

**2007-2008 ANNUAL MONITORING REPORT
BUILDING AS-4141 (JP-5 LINE AREA)
MARINE CORPS BASE CAMP LEJEUNE
ONSLOW COUNTY, NORTH CAROLINA**

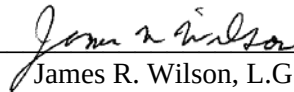
Prepared for:

DEPARTMENT OF THE NAVY
Contract No. N62470-02-D-3260

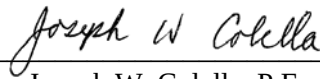
Naval Facilities Engineering Command
Mid-Atlantic
6506 Hampton Boulevard
Building A (South East Wing) 3rd Floor
Norfolk, Virginia 24311-6287

Submitted by:

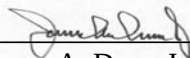
Shaw Environmental, Inc.
500 East Main Street, Suite 1630
Norfolk, Virginia 23508-1273



James R. Wilson, L.G.
Licensed Geologist Number 2069



Joseph W. Colella, P.E.
Project Manager



James A. Dunn Jr., P.E.
Program Manager

Task Order 095
Project No. 126006
May 2008

TABLE OF CONTENTS

1.0	INTRODUCTION	1-1
1.1	MCB CAMP LEJEUNE LOCATION AND DESCRIPTION	1-1
1.2	SITE HISTORY	1-2
2.0	GROUNDWATER AND FREE PHASE PRODUCT MONITORING.....	2-1
2.1	GROUNDWATER MONITORING SUMMARY	2-1
2.2	OCTOBER 2007 GAUGING EVENT	2-1
2.3	MARCH 2008 GAUGING EVENT	2-2
2.4	FREE PHASE PRODUCT THICKNESS AND RECOVERY SUMMARY.....	2-2
3.0	GROUNDWATER ANALYTICAL RESULTS SUMMARY	3-1
3.1	GROUNDWATER SAMPLING SUMMARY (1998-2007)	3-1
3.2	GROUNDWATER SAMPLING (OCTOBER 2007)	3-3
3.3	GROUNDWATER SAMPLING (MARCH 2008)	3-3
4.0	CONCLUSIONS AND RECOMMENDATIONS	4-1

Tables

Table 1.1: Site Rehabilitation Goals

Table 2.1: Groundwater Elevation Table 2007-2008

Table 3.1: Groundwater Natural Attenuation Results (October 2007)

Table 3.2: Groundwater Analytical Results (October 2007)

Table 3.3: Groundwater Natural Attenuation Results (March 2008)

Table 3.4: Groundwater Analytical Results (March 2008)

Figures

Figure 1.1: Vicinity Map

Figure 1.2: Location Map

Figure 1.3: Site Map

Figure 2.1: Groundwater Elevation Map, October 25, 2007

Figure 2.2: Free Phase Product Thickness Map, October 25, 2007

Figure 2.3: Groundwater Elevation Map, March 28, 2008

Figure 2.4: Free Phase Product Thickness Map, March 28, 2008

Figure 3.1: Groundwater Analytical Results, October 2007

Figure 3.2: Groundwater Analytical Results, March 2008

APPENDIX A: HISTORICAL GROUNDWATER ELEVATIONS AND FREE PHASE PRODUCT THICKNESSES

APPENDIX B: GROUNDWATER SAMPLE COLLECTION FIELD LOGS

APPENDIX C: GROUNDWATER LABORATORY ANALYTICAL REPORTS

LIST OF ACRONYMS

AFVR	Aggressive Fluid Vapor Recovery
bls	Below Land Surface
DRO	Diesel Range Organics
DWM	Division of Waste Management
EPA	Environmental Protection Agency
FID	Flame Ionization Detector
GRO	Gasoline Range Organics
IDW	Investigation Derived Waste
NAVFAC	Naval Facilities Engineering Command, Atlantic Division
MCB	Marine Corps Base
NCAC	North Carolina Administrative Code
PAHs	Poly Aromatic Hydrocarbons
PVC	Poly Vinyl Chloride
RAO	Remedial Action Objectives
Shaw	Shaw Environmental, Inc.
SVOCs	Semi-Volatile Organic Compounds
TCLP	Toxic Characteristic Leachability Procedure
TPH	Total Petroleum Hydrocarbons
VOCs	Volatile Organic Compounds

1.0 INTRODUCTION

Shaw Environmental Inc. (Shaw) has been tasked by the Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic (NAVFAC MIDLANT) under Contract Number N62470-02-D-3260, Task Order 0095 to prepare this Annual Monitoring Report for the Building AS-4141 (JP-5 Line Area) site located at the Marine Corps Air Station (MCAS), New River, in Onslow County North Carolina. The purpose of this report is to present the findings and recommendations associated with the groundwater monitoring activities performed in October 2007 and March 2008. This report and the methods used to acquire the data in support of this report have been prepared in accordance with the North Carolina Department of Environmental and Natural Resources (NCDENR), Division of Waste Management (DWM), Underground Storage Tank (UST) Section guidelines.

1.1 MCB CAMP LEJEUNE LOCATION AND DESCRIPTION

Located in Onslow County, North Carolina, Marine Corps Base (MCB) Camp Lejeune is a training base for the United States Marine Corps. The base covers approximately 236 square miles (153,000 acres) and includes 14 miles of coastline. MCB Camp Lejeune is bound 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 Base (**Figure 1.1**).

Building AS-4141 is located at the MCAS New River, North Carolina (**Figure 1.2**). The site is directly west of the airfield and is divided by White Street and consists of several parking lots and a helicopter hanger. An underground pipeline that transports JP-5 fuel from the Campbell Street Fuel Farm to the flight line transects the subject site. Building AS-4141 is located at the west central portion of the site. The mission of the fuel transfer pipeline at MCAS New River is to transfer JP-5 fuel from the Campbell Street Bulk Fuel Farm to four Underground Storage Tanks at the Rapid Jet Systems A & B and C & D. JP-5 fuel is transferred to the C & D Rapid Jet Systems via approximately 4,000 feet of singlewall fiberglass, underground piping. Its general routing is along White Street and then under the aircraft parking ramp MAT-7. Six valve pits with new block and bleed valves are located along the fiberglass portion of this piping system. The transfer pipeline transitions to 8-inch stainless steel just prior to entering valve box #6 and approximately 1,000 feet of 8 inch stainless steel transfer line continues to the A & B

Rapid Jet UST Systems. A layout of the Building AS-4141 site in the JP-5 Line Area is presented in **Figure 1.3**.

The nearest surface water body is a pond located approximately 800 feet northeast of the site. No active drinking water supply wells are within 1,500 feet of the site. The nearest drinking water supply well, AS-4150, is located approximately 2,200 feet southwest of the site and has been taken offline and shut down.

The objective of the Annual Monitoring Report and associated sampling activity is to document the monthly gauging of 10 wells, aggressive fluid vapor recovery (AFVR) events conducted in wells with free phase product, as well as evaluate the extent of dissolved phase contamination at the site from the two semi-annual sampling events conducted in October 2007 and March 2008. The report also provides a brief environmental history of the site, summarizes the corrective action plan, and describes the installation and operation of the recommended remedial alternative. The report provides a discussion of monitoring results and the status of groundwater quality.

1.2 SITE HISTORY

In the early 1980s, several environmental investigations completed at the site, identified leaks in the JP-5 fuel line. Upon discovery of the leak the pipeline was shut down and fuel was trucked from the fuel farm to day tanks at the flight line. During the summer of 1984 the pipeline was replaced. Results of these investigations identified both dissolved phase contamination and free phase product in the vicinity of the JP-5 fuel line.

In May of 1986 a site assessment was conducted by ATEC Associates, Inc. to identify the extent of JP-5 fuel contamination in the JP-5 Line Area. Monitoring wells MW02, MW07, MW08, MW10, and MW13 were installed as part of this investigation. An interim remedial system to remove free phase product from the area was installed in October 1986. Operation of the interim system was terminated in 1987 due to hangar construction activities. A total of 4,043 gallons of JP-5 fuel was recovered by the interim system.

In September 1989 O'Brian & Gere Engineers (OBG) installed monitoring wells OBG-1 through OBG-6 to assist with further delineation of the groundwater contamination which was used to develop a Corrective Action Plan (CAP) dated June 1991. Based upon the recommendations of the CAP, a free phase product recovery system and a groundwater

extraction and treatment system were installed in February of 1994. A long-term monitoring (LTM) program was also recommended in the CAP.

The following three remedial goals were developed for the site:

- Remove free phase product from the subsurface to the extent practicable,
- Prevent further migration of contaminated groundwater,
- Rehabilitate the groundwater by removing any dissolved petroleum constituents in concentrations exceeding North Carolina's groundwater quality standards.

From February 1998 through April 2002, J.A. Jones Environmental Services Company (J.A. Jones) implemented the selected approach as outlined in the CAP for the JP-5 Line Area. Starting in August 1999, AFVR actions were conducted at the recovery wells to enhance the removal of free phase product. AFVR events were completed if free phase product thickness was equal to or greater than 0.1 feet in a recovery well. The recovery wells RW-1 and RW-2 were gauged weekly for free phase product thickness. The monitoring requirements of the JP-5 Line Area included monthly monitoring of free phase product levels in 11 wells and quarterly groundwater sampling and analysis from five wells. Between April 1999 and December 2002 approximately 51,450 gallons of groundwater from monitoring well development and AFVR events had been transported and disposed.

The CAP designed recovery system at the JP-5 Line Area was in operation from February 1994 to July 2000. The remedial system was designed to recover free phase product and to remediate contaminated groundwater. The free phase product recovery system consisted of two recovery wells (RW-1 and RW-2) located within the contaminant plume. The recovery wells were designed to prevent the migration of contamination, recover free phase product, and extract contaminated groundwater. Free phase product was recovered from the recovery wells through the use of pneumatic pumps. A controller that established pumping rates and optimized free product recovery set the operation cycle of the pumps. Groundwater was recovered from the two wells; treated using an oil/water separator, air stripping, followed by carbon adsorption; and discharged to the MCB wastewater treatment plant (WWTP). On July 19, 2000 J.A. Jones shut down the treatment system based on recommendations provided by Radian under the JP-5 Treatment System Optimization Study.

