	<0.19	<4.8	<4.9	<4.9
Pyrene	210	<5.0	<5.4	<5.1	<5.1	<5.2	<4.8	<1.9	<4.8	<4.9	<4.9
Fluorene	280	<5.0	<5.4	<5.1	<5.1	<5.2	<4.8	<1.9	<4.8	<4.9	<4.9
Anthracene	2100	<5.0	<5.4	<5.1	<5.1	<5.2	<4.8	<1.9	<4.8	<4.9	<4.9
Fluoranthene	280	<5.0	<5.4	<5.1	<5.1	<5.2	<4.8	<1.9	<4.8	<4.9	<4.9
Phenanthrene	210	<5.0	<5.4	<5.1	<5.1	<5.2	<4.8	<1.9	<4.8	<4.9	<4.9
SW846-3010A											
Lead	15	NA	NA	NA	NA	NA	<5.0	7.3	<1.2	1.9 B	6.8
		Bold type indicates detectable concentrations.									
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).									

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary

Type II Well: **MW-13**

Client Sample ID:		UST820-MW13
Date Sampled:		03/22/09
Analyte (ug/l)	GWQS	Result
EPA 602		
Benzene	1	<5.0
Chlorobenzene	50	<5.0
Methyl tert-butyl ether	200	<5.0
Ethylbenzene	550	42.5
Xylenes (total)	530	836
Toluene	1000	45.0
Total BTEX + MTBE		923.5
Di-Isopropyl ether	70	
EPA 610		
Chrysene	4.79	<4.8
Naphthalene	21	9.8
Acenaphthene	80	<4.8
Acenaphthylene	210	<4.8
Benzo(a)anthracene	0.0479	<4.8
Pyrene	210	<4.8
Fluorene	280	<4.8
Anthracene	2100	<4.8
Fluoranthene	280	<4.8
Phenanthrene	210	<4.8
SW846-3010A		
Lead	15	8.2

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Printed: 5/11/2009

Samples analyzed by Compuchem, STL, or Accutest

Analytical Data Summary
Type II Well: **MW-14**

Client Sample ID:		GW-237	UST820-MW14-01C3	UST820-MW14-02B	UST820-MW14-02C	UST820-MW14	UST820-MW14	UST820-MW14	UST820-MW14	UST820-MW14	UST820-MW14	UST820-MW14	UST820-MW14	UST820-MW14	UST820-MW14	UST820-MW14
Date Sampled:		06/22/01	09/27/01	04/26/02	10/30/02	04/18/03	10/17/03	04/15/04	11/20/04	3/1/05	5/31/05	8/9/05	2/3/06	10/16/06	10/19/07	03/22/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602																
Benzene	1	<1.0	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	0.93 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS
Methyl tert-butyl ether	200	2.1 J	<1.0	0.53 J	<1.0	<1.0	<1.0	<1.0	2.6	3.5	0.6 J	<1.0	<1.0	<1.0	<1.0	NS
Ethylbenzene	550	<1.0	<1.0	7.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS
Xylenes (total)	530	<1.0	<2.0	37.2	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	NS
Toluene	1000	0.36 J	<1.0	89.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS
Total BTEX + MTBE		0.36		135.4					3.53	3.50	0.60					
Di-isopropyl ether	70														<1.0	
EPA 610																
Chrysene	4.79	<0.10	<0.10	<5.0	<5.1	<5.1	<5.1	<5.2	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	NS
Naphthalene	21	<2.0	<2.0	2.9	<5.1	<5.1	<5.1	<5.2	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	NS
Acenaphthene	80	<1.0	<1.0	<5.0	<5.1	<5.1	<5.1	<5.2	<4.8	<4.8	<4.8	<3.8	<4.8	<4.8	<4.8	NS
Acenaphthylene	210	<1.0	<1.0	<5.0	<5.1	<5.1	<5.1	<5.2	<4.8	<4.8	<4.8	<3.8	<4.8	<4.8	<4.8	NS
Benzo(a)anthracene	0.0479	<0.10	<0.10	<5.0	<5.1	<5.1	<5.1	<5.2	<4.8	<4.8	<4.8	<0.19	<4.8	<4.8	<4.8	NS
Pyrene	210	<0.10	<0.25	<5.0	<5.1	<5.1	<5.1	<5.2	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	NS
Fluorene	280	<2.0	<2.0	<5.0	<5.1	<5.1	<5.1	<5.2	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	NS
Anthracene	2100	<1.0	<1.0	<5.0	<5.1	<5.1	<5.1	<5.2	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	NS
Fluoranthene	280	<0.20	<0.25	<5.0	<5.1	<5.1	<5.1	<5.2	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	NS
Phenanthrene	210	<1.0	<1.0	<5.0	<5.1	<5.1	<5.1	<5.2	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	NS
SW846-3010A																
Lead	15	NA	NA	NA	NA	NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<1.2	<3.4	<2.1	NS
		Bold type indicates detectable concentrations.														
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).														

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary
Type II Well: **MW-15**

Client Sample ID:		UST820-MW15-02B	UST820-MW15-02C	UST820-MW15	UST820-MW15	UST820-MW15	UST820-MW15	UST820-MW15	UST820-MW15	UST820-MW15	UST820-MW15
Date Sampled:		04/26/02	10/28/02	04/08/03	10/17/03	04/13/04	11/06/04	08/06/05	02/02/06	10/12/06	10/15/07
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602											
Benzene	1	<1.0	<1.0	<1.0	<1.0	<1.0	2.1	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	550	<1.0	<1.0	<1.0	<1.0	<1.0	0.65 J	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	530	<3.0	<3.0	<3.0	<3.0	<3.0	1.4 J	<3.0	<3.0	<3.0	<3.0
Toluene	1000	<1.0	<1.0	<1.0	<1.0	<1.0	0.89 J	<1.0	<1.0	<1.0	<1.0
Total BTEX + MTBE							5.04				
Di-Isopropyl ether	70										<1.0
EPA 610											
Chrysene	4.79	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<2.0	<4.8	<4.8	<4.8
Naphthalene	21	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<2.0	<4.8	<4.8	<4.8
Acenaphthene	80	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<4.0	<4.8	<4.8	<4.8
Acenaphthylene	210	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<4.0	<4.8	<4.8	<4.8
Benzo(a)anthracene	0.0479	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<0.2	<4.8	<4.8	<4.8
Pyrene	210	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<2.0	<4.8	<4.8	<4.8
Fluorene	280	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<2.0	<4.8	<4.8	<4.8
Anthracene	2100	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<2.0	<4.8	<4.8	<4.8
Fluoranthene	280	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<2.0	<4.8	<4.8	<4.8
Phenanthrene	210	<5.0	<5.2	<5.1	<5.1	<5.2	<4.8	<2.0	<4.8	<4.8	<4.8
SW846-3010A											
Lead	15	NA	NA	NA	NA	NA	<5.0	<5.0	<1.2	<1.7	<2.1
		Bold type indicates detectable concentrations.									
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).									

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary

Type II Well: **MW-15**

Client Sample ID:		UST820-MW15
Date Sampled:		03/22/09
Analyte (ug/l)	GWQS	Result
EPA 602		
Benzene	1	<1.0
Chlorobenzene	50	<1.0
Methyl tert-butyl ether	200	<1.0
Ethylbenzene	550	<1.0
Xylenes (total)	530	<3.0
Toluene	1000	<1.0
Total BTEX + MTBE		
Di-Isopropyl ether	70	
EPA 610		
Chrysene	4.79	<4.8
Naphthalene	21	<4.8
Acenaphthene	80	<4.8
Acenaphthylene	210	<4.8
Benzo(a)anthracene	0.0479	<4.8
Pyrene	210	<4.8
Fluorene	280	<4.8
Anthracene	2100	<4.8
Fluoranthene	280	<4.8
Phenanthrene	210	<4.8
SW846-3010A		
Lead	15	6.6

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Printed: 5/11/2009

Samples analyzed by Compuchem, STL, or Accutest

Analytical Data Summary
Type II Well: **MW-16**

Client Sample ID:		UST820-MW16-02B	UST820-MW16-02C	UST820-MW16	UST820-MW16	UST820-MW16	UST820-MW16	UST820-MW16	UST820-MW16	UST820-MW16	UST820-MW16
Date Sampled:		04/25/02	10/29/02	04/18/03	10/07/03	04/15/04	11/20/04	8/8/05	2/2/06	10/16/06	10/21/07
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602											
Benzene	1	<1.0	<1.0	<1.0	<1.0	2.4	2.6	8.6	<1.0	<1.0	0.50 J
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	<1.0	<1.0	<1.0	<1.0	<1.0	0.6 J	2.7	<1.0	<1.0	0.70 J
Ethylbenzene	550	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	530	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	1.1 J
Toluene	1000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total BTEX + MTBE						2.4	3.2	11.3			
Di-Isopropyl ether	70										<1.0
EPA 610											
Chrysene	4.79	<5.5	<5.1	<5.1	<5.2	<5.3	<4.8	<1.9	<4.8	<4.8	<4.8
Naphthalene	21	<5.5	<5.1	<5.1	<5.2	<5.3	<4.8	<1.9	<4.8	<4.8	<4.8
Acenaphthene	80	<5.5	<5.1	<5.1	<5.2	<5.3	<4.8	<3.8	<4.8	<4.8	<4.8
Acenaphthylene	210	<5.5	<5.1	<5.1	<5.2	<5.3	<4.8	<3.8	<4.8	<4.8	<4.8
Benzo(a)anthracene	0.0479	<5.5	<5.1	<5.1	<5.2	<5.3	<4.8	<0.19	<4.8	<4.8	<4.8
Pyrene	210	<5.5	<5.1	<5.1	<5.2	<5.3	<4.8	<1.9	<4.8	<4.8	<4.8
Fluorene	280	<5.5	<5.1	<5.1	<5.2	<5.3	<4.8	<1.9	<4.8	<4.8	<4.8
Anthracene	2100	<5.5	<5.1	<5.1	<5.2	<5.3	<4.8	<1.9	<4.8	<4.8	<4.8
Fluoranthene	280	<5.5	<5.1	<5.1	<5.2	<5.3	<4.8	<1.9	<4.8	<4.8	<4.8
Phenanthrene	210	<5.5	<5.1	<5.1	<5.2	<5.3	<4.8	<1.9	<4.8	<4.8	<4.8
SW846-3010A											
Lead	15	NA	NA	NA	NA	NA	<5.0	18.7	<1.2	8.1 B	2.3 B
		Bold type indicates detectable concentrations.									
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).									

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary

Type II Well: **MW-16**

Client Sample ID:		UST820-MW16
Date Sampled:		03/22/09
Analyte (ug/l)	GWQS	Result
EPA 602		
Benzene	1	<1.0
Chlorobenzene	50	<1.0
Methyl tert-butyl ether	200	<1.0
Ethylbenzene	550	<1.0
Xylenes (total)	530	<3.0
Toluene	1000	<1.0
Total BTEX + MTBE		
Di-Isopropyl ether	70	
EPA 610		
Chrysene	4.79	<4.8
Naphthalene	21	<4.8
Acenaphthene	80	<4.8
Acenaphthylene	210	<4.8
Benzo(a)anthracene	0.0479	<4.8
Pyrene	210	<4.8
Fluorene	280	<4.8
Anthracene	2100	<4.8
Fluoranthene	280	<4.8
Phenanthrene	210	<4.8
SW846-3010A		
Lead	15	31.3

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Printed: 5/11/2009

Samples analyzed by Compuchem, STL, or Accutest

Analytical Data Summary
Type III Well: **MW-17**

Client Sample ID:		UST820-MW17-02B	UST820-MW17-02C	UST820-MW17	UST820-MW17	UST820-MW17	UST820-MW17	UST820-MW17	UST820-MW17	UST820-MW17	UST820-MW17
Date Sampled:		04/25/02	10/29/02	04/18/03	10/07/03	04/15/04	11/20/04	8/8/05	2/2/06	10/16/06	10/21/07
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602											
Benzene	1	17.4	<1.0	45.8	364	181	242	552	675	695	53
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<20	<50	<50
Methyl tert-butyl ether	200	61	12.4	148	1860	1500	1760	4250	5180	4520	2960
Ethylbenzene	550	<1.0	<1.0	<1.0	<1.0	<10	<1.0	1.2	<20	<50	<50
Xylenes (total)	530	<3.0	<3.0	1.9 J	3.3	<30	2.3 J	5.1	<60	<150	<150
Toluene	1000	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<20	<50	<50
Total BTEX + MTBE		78.4	12.4	195.7	2227.3	1681	4494.3	4808.3	5855.0	5215.0	3013.4
Di-Isopropyl ether	70										<50
EPA 610											
Chrysene	4.79	<5.5	<5.1	<5.1	<5.2	<5.1	<4.8	<1.9	<4.8	<4.9	<4.8
Naphthalene	21	<5.5	<5.1	<5.1	<5.2	<5.1	<4.8	<1.9	<4.8	<4.9	<4.8
Acenaphthene	80	<5.5	<5.1	<5.1	<5.2	<5.1	<4.8	<3.8	<4.8	<4.9	<4.8
Acenaphthylene	210	<5.5	<5.1	<5.1	<5.2	<5.1	<4.8	<3.8	<4.8	<4.9	<4.8
Benzo(a)anthracene	0.0479	<5.5	<5.1	<5.1	<5.2	<5.1	<4.8	<0.19	<4.8	<4.9	<4.8
Pyrene	210	<5.5	<5.1	<5.1	<5.2	<5.1	<4.8	<1.9	<4.8	<4.9	<4.8
Fluorene	280	<5.5	<5.1	<5.1	<5.2	<5.1	<4.8	<1.9	<4.8	<4.9	<4.8
Anthracene	2100	<5.5	<5.1	<5.1	<5.2	<5.1	<4.8	<1.9	<4.8	<4.9	<4.8
Fluoranthene	280	<5.5	<5.1	<5.1	<5.2	<5.1	<4.8	<1.9	<4.8	<4.9	<4.8
Phenanthrene	210	<5.5	<5.1	<5.1	<5.2	<5.1	<4.8	<1.9	<4.8	<4.9	<4.8
SW846-3010A											
Lead	15	NA	NA	NA	NA	NA	<15	<20	5.2	<3.4	<42
		Bold type indicates detectable concentrations.									
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).									

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary

Type III Well: **MW-17**

Client Sample ID:		UST820-MW17
Date Sampled:		3/23/09
Analyte (ug/l)	GWQS	Result
EPA 602		
Benzene	1	148
Chlorobenzene	50	<10
Methyl tert-butyl ether	200	2070
Ethylbenzene	550	<10
Xylenes (total)	530	<30
Toluene	1000	<10
Total BTEX + MTBE		148
Di-Isopropyl ether	70	
EPA 610		
Chrysene	4.79	<4.8
Naphthalene	21	<4.8
Acenaphthene	80	<4.8
Acenaphthylene	210	<4.8
Benzo(a)anthracene	0.0479	<4.8
Pyrene	210	<4.8
Fluorene	280	<4.8
Anthracene	2100	<4.8
Fluoranthene	280	<4.8
Phenanthrene	210	<4.8
SW846-3010A		
Lead	15	45.8 B

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Printed: 5/11/2009

Samples analyzed by Compuchem, STL, or Accutest

Analytical Data Summary
Type II Well: **MW-18**

Client Sample ID:		UST820-MW18	UST820-MW18	UST820-MW18	UST820-MW18	UST820-MW18	UST820-MW18	UST820-MW18	UST820-MW18
Date Sampled:		11/20/04	2/26/05	5/31/05	8/10/05	2/2/06	10/17/06	10/21/07	03/22/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602									
Benzene	1	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	550	<1.0	5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	530	<3.0	13.2	<3.0	<3.0	<3.0	<3.0	1.8 J	<3.0
Toluene	1000	<1.0	10.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total BTEX + MTBE			29.9						
Di-Isopropyl ether	70							<1.0	
EPA 610									
Chrysene	4.79	<4.9	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Naphthalene	21	<4.9	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Acenaphthene	80	<4.9	<4.8	<4.8	<3.8	<4.8	<4.8	<4.8	<4.8
Acenaphthylene	210	<4.9	<4.8	<4.8	<3.8	<4.8	<4.8	<4.8	<4.8
Benzo(a)anthracene	0.0479	<4.9	<4.8	<4.8	<0.19	<4.8	<4.8	<4.8	<4.8
Pyrene	210	<4.9	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Fluorene	280	<4.9	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Anthracene	2100	<4.9	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Fluoranthene	280	<4.9	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Phenanthrene	210	<4.9	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
SW846-3010A									
Lead	15	<5.0	<100	<5.0	<5.0	<1.2	<1.7	6.5	9.4
		Bold type indicates detectable concentrations.							
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).							