On August 7, 2000 a passive product skimmer was installed in recovery well RW-1 to assist with free phase product recovery. On October 17, 2000 J.A. Jones completed the closure of the abandoned fuel line and a closure report was completed February 13, 2001.

Shaw Environmental, Inc. (Shaw) prepared an Annual Monitoring Report dated January 2004 that documented J.A. Jones' activities between 1998 and April 2002. Shaw operated, monitored and maintained the subject site from May 2002 to January 2003. Engineering and Environment, Inc. (E&E) took over these operations from February 2003 until March 2005. E&E documented their activities in a report entitled Annual Groundwater Monitoring Report 2004-2005, dated July 29, 2005.

In December 2004, CATLIN Engineers and Scientists (CATLIN) completed a Revised Corrective Action Plan (RCAP) with Remedial Action Objectives (RAO) for the site, which recommended additional investigations to effectively evaluate the AFVR remedial approach. Based on CATLIN's RAO & RCAP, the extent of free phase product needed to be delineated, and the horizontal and vertical extent of groundwater contamination needed to be defined.

In April 2005, Shaw took over operations for the site which included free phase product recovery using AFVR events, monitoring the free phase product thicknesses, and sampling of the monitoring wells at the subject site. In October 2005 Shaw installed one Type III monitoring well (MW14) and two Type II monitoring wells (MW15 and OBG03R) to evaluate the extent of dissolved phase contamination. In addition, Shaw installed five piezometers (TP-1 through TP-5) to delineate the free phase product at the site. In December 2005 Shaw completed one groundwater sample collection and analysis event from select monitoring wells to track free phase product and dissolved hydrocarbon contamination occurrence. Shaw prepared a 2005 Annual Monitoring Report dated June 2006 that documented these activities.

In December 2005, CATLIN conducted soil sampling with thirteen hand augered borings in areas of previously referenced TPH contamination. All soil sample results were below Residential and Industrial/Commercial maximum soil contaminant concentrations (MSCCs). In February and March 2006, CATLIN installed four Type II monitoring wells (MW16 through MW19) to evaluate the extent of dissolved phase contamination. These new wells were gauged and monitoring wells MW16 and MW17 detected 0.30 feet and 0.20 feet of free phase product, respectively.

CATLIN prepared a revision for the RAO & RCAP in June 2006 and included the 2005 activities they performed. CATLIN believed the AFVR events had not been effectively removing free phase product from the Building AS-4141 site, hence CATLIN evaluated five alternative technologies for removal of free phase product from the Building AS-4141 site. These included a Skimmer System, Excavation and Treatment, a Groundwater Depression System, a Dual Phase Extraction System, and the continued use of AFVR events. CATLIN recommended the Dual Phase Extraction System (DPE) to effectively remove free phase product from the site.

In August 2006, CATLIN installed two Type II monitoring wells (MW20 and MW21) to evaluate the extent of free phase product recovery efforts. Pilot tests were conducted in December 2006 and January 2007. These pilot tests were used to aid in evaluating the feasibility of the DPE technology recommended for the remediation of free phase product from the Building AS-4141 site. CATLIN prepared a Summary of Aggressive Fluid Vapor Recovery Pilot Test for Building AS-4141 Report dated March 14, 2007 that documented these activities.

In October 2006 and March 2007 Shaw completed two groundwater sample collection and analysis events from select monitoring wells to track free phase product and dissolved hydrocarbon contamination occurrence. Shaw prepared a 2007 Annual Monitoring Report dated May 2007 that documented these activities.

This 2007-2008 Annual Monitoring Report documents the October 2007 and March 2008 gauging of 19 monitoring wells and sampling of 9 selected monitoring wells and the monthly removal of free phased product from the 5 piezometers (AS3905-TP-1 through AS3905-TP-5) using a peristaltic pump. The maximum concentrations of the chemicals of concern for 2006, 2007, and 2008 with the revised site rehabilitation goals for detected chemicals of concern are presented in **Table 1.1**.

2.0 GROUNDWATER AND FREE PHASE PRODUCT MONITORING

2.1 GROUNDWATER MONITORING SUMMARY

Groundwater elevations and free phase product thicknesses were measured weekly from November 2005 to February 2007 in each of 5 groundwater monitoring wells (USTAS4141-MW14, USTAS4141-MW15, USTAS4141-OBG03R, USTAS4141-OBG06, and USTAS4141-RW01) and 5 piezometers (AS3905-TP-1 through AS3905-TP-5) by Shaw. Groundwater elevations and free phase product thicknesses were measured monthly from March 2007 to April 2008 from the same 5 wells and 5 piezometers. The weekly and monthly groundwater elevation and free phase product thickness data for November 2005 to April 2008 are presented in **Appendix A**.

The groundwater sample collection field logs for the two semi-annual groundwater gauging and sampling events performed by Shaw in October 2007 and March 2008 are provided in **Appendix B**. The original monitoring wells designated as “W” have been changed to “MW” to be consistent with the monitoring well numbering scheme at the site.

2.2 OCTOBER 2007 GAUGING EVENT

In October 2007 the depth to groundwater from top of casing was gauged in 14 monitoring wells (USTAS4141-MW02, USTAS4141-MW07, USTAS4141-MW10, USTAS4141-MW14, USTAS4141-MW15, USTAS4141-MW16, USTAS4141-MW17, USTAS4141-MW18, USTAS4141-MW19, USTAS4141-MW20, USTAS4141-MW21, USTAS4141-RW01, USTAS4141-OBG03R, and USTAS4141-OBG06) and five piezometers (AS3905-TP1 through AS3905-TP5) at the site. The depth to groundwater ranged from 3.82 feet bls in monitoring well USTAS4141-MW07 to 10.73 feet bls in piezometer USTAS4141-MW21. Groundwater elevations ranged from 11.69 feet National Geodetic Vertical Datum (NGVD) in piezometer USTAS4141-MW19 to 19.54 feet NGVD in monitoring well USTAS4141-MW02. The shallow groundwater flows from the northwest to the southeast at a horizontal hydraulic gradient of 0.028 ft/ft from USTAS4141-MW02 to USTAS4141-OBG03R (**Figure 2.1**). Detectable thickness of free phase product was observed in piezometers AS3905-TP1 through AS3905-TP5, and monitoring wells USTAS4141-MW17, USTAS4141-MW20, USTAS4141-MW21, USTAS4141-RW01, and USTAS4141-OBG03R (**Figure 2.2**). Free phase product thicknesses ranged from 0.03 feet in AS3905-TP2 to 3.37 feet in USTAS4141-MW21.

2.3 MARCH 2008 GAUGING EVENT

In March 2008 the depth to groundwater from top of casing was gauged in 14 monitoring wells (USTAS4141-MW02, USTAS4141-MW07, USTAS4141-MW10, USTAS4141-MW14, USTAS4141-MW15, USTAS4141-MW16, USTAS4141-MW17, USTAS4141-MW18, USTAS4141-MW19, USTAS4141-MW20, USTAS4141-MW21, USTAS4141-RW01, USTAS4141-OBG03R, and USTAS4141-OBG06) and five piezometers (AS3905-TP1 through AS3905-TP5) at the site. The depth to groundwater ranged from 2.98 feet bls in monitoring well USTAS4141-MW15 to 9.87 feet bls in monitoring well AS3905-TP5. Groundwater elevations ranged from 10.39 feet NGVD in piezometer AS3905-TP5 to 18.72 feet NGVD in monitoring well USTAS4141-MW02. The shallow groundwater flows from the northwest to the southeast at a horizontal hydraulic gradient of 0.024 ft/ft from USTAS4141-MW02 to USTAS4141-OBG03R (**Figure 2.3**). Detectable thickness of free phase product was observed in piezometers AS3905-TP1, AS3905-TP3 through AS3905-TP5, and monitoring wells USTAS4141-MW19, USTAS4141-MW20, USTAS4141-MW21, USTAS4141-RW01, and USTAS4141-OBG03R (**Figure 2.4**). Free phase product thicknesses ranged from 0.01 feet in USTAS4141-MW19 to 2.98 feet in AS3905-TP1.

2.4 FREE PHASE PRODUCT THICKNESS AND RECOVERY SUMMARY

An interim remedial system to remove free product from the area was installed in October 1986. Operation of the interim system was terminated in 1987 due to hangar construction activities. A total of 4,043 gallons of JP-5 fuel was recovered by the interim system.

Starting in August 1999, AFVR actions were conducted at the recovery wells to enhance the removal of free product. AFVR events were completed if product thickness was equal to or greater than 0.6 feet in a recovery well. The recovery wells USTAS4141-RW01 and USTAS4141-RW02 were gauged weekly for product thickness. The monitoring requirements of the JP-5 Line Area included monthly monitoring of free product levels in 11 wells and quarterly groundwater sampling and analysis from five wells. Between April 1999 and December 2002 approximately 51,450 gallons of groundwater from monitoring well development and AFVR events had been transported and disposed.

The recovery system at the JP-5 Line Area was in operation from February 1994 to July 2000. The remedial system was designed to recover free product and to remediate contaminated groundwater. The free product recovery system consisted of two recovery

wells (USTAS4141-RW01 and USTAS4141-RW02) located within the contaminant plume. The recovery wells were designed to prevent the migration of contamination, recover free product, and extract contaminated groundwater. Free product was recovered from the recovery wells through the use of pneumatic pumps. A controller that established pumping rates and optimized free product recovery set the operation cycle of the pumps. Groundwater was recovered from the two wells; treated using an oil/water separator, air stripping, followed by carbon adsorption; and discharged to the MCB wastewater treatment plant (WWTP). On July 19, 2000 J.A. Jones shut down the treatment system based on recommendations provided by Radian under the JP-5 Treatment System Optimization Study. On August 7, 2000 a passive product skimmer was installed in recovery well RW-1 to assist with free product recovery.

Dating back to 1998 free phase product has been observed in three on-site wells (USTAS4141-MW10, USTAS4141-RW01 and USTAS4141-RW02). Monitoring well USTAS4141-MW10 displayed approximately 0.9 feet from April through July 1998. By September 1998 AFVR events conducted at USTAS4141-MW10 had removed product from the well. Product has not been measured in monitoring well USTAS4141-MW10 since October 1998. Recovery well USTAS4141-RW02 consistently displayed product from April 1998 to July 1999. Measured product thickness ranged from 0.02 feet in July 1999 to 4.3 feet in April 1998. Recovery well USTAS4141-RW01 consistently displayed the presence of free product from April 1998 through April 2002. Measured product thickness has decreased from a high of 7.8 feet in April 1998 to 0.6 feet in April 2002.

Free phase product was monitored on a monthly basis starting in April 1998 to April 2002 by J.A. Jones. During this time period free phase product was detected at the following thicknesses in April 1998: USTAS4141-MW10 at 0.87 ft, USTAS4141-RW01 at 7.79 ft, and USTAS4141-RW02 at 4.31 ft. In May 1999 free phase product was no longer detected in USTAS4141-MW10, but was detected in USTAS4141-RW01 at 3.69 ft and USTAS4141-RW02 at 0.02 ft. In April 2000 free phase product was no longer detected in USTAS4141-RW02, but was detected in USTAS4141-RW01 at 1.10 ft. In April 2001 free phase product was detected in USTAS4141-RW01 at 0.35 ft. In April 2002 free phase product was detected in USTAS4141-RW01 at 0.57 ft.

E&E took over monitoring free phase product measurements from early 2003 until March 2005. The E&E activities are documented in a report entitled Annual Groundwater Monitoring Report 2004-2005, dated July 29, 2005. Shaw conducted seven AFVR events from monitoring wells USTAS4141-OBG06 and USTAS4141-RW01 during July 2003 to

March 2005 with approximately 596 gallons of fluids recovered of which consisted of 63.3 gallons of gasoline.

In April 2005 to February 2007, Shaw took over operations for the site which included free phase product recovery using AFVR events for recovery well USTAS4141-RW1 and monitoring well USTAS4141-OBG03R and using a peristaltic pump in piezometers AS3905-TP1 through AS3905-TP5. From November 2005 to August 2006, a total of eight AFVR events were completed at the JP-5 Fuel Line Area. Recovery well USTAS4141-RW1 required three AFVR events and monitoring well USTAS4141-OBG03R required five AFVR events. A total of 20 gallons of product was recovered from USTAS4141-RW1 and 52.5 gallons of product was recovered from USTAS4141-OBG03R since the well was installed in October 2005. Shaw conducted four AFVR events from recovery well USTAS4141-RW01 during December 2006 to January 2007 for CATLIN's pilot tests with approximately 33 gallons of gasoline recovered. A range of 3 to 12 gallons of free phased product per week was recovered from the five piezometers from April 2005 to February 2007.

Free phase product was monitored on a weekly basis starting in November 2005 to February 2007 by Shaw in monitoring wells USTAS4141-MW14, USTAS4141-MW15, USTAS4141-RW01, USTAS4141-OBG03R, and USTAS4141-OBG06) and five piezometers (AS3905-TP1 through AS3905-TP5).

Measured free phase product thicknesses on selected dates from November 2005 to March 2007 in the six monitoring wells that detected measurable free phased product are presented in the table below. The data indicates no trend in the field measurements. As free product was encountered, it was removed.

FREE PHASED PRODUCT THICKNESSES (FEET)

Well	NOVEMBER 2005	APRIL 2006	OCTOBER 2006	MARCH 2007
TP-1	0.00	0.50	0.26	0.26
TP-3	0.35	3.56	1.05	3.81
TP-4	0.00	0.00	0.41	0.33
TP-5	0.01	2.54	1.45	2.45
OBG03R	1.42	0.23	0.00	0.64
RW-1	0.16	0.86	0.10	0.25

From March 2007 to April 2008, Shaw did not conduct any AFVR events for recovery well USTAS4141-RW1 or monitoring well USTAS4141-OBG03R since the free product thickness was less than 0.60 feet. An absorbent sock was used to remove free product for these wells; the sock was changed monthly. During this same period a peristaltic pump was utilized in piezometers AS3905-TP1 through AS3905-TP5 to remove free phased product. A total of approximately 60 gallons of product recovered. Product was removed from these wells shortly after it was encountered.

Groundwater elevations and free phase product thicknesses were measured monthly from March 2007 to April 2008 from monitoring wells USTAS4141-MW14, USTAS4141-MW15, USTAS4141-RW01, USTAS4141-OBG03R, and USTAS4141-OBG06) and five piezometers (AS3905-TP1 through AS3905-TP5). In addition, monitoring wells USTAS4141-MW17, USTAS4141-MW19, USTAS4141-MW20, and USTAS4141-MW21 were measured during semi-annual sampling events.

Measured free phase product thicknesses from the October 2007 and March 2008 events in the 11 monitoring wells that detected measurable free phased product are presented in the table below.

FREE PHASED PRODUCT THICKNESSES (FEET)

Well	OCTOBER 2007	MARCH 2008
TP-1	0.65	2.98
TP-2	0.03	0.00
TP-3	1.08	2.24
TP-4	0.20	0.16
TP-5	0.98	2.60
OBG03R	0.27	0.40
RW-1	0.35	0.44
MW17	0.14	0.00
MW19	0.00	0.01
MW20	2.98	2.01
MW21	3.37	1.59

Free phase product measurements from November 2005 to April 2008 are presented in **Appendix B**.

The monthly gauging and removal actions allowed more free product to accumulate between removal events in 2007-2008. This is indicated by the data from the two tables above. The surrounding high plasticity clay affects the flow of free product and the removal vents.

3.0 GROUNDWATER ANALYTICAL RESULTS SUMMARY

3.1 GROUNDWATER SAMPLING SUMMARY (1998-2007)

Groundwater samples were collected quarterly from the site monitoring wells between March 1998 and March 2002 by J.A. Jones. Groundwater samples were collected from monitoring wells USTAS4141-OBG04, USTAS4141-OBG05, USTAS4141-MW07, USTAS4141-MW08, and USTAS4141-MW13. Based on laboratory analytical results Volatile Organic Compounds (VOCs) were below the quantitation limit (BQL) in all of the groundwater samples dating back to March 1998.

Bis(2-ethylhexyl)phthalate, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were the only Semi-Volatile Organic Compounds (SVOCs) detected in groundwater samples collected from the five wells and these compounds have not been detected since the September 23, 1998 sampling event. Bis(2-ethylhexyl)phthalate is primarily used as a plasticizer in polyvinyl chloride resins and as a non plasticizer used as a replacement for PCBs in dielectric fluids for electric capacitors. It is also found in analytical results as a false positive caused by one of the following sources: sample containers, handling plastics during extractions, plastic sheeting and gloves used in the field and laboratory, plastic wrapping of pipettes and other lab supplies, and tygon tubing. Also, the occurrence of the compound appears to be inconsistent for individual wells. For this reason, Shaw does not believe that the source of bis(2-ethylhexyl)phthalate is related to the JP-5 Fuel Line area.

Groundwater samples were collected from the site monitoring wells in March 2003 and June 2004 by E&E. Groundwater samples were collected from monitoring wells USTAS4141-OBG04, USTAS4141-OBG05, USTAS4141-MW07, USTAS4141-MW08, and USTAS4141-MW13. Based on laboratory analytical results obtained in March 2003, Benzene, Ethylbenzene, Toluene, and total xylenes were detected above the quantitation limit at maximum concentrations of 52.7µg/l, 8.6 µg/l, 24.7µg/l, and 60.3µg/l, respectively. VOCs were BQL in all of the groundwater samples in June 2004. Bis(2-ethylhexyl)phthalate, naphthalene, and benzo(a)anthracene were the only Semi-Volatile Organic Compounds (SVOCs) detected in groundwater samples collected from the five wells in the March 2003 and June 2004 sampling events.

In December 2005, Shaw collected groundwater samples from monitoring wells USTAS4141-OBG06, USTAS4141-RW02, USTAS4141-MW02, USTAS4141-MW14, and USTAS4141-MW15. Analytical results from the groundwater samples did not detect VOC compounds above NC 2L Groundwater Quality Standards (GWQS) in any of the monitoring wells. Analytical results from the groundwater samples did not detect PAH compounds above NC 2L GWQS in any of the monitoring wells with the exception of USTAS4141-MW15 (2-methylnaphthalene, 36.2 µg/l). Analytical results from the groundwater samples detected lead in excess of North Carolina 2L GWQS in monitoring wells USTAS4141-MW02 (102 µg/l) and USTAS4141-MW15 (19.9 µg/l).

In October 2006, groundwater samples were collected from monitoring wells USTAS4141-MW02, USTAS4141-MW10, USTAS4141-MW14, USTAS4141-MW15, USTAS4141-MW16, USTAS4141-MW17, USTAS4141-MW18, USTAS4141-MW19, USTAS4141-MW20, USTAS4141-MW21, USTAS4141-OBG03R, and USTAS4141-OBG06. Based on laboratory analytical results obtained in October 2006, Volatile Organic Compounds (VOCs) which includes Benzene, Methyl Tert-Butyl Ether, Toluene, Ethylbenzene, and total xylenes were detected above the quantitation limit at maximum concentrations of 13.5 µg/l, <1.0 µg/l, 3.2 µg/l, 52.1 µg/l, and 171 µg/l, respectively. Semi-Volatile Organic Compounds (SVOCs) 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene were detected above the quantitation limit at maximum concentrations of 466 µg/l, 589 µg/l, and 461 µg/l, respectively. Lead was detected above the quantitation limit at a maximum concentration of 68 µg/l.