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary
Type III Well: **MW-19**

Client Sample ID:		UST820-MW19-01C3	UST820-MW19-02B	UST820-MW19-02C	UST820-MW19	UST820-MW19	UST820-MW19	UST820-MW19	UST820-MW19	UST820-MW19	UST820-MW19	UST820-MW19	UST820-MW19	UST820-MW19	UST820-MW19
Date Sampled:		09/26/01	04/24/02	10/30/02	04/14/03	10/07/03	04/16/04	11/20/04	2/26/05	5/31/05	8/8/05	2/2/06	10/17/06	10/23/07	3/23/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602															
Benzene	1	<1.0	1.4	<1.0	0.87 J	0.76 J	0.79 J	0.57 J	4.1	0.75 J	<1.0	NA	<1.0	NA	NS
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA	NS
Methyl tert-butyl ether	200	<1.0	8.2	5.1	4.4	3.0	4.5	4.7	8.0	9.0	8.0	NA	7.4	NA	NS
Ethylbenzene	550	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	8.3	0.6 J	<1.0	NA	<1.0	NA	NS
Xylenes (total)	530	<2.0	<3.0	<3.0	<3.0	<3.0	1.8 J	<1.0	21.8	<3.0	<3.0	NA	<3.0	NA	NS
Toluene	1000	<1.0	0.75 J	<1.0	<1.0	<1.0	1.3	<1.0	23.1	1.0	<1.0	NA	<1.0	NA	NS
Total BTEX + MTBE			10.35		5.27	3.76	8.39	5.27	65.3	11.35	8.00	NA	7.40	NA	
Di-Isopropyl ether	70													NA	
EPA 610															
Chrysene	4.79	<0.10	<5.5	<5.3	<5.1	<5.4	<5.3	<4.8	<4.8	<4.8	<1.9	NA	<5.0	NA	NS
Naphthalene	21	<2.0	<5.5	<5.3	<5.1	<5.4	<5.3	<4.8	1.5 J	<4.8	<1.9	NA	<5.0	NA	NS
Acenaphthene	80	<1.0	<5.5	<5.3	<5.1	<5.4	<5.3	<4.8	<4.8	<4.8	<3.8	NA	<5.0	NA	NS
Acenaphthylene	210	<1.0	<5.5	<5.3	<5.1	<5.4	<5.3	<4.8	<4.8	<4.8	<3.8	NA	<5.0	NA	NS
Benzo(a)anthracene	0.0479	<0.10	<5.5	<5.3	<5.1	<5.4	<5.3	<4.8	<4.8	<4.8	<0.19	NA	<5.0	NA	NS
Pyrene	210	<0.25	<5.5	<5.3	<5.1	<5.4	<5.3	<4.8	<4.8	<4.8	<1.9	NA	<5.0	NA	NS
Fluorene	280	<2.0	<5.5	<5.3	<5.1	<5.4	<5.3	<4.8	<4.8	<4.8	<1.9	NA	<5.0	NA	NS
Anthracene	2100	<1.0	<5.5	<5.3	<5.1	<5.4	<5.3	<4.8	<4.8	<4.8	<1.9	NA	<5.0	NA	NS
Fluoranthene	280	<0.25	<5.5	<5.3	<5.1	<5.4	<5.3	<4.8	<4.8	<4.8	<1.9	NA	<5.0	NA	NS
Phenanthrene	210	<1.0	<5.5	<5.3	<5.1	<5.4	<5.3	<4.8	<4.8	<4.8	<1.9	NA	<5.0	NA	NS
SW846-3010A															
Lead	15	NA	NA	NA	NA	NA	NA	<5.0	<5.0	19.9	<100	NA	<68	NA	NS
		Bold type indicates detectable concentrations.													
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).													

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary

Type II Well: **MW-20**

Client Sample ID:		UST820-MW20	UST820-MW20	UST820-MW20	UST820-MW20	UST820-MW20	UST820-MW20	UST820-MW20	UST820-MW20
Date Sampled:		11/20/04	3/1/05	5/31/05	8/9/05	2/2/06	10/17/06	10/21/07	03/22/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602									
Benzene	1	<1.0	1.0	<1.0	<1.0	0.69 J	<1.0	<1.0	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	<1.0	<1.0	<1.0	0.53 J	0.59 J	1.3	2.2	<1.0
Ethylbenzene	550	<1.0	3.5	<1.0	<1.0	8.0	<1.0	<1.0	<1.0
Xylenes (total)	530	<3.0	8.6	<3.0	<3.0	7.8	<3.0	<3.0	<3.0
Toluene	1000	<1.0	6.1	<1.0	<1.0	1.1	<1.0	<1.0	<1.0
Total BTEX + MTBE			19.2		0.53	18.18	1.3	2.2	
Di-Isopropyl ether	70							<1.0	
EPA 610									
Chrysene	4.79	<4.8	<4.8	<4.8	<1.9	<4.9	<4.8	<4.8	<4.9
Naphthalene	21	<4.8	<4.8	<4.8	<1.9	1.5 J	<4.8	<4.8	<4.9
Acenaphthene	80	<4.8	<4.8	<4.8	<3.9	<4.9	<4.8	<4.8	<4.9
Acenaphthylene	210	<4.8	<4.8	<4.8	<3.9	<4.9	<4.8	<4.8	<4.9
Benzo(a)anthracene	0.0479	<4.8	<4.8	<4.8	<0.19	<4.9	<4.8	<4.8	<4.9
Pyrene	210	<4.8	<4.8	<4.8	<1.9	<4.9	<4.8	<4.8	<4.9
Fluorene	280	<4.8	<4.8	<4.8	<1.9	<4.9	<4.8	<4.8	<4.9
Anthracene	2100	<4.8	<4.8	<4.8	<1.9	<4.9	<4.8	<4.8	<4.9
Fluoranthene	280	<4.8	<4.8	<4.8	<1.9	<4.9	<4.8	<4.8	<4.9
Phenanthrene	210	<4.8	<4.8	<4.8	<1.9	<4.9	<4.8	<4.8	<4.9
SW846-3010A									
Lead	15	<5.0	<5.0	<5.0	6.1	<1.2	<1.7	<2.1	<2.0
		Bold type indicates detectable concentrations.							
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).							

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary
Type III Well: **MW-21**

Client Sample ID:		UST820-MW21-01C3	UST820-MW21-02B	UST820-MW21-02C	UST820-MW21	UST820-MW21	UST820-MW21	UST820-MW21	UST820-MW21	UST820-MW21	UST820-MW21	UST820-MW21	UST820-MW21	UST820-MW21	UST820-MW21
Date Sampled:		09/26/01	04/24/02	10/30/02	04/14/03	10/07/03	04/16/04	11/20/04	3/1/05	5/31/05	8/9/05	2/2/06	10/17/06	10/21/07	3/22/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602															
Benzene	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	<1.0	<1.0	<1.0	<1.0	<1.0	0.51 J	0.84 J	0.85 J	0.87 J	0.85 J	1.5	0.96 J	1.4 J	1.2
Ethylbenzene	550	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	530	<2.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	12.5	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Toluene	1000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	11.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total BTEX + MTBE							0.51	0.84	32.85	0.87	0.85	1.50	0.96	1.40	
Di-Isopropyl ether	70													<1.0	
EPA 610															
Chrysene	4.79	<0.10	<5.5	<5.0	<5.1	<5.6	<5.2	<4.8	<4.8	<4.8	<1.9	<4.8	<4.9	<4.8	<4.8
Naphthalene	21	<2.0	<5.5	<5.0	<5.1	<5.6	<5.2	<4.8	<4.8	<4.8	<1.9	<4.8	<4.9	<4.8	<4.8
Acenaphthene	80	<1.0	<5.5	<5.0	<5.1	<5.6	<5.2	<4.8	<4.8	<4.8	<3.9	<4.8	<4.9	<4.8	<4.8
Acenaphthylene	210	<1.0	<5.5	<5.0	<5.1	<5.6	<5.2	<4.8	<4.8	<4.8	<3.9	<4.8	<4.9	<4.8	<4.8
Benzo(a)anthracene	0.0479	<0.10	<5.5	<5.0	<5.1	<5.6	<5.2	<4.8	<4.8	<4.8	<0.19	<4.8	<4.9	<4.8	<4.8
Pyrene	210	<0.25	<5.5	<5.0	<5.1	<5.6	<5.2	<4.8	<4.8	<4.8	<1.9	<4.8	<4.9	<4.8	<4.8
Fluorene	280	<2.0	<5.5	<5.0	<5.1	<5.6	<5.2	<4.8	<4.8	<4.8	<1.9	<4.8	<4.9	<4.8	<4.8
Anthracene	2100	<1.0	<5.5	<5.0	<5.1	<5.6	<5.2	<4.8	<4.8	<4.8	<1.9	<4.8	<4.9	<4.8	<4.8
Fluoranthene	280	<0.25	<5.5	<5.0	<5.1	<5.6	<5.2	<4.8	<4.8	<4.8	<1.9	<4.8	<4.9	<4.8	<4.8
Phenanthrene	210	<1.0	<5.5	<5.0	<5.1	<5.6	<5.2	<4.8	<4.8	<4.8	<1.9	<4.8	<4.9	<4.8	<4.8
SW846-3010A															
Lead	15	NA	NA	NA	NA	NA	NA	<5.0	<5.0	<5.0	<10	7.2	1.7 B	<8.4	<2.0
		Bold type indicates detectable concentrations.													
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).													

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary

Type II Well: **MW-22**

Client Sample ID:		UST820-MW22	UST820-MW22	UST820-MW22	UST820-MW22	UST820-MW22	UST820-MW22	UST820-MW22	UST820-MW22
Date Sampled:		11/30/04	3/1/05	5/31/05	8/10/05	2/3/06	10/18/06	10/24/07	3/23/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602									
Benzene	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS
Methyl tert-butyl ether	200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS
Ethylbenzene	550	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS
Xylenes (total)	530	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	NS
Toluene	1000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS
Total BTEX + MTBE									
Di-Isopropyl ether	70							<1.0	
EPA 610									
Chrysene	4.79	<4.8	<4.8	<4.8	<1.9	<4.9	<4.9	<4.9	NS
Naphthalene	21	<4.8	<4.8	<4.8	<1.9	<4.9	<4.9	<4.9	NS
Acenaphthene	80	<4.8	<4.8	<4.8	<3.8	<4.9	<4.9	<4.9	NS
Acenaphthylene	210	<4.8	<4.8	<4.8	<3.8	<4.9	<4.9	<4.9	NS
Benzo(a)anthracene	0.0479	<4.8	<4.8	<4.8	<0.19	<4.9	<4.9	<4.9	NS
Pyrene	210	<4.8	<4.8	<4.8	<1.9	<4.9	<4.9	<4.9	NS
Fluorene	280	<4.8	<4.8	<4.8	<1.9	<4.9	<4.9	<4.9	NS
Anthracene	2100	<4.8	<4.8	<4.8	<1.9	<4.9	<4.9	<4.9	NS
Fluoranthene	280	<4.8	<4.8	<4.8	<1.9	<4.9	<4.9	<4.9	NS
Phenanthrene	210	<4.8	<4.8	<4.8	<1.9	<4.9	<4.9	<4.9	NS
SW846-3010A									
Lead	15	<5.0	<5.0	<5.0	<5.0	<1.2	<3.4	<2.1	NS
		Bold type indicates detectable concentrations.							
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).							

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Printed: 5/11/2009

Samples analyzed by Compuchem, STL, or Accutest

Analytical Data Summary
Type III Well: **MW-23**

Client Sample ID:		UST820-MW23	UST820-MW23	UST820-MW23	UST820-MW23	UST820-MW23	UST820-MW23	UST820-MW23	UST820-MW23
Date Sampled:		11/30/04	3/1/05	5/31/05	8/10/05	2/3/06	10/18/06	10/24/07	3/23/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602									
Benzene	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	<1.0	2.2	2.9	2.7	1.6	0.97 J	<1.0	1.3
Ethylbenzene	550	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	530	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Toluene	1000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total BTEX + MTBE			2.20	2.90	2.70	1.60	0.97		
Di-Isopropyl ether	70							<1.0	
EPA 610									
Chrysene	4.79	<4.8	<4.8	<4.9	<1.9	<4.8	<4.9	<4.8	<4.8
Naphthalene	21	<4.8	<4.8	<4.9	<1.9	<4.8	<4.9	<4.8	<4.8
Acenaphthene	80	<4.8	<4.8	<4.9	<3.8	<4.8	<4.9	<4.8	<4.8
Acenaphthylene	210	<4.8	<4.8	<4.9	<3.8	<4.8	<4.9	<4.8	<4.8
Benzo(a)anthracene	0.0479	<4.8	<4.8	<4.9	<0.19	<4.8	<4.9	<4.8	<4.8
Pyrene	210	<4.8	<4.8	<4.9	<1.9	<4.8	<4.9	<4.8	<4.8
Fluorene	280	<4.8	<4.8	<4.9	<1.9	<4.8	<4.9	<4.8	<4.8
Anthracene	2100	<4.8	<4.8	<4.9	<1.9	<4.8	<4.9	<4.8	<4.8
Fluoranthene	280	<4.8	<4.8	<4.9	<1.9	<4.8	<4.9	<4.8	<4.8
Phenanthrene	210	<4.8	<4.8	<4.9	<1.9	<4.8	<4.9	<4.8	<4.8
SW846-3010A									
Lead	15	5.4	<5.0	<5.0	8.2	2.1 B	<3.4	<2.1	<2.0
		Bold type indicates detectable concentrations.							
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).							

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary
Type II Well: **MW-24**

Client Sample ID:		UST820-MW24	UST820-MW24	UST820-MW24	UST820-MW24	UST820-MW24	UST820-MW24	UST820-MW24	UST820-MW24
Date Sampled:		11/30/04	2/26/05	5/27/05	8/9/05	2/2/06	10/16/06	10/19/07	03/22/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602									
Benzene	1	<1.0	1.9	<1.0	<1.0	2.9	<1.0	<1.0	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	<1.0	<1.0	<1.0	<1.0	0.7 J	<1.0	<1.0	<1.0
Ethylbenzene	550	<1.0	6.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	530	<3.0	16.1	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Toluene	1000	<1.0	15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total BTEX + MTBE			39.2			3.6			
Di-Isopropyl ether	70							<1.0	
EPA 610									
Chrysene	4.79	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Naphthalene	21	<4.8	0.97 J	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Acenaphthene	80	<4.8	<4.8	<4.8	<3.8	<4.8	<4.8	<4.8	<4.8
Acenaphthylene	210	<4.8	<4.8	<4.8	<3.8	<4.8	<4.8	<4.8	<4.8
Benzo(a)anthracene	0.0479	<4.8	<4.8	<4.8	<0.19	<4.8	<4.8	<4.8	<4.8
Pyrene	210	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Fluorene	280	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Anthracene	2100	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Fluoranthene	280	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Phenanthrene	210	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
SW846-3010A									
Lead	15	5.2	5.9	<5.0	9.5	18.2	4.2 B	2.4 B	<2.0
		Bold type indicates detectable concentrations.							
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).							

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary
Type III Well: **MW-25**

Client Sample ID:		UST820-MW25	UST820-MW25	UST820-MW25	UST820-MW25	UST820-MW25	UST820-MW25	UST820-MW25	UST820-MW25
Date Sampled:		11/30/04	2/26/05	5/27/05	8/8/05	2/2/06	10/16/06	10/19/07	3/22/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602									
Benzene	1	<1.0	4.2	<1.0	<1.0	4.5	<1.0	<1.0	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	1.5	<1.0	0.65 J	<1.0	1.2	0.77 J	<1.0	<1.0
Ethylbenzene	550	<1.0	9.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	530	<3.0	23.8	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Toluene	1000	<1.0	26.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total BTEX + MTBE			63.4	0.65		5.70	0.77		
Di-Isopropyl ether	70							<1.0	
EPA 610									
Chrysene	4.79	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Naphthalene	21	<4.8	1.6 J	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Acenaphthene	80	<4.8	<4.8	<4.8	<3.8	<4.8	<4.8	<4.8	<4.8
Acenaphthylene	210	<4.8	<4.8	<4.8	<3.8	<4.8	<4.8	<4.8	<4.8
Benzo(a)anthracene	0.0479	<4.8	<4.8	<4.8	<0.19	<4.8	<4.8	<4.8	<4.8
Pyrene	210	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Fluorene	280	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Anthracene	2100	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Fluoranthene	280	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Phenanthrene	210	<4.8	<4.8	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
SW846-3010A									
Lead	15	<5.0	<5.0	<5.0	<5.0	6.9	1.8 B	<2.1	<2.0
		Bold type indicates detectable concentrations.							
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).							

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary
Type II Well: **MW-26**

Client Sample ID:		UST820-MW26-01C3	UST820-MW26-02B	UST820-MW26-02C	UST820-MW26	UST820-MW26	UST820-MW26	UST820-MW26	UST820-MW26	UST820-MW26	UST820-MW26	UST820-MW26	UST820-MW26	UST820-MW26	UST820-MW26
Date Sampled:		10/02/01	04/26/02	10/29/02	04/18/03	10/17/03	04/20/04	11/20/04	2/26/05	5/27/05	8/9/05	2/5/06	10/13/06	10/19/07	03/22/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602															
Benzene	1	2.6	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	2.1	<1.0	<1.0	5.1	<1.0	<1.0	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	10	28.5	14.8	0.54 J	<1.0	<1.0	4.3	6.9	<1.0	1.5	<1.0	1.5	<1.0	<1.0
Ethylbenzene	550	3.2	3.1	<1.0	<1.0	<1.0	<1.0	<1.0	6.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	530	18	16.7	<3.0	2.1 J	<3.0	<3.0	<3.0	16.7	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Toluene	1000	14	30.2	<1.0	0.87 J	<1.0	<1.0	<1.0	15.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total BTEX + MTBE		47.8	78.5	15	3.51			5.3	47.8		1.5	5.1	1.5		
Di-Isopropyl ether	70													<1.0	
EPA 610															
Chrysene	4.79	<0.10	<5.0	<5.2	<5.1	<5.0	<5.6	<4.8	<4.8	<4.8	<1.9	<4.8	<4.9	<4.8	<4.8
Naphthalene	21	<2.0	<5.0	<5.2	<5.1	<5.0	<5.6	<4.8	1.0 J	<4.8	<1.9	<4.8	<4.9	<4.8	<4.8
Acenaphthene	80	<1.0	<5.0	<5.2	<5.1	<5.0	<5.6	<4.8	<4.8	<4.8	<3.8	<4.8	<4.9	<4.8	<4.8
Acenaphthylene	210	<1.0	<5.0	<5.2	<5.1	<5.0	<5.6	<4.8	<4.8	<4.8	<3.8	<4.8	<4.9	<4.8	<4.8
Benzo(a)anthracene	0.0479	<0.10	<5.0	<5.2	<5.1	<5.0	<5.6	<4.8	<4.8	<4.8	<0.19	<4.8	<4.9	<4.8	<4.8
Pyrene	210	<0.25	<5.0	<5.2	<5.1	<5.0	<5.6	<4.8	<4.8	<4.8	<1.9	<4.8	<4.9	<4.8	<4.8
Fluorene	280	<2.0	<5.0	<5.2	<5.1	<5.0	<5.6	<4.8	<4.8	<4.8	<1.9	<4.8	<4.9	<4.8	<4.8
Anthracene	2100	<1.0	<5.0	<5.2	<5.1	<5.0	<5.6	<4.8	<4.8	<4.8	<1.9	<4.8	<4.9	<4.8	<4.8
Fluoranthene	280	<0.25	<5.0	<5.2	<5.1	<5.0	<5.6	<4.8	<4.8	<4.8	<1.9	<4.8	<4.9	<4.8	<4.8
Phenanthrene	210	<1.0	<5.0	<5.2	<5.1	<5.0	<5.6	<4.8	<4.8	<4.8	<1.9	<4.8	<4.9	<4.8	<4.8
SW846-3010A															
Lead	15	NA	NA	NA	NA	NA	NA	11	9.6	<5.0	7.5	7.3	<1.7	<2.1	5.7
		Bold type indicates detectable concentrations.													
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).													

J= estimated
P= >25% difference between column quantitation
B= detected in blank
NA= not analyzed

Analytical Data Summary
Type II Well: **MW-27**

Client Sample ID:		UST820-MW27-01C3	Well Dry	UST820-MW27	UST820-MW27	UST820-MW27	UST820-MW27	UST820-MW27	UST820-MW27	UST820-MW27	UST820-MW27
Date Sampled:		10/03/01	04/25/02	04/09/03	10/09/03	04/13/04	11/22/04	8/6/05	2/5/06	10/17/06	10/21/07
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
EPA 602											
Benzene	1	<1.0		<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	50	<1.0		<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	<10		139	1.5	1.2	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	550	<1.0		<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.6	<1.0
Xylenes (total)	530	<2.0		<6.0	<3.0	3.3	1.4 J	<3.0	<3.0	70.0	<3.0
Toluene	1000	<1.0		<2.0	<1.0	0.65 J	<1.0	<1.0	<1.0	5.7	<1.0
Total BTEX + MTBE				139	2	5.15	1.4			78.3	
Di-Isopropyl ether	70										<1.0
EPA 610											
Chrysene	4.79	<0.10		<5.2	<5.2	<5.5	<4.8	<2.0	<4.8	<4.8	<4.8
Naphthalene	21	<2.0		<5.2	<5.2	<5.5	<4.8	<2.0	<4.8	5.0	5.0
Acenaphthene	80	<1.0		<5.2	<5.2	<5.5	<4.8	<3.9	<4.8	<4.8	<4.8
Acenaphthylene	210	<1.0		<5.2	<5.2	<5.5	<4.8	<3.9	<4.8	<4.8	<4.8
Benzo(a)anthracene	0.0479	<0.10		<5.2	<5.2	<5.5	<4.8	<0.2	<4.8	<4.8	<4.8
Pyrene	210	<0.25		<5.2	<5.2	<5.5	<4.8	<2.0	<4.8	<4.8	<4.8
Fluorene	280	<2.0		<5.2	<5.2	10	<4.8	<2.0	<4.8	<4.8	<4.8
Anthracene	2100	<1.0		<5.2	<5.2	<5.5	<4.8	<2.0	<4.8	<4.8	<4.8
Fluoranthene	280	<0.25		<5.2	<5.2	<5.5	<4.8	<2.0	<4.8	<4.8	<4.8
Phenanthrene	210	<1.0		<5.2	<5.2	<5.5	<4.8	<2.0	<4.8	<4.8	<4.8
SW846-3010A											
Lead	15	N/A		N/A	N/A	N/A	6.0	<5.0	4.1 B	2.4 B	<2.1
		Bold type indicates detectable concentrations.									
		Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).									

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary

Type II Well: **MW-27**

Client Sample ID:		UST820-MW27
Date Sampled:		03/22/09
Analyte (ug/l)	GWQS	Result
EPA 602		
Benzene	1	NS
Chlorobenzene	50	NS
Methyl tert-butyl ether	200	NS
Ethylbenzene	550	NS
Xylenes (total)	530	NS
Toluene	1000	NS
Total BTEX + MTBE		
Di-Isopropyl ether	70	
EPA 610		
Chrysene	4.79	NS
Naphthalene	21	NS
Acenaphthene	80	NS
Acenaphthylene	210	NS
Benzo(a)anthracene	0.0479	NS
Pyrene	210	NS
Fluorene	280	NS
Anthracene	2100	NS
Fluoranthene	280	NS
Phenanthrene	210	NS
SW846-3010A		
Lead	15	NS

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Printed: 5/11/2009

Samples analyzed by Compuchem, STL, or Accutest

Analytical Data Summary
Type III Well: **MW-28**

Client Sample ID:		UST820-MW28	UST820-MW28	UST820-MW28	UST820-MW28	UST820-MW28	UST820-MW28
Date Sampled:		5/25/05	8/9/05	2/5/06	10/18/06	10/15/07	3/23/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result
EPA 602							
Benzene	1	1110	1130	258	94.3	1.7	43.1
Chlorobenzene	50	<50	<1.0	<50	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	3350	2430	576	428	740 B	161
Ethylbenzene	550	<50	<1.0	<50	<1.0	<1.0	<1.0
Xylenes (total)	530	<150	<3.0	<150	<3.0	<3.0	<3.0
Toluene	1000	<50	<1.0	<50	<1.0	<1.0	<1.0
Total BTEX + MTBE		4460	3560	834	522	742	43.1
Di-Isopropyl ether	70					4.4	
EPA 610							
Chrysene	4.79	<4.8	<1.9	<4.8	4.8	<4.8	<4.8
Naphthalene	21	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Acenaphthene	80	<4.8	<3.8	<4.8	<4.8	<4.8	<4.8
Acenaphthylene	210	<4.8	<3.8	<4.8	<4.8	<4.8	<4.8
Benzo(a)anthracene	0.0479	<4.8	<0.19	<4.8	2.7 J	<4.8	<4.8
Pyrene	210	<4.8	<1.9	<4.8	5.8	<4.8	<4.8
Fluorene	280	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Anthracene	2100	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Fluoranthene	280	<4.8	<1.9	<4.8	7.4	<4.8	<4.8
Phenanthrene	210	<4.8	<1.9	<4.8	2.0 J	<4.8	<4.8
SW846-3010A							
Lead	15	N/A	N/A	<1.2	<8.5	<2.1	<2.0
Bold type indicates detectable concentrations.							
Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).							

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary
Type III Well: **MW-29**

Client Sample ID:		UST820-MW29	UST820-MW29	UST820-MW29	UST820-MW29	UST820-MW29	UST820-MW29
Date Sampled:		5/25/05	8/9/05	2/3/06	10/18/06	10/18/07	3/22/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result
EPA 602							
Benzene	1	29.6	10.7	10.8	9.4	<1.0	<1.0
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	200	31.8	23.2	16.4	11.4	6.6	20.5
Ethylbenzene	550	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	530	<3.0	<3.0	<3.0	<3.0	<3.0	1.3 J
Toluene	1000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total BTEX+ MTBE		61.4	33.9	27.2	20.8	6.6	1.3
Di-Isopropyl ether	70					<1.0	
EPA 610							
Chrysene	4.79	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Naphthalene	21	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Acenaphthene	80	<4.8	<3.8	<4.8	<4.8	<4.8	<4.8
Acenaphthylene	210	<4.8	<3.8	<4.8	<4.8	<4.8	<4.8
Benzo(a)anthracene	0.0479	<4.8	<0.19	<4.8	<4.8	<4.8	<4.8
Pyrene	210	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Fluorene	280	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Anthracene	2100	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Fluoranthene	280	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
Phenanthrene	210	<4.8	<1.9	<4.8	<4.8	<4.8	<4.8
SW846-3010A							
Lead	15	N/A	N/A	14.6	<1.7	<2.1	<2.0
Bold type indicates detectable concentrations.							
Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).							

J= estimated

P= >25% difference between column quantitation

B= detected in blank

NA= not analyzed

Analytical Data Summary
Type II Well: **PW-01**

Client Sample ID:		UST820-PW01	UST820-PW01	UST820-PW01	UST820-PW01	UST820-PW01	UST820-PW01
Date Sampled:		11/22/04	8/8/05	2/1/06	1/3/07	10/17/07	03/23/09
Analyte (ug/l)	GWQS	Result	Result	Result	Result	Result	Result
EPA 602							
Benzene	1	109	12.2	36.9	17.2	1.4	NS
Chlorobenzene	50	<1.0	<1.0	<1.0	<1.0	<1.0	NS
Methyl tert-butyl ether	200	11.6	10.6	7.9	34.5	8.5	NS
Ethylbenzene	550	78.2	10.5	7.1	16.6	18.5	NS
Xylenes (total)	530	333	70.3	106	362	45.8	NS
Toluene	1000	48.3	2.4	24.1	75.4	2.7	NS
Total BTEX + MTBE		568.5	95.4	182.0	505.7	76.9	
Di-Isopropyl ether	70					<1.0	
EPA 610							
Chrysene	4.79	<4.8	<1.9	<4.8	<4.8	<4.8	NS
Naphthalene	21	10.8	1.2 J	<4.8	6.8	<4.8	NS
Acenaphthene	80	<4.8	<3.8	<4.8	<4.8	<4.8	NS
Acenaphthylene	210	<4.8	<3.8	<4.8	<4.8	<4.8	NS
Benzo(a)anthracene	0.0479	<4.8	<0.19	<4.8	<4.8	<4.8	NS
Pyrene	210	<4.8	<1.9	<4.8	<4.8	<4.8	NS
Fluorene	280	<4.8	<1.9	<4.8	<4.8	<4.8	NS
Anthracene	2100	<4.8	<1.9	<4.8	<4.8	<4.8	NS
Fluoranthene	280	<4.8	<1.9	<4.8	<4.8	<4.8	NS
Phenanthrene	210	<4.8	<1.9	<4.8	<4.8	<4.8	NS
SW846-3010A							
Lead	15	<5.0	<5.0	2.0 B	<1.7	<2.1	NS
Bold type indicates detectable concentrations.							
Shaded area indicates detectable concentrations above the groundwater quality standards (GWQS).							

J= estimated

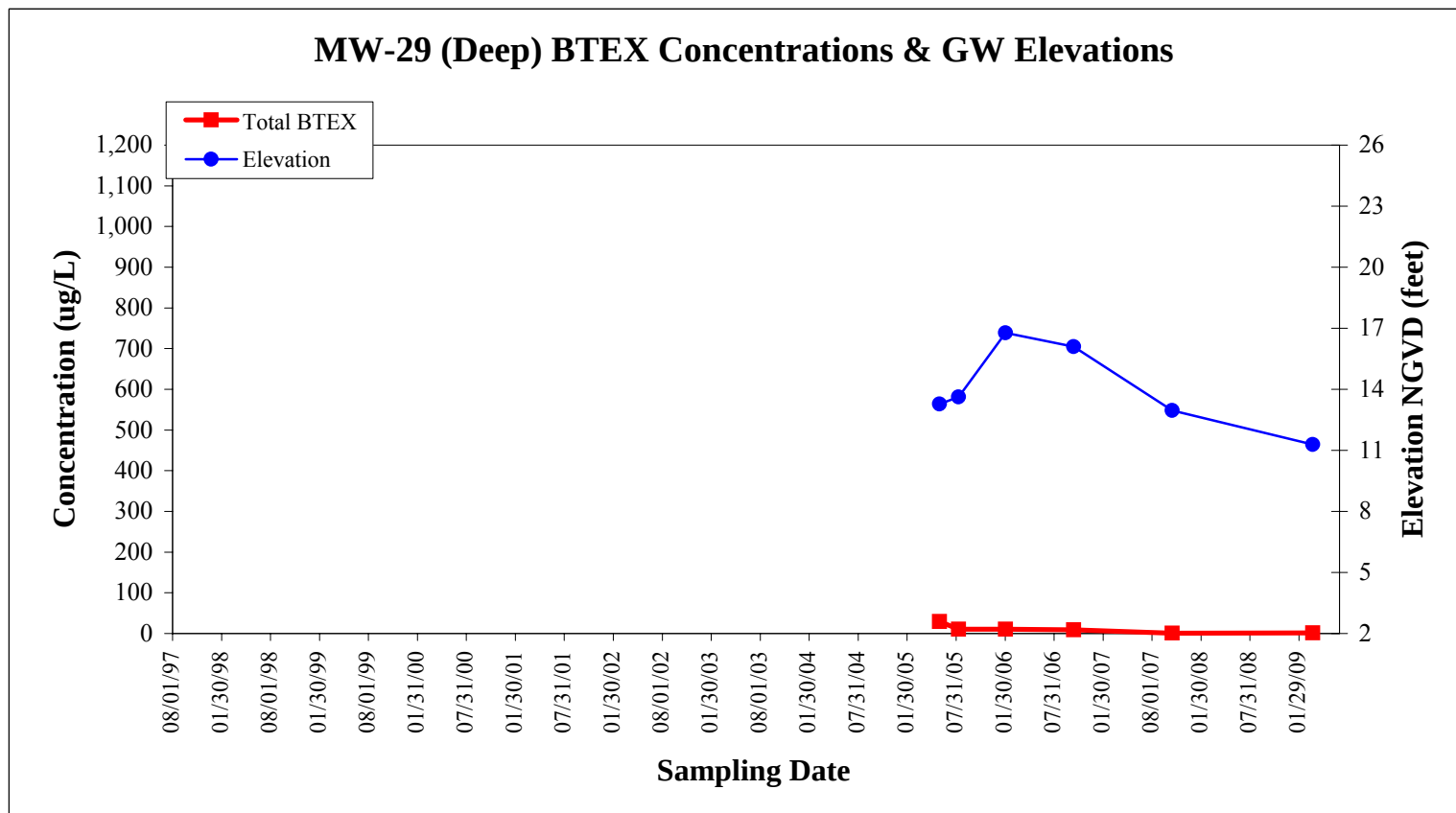
P= >25% difference between column quantitation