In March 2007, groundwater samples were collected from monitoring wells USTAS4141-MW02, USTAS4141-MW07, USTAS4141-MW10, USTAS4141-MW14, USTAS4141-MW15, USTAS4141-MW16, USTAS4141-MW17, USTAS4141-MW18, USTAS4141-MW19, and USTAS4141-OBG06. Based on laboratory analytical results obtained in March 2007, Volatile Organic Compounds (VOCs) which includes Benzene, Methyl Tert-Butyl Ether, Toluene, Ethylbenzene, and total xylenes were detected above the quantitation limit at maximum concentrations of 6.0 µg/l, <1.0 µg/l, <1.0 µg/l, 16.7 µg/l, and 21 µg/l, respectively. Semi-Volatile Organic Compounds (SVOCs) 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene were detected above the quantitation limit at maximum concentrations of 120 µg/l, 87.6 µg/l, and 257 µg/l, respectively. Lead was not detected above the quantitation limit.

3.2 GROUNDWATER SAMPLING (OCTOBER 2007)

Groundwater samples were collected from monitoring wells USTAS4141-MW02, USTAS4141-MW07, USTAS4141-MW10, USTAS4141-MW14, USTAS4141-MW15, USTAS4141-MW16, USTAS4141-MW18, USTAS4141-MW19, and USTAS4141-OBG06 on October 25 through October 30, 2007. Groundwater samples were not collected from monitoring wells USTAS4141-MW17, USTAS4141-MW20, USTAS4141-MW21, and USTAS4141-OBG03R due to the presence of free phased product. A minimum of three well volumes was purged from each monitoring well prior to groundwater sample collection using low flow methods. The samples were placed in preserved containers supplied by the laboratory. The collected samples were immediately placed in a cooler with ice and sent via overnight courier to Accutest Laboratory located in Orlando, Florida. The samples were analyzed for VOCs using EPA Method 602 with xylenes, Polynuclear aromatic hydrocarbons (PAHs) only using EPA Method 625, and lead using EPA Method 3030C.

Of the 9 monitoring wells sampled, the following one well displayed compounds in excess of North Carolina's Groundwater Quality Standards.

- USTAS4141-MW16 [2-methylnaphthalene, 76.6 µg/l; and naphthalene 83.6 µg/l]

Groundwater field parameters and analytical results from the 9 monitoring wells for the October 2007 sampling event are presented in **Tables 3.1 and 3.2**, and **Figure 3.1**. Copies of the groundwater sample collection field logs are provided in **Appendix B** and the laboratory analytical reports are provided in **Appendix C**.

3.3 GROUNDWATER SAMPLING (MARCH 2008)

Groundwater samples were collected from monitoring wells USTAS4141-MW02, USTAS4141-MW07, USTAS4141-MW10, USTAS4141-MW14, USTAS4141-MW15, USTAS4141-MW16, USTAS4141-MW17, USTAS4141-MW18, USTAS4141-MW19, and USTAS4141-OBG06 on March 27 through March 28, 2008. Groundwater samples were not collected from monitoring wells USTAS4141-MW19, USTAS4141-MW20, USTAS4141-MW21, and USTAS4141-OBG03R due to the presence of free phased product. The same sampling procedures and analytical parameters were used during March 2008 as in October 2007.

Of the 9 monitoring wells sampled, the following three wells displayed compounds in excess of North Carolina's Groundwater Quality Standards.

- USTAS4141-MW07 [lead, 37.2 µg/l]
- USTAS4141-MW16 [2-methylnaphtalene, 49.3 µg/l; and naphthalene 65.6 µg/l]
- USTAS4141-MW17 [benzene, 4.0 µg/l; 2-methylnaphtalene, 176 µg/l; and naphthalene 274 µg/l]

Groundwater field parameters and analytical results from the 9 monitoring wells for the March 2008 sampling event are presented in **Table 3.3 and 3.4 and Figure 3.2**. Copies of the groundwater sample collection field logs are provided in **Appendix B** and the laboratory analytical reports are provided in **Appendix C**.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The data from the wells from the October 2006 to March 2007 events indicate the AFVR events had been successful in removing free phase product. Therefore the AFVR events and free product thickness measurement frequency was changed from weekly to monthly starting in March 2007 due to the small amount of free phased product present. Petroleum hydrocarbon absorbent socks have been placed in the wells with a free phase product thickness of less than 0.6 feet and replaced on a monthly basis.

During March 2007 to April 2008 free phase product was measured on a monthly basis by Shaw in monitoring wells USTAS4141-MW14, USTAS4141-MW15, USTAS4141-RW01, USTAS4141-OBG03R, and USTAS4141-OBG06) and five piezometers (AS3905-TP1 through AS3905-TP5). In addition, free phase product was measured in monitoring wells USTAS4141-MW17, USTAS4141-MW19, USTAS4141-MW20, and USTAS4141-MW21 during these semi-annual sampling events.

From March 2007 to April 2008, Shaw did not conduct any AFVR events for any monitoring wells at the site since free phase product thickness was not present greater than 0.6 feet during any of the monthly visits. A peristaltic pump was utilized in in piezometers AS3905-TP1 through AS3905-TP5 for free phased product recovery with a total of approximately 60 gallons of free product recovered during the 12 month period.

The persistent presence of measurable free phase product in monitoring wells USTAS4141-OBG03R, USTAS4141-RW01, and piezometers AS3905-TP1, AS3905-TP3, AS3905-TP4, and AS3905-TP5 as well as the presence of measurable free phase product in the new monitoring wells USTAS4141-MW17, USTAS4141-MW19, USTAS4141-MW20 and USTAS4141-MW21 requires that free product recovery efforts be continued at the Building AS-4141 in the JP-5 Line Area. From March 2007 through April 2008 free phase product thicknesses have fluctuated and some wells have actually increased in the thicknesses due to the longer monthly interval between removals despite removal efforts.

Shaw recommends that groundwater and free phase product measurements be recorded on a monthly basis at all the existing monitoring wells at the site which includes USTAS4141-MW02, USTAS4141-MW07, USTAS4141-MW08, USTAS4141-MW10, USTAS4141-MW13 through USTAS4141-MW21, USTAS4141-OBG02 through USTAS4141-OBG06, USTAS4141-OBG03R, USTAS4141-RW01, USTAS4141-RW02,

and piezometers AS3905-TP1 through AS3905-TP5. The number of wells will be decreased after the absence of free phase product is observed for several months. In addition, groundwater and free phase product measurements is recommended to be recorded on a bi-weekly basis at monitoring wells USTAS4141-MW17, USTAS4141-MW19, USTAS4141-MW20, USTAS4141-MW21, USTAS4141-OBG03R, USTAS4141-RW01, and piezometers AS3905-TP1 through AS3905-TP5. When free phase product is observed in a well at a thickness greater than 0.6 feet, an AFVR event will be completed at the well. AFVR events should continue twice a month until otherwise indicated. If free phase product is observed in a well at a thickness less than 0.6 feet, then an absorbent sock will be placed in the well or other methods will be used to remove the free product.

Shaw recommends that the adjacent fuel lines be tightness tested annually to confirm that there are no further leaks in the fuel system.

Shaw recommends semi-annual groundwater sample collection and analysis from 14 monitoring wells (USTAS4141-MW02, USTAS4141-MW07, USTAS4141-MW10, USTAS4141-MW14, USTAS4141-MW15, USTAS4141-MW16, USTAS4141-MW17, USTAS4141-MW18, USTAS4141-MW19, USTAS4141-MW20, USTAS4141-MW21, USTAS4141-RW01, USTAS4141-OBG03R, and USTAS4141-OBG06). Samples will only be collected from monitoring wells where free phase product is not detected. The samples will be analyzed for VOCs using USEPA Method 602/w xylenes, USEPA Method 625 (PAHs only), and lead using USEPA Method 3030C. Sampling will be coordinated with the gauging and free product removal events so that sampling would be done after the product removal activity.

TABLES

TABLE 1.1

MCB CAMP LEJEUNE
AS4141 (JP-5 LINE AREA) ANNUAL REPORT
GROUNDWATER
REVISED SITE REHABILITATION GOALS
FOR DETECTED CHEMICAL OF CONCERN