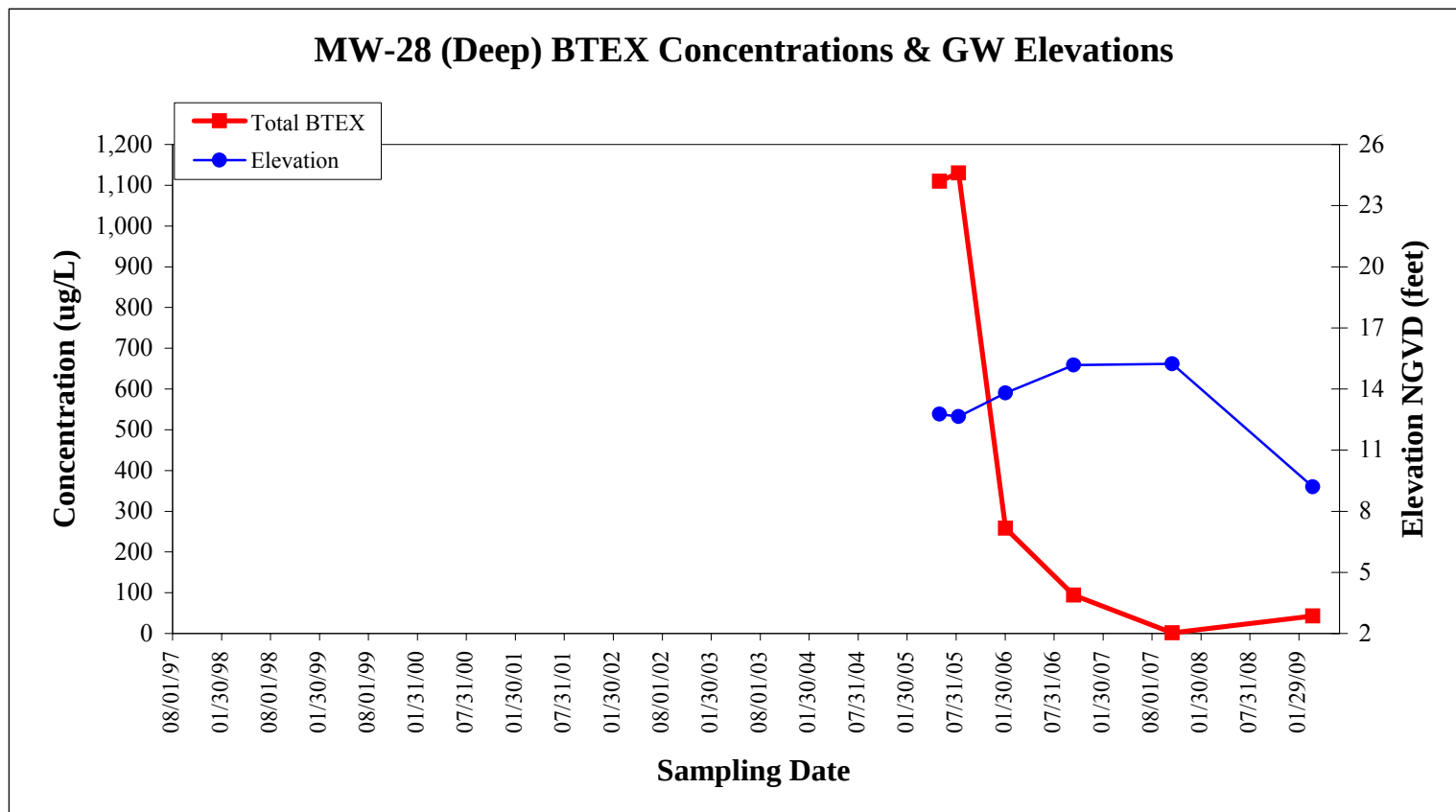
B= detected in blank

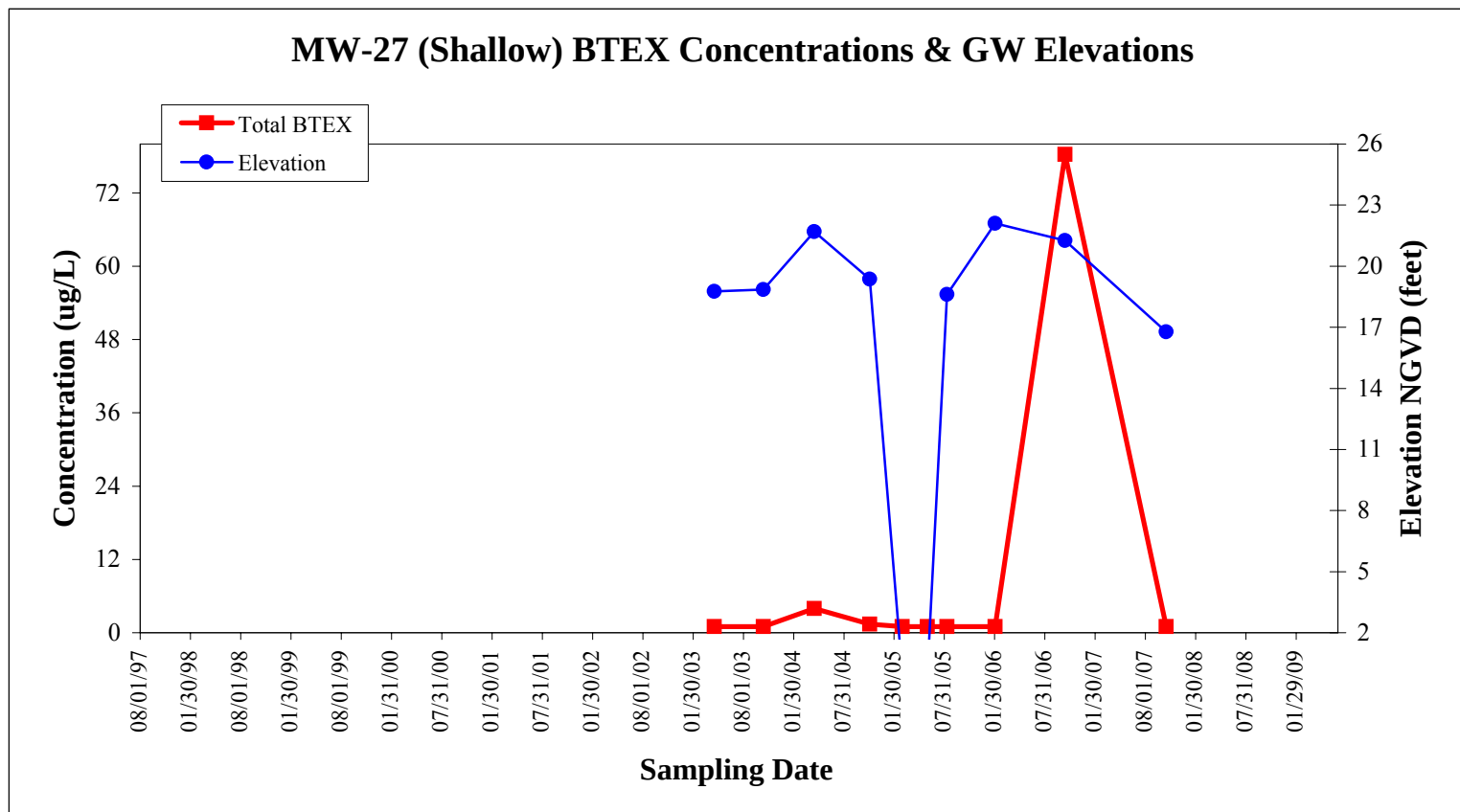
NA= not analyzed

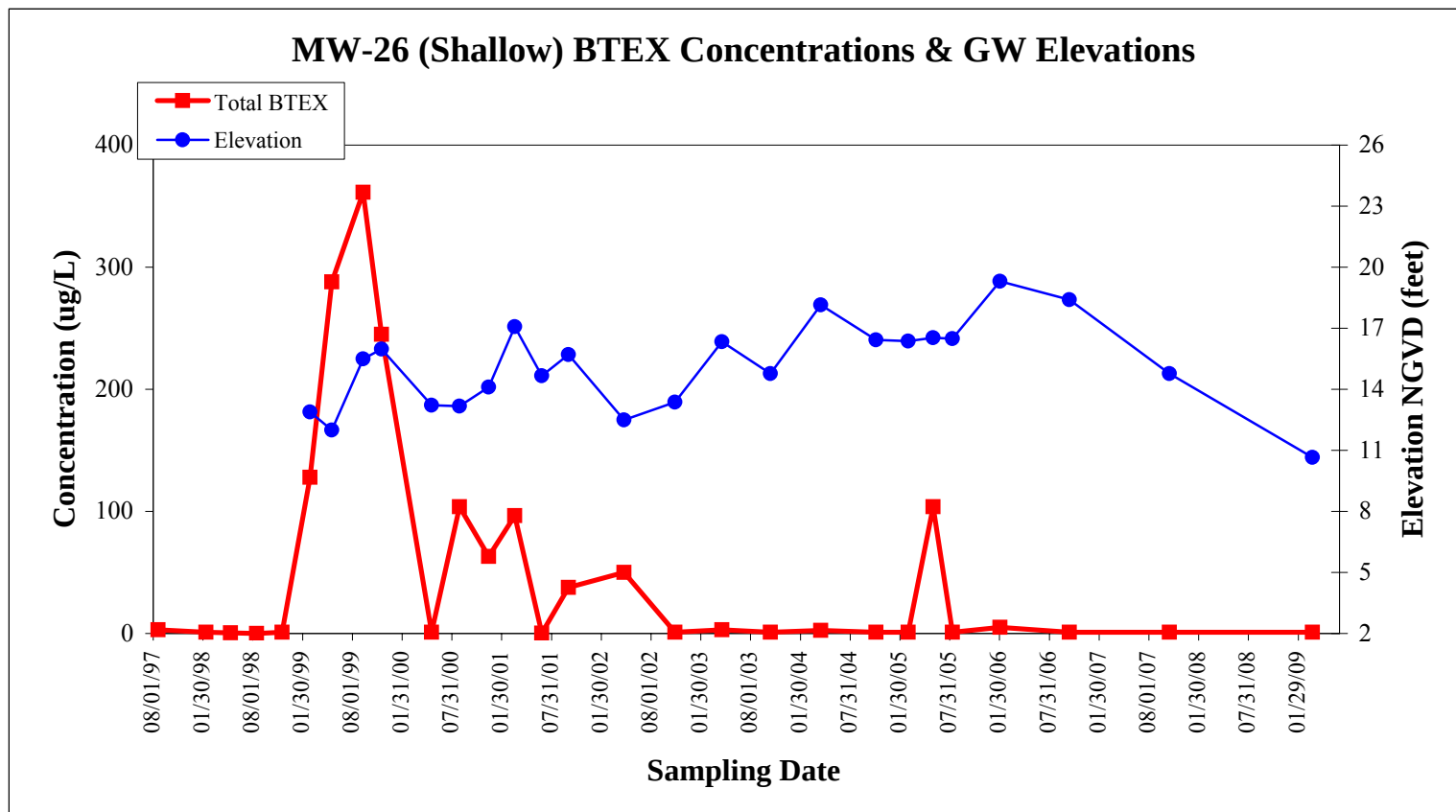
APPENDIX D

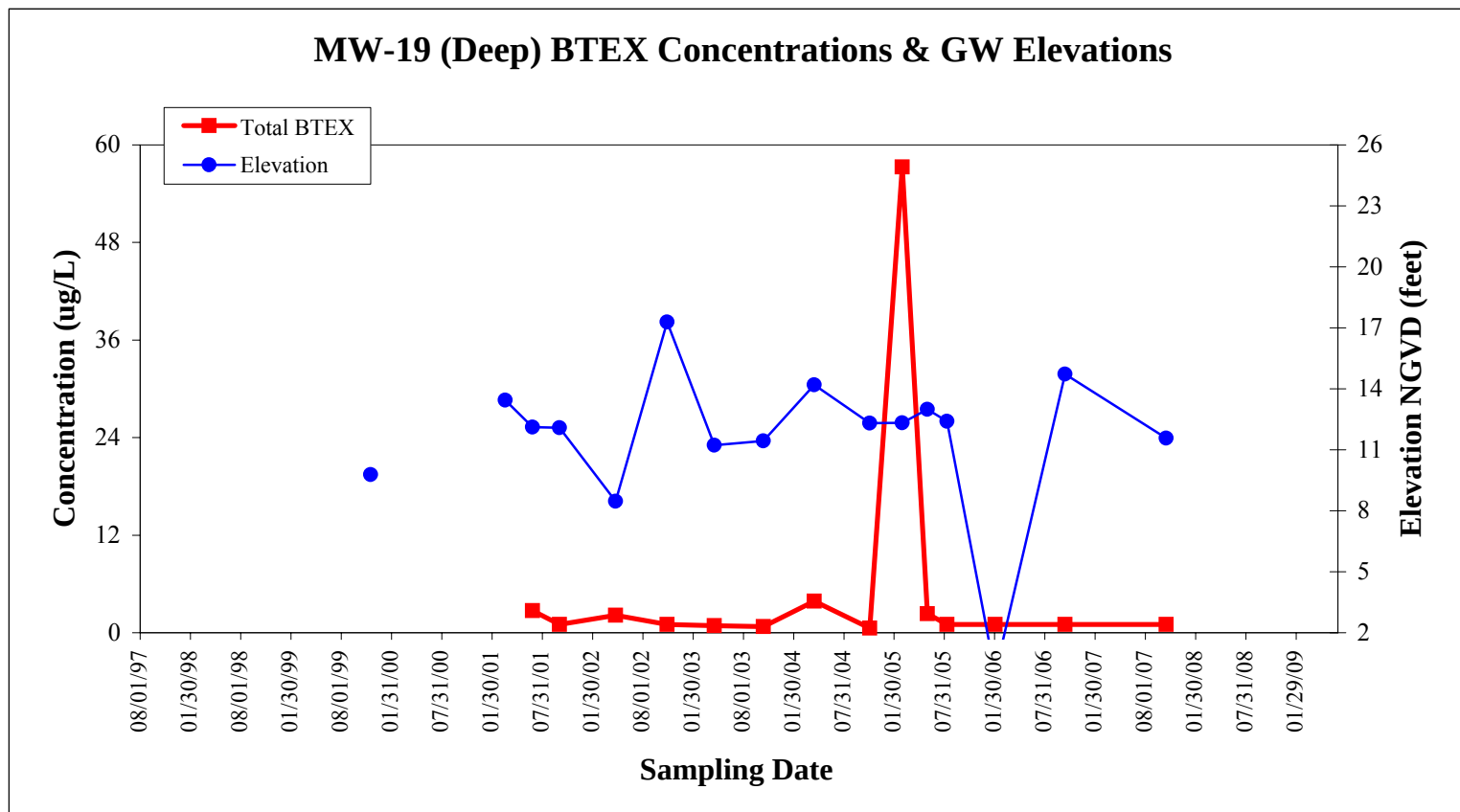
GROUNDWATER ELEVATION VS. BTEX CONCENTRATION GRAPHS

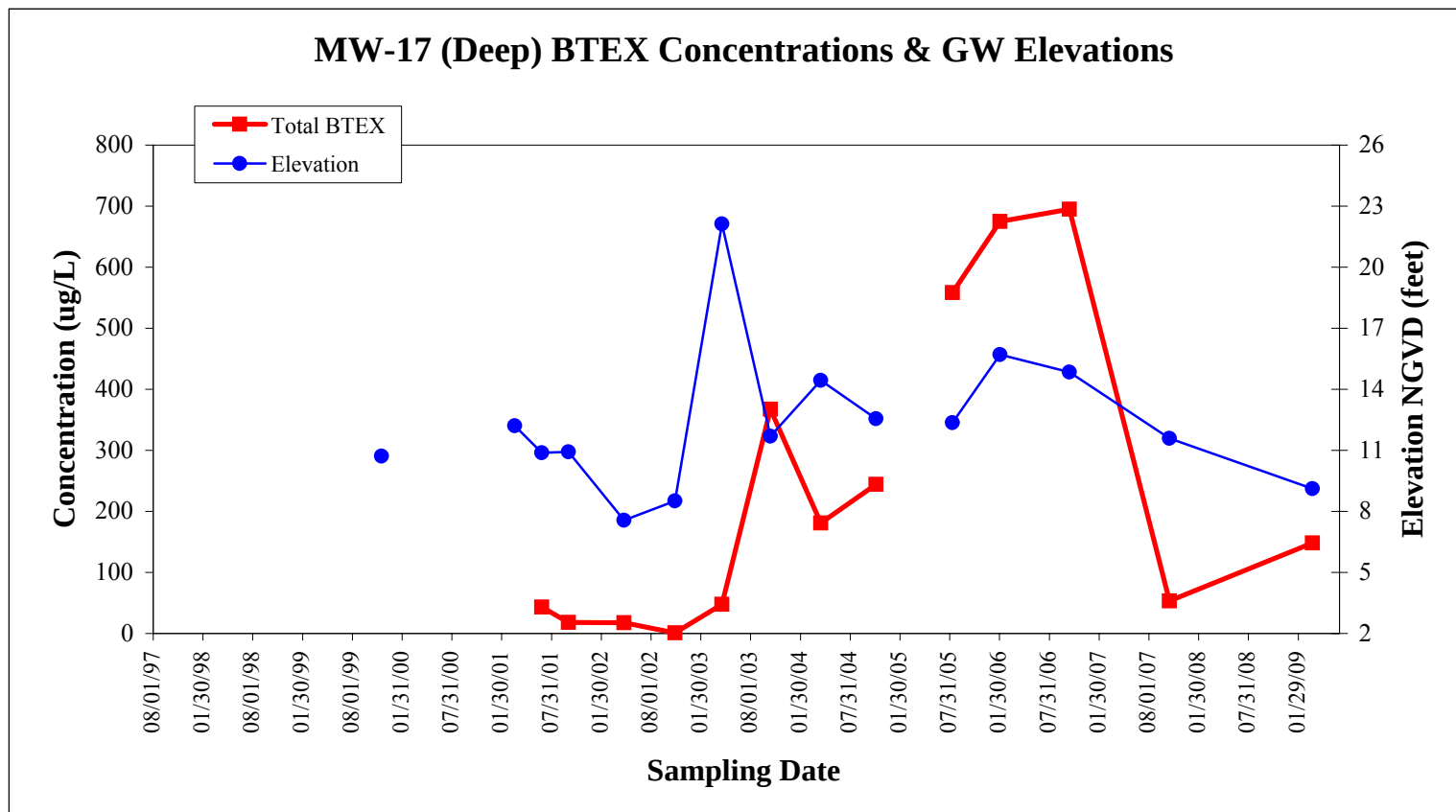


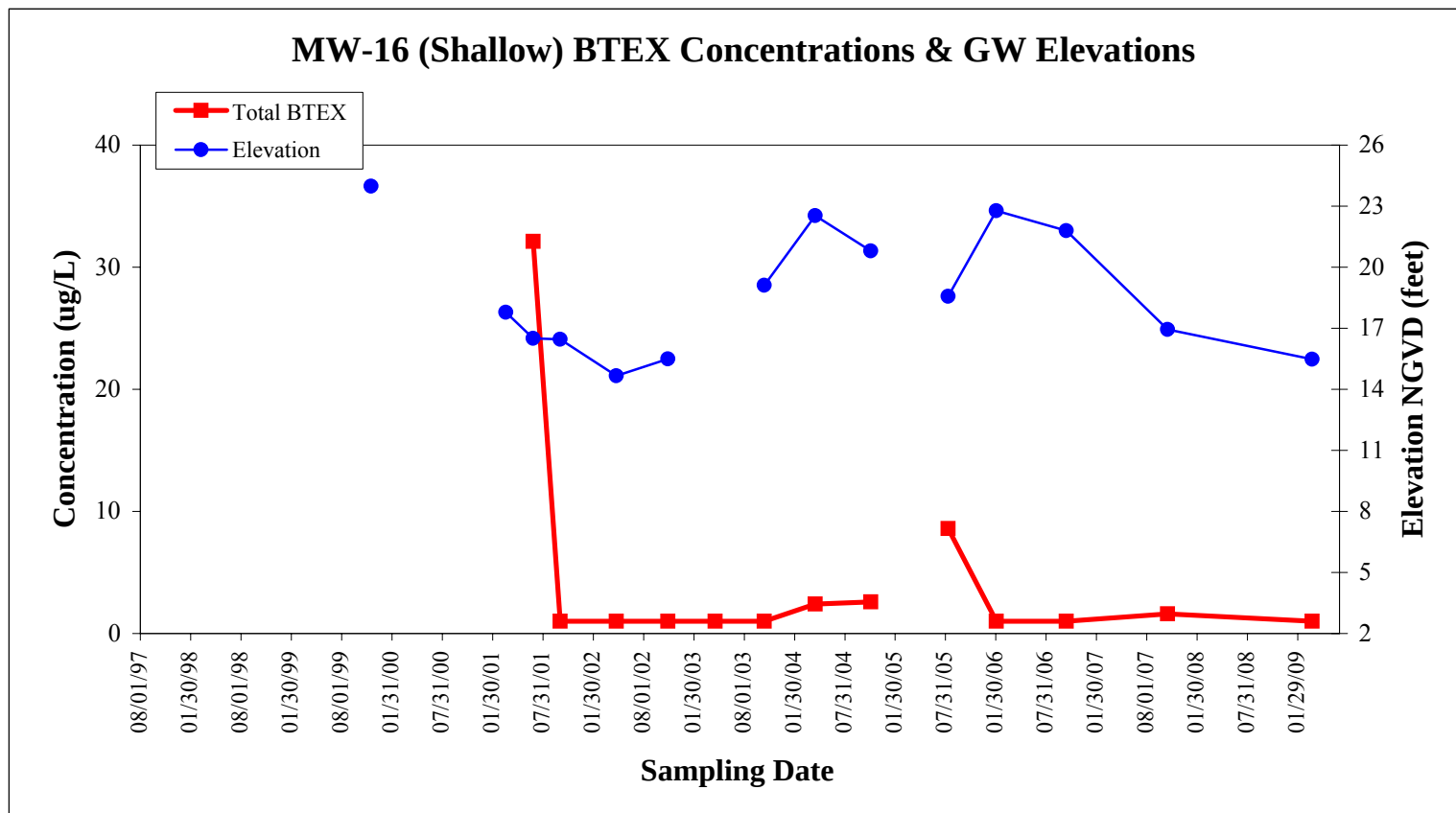


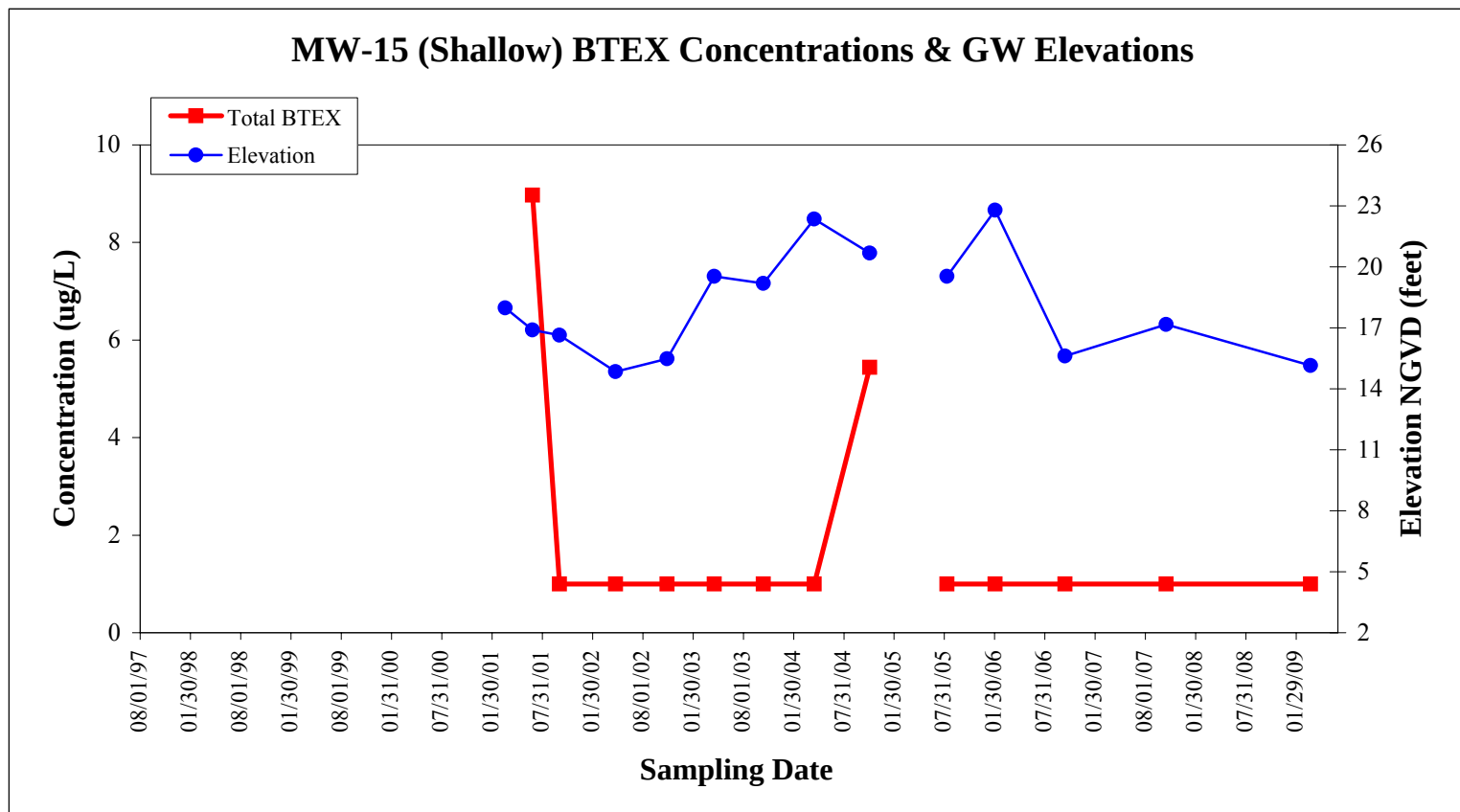


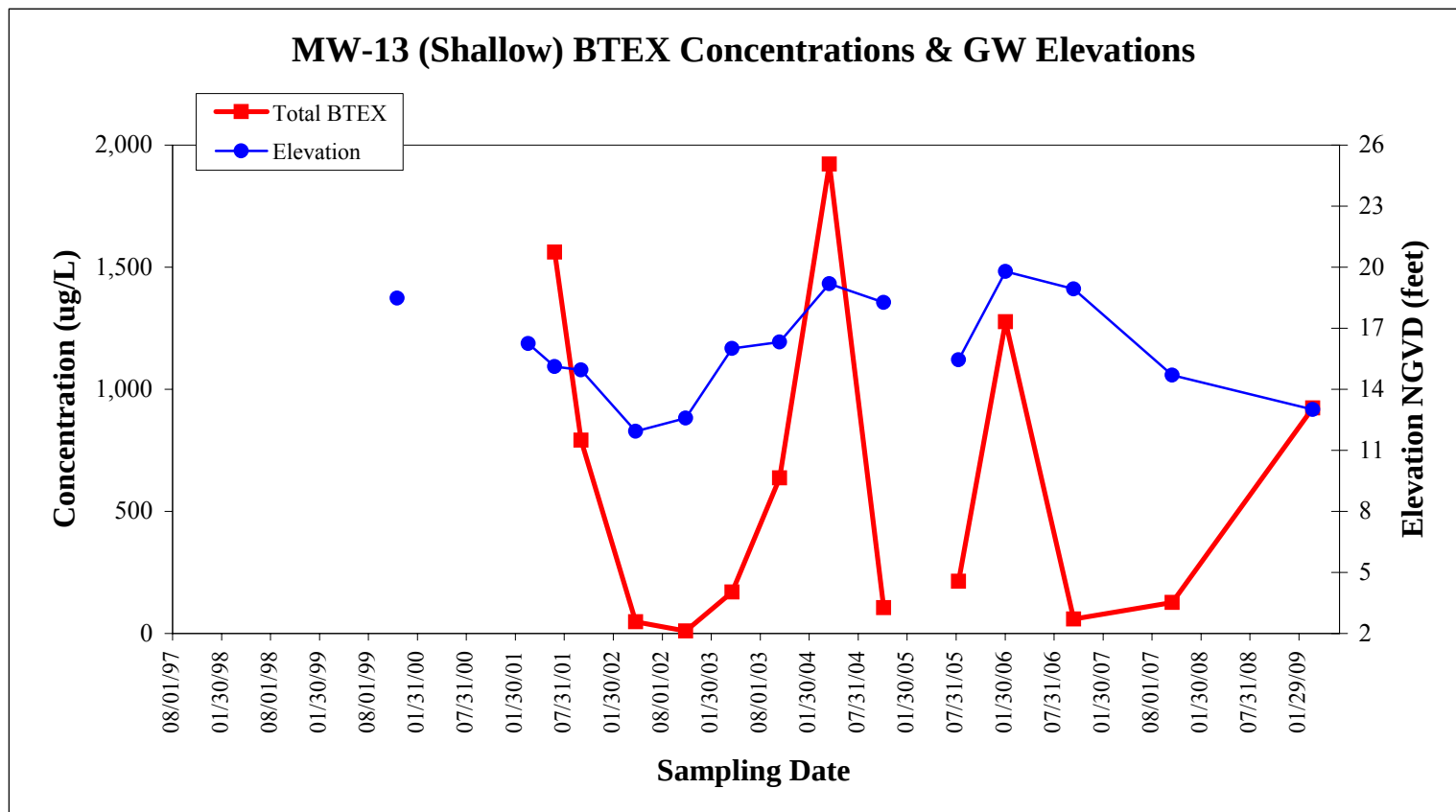




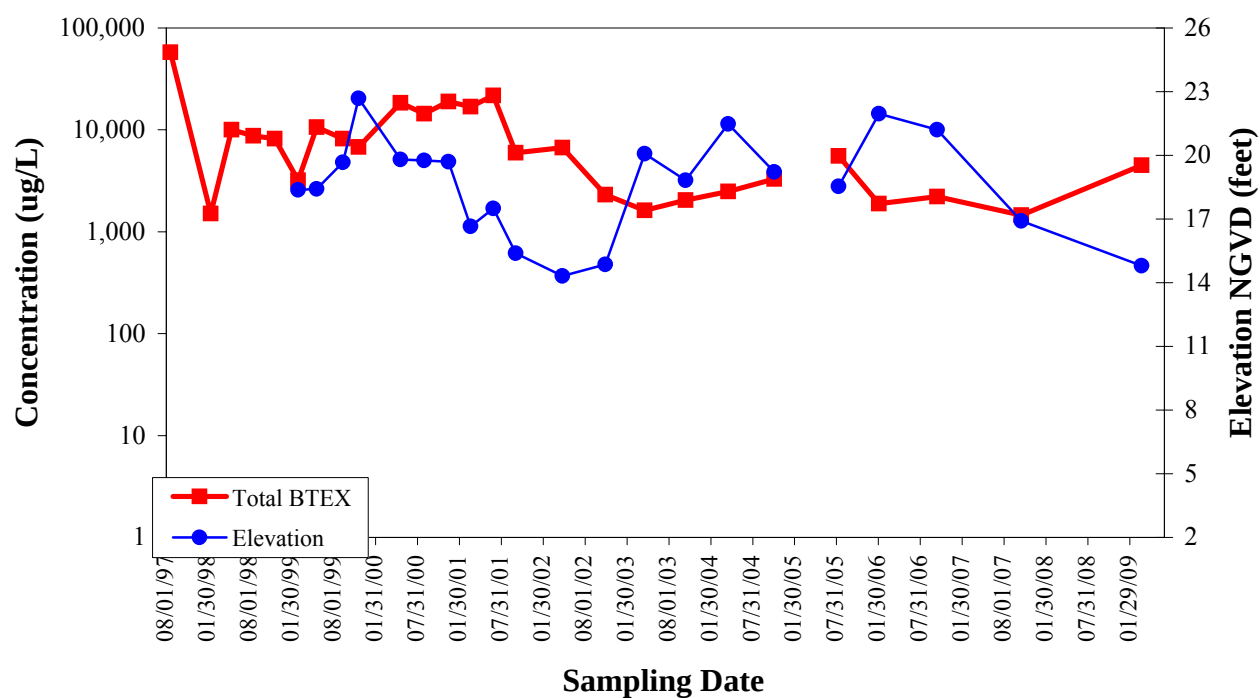