ANALYTE	2006 MAXIMUM CONC	2007 MAXIMUM CONC	2008 MAXIMUM CONC	TARGET CONCENTRATION (NORTH CAROLINA STANDARDS)*
Benzene	13.5 ppb	6.0 ppb	<1.0 ppb	1 ppb
Methyl Tert-Butyl Ether	<1.0 ppb	<1.0 ppb	<1.0 ppb	200 ppb
Toluene	3.2 ppb	<1.0 ppb	<1.0 ppb	1000 ppb
Ethylbenzene	52.1 ppb	16.7 ppb	10.6 ppb	29 ppb
Xylenes	171 ppb	21 ppb	16 ppb	530 ppb
Lead	68 ppb	<100 ppb	37.2 ppb	15 ppb
Naphthalene	461 ppb	257 ppb	274 ppb	21 ppb
1-Methylnaphthalene	466 ppb	120 ppb	163 ppb	Detection Limit
2-Methylnaphthalene	589 ppb	87.6 ppb	176 ppb	14 ppb

ppb

*

parts per billion

Goals of remediation are to achieve target concentrations or less

Table 2.1
Building AS4141 (JP-5 Area)
Groundwater Elevations

Well ID	Date		10/25/2007					3/28/2008				
	DTB	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
MW02	18.92	23.48	3.94	0	0	19.54		4.76	0	0	18.72	
MW07	15.54	NM	3.82	0	0	NM		3.63	0	0	NM	
MW08	16.58	25.62	NM	0	0	NM		NM	0	0	NM	
MW10	14.88	21.56	5.59	0	0	15.97		5.39	0	0	16.17	
MW13	15.56	18.87	NM	0	0	NM		NM	0	0	NM	
MW14	24.81	19.56	7.22	0	0	12.34		6.47	0	0	13.09	
MW15	12.79	18.62	3.96	0	0	14.66		2.98	0	0	15.64	
MW16	14.47	NM	9.38	0	0	NM		8.24	0	0	NM	
MW17	14.45	19.78	7.52	7.38	0.14	12.26		6.56	0	0	13.22	
MW18	15.07	NM	7.42	0	0	NM		6.87	0	0	NM	
MW19	14.57	19.76	8.07	0	0	11.69		6.41	6.4	0.01	13.35	
MW20	12.93	NM	10.33	7.44	2.89	NM		8.39	6.38	2.01	NM	
MW21	12.23	NM	10.73	7.36	3.37	NM		7.04	5.45	1.59	NM	
RW01	23.93	NM	6.70	6.35	0.35	NM		6.63	6.19	0.44	NM	
RW02	21.00	NM	NM	0	0	NM		NM	0	0	NM	
OBG02	12.57	23.85	NM	0	0	NM		NM	0	0	NM	
OBG03R	12.70	20.64	8.08	7.81	0.27	12.56		7.71	7.31	0.40	12.93	
OBG04	17.14	20.28	NM	0	0	NM		NM	0	0	NM	
OBG05	14.15	19.55	NM	0	0	NM		NM	0	0	NM	
OBG06	17.30	20.88	6.50	0	0	14.38		5.16	0	0	15.72	
TP-1	12.62	20.40	8.25	7.60	0.65	12.15		8.02	5.04	2.98	12.38	
TP-2	12.73	20.24	7.50	7.47	0.03	12.74		7.61	0	0	12.63	
TP-3	12.60	20.37	8.53	7.45	1.08	11.84		9.49	7.25	2.24	10.88	
TP-4	12.62	20.17	6.51	6.31	0.20	13.66		6.88	6.71	0.16	13.29	
TP-5	12.56	20.26	8.30	7.32	0.98	11.96		9.87	7.27	2.60	10.39	

NM = Not Measured

DTB = Depth to bottom of well (feet)

DTP = Depth to product (feet)

Table 3.1
JP5 Line Area (Building AS-4141)
Field Reading Results
JP5 Oct. 2007 Nat. Atten

Client Sample ID:		USTASS4141- MW18	USTASS4141- MW16	USTASS4141- MW07	USTASS4141- MW10	USTASS4141- OBG-03R	USTASS4141- MW14	USTASS4141- OBG-06	USTASS4141- MW02	USTASS4141- MW15	USTASS4141- MW19
Date Sampled:		10/25/07	10/25/07	10/27/07	10/27/07	10/26/07	10/26/07	10/25/07	10/26/07	10/25/07	10/26/07
Analyte	Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters											
Depth to Water	feet	7.42	9.38	3.82	5.59	8.11	7.22	6.50	3.94	3.96	8.07
Temperature	°C	26.55	24.34	26.73	26.18	NM	24.33	25.1	27.06	31.52	23.85
Conductivity	mS/m	0.614	0.458	0.139	0.540	NM	0.876	0.377	0.177	0.6	0.287
Dissolved Oxygen	mg/L	1.26	0.86	5.04	1.88	NM	0.57	1.02	1.05	1.15	0.66
pH	-	6.37	6.31	6.45	6.43	NM	6.94	4.83	5.74	6.61	6.13
Oxidation-Reduction Potential	mV	4.1	-22.6	137.5	18.4	NM	-29.8	227.2	68.7	-34.3	76.4
Turbidity	NTU	0.0	49.9	1015.6	5.5	NM	0	80.5	268.5	0	0.0

Table 3.1
JP5 Line Area (Building AS-4141)
Field Reading Results
JP5 Oct. 2007 Nat. Atten

Client Sample ID:		USTASS4141- MW21	USTASS4141- MW20	USTASS4141- MW17
Date Sampled:		10/25/07	10/25/07	10/26/07
Analyte	Unit	Result	Result	Result
Field Parameters				
Depth to Water	feet	10.73	10.33	7.52
Temperature	°C	NM	NM	NM
Conductivity	mS/m	NM	NM	NM
Dissolved Oxygen	mg/L	NM	NM	NM
pH	-	NM	NM	NM
Oxidation-Reduction Potential	mV	NM	NM	NM
Turbidity	NTU	NM	NM	NM

Table 3.2
JP5 Line Area (Building AS-4141)
Groundwater Analytical Results
VOC, SVOC (PAHs Only) and Lead
JP5 October 2007 Analytical

Date: 10/25/2007			Incident Number and Name: 126006 JP 5 Wells									
Analytical Method:			EPA 602									
Contaminant of Concern												
Sample ID	Date Collected	Sample Depth (ft bgs)	Benzene	Chlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Ethylbenzene	Methyl Tert Butyl Ether	Toluene	Xylenes (total)	
USTASS4141-MW07	10/27/2007	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
USTASS4141-MW10	10/27/2007	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
USTASS4141-OBG-03R	10/25/2007	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW14	10/30/2007	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
USTASS4141-OBG-06	10/25/2007	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
USTASS4141-MW02	10/30/2007	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
USTASS4141-MW15	10/25/2007	N/A	<1.0	<1.0	<6.0 B	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
USTASS4141-MW19	10/30/2007	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
USTASS4141-MW21	10/25/2007	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW20	10/25/2007	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW17	10/25/2007	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW16	10/25/2007	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	10.6	<1.0	<1.0	16.0	
USTASS4141-MW18	10/25/2007	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
GWQS (ug/L)			1	50	24	170	1.4	550	200	1000	530	
GCL (ug/L)			5000	50000	72500	61500	39500	29000	200000	257500	87500	

Indicate laboratory reporting limit for contaminants when analyzed but not detected (i.e., <1.0)

List any contaminant detected above the method detection limit

Detectable concentration exceeds GWQS

GWQS = Groundwater Quality Standard NC Administrative Code Title 15A Subchapter 2L - Groundwater Classifications and Standards 12/01/05

GCL = Gross Contamination Level

Results must be reported in ug/L

ug/L = micrograms per liter

NA = not applicable

NS = no standard

FP = not sampled due to free product

J Numerical value is an estimate between laboratory reporting limit and laboratory method detection limit

Table 3.2
JP5 Line Area (Building AS-4141)
Groundwater Analytical Results
VOC, SVOC (PAHs Only) and Lead
JP5 October 2007 Analytical

Date: 10/25/2007			Incident Number and Name: 126006 JP 5 Wells																		
Analytical Method:			3030C	EPA 625																	
Contaminant of Concern			Lead	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
Sample ID	Date Collected	Sample Depth (ft bgs)																			
USTASS4141-MW07	10/27/2007	N/A	<2.1	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
USTASS4141-MW10	10/27/2007	N/A	<21	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
USTASS4141-OBG-03R	10/25/2007	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW14	10/30/2007	N/A	<2.1	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
USTASS4141-OBG-06	10/25/2007	N/A	<2.1	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
USTASS4141-MW02	10/30/2007	N/A	<2.1	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
USTASS4141-MW15	10/25/2007	N/A	<2.1	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	4.2 J	4.3 J	<4.8	<4.8	<4.8
USTASS4141-MW19	10/30/2007	N/A	<2.1	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
USTASS4141-MW21	10/25/2007	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW20	10/25/2007	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW17	10/25/2007	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW16	10/25/2007	N/A	<8.4	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	78.9	76.6	83.6	<4.8	<4.8
USTASS4141-MW18	10/25/2007	N/A	<4.2	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
GWQS (ug/L)			15	80	210	2100	0.0479	0.00479	0.0479	210	0.479	4.79	0.0047	280	280	0.0479	NS	14	21	210	210
GCL (ug/L)			15000	2120	1965	2100	22	1.5	0.6	210	0.47	5	0.25	280	950	31	NS	12500	15500	410	210

Indicate laboratory reporting limit for contaminants when analyzed
but not detected (i.e., <1.0)

List any contaminant detected above the method detection limit

Detected concentration exceeds GWQS

GWQS = Groundwater Quality Standard NC Administrative Code Title 15A Subchapter 2L - Groundwater Classifications and Standards 12/01/05

GCL = Gross Contamination Level

Results must be reported in ug/L

ug/L = micrograms per liter

NA = not applicable

NS = no standard

FP = not sampled due to free product

J Numerical value is an estimate between laboratory reporting limit and laboratory method detection limit

B Indicates a result ≥ Instrument detection limit but < reporting limit

Table 3.3
JP5 Line Area (Building AS-4141)
Field Reading Results
JP5 Mar 2008 Nat. Atten

Client Sample ID:		USTASS4141- MW18	USTASS4141- MW16	USTASS4141- MW07	USTASS4141- MW10	USTASS4141- OBG-03R	USTASS4141- MW14	USTASS4141- OBG-06	USTASS4141- MW02	USTASS4141- MW15	USTASS4141- MW19
Date Sampled:		03/27/08	03/27/08	03/28/08	03/28/08	03/28/08	03/28/08	03/28/08	03/28/08	03/27/08	03/28/08
Analyte	Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters											
Depth to Water	feet	6.87	8.24	3.63	5.39	7.71	6.47	5.16	4.76	2.98	6.41
Temperature	°C	26.25	25.76	25.17	25.2	NM	25.53	24.56	25.26	29.18	NM
Conductivity	mS/m	0.790	0.359	0.497	0.657	NM	0.938	0.469	0.387	0.82	NM
Dissolved Oxygen	mg/L	1.57	0.79	6.13	5.79	NM	7.19	1.17	7.35	1.56	NM
pH	-	6.53	6.79	6.57	6.76	NM	7.12	5.31	5.99	7.15	NM
Oxidation-Reduction Potential	mV	12.8	57.6	156.9	48.9	NM	-17.4	256.3	93.1	-79	NM
Turbidity	NTU	0.0	0.0	874.4	653.9	NM	0	0	17.5	0	NM

Table 3.3
JP5 Line Area (Building AS-4141)
Field Reading Results
JP5 Mar 2008 Nat. Atten

Client Sample ID:		USTASS4141- MW21	USTASS4141- MW20	USTASS4141- MW17
Date Sampled:		03/28/08	03/28/08	03/28/08
Analyte	Unit	Result	Result	Result
Field Parameters				
Depth to Water	feet	7.04	8.39	6.56
Temperature	°C	NM	NM	NM
Conductivity	mS/m	NM	NM	NM
Dissolved Oxygen	mg/L	NM	NM	NM
pH	-	NM	NM	NM
Oxidation-Reduction Potential	mV	NM	NM	NM
Turbidity	NTU	NM	NM	NM

Table 3.4
JP5 Line Area (Building AS-4141)
Groundwater Analytical Results
VOC, SVOC (PAHs Only) and Lead
JP5 March 2008 Analytical

Date: 3/28/2008			Incident Number and Name: 126006 JP 5 Wells									
Analytical Method:			EPA 602									
Contaminant of Concern												
Sample ID	Date Collected	Sample Depth (ft bgs)	Benzene	Chlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Ethylbenzene	Methyl Tert Butyl Ether	Toluene	Xylenes (total)	
USTASS4141-MW07	3/28/2008	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
USTASS4141-MW10	3/28/2008	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
USTASS4141-OBG-03R	3/28/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW14	3/28/2008	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
USTASS4141-OBG-06	3/28/2008	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
USTASS4141-MW02	3/28/2008	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
USTASS4141-MW15	3/27/2008	N/A	<1.0	<1.0	<8.0 B	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
USTASS4141-MW19	3/28/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW21	3/28/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW20	3/28/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW17	3/28/2008	N/A	<1.0	<1.0	<36.0 B	<1.0	<10.0 B	3.0	<1.0	<1.0	<1.0	7.5
USTASS4141-MW16	3/27/2008	N/A	0.57 J	<1.0	<48.0 B	<1.0	<14.0 B	5.4	<1.0	<1.0	<1.0	5.8
USTASS4141-MW18	3/27/2008	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
GWQS (ug/L)			1	50	24	170	14	550	200	1000	530	
GCL (ug/L)			5000	50000	72500	61500	39500	29000	200000	257500	87500	

Indicate laboratory reporting limit for contaminants when analyzed
but not detected (i.e., <1.0)

List any contaminant detected above the method detection limit

Detected concentration exceeds GWQS

GWQS = Groundwater Quality Standard NC Administrative Code Title 15A Subchapter 2L - Groundwater Classifications and Standards 12/01/05

GCL = Gross Contamination Level

Results must be reported in ug/L

ug/L = micrograms per liter

NA = not applicable

NS = no standard

FP = not sampled due to free product

J Numerical value is an estimate between laboratory reporting limit and laboratory method detection limit

Table 3.4
JP5 Line Area (Building AS-4141)
Groundwater Analytical Results
VOC, SVOC (PAHs Only) and Lead
JP5 March 2008 Analytical

Date: 3/28/2008			Incident Number and Name: 126006 JP 5 Wells																		
Analytical Method:			3030C	EPA 625																	
Contaminant of Concern			Lead	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
Sample ID	Date Collected	Sample Depth (ft bgs)																			
USTASS4141-MW07	3/28/2008	N/A	37.2	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	1.6 J	1.5 J	2.7 J	<4.8	<4.8	<4.8
USTASS4141-MW10	3/28/2008	N/A	<3.4 B	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	1.8 J	1.8 J	3.4 J	<4.8	<4.8	<4.8
USTASS4141-OBG-03R	3/28/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW14	3/28/2008	N/A	<2.1	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	
USTASS4141-OBG-06	3/28/2008	N/A	<2.3 B	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	
USTASS4141-MW02	3/28/2008	N/A	<4.4 B	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	1.8 J	<4.9	<4.9
USTASS4141-MW15	3/27/2008	N/A	<2.1	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	2.4 J	3.0 J	<4.9	<4.9	<4.9
USTASS4141-MW19	3/28/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW21	3/28/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW20	3/28/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW17	3/28/2008	N/A	<3.1 B	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	163	176	274	<19	<19
USTASS4141-MW16	3/27/2008	N/A	<2.1	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	70.6	49.3	65.6	<4.8	<4.8
USTASS4141-MW18	3/27/2008	N/A	6.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
GWQS (ug/L)			15	80	210	2100	0.0479	0.00479	0.0479	210	0.479	4.79	0.0047	280	280	0.0479	NS	14	21	210	210
GCL (ug/L)			15000	2120	1965	2100	22	1.5	0.6	210	0.47	5	0.25	280	950	31	NS	12500	15500	410	210

Indicate laboratory reporting limit for contaminants when analyzed
but not detected (i.e., <1.0)

List any contaminant detected above the method detection limit

Detactable concentration exceeds GWQS

GWQS = Groundwater Quality Standard NC Administrative Code Title 15A Subchapter 2L - Groundwater Classifications and Standards 12/01/05

GCL = Gross Contamination Level

Results must be reported in ug/L

ug/L = micrograms per liter

NA = not applicable

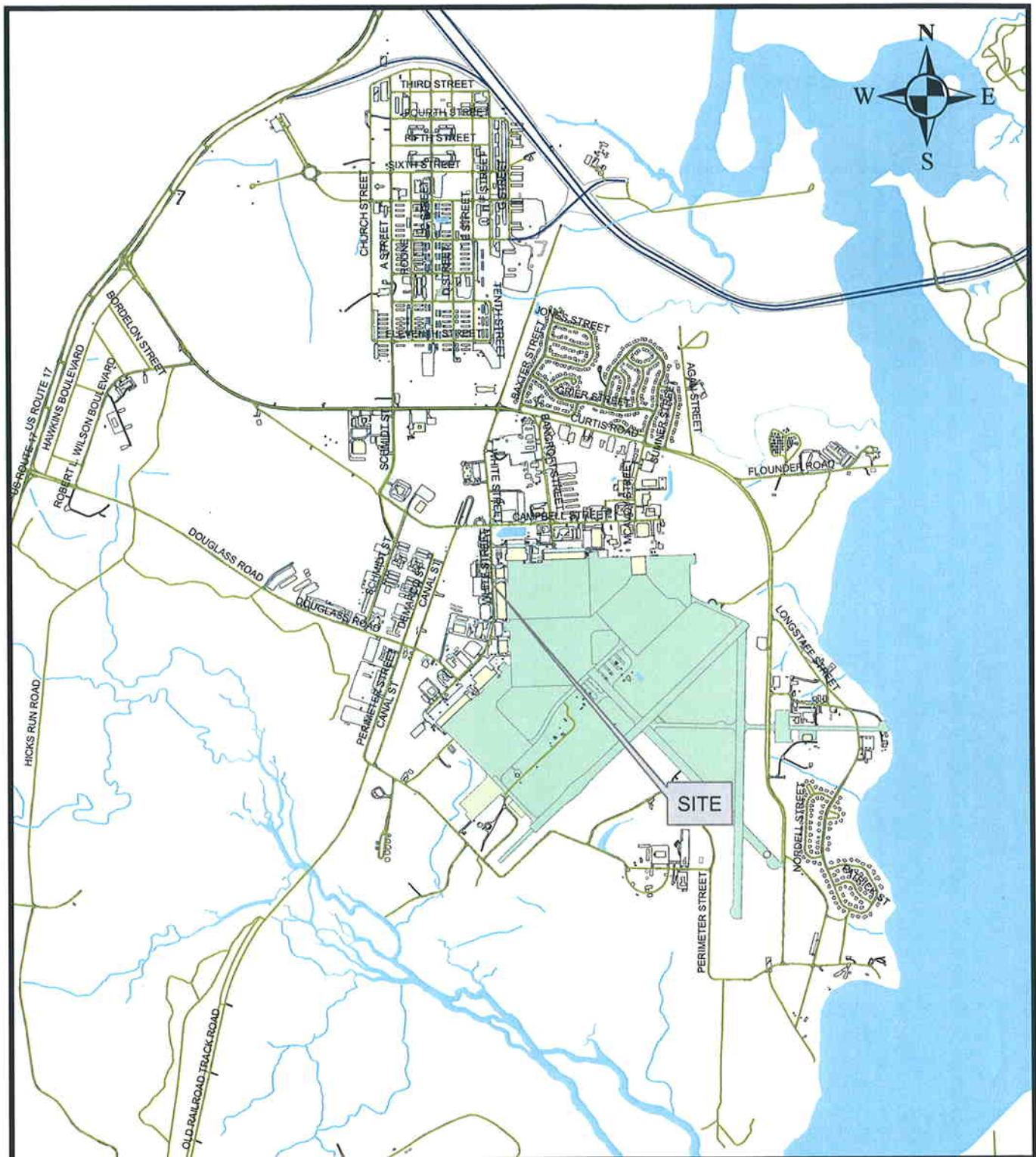
NS = no standard

FP = not sampled due to free product

J Numerical value is an estimate between laboratory reporting limit and laboratory method detection limit