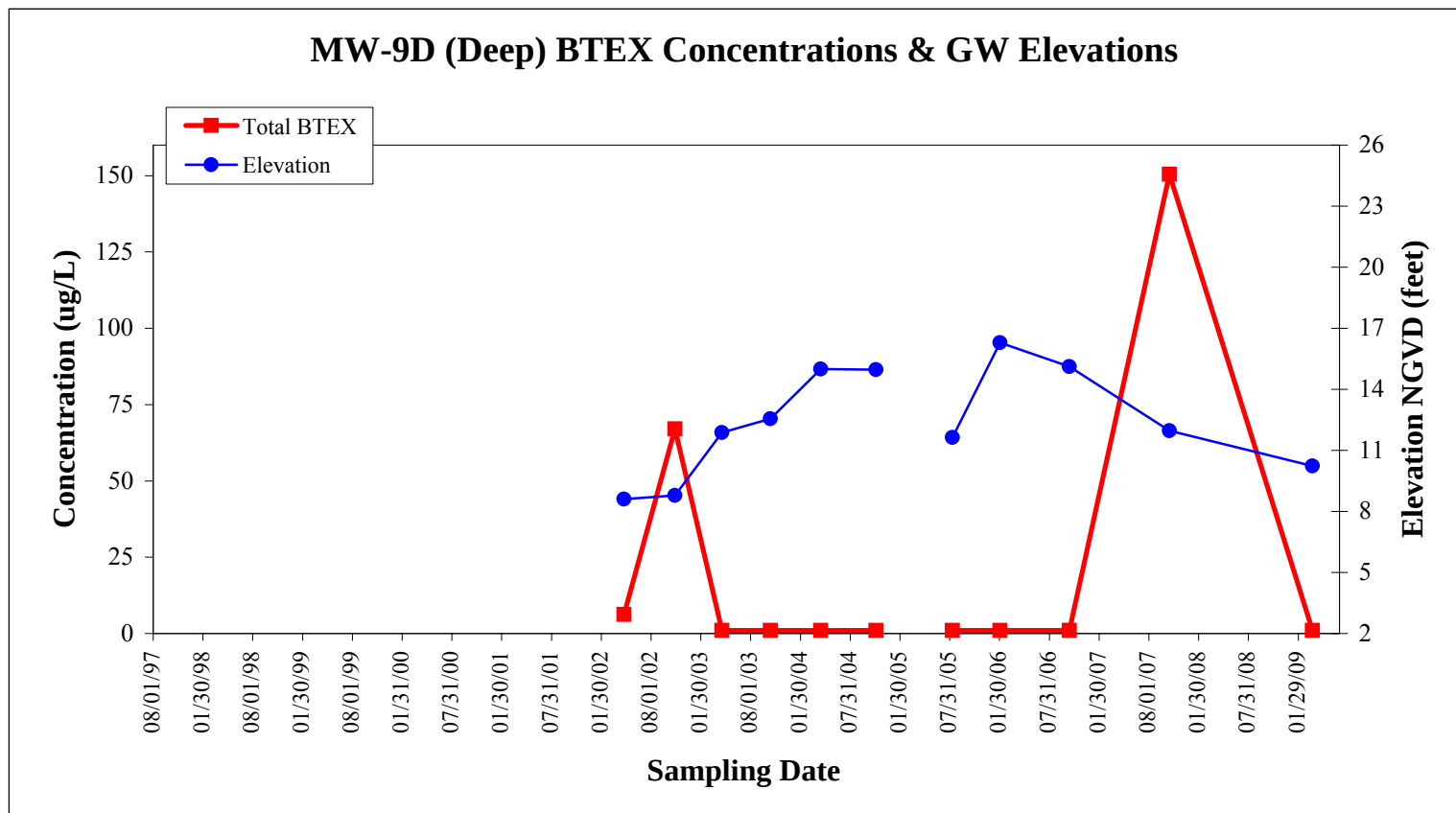


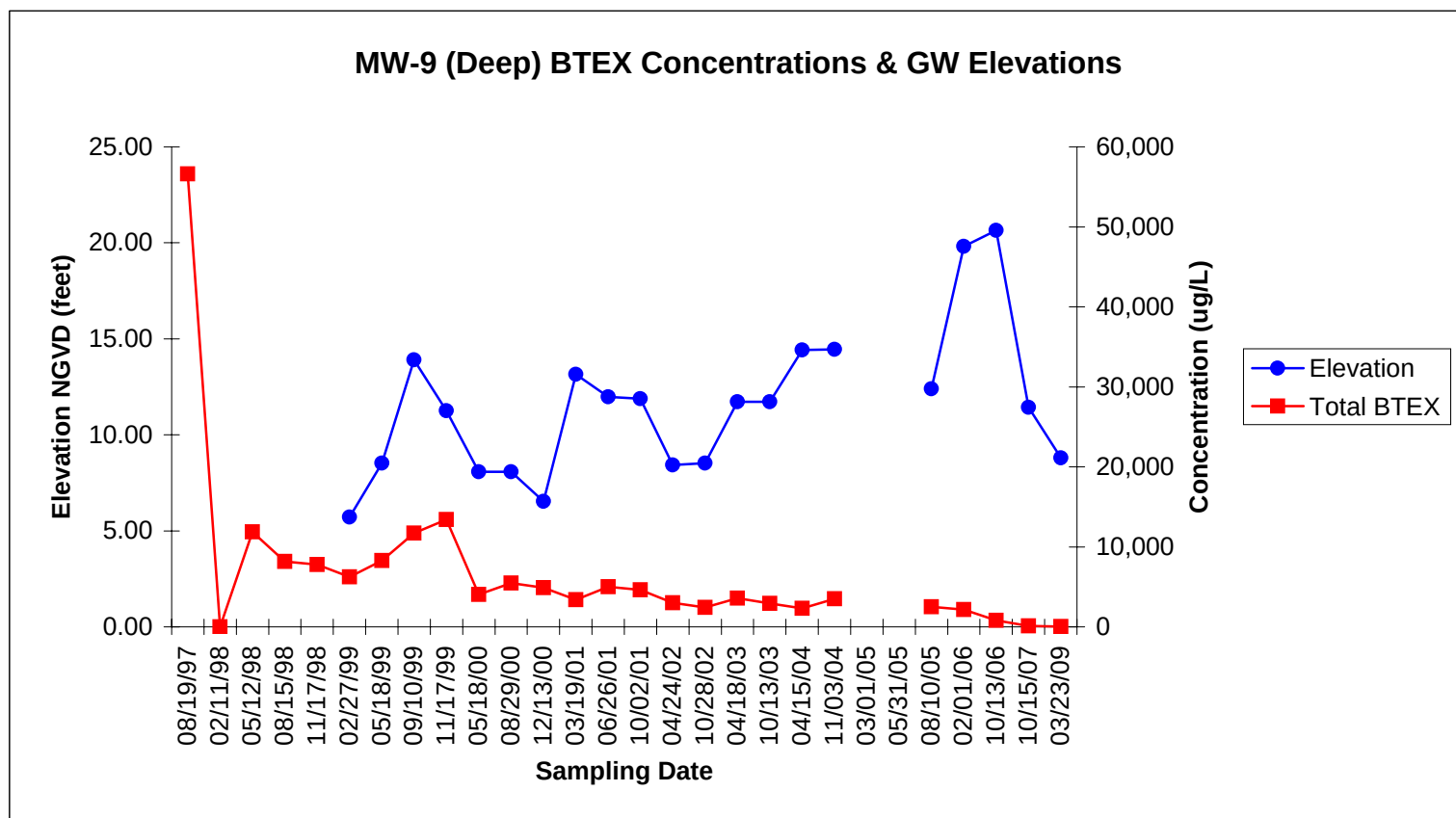


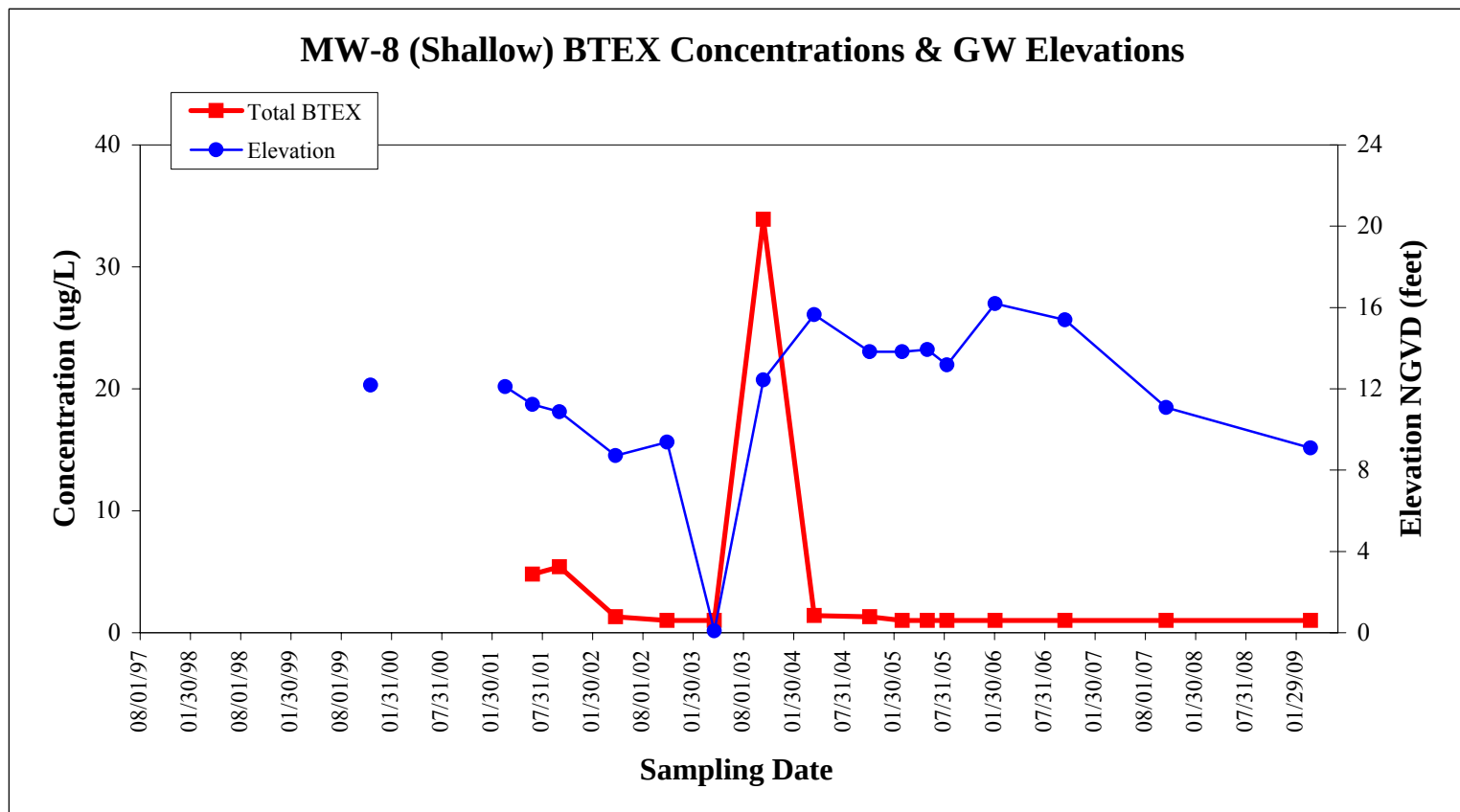


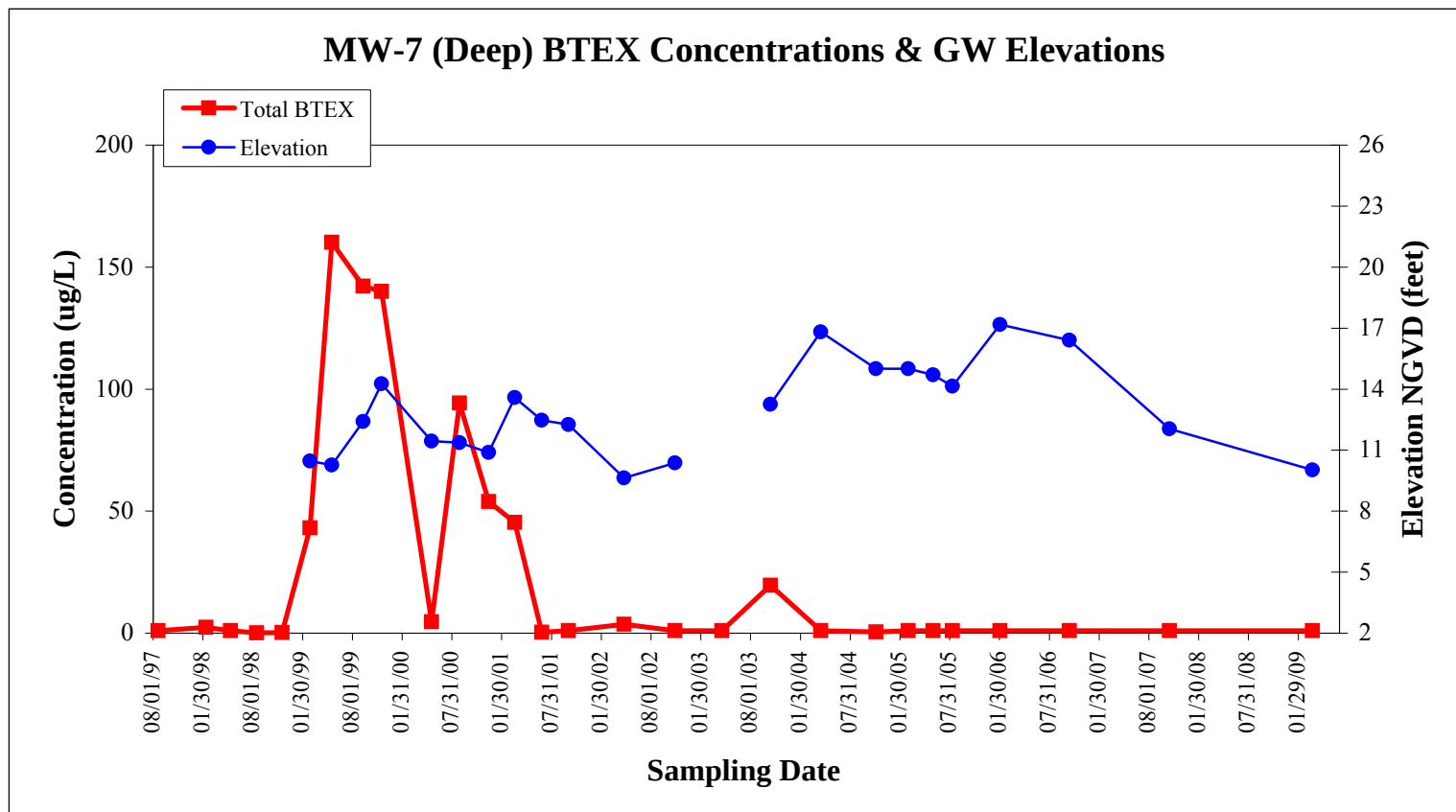
MW-11 (Shallow) BTEX Concentrations & GW Elevations