B Indicates a result ≥ instrument detection limit but < reporting limit

FIGURES

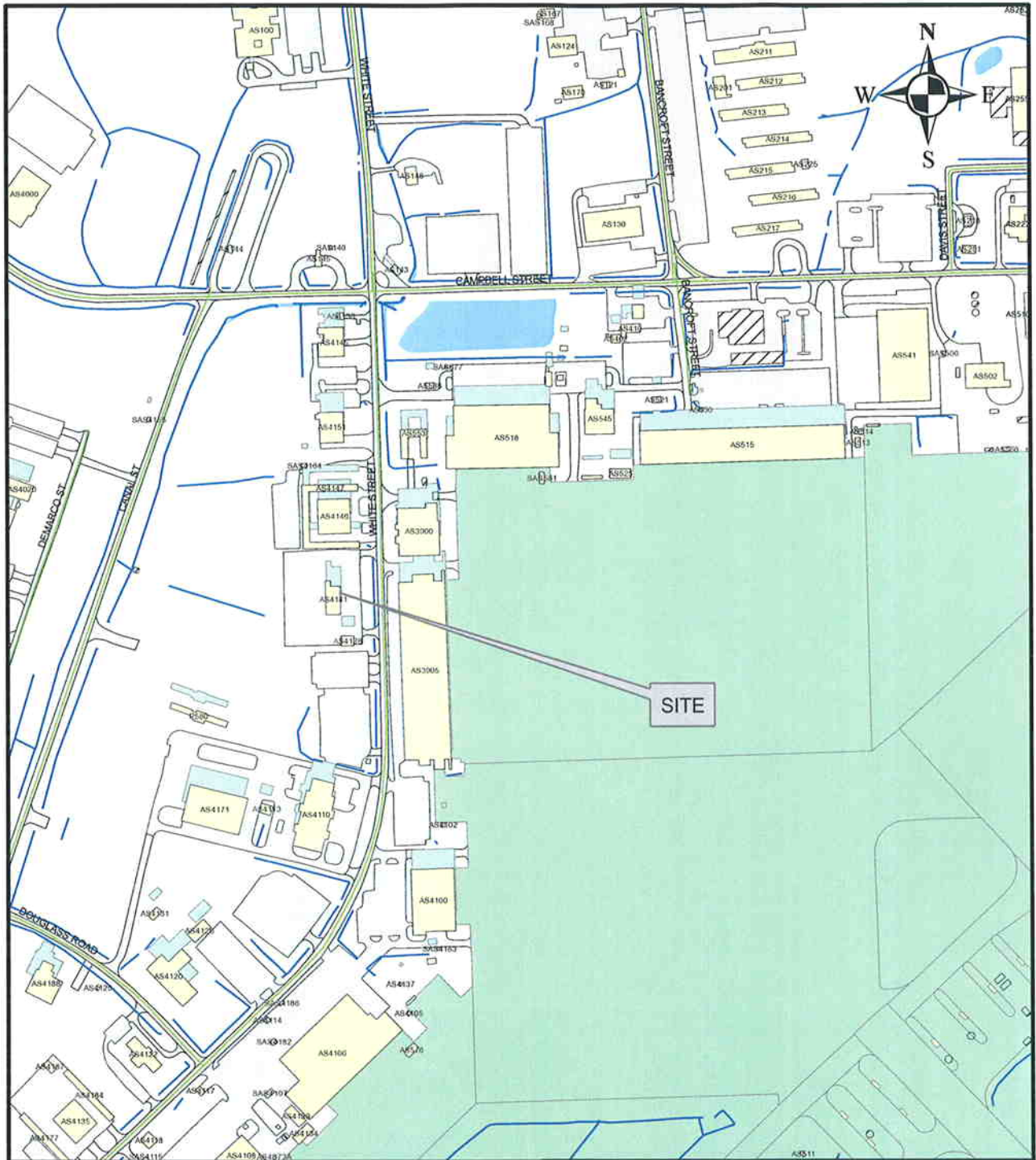


0 850 1,700 3,400 5,100 6,800
Feet



Shaw Environmental & Infrastructure, Inc.

FIGURE 1.1
VICINITY MAP
JP-5 LINE AREA
MARINE CORPS AIR STATION
CAMP LEJEUNE, NORTH CAROLINA



0 190 380 760 1,140 1,520 Feet

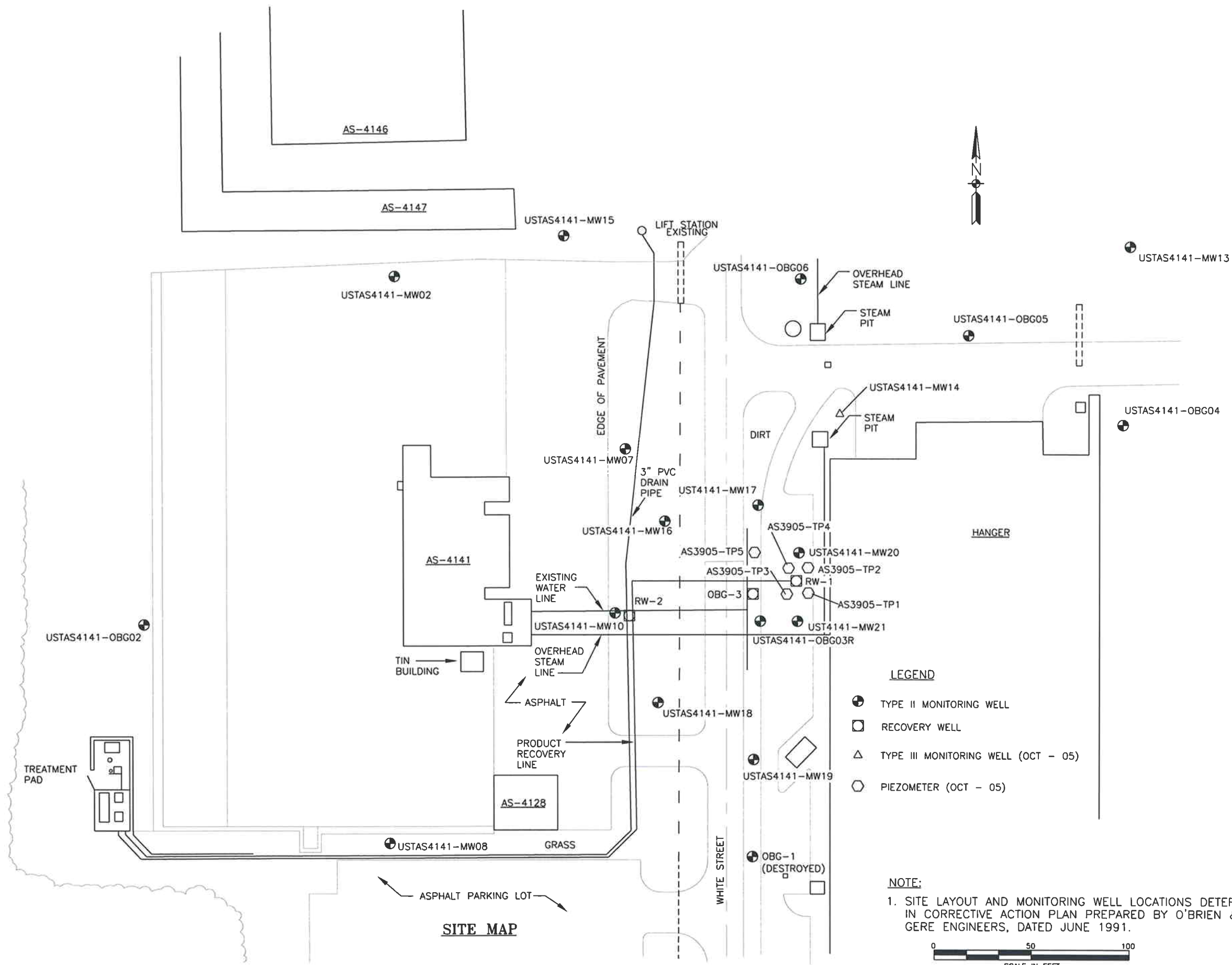


Shaw Environmental & Infrastructure, Inc.

**FIGURE 1.2
LOCATION MAP**

**JP-5 LINE AREA
MARINE CORPS AIR STATION
CAMP LEJEUNE, NORTH CAROLINA**

File: Q:\LEJUNE-6-05\RAC_IVA TO_46_RAPID_FEFUELER\JP-5 ANNUAL_REPORT_2007-2008\JP-5 LINE-FIG 1-3-SITE.dwg
Plot Date/Time: May 08, 2008 - 7:33am
Plotted By: John Lange



DEPARTMENT OF THE NAVY
NAVAL STATION
NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC DIVISION
NORFOLK, VIRGINIA

BUILDING AS-4141
JP-5 LINE AREA SITE MAP

SCALE: AS SHOWN
TASK ORDER NO. 046
CONSTR. CONTRACT NO. N62470-02-D-3260
NAVFAC DRAWING NO.

SHEET I.D.

1.3

REFERENCE: J. A. JONES MONITORING REPORT.

Shaw
Shaw Environmental, Inc.