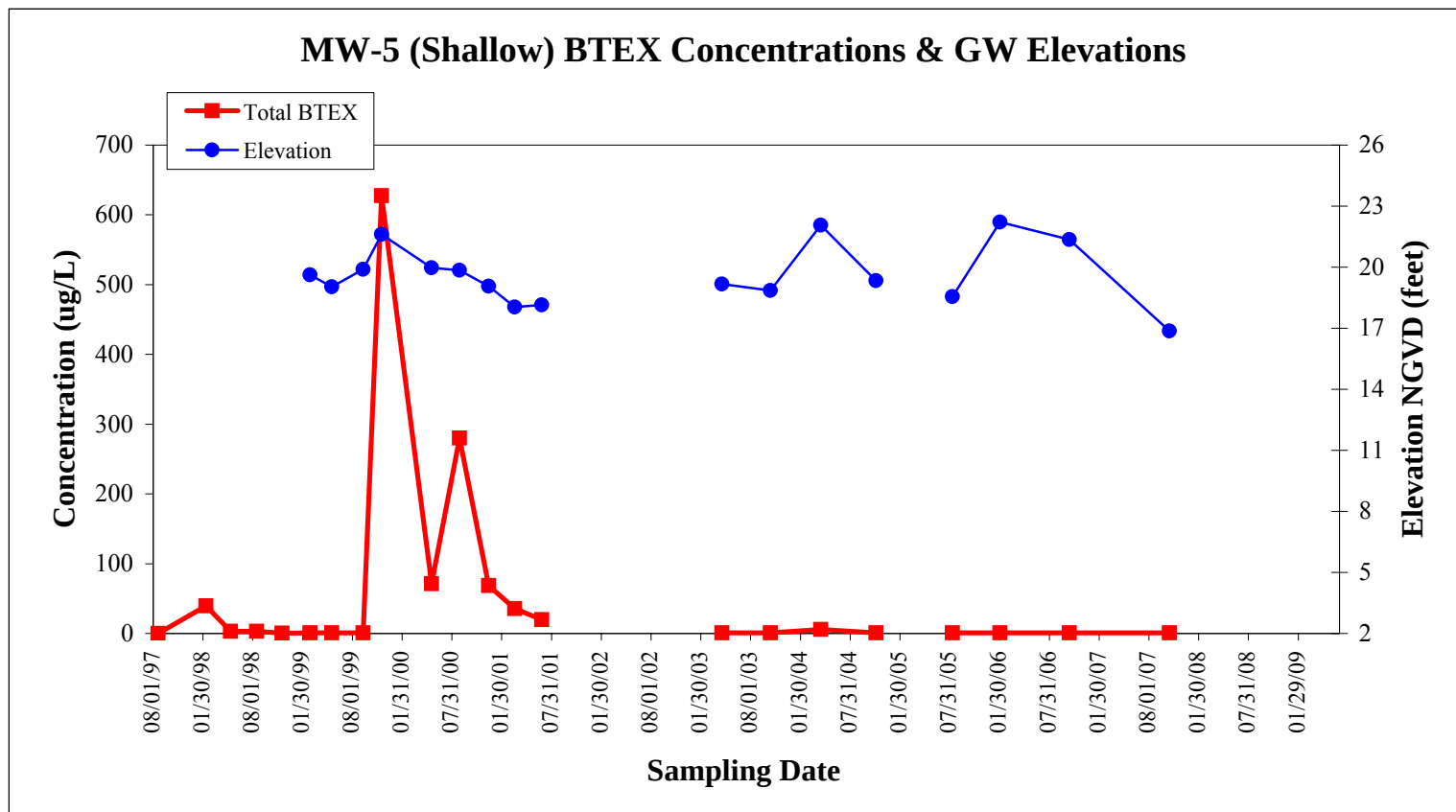


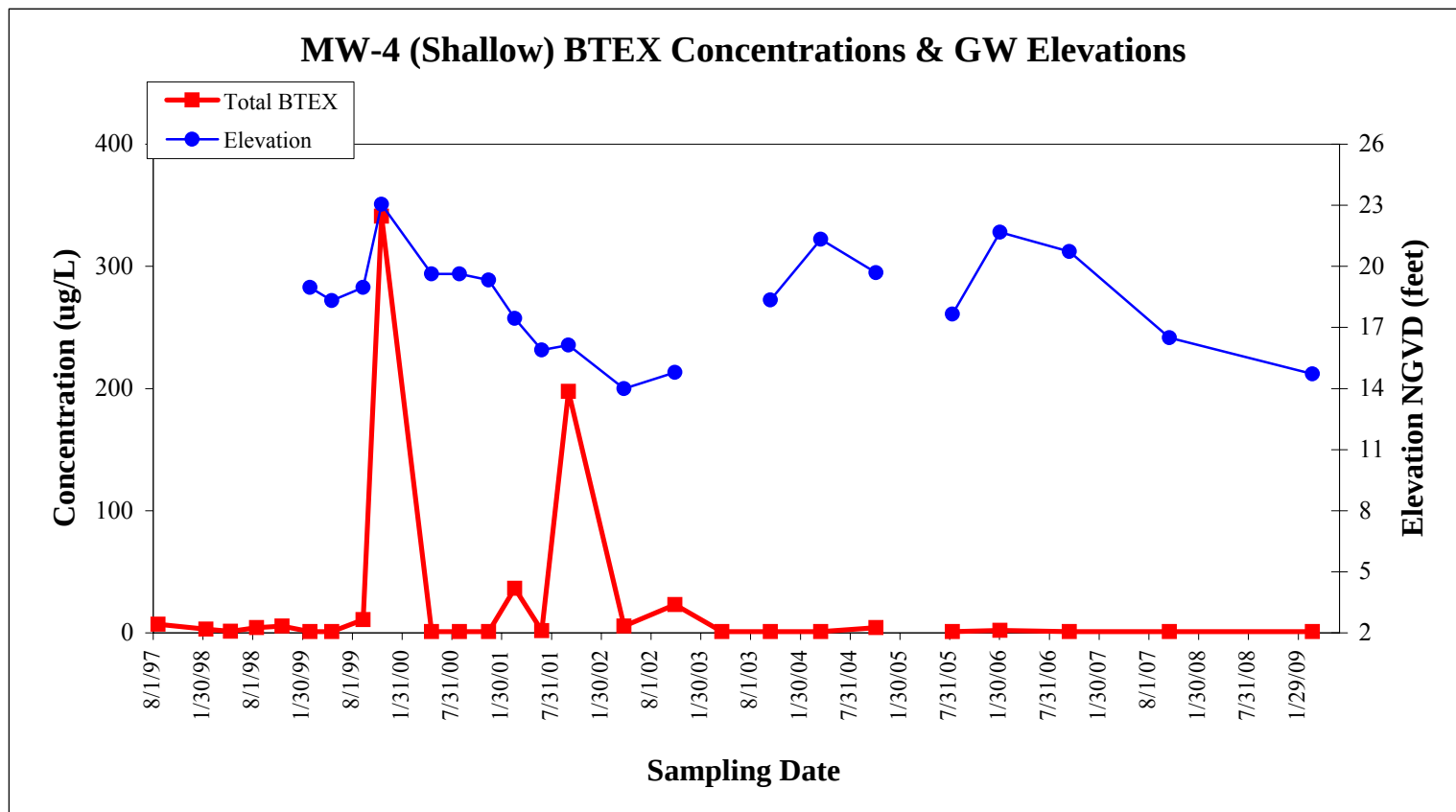


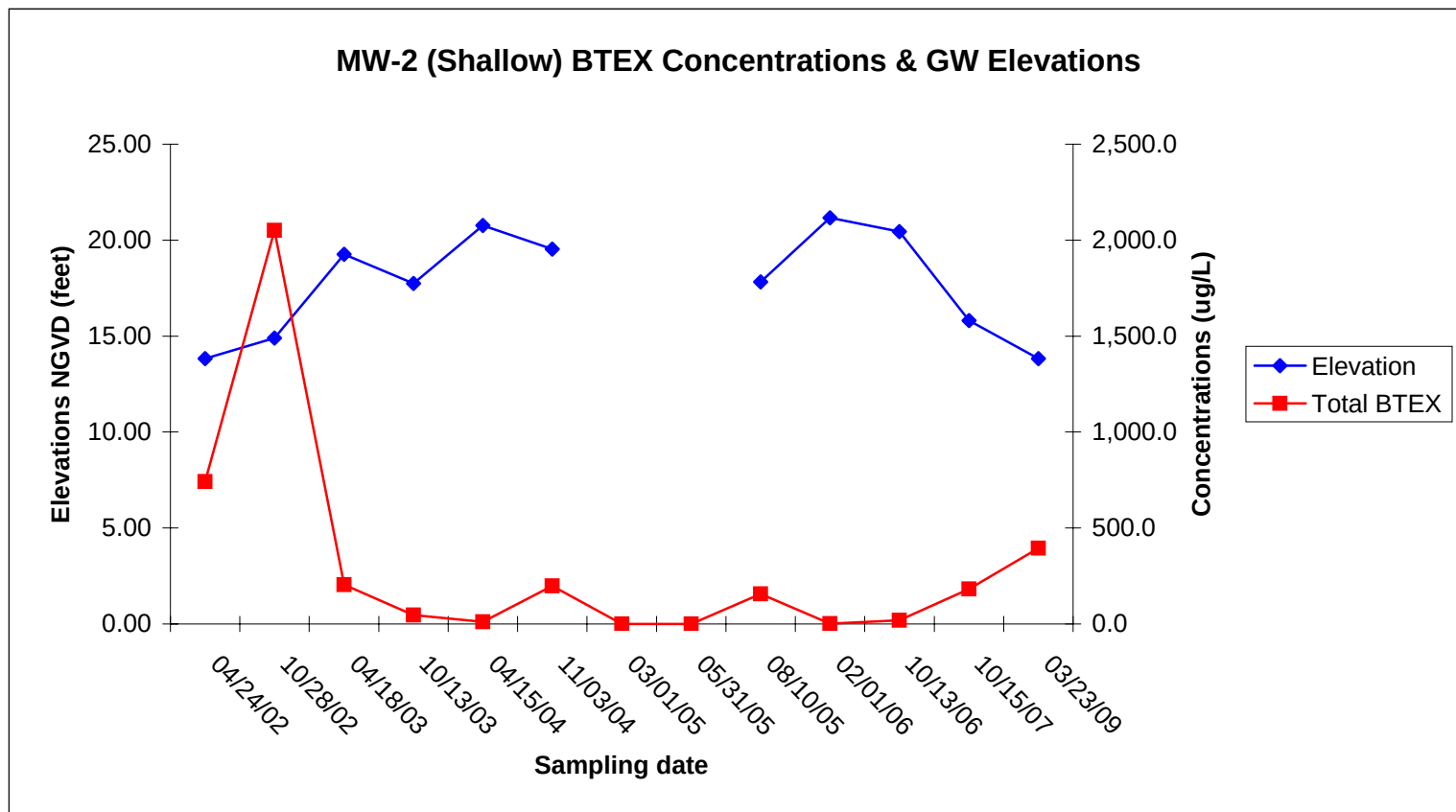












Site B-820 Well Gauging Data

Well TOC	MW-2 32.27		MW-4 32.87		MW-5 29.93		MW-7 26.86		MW-8 26.8		MW-9 31.21		MW-9D 32.53		MW-11 29.12		MW-13 28.8		MW 31.
Date	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation
08/19/97																			
02/11/98																			
05/12/98																			
08/15/98																			
11/17/98																			
02/27/99			18.97	13.90	19.63	10.30	10.46	16.40			5.71	25.50			18.37	10.75			
05/18/99			18.32	14.55	19.03	10.90	10.26	16.60			8.53	22.68			18.42	10.70			
09/10/99			18.97	13.90	19.89	10.04	12.41	14.45			13.91	17.30			19.67	9.45			
11/17/99			23.04	9.83	21.61	8.32	14.26	12.60	12.18	14.62	11.26	19.95			22.69	6.43	18.48	10.32	
05/18/00			19.62	13.25	19.97	9.96	11.44	15.42			8.08	23.13			19.81	9.31			
08/29/00			19.62	13.25	19.85	10.08	11.37	15.49			8.08	23.13			19.76	9.36			
12/13/00			19.33	13.54	19.07	10.86	10.89	15.97			6.53	24.68			19.70	9.42			
03/19/01			17.44	15.43	18.04	11.89	13.59	13.27	12.11	14.69	13.15	18.06			16.66	12.46	16.25	12.55	
06/26/01			15.89	16.98	18.15	11.78	12.47	14.39	11.23	15.57	11.98	19.23			17.49	11.63	15.11	13.69	
10/02/01			16.13	16.74			12.26	14.60	10.87	15.93	11.88	19.33			15.38	13.74	14.95	13.85	
04/24/02	13.83	18.44	13.99	18.88			9.63	17.23	8.72	18.08	8.43	22.78	8.60	23.93	14.31	14.81	11.94	16.86	15.55
10/28/02	14.89	17.38	14.79	18.08			10.37	16.49	9.38	17.42	8.53	22.68	8.78	23.75	14.86	14.26	12.59	16.21	16.27
04/18/03	19.26	13.01			19.17	10.76			0.09	26.71	11.72	19.49	11.88	20.65	20.08	9.04	16.01	12.79	16.66
10/13/03	17.74	14.53	18.34	14.53	18.85	11.08	13.26	13.60	12.43	14.37	11.72	19.49	12.55	19.98	18.82	10.30	16.32	12.48	16.67
04/15/04	20.76	11.51	21.33	11.54	22.06	7.87	16.82	10.04	15.65	11.15	14.42	16.79	14.99	17.54	21.47	7.65	19.18	9.62	19.14
11/03/04	19.54	12.73	19.68	13.19	19.33	10.60	15.01	11.85	13.82	12.98	14.45	16.76	14.96	17.57	19.21	9.91	18.26	10.54	17.39
03/01/05							15.01	11.85	13.82	12.98									17.39
05/31/05							14.70	12.16	13.93	12.87									17.53
08/10/05	17.82	14.45	17.65	14.62	18.55	11.38	14.14	12.72	13.18	13.62	12.40	18.81	11.63	20.90	18.54	10.58	15.45	13.35	17.90
02/01/06	21.17	11.10	21.67	11.20	22.22	7.71	17.18	9.68	16.19	10.61	19.81	11.40	16.29	16.24	21.96	7.16	19.79	9.01	19.85
10/13/06	20.44	11.83	20.72	12.15	21.36	8.57	16.40	10.46	15.39	11.41	20.65	10.56	15.11	17.42	21.20	7.92	18.93	9.87	19.09
10/15/07	15.81	16.46	16.49	16.38	16.86	13.07	12.05	14.81	11.08	15.72	11.43	19.78	11.96	20.57	16.91	12.21	14.70	14.10	14.73
03/23/09	13.83	18.44	14.72	18.15			10.02	16.84	9.09	17.71	8.80	22.41	10.23	22.30	14.80	14.32	13.00	15.80	

Highlighted data confirmed with field logs.