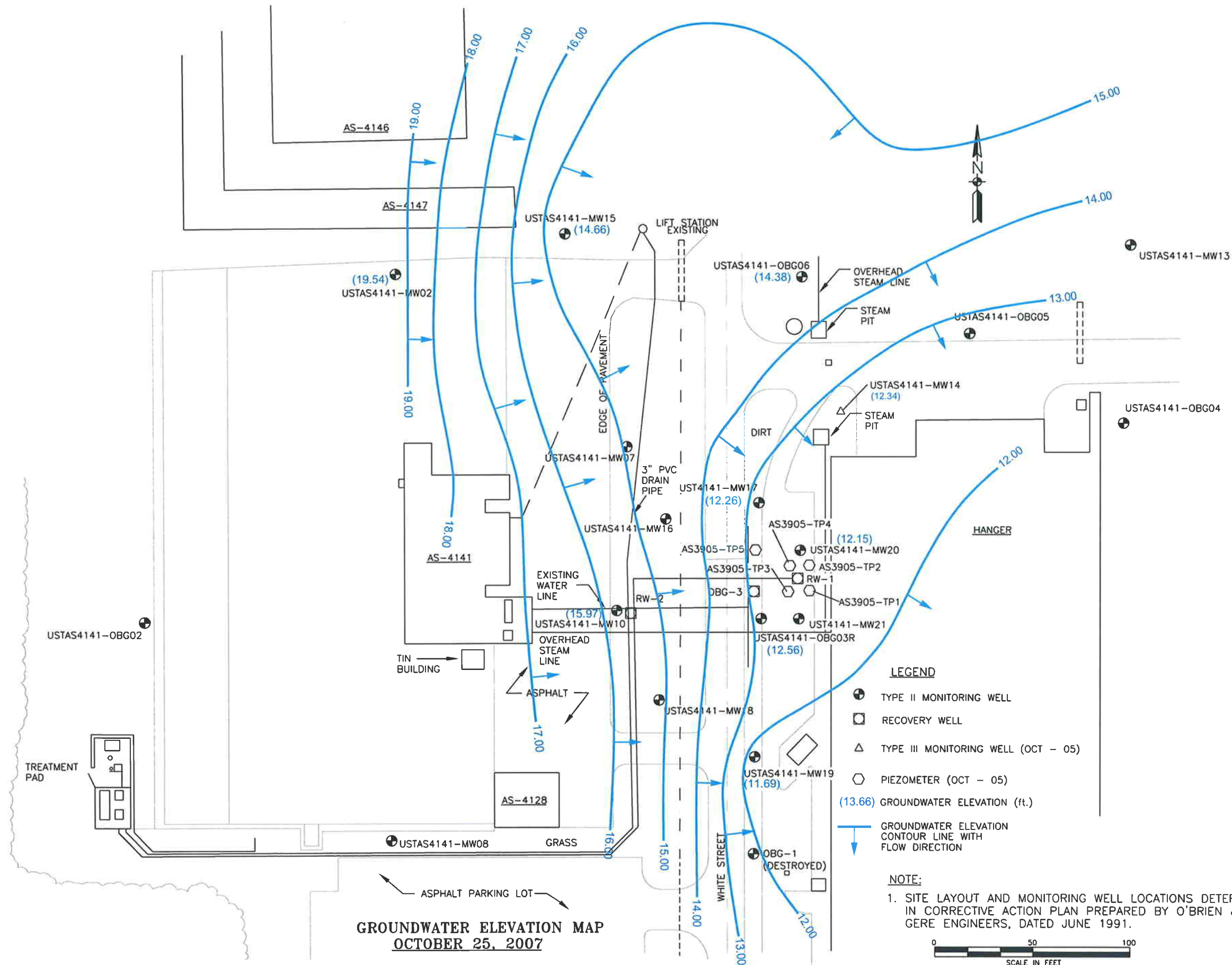
DESIGNED BY RBK
DRAWN BY JEL
CHECKED BY RBK
APPROVED BY

PROJECT NO. 845823

REV DATE BY

DESCRIPTION/ISSUE
REVISIONS

File: Q:\LEJUNE-6-05\RAC-1\TO_46_RAPID_FUELER\JP-5 ANNUAL_REPORT_2007-2008\JP-5-LINE-FIG 2-1-GW-08.dwg
Plot Date/Time: May 08, 2008 - 9:55am
Xref:
Plotted By: John Lange



GROUNDWATER ELEVATION MAP
OCTOBER 25, 2007

NOTE:

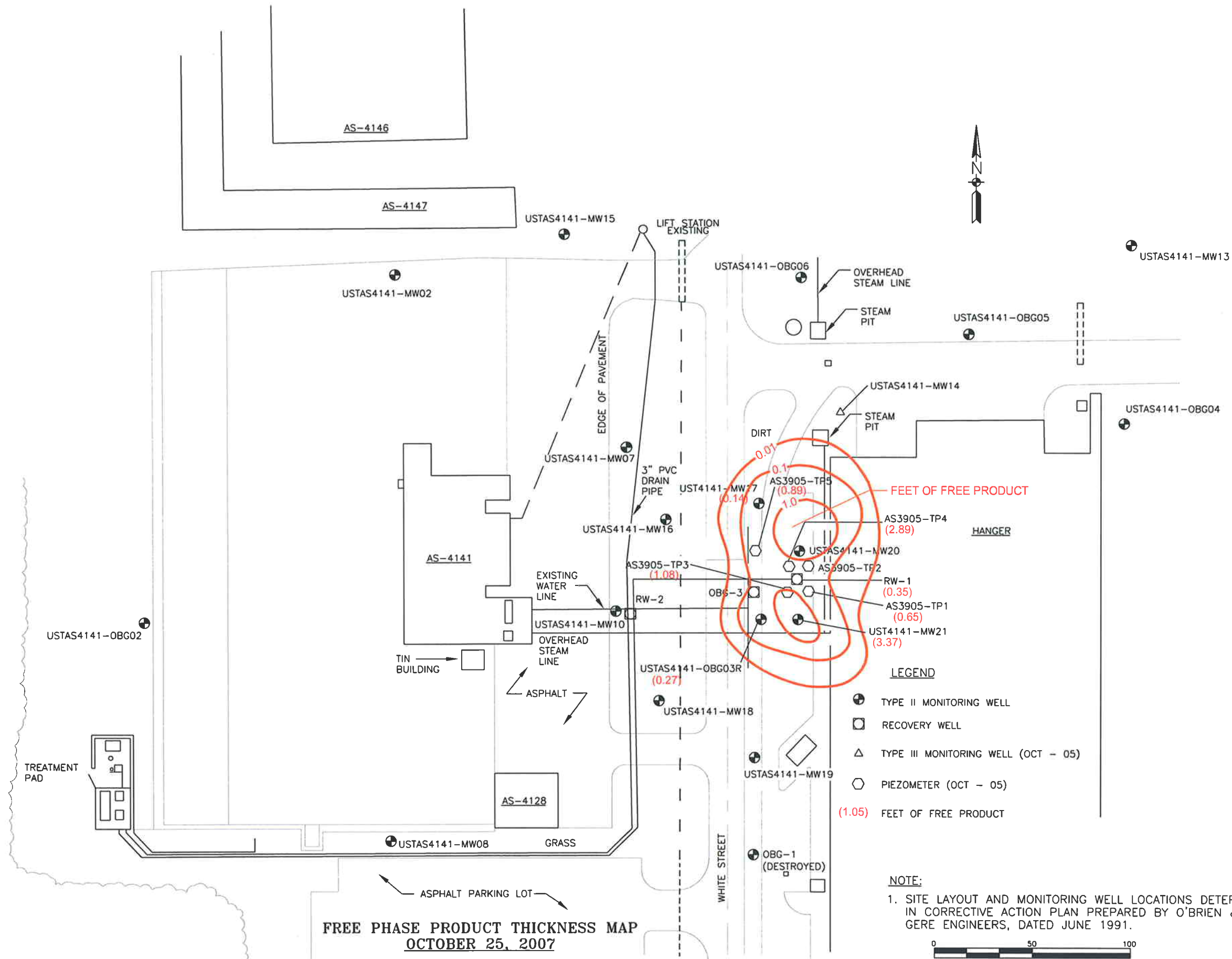
1. SITE LAYOUT AND MONITORING WELL LOCATIONS DETERMINED IN CORRECTIVE ACTION PLAN PREPARED BY O'BRIEN & GERE ENGINEERS, DATED JUNE 1991.



REFERENCE: J. A. JONES MONITORING REPORT.

DEPARTMENT OF THE NAVY		NAVAL FACILITIES ENGINEERING COMMAND		NAVY STATION		ATLANTIC DIVISION		NAVY FACILITIES ENGINEERING COMMAND		NORFOLK, VIRGINIA	
NAVAL STATION		ATLANTIC DIVISION		BUILDING AS-4141		JP-5 LINE AREA SITE MAP		GROUNDWATER ELEVATION MAP		OCTOBER 2007	
SCALE:		AS SHOWN		TASK ORDER NO.		046		CONSTR. CONTRACT NO.		N62470-02-D-3260	
NAVFAC DRAWING NO.		SHEET I.D.		2.1		PROJECT NO. 845823		DESIGNED BY		RBK	
DRAWN BY		JEL		CHECKED BY		RBK		APPROVED BY		PROJECT NO. 845823	
REV		DATE		BY		CHK'D		APR'D		DESCRIPTION/ISSUE	
REV		DATE		BY		CHK'D		APR'D		REVISIONS	

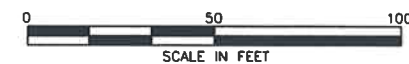
File: Q:\LE\JUNE-6-05\RAC_IV\TO_46_RAPID_FEFUELER\JP-5 ANNUAL_REPORT_2007-2008\JP-5-LINE-FIG 2-2-FP-08.dwg
Plot Date/Time: May 08, 2008 - 1:24pm
Plotted By: john.lange



FREE PHASE PRODUCT THICKNESS MAP
OCTOBER 25, 2007

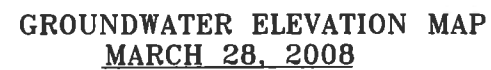
NOTE:

1. SITE LAYOUT AND MONITORING WELL LOCATIONS DETERMINED IN CORRECTIVE ACTION PLAN PREPARED BY O'BRIEN & GERE ENGINEERS, DATED JUNE 1991.



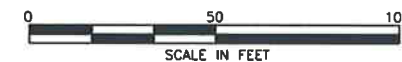
REFERENCE: J. A. JONES MONITORING REPORT.

DEPARTMENT OF THE NAVY		NAVAL FACILITIES ENGINEERING COMMAND		NAVAL DIVISION		NORFOLK, VIRGINIA	
NAVAL STATION		ATLANTIC DIVISION		BUILDING AS-4141		JP-5 LINE AREA SITE MAP	
						FREE PHASE PRODUCT THICKNESS MAP	
						OCTOBER 2007	
SCALE: AS SHOWN		SIZE:					
TASK ORDER NO. 046							
CONSTR. CONTRACT NO. N62470-02-D-3260							
NAVFAC DRAWING NO.							
SHEET I.D.		2.2					



	TYPE