Site B-820 Well Gauging Data

Well TOC	7-14 .65	MW-15 29.89		MW-16 31.86		MW-17 32.16		MW-19 31.35		MW-26 28.49		MW-27 29.91		MW-28 28.85		MW-29 27.37	
Date	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth
08/19/97																	
02/11/98																	
05/12/98																	
08/15/98																	
11/17/98																	
02/27/99										12.89	15.60						
05/18/99										11.99	16.50						
09/10/99										15.49	13.00						
11/17/99				23.98	7.88	10.71	21.45	9.78	21.57	15.97	12.52						
05/18/00										13.22	15.27						
08/29/00										13.17	15.32						
12/13/00										14.10	14.39						
03/19/01		17.98	11.91	17.78	14.08	12.21	19.95	13.44	17.91	17.07	11.42						
06/26/01		16.90	12.99	16.50	15.36	10.88	21.28	12.12	19.23	14.67	13.82						
10/02/01		16.64	13.25	16.46	15.40	10.93	21.23	12.09	19.26	15.70	12.79						
04/24/02	16.10	14.85	15.04	14.67	17.19	7.56	24.60	8.46	22.89	12.50	15.99						
10/28/02	15.38	15.48	14.41	15.50	16.36	8.51	23.65	17.28	14.07	13.37	15.12						
04/18/03	14.99	19.53	10.36			22.12	10.04	11.23	20.12	16.34	12.15	18.76	11.15				
10/13/03	14.98	19.18	10.71	19.11	12.75	11.70	20.46	11.44	19.91	14.77	13.72	18.86	11.05				
04/15/04	12.51	22.35	7.54	22.54	9.32	14.44	17.72	14.19	17.16	18.15	10.34	21.70	8.21				
11/03/04	14.26	20.68	9.21	20.80	11.06	12.55	19.61	12.31	19.04	16.43	12.06	19.36	10.55				
03/01/05	14.26							12.32	19.03	16.37	12.12						
05/31/05	14.12							12.99	18.36	16.53	11.96			12.77	16.08	13.28	14.09
08/10/05	13.75	19.53	10.36	18.57	13.29	12.35	19.81	12.40	18.95	16.49	12.00	18.61	11.30	12.64	16.21	13.62	13.75
02/01/06	11.80	22.79	7.10	22.78	9.08	15.70	16.46			19.30	9.19	22.10	7.81	13.80	15.05	16.77	10.60
10/13/06	12.56	15.61	14.28	21.80	10.06	14.84	17.32	14.73	16.62	18.40	10.09	21.26	8.65	15.18	13.67	16.09	11.28
10/15/07	16.92	17.16	12.73	16.94	14.92	11.59	20.57	11.57	19.78	14.77	13.72	16.78	13.13	15.23	13.62	12.96	14.41
03/23/09		15.14	14.75	15.47	16.39	9.12	23.04			10.66	17.83			9.20	19.65	11.29	16.08

Highlighted

Site B-820 Groundwater Analytical

LOCATION	PARAMETER	SAMPLING DATE														
		08/19/97	02/11/98	05/12/98	08/15/98	11/17/98	02/27/99	05/18/99	09/10/99	11/17/99	05/18/00	08/29/00	12/13/00	03/19/01	06/26/01	10/02/01
MW-2	benzene															
	toluene															
	ethylbenzene															
	xylenes															
	Total BTEX															
MW-4	benzene	2.8	0.5	0	1.1	1.6	0	0	3.8	161	0	0	0	13	0	9.6
	toluene	2.1	0.88	0.85	1.8	0.69	0	0	0	75.4	0	0	0	10	1.7	72
	ethylbenzene	0.68	0.27	0.12	0.17	0.22	0	0	7.1	17.6	0	0	0	3.7	0	16
	xylenes	1.55	1.34	0.32	1.21	2.96	0	0	0	87	0	0	0	9.6	0	100
	Total BTEX	7.13	2.99	1.29	4.28	5.47	1	1	10.9	341	1	1	1	36.3	1.7	197.6
MW-5	benzene	0	21	2.2	1.9	0	0	0	0	47.2	6.1	216	30	18	3.4	
	toluene	0.054	8.1	0.29	0.21	0.3	0	0	0	270	36.2	46.4	19	11	7.7	
	ethylbenzene	0.066	1.8	0	0.14	0	0	0	0	41.1	4.9	11.1	5.6	2.8	1.3	
	xylenes	0.064	8.7	0.64	0.82	0	0	0	0	269	23.9	6.8	14	4	7.5	
	Total BTEX	0.184	39.6	3.13	3.07	0.3	1	1	1	627	71.1	280.3	68.6	35.8	19.9	
MW-7	benzene	0	0.1	0	0.11	0	7.5	36.6	47.9	7.1	4.7	46	21	18	0	0
	toluene	0	1.2	0.79	0	0.26	24.9	59.6	39.5	42.8	0	25.8	15	14	0.35	0
	ethylbenzene	0	0.15	0	0	0	3.3	12.6	11.3	12.8	0	7.8	4.9	3.8	0	0
	xylenes	0	0.95	0.26	0	0	7.4	51.3	43.5	77.4	0	14.7	13	9.6	0	0
	Total BTEX	1	2.4	1.05	0.11	0.26	43.1	160.1	142.2	140.1	4.7	94.3	53.9	45.4	0.35	1
MW-8	benzene														3.2	5.4
	toluene														1.6	0
	ethylbenzene														0	0
	xylenes														0	0
	Total BTEX														4.8	5.4
MW-9	benzene	8,500	0.45	4,400	3,300	5,000	4,140	5,620	6,170	1,190	2,580	3,390	2,900	2,000	2,700	2,600
	toluene	32,000	0.82	4,700	2,500	1,200	959	1,340	1,760	5,480	747	1,060	990	710	1,200	1,100
	ethylbenzene	2,800	0.19	740	600	480	368	411	1,030	736	217	291	280	180	300	250
	xylenes	13,300	1.21	2,010	1,780	1,120	785	917	2,760	5,990	507	735	740	490	820	690
	Total BTEX	56,600	2.67	11,850	8,180	7,800	6,252	8,288	11,720	13,396	4,051	5,476	4,910	3,380	5,020	4,640
MW-9D	benzene															0
	toluene															0
	ethylbenzene															0
	xylenes															0
	Total BTEX															1
MW-11	benzene	6,900	340	590	760	880	0	1,040	445	3,630	1,360	647	1,000	700	410	130
	toluene	29,000	420	4,400	3,700	2,800	1,770	5,330	3,650	1,040	8,220	6,690	9,100	8,200	11,000	2,900
	ethylbenzene	3,300	100	630	550	640	173	578	382	613	1,110	881	1,000	1,000	1,400	340
	xylenes	18,600	650	4,400	3,700	3,900	1,250	3,700	3,720	1,510	7,760	6,140	7,800	7,000	9,000	2,600
	Total BTEX	57,800	1,510	10,020	8,710	8,220	3,193	10,648	8,197	6,793	18,450	14,358	18,900	16,900	21,810	5,970

Result of "1" is actually <RL.

Dummied as "1" for graphing.

Site B-820 Groundwater Analytical

LOCATION	PARAMETER	08/19/97	02/11/98	05/12/98	08/15/98	11/17/98	02/27/99	05/18/99	09/10/99	11/17/99	05/18/00	08/29/00	12/13/00	03/19/01	SAMPLING DATE		
															06/26/01	10/02/01	
MW-13	benzene															40	24
	toluene															920	68
	ethylbenzene															52	110
	xylene															550	590
	Total BTEX															1,562	792
MW-14	benzene															0	0
	toluene															0.36	0
	ethylbenzene															0	0
	xylene															0	0
	Total BTEX															0.36	1
MW-15	benzene															1.9	0
	toluene															3.3	0
	ethylbenzene															0.67	0
	xylene															3.1	0
	Total BTEX															8.97	1

Result of "1" is actually <RL.
Dummied as "1" for graphing.

Site B-820 Groundwater Analytical

LOCATION	PARAMETER	08/19/97	02/11/98	05/12/98	08/15/98	11/17/98	02/27/99	05/18/99	09/10/99	11/17/99	05/18/00	08/29/00	12/13/00	03/19/01	SAMPLING DATE		
															06/26/01	10/02/01	
MW-16	benzene															8.2	0
	toluene															12	0
	ethylbenzene															2.3	0
	xylenes															9.6	0
	Total BTEX															32.1	1
MW-17	benzene															19	18
	toluene															12	0
	ethylbenzene															2.2	0
	xylenes															10	0
	Total BTEX															43.2	18
MW-19	benzene															1.5	0
	toluene															0.66	0
	ethylbenzene															0	0
	xylenes															0.56	0
	Total BTEX															2.72	1
MW-26	benzene	0	0	0	0.1	0	14.7	21	166	15.4	0	49.6	30	42	0	2.6	
	toluene	1.2	0.22	0.3	0	0	66.4	159	91.7	83.2	0	27.7	17	28	0.3	14	
	ethylbenzene	0.32	0.08	0	0	0	7.8	16.9	23	19.5	0	8.5	5	7.4	0	3.2	
	xylenes	1.62	0.6	0.196	0	0	39	91	80.7	127	0	18	11	19	0	18	
	Total BTEX	3.14	0.992	0.496	0.1	1	127.9	287.9	361.4	245.1	1	103.8	63	96.4	0.3	37.8	
MW-27	benzene																
	toluene																
	ethylbenzene																
	xylenes																
	Total BTEX																
MW-28	benzene																
	toluene																
	ethylbenzene																
	xylenes																
	Total BTEX																
MW-29	benzene																
	toluene																
	ethylbenzene																
	xylenes																
	Total BTEX																

Result of "1" is actually <RL.
Dummied as "1" for graphing.

Site B-820 Groundwater Analytical

04/24/02	10/28/02	04/18/03	10/13/03	04/15/04	11/03/04	03/01/05	05/31/05	08/10/05	02/01/06	10/13/06	10/15/07	03/23/09
19.4	95.2	0.84	0	0	0.7			0	0	0	6.8	0.0
402	966	82	8.6	1.2	66.9			52.3	0	0	0	211
34.9	212	21.1	5.4	0.83	14.8			7.0	0	0	2.7	29.0
285	778	100	31.6	9.1	116			97.8	0	18.8	172.0	155.0
741.3	2,051.2	203.94	45.6	11.13	198.4			157.1	1	18.8	181.5	395.0
0	5.2	0	0	0	1.6			0	2.1	0	0	0
0	5.4	0	0	0	0.74			0	0	0	0	0
0	3.1	0	0	0	0.63			0	0	0	0	0
5.4	9.3	0	0	0	1.3			0	0	0	0	0
5.4	23	1	1	1	4.27			1	2.1	1	1	1
		0	0	0	0			0	0	0	0	NS
		0	0	1.5	0			0	0	0	0	NS
		0	0	0.62	0			0	0	0	0	NS
		0	0	3.4	0			0	0	0	0	NS
		1	1	5.52	1			1	1	1	1	
0	0	0	5.3	0	0.56	0	0	0	0	0	0	0
1.8	0	0	3.6	0	0	0	0	0	0	0	0	0
0	0	0	1.3	0	0	0	0	0	0	0	0	0
1.8	0	0	9.4	0	0	0	0	0	0	0	0	0
3.6	1	1	19.6	1	0.56	1	1	1	1	1	1	1
0	0	0	12.9	1.4	1.3	0	0	0	0.55	0.67	0.00	0.0
1.3	0	0	6.7	0	0	0	0	0	0	0	0	0
0	0	0	2.1	0	0	0	0	0	0	0	0	0
0	0	0	12.2	0	0	0	0	0	0	0	0	0
1.3	1	1	33.9	1.4	1.3	1	1	1	1	1	1	1
1,770	1,450	2,340	1,960	1,170	2,360			1,820	1,710	723	92.6	22.0
645	488	466	416	375	428			224	76	20	11.2	0.0
159	125	241	155	225	222			168	119	25	6.8	4.6
447	348	556	389	532	495			297	242	49	0	10
3,021	2,411	3,603	2,920	2,302	3,505			2,509	2,147	817	111	37
2	19.9	0	0	0	0			0	0	0	1.2	0
1.7	17.3	0	0	0	0			0	0	0	14.8	0
0.73	7.8	0	0	0	0			0	0	0	55.2	0
1.8	22	0	0	0	0			0	0	0	79.3	0
6.23	67	1	1	1	1			1	1	1	151	1
45.1	49.3	7.5	84.7	0	7.4			0	1.3	1.1	0.9	0
2,900	594	284	310	264	722			1,478	249	177	6.4	8.5 J
481	91.5	35.6	42.2	31.6	111			78.1	1,390.0	1,860.0	46.2	118.0
3,270	1,580	1,290	1,610	2,180	2,450			3,990	249	177	1,400	4,390
6,696.1	2,314.8	1,617.1	2,046.9	2,475.6	3,290.4			5,546.1	1,889.3	2,215.1	1,453.5	4,508.0

Result of "1" is actually <RL.

Dummied as "1" for graphing.

Site B-820 Groundwater Analytical

<u>04/24/02</u>	<u>10/28/02</u>	<u>04/18/03</u>	<u>10/13/03</u>	<u>04/15/04</u>	<u>11/03/04</u>	<u>03/01/05</u>	<u>05/31/05</u>	<u>08/10/05</u>	<u>02/01/06</u>	<u>10/13/06</u>	<u>10/15/07</u>	<u>03/23/09</u>
0.63	0	0.55	4.3	12.50	2.8			1.8	8.8	0	0	0
17.5	2.1	62.5	53.3	474.0	19.1			41.6	304.0	10.8	27.4	45.0
5	0.73	3.9	48.4	145.0	19.5			21.7	60.8	6.7	13.5	42.5
24.8	7.2	103	531	1,290	64			148	903	41	86	836
47.93	10.03	169.95	637	1,921.5	105.4			213.1	1,276.6	58.7	126.9	923.5
1.2	0	0	0	0	0.93	0	0	0	0	0	0	NS
89.2	0	0	0	0	0	0	0	0	0	0	0	NS
7.3	0	0	0	0	0	0	0	0	0	0	0	NS
37.2	0	0	0	0	0	0	0	0	0	0	0	NS
134.9	1	1	1	1	0.93	1	1	1	1	1	1	
0	0	0	0	0	2.5			0	0	0	0	0
0	0	0	0	0	0.89			0	0	0	0	0
0	0	0	0	0	0.65			0	0	0	0	0
0	0	0	0	0	1.4			0	0	0	0	0
1	1	1	1	1	5.44			1	1	1	1	1

Result of "1" is actually <RL.
Dummied as "1" for graphing.

Site B-820 Groundwater Analytical

04/24/02	10/28/02	04/18/03	10/13/03	04/15/04	11/03/04	03/01/05	05/31/05	08/10/05	02/01/06	10/13/06	10/15/07	03/23/09
0	0	0	0	2.4	2.6			8.6	0	0	0.5	0
0	0	0	0	0	0			0	0	0	0	0
0	0	0	0	0	0			0	0	0	0	0
0	0	0	0	0	0			0	0	0	1.1	0
1	1	1	1	2.4	2.6			8.6	1	1	1.6	1
17.4	0	45.8	364	181	242			552	675	695	53	148
0	0	0	0	0	0			0	0	0	0	0
0	0	0	0	0	0			1.2	0	0	0	0
0	0	1.9	3.3	0	2.3			5.1	0	0	0	0
17.4	1	47.7	367.3	181	244.3			558.3	675.0	695.0	53.4	148.0
1.4	0	0.87	0.76	0.79	0.57	4.1	0.75	0	0	0	0	NS
0.75	0	0	0	1	0	23.1	1	0	0	0	0	NS
0	0	0	0	0	0	8.3	0.6	0	0	0	0	NS
0	0	0	0	1.8	0	21.8	0	0	0	0	0	NS
2.15	1	0.87	0.76	3.89	0.57	57.3	2.35	1	1	1	1	
0	0	0	0	2.4	1	0	49.6	0	5.1	0	0	0
30.2	0	0.87	0	0	0	0	27.7	0	0	0	0	0
3.1	0	0	0	0	0	0	8.5	0	0	0	0	0
16.7	0	2.1	0	0	0	0	18	0	0	0	0	0
50	1	2.97	1	2.40	1	1	103.8	1	5.1	1	1	1
		0	0	0	0	0	0	0	0	0	0	NS
		0	0	0.65	0	0	0	0	0	5.7	0.0	NS
		0	0	0	0	0	0	0	0	2.6	0.0	NS
		0	0	3.3	1.4	0	0	0	0	70	0	NS
		1	1	3.95	1.4	1	1	1	1	78.3	1.0	
							1,110.0	1,130.0	258.0	94.3	1.7	43.1
							0	0	0	0	0	0
							0	0	0	0	0	0
							0	0	0	0	0	0
							1,110.0	1,130.0	258.0	94.3	1.7	43.1
							29.6	10.7	10.8	9.4	0.0	0.0
							0	0	0	0	0	0
							0	0	0	0	0	0
							0	0	0	0	0	1
							29.6	10.7	10.8	9.4	1.0	1.3

Result of "1" is actually <RL.
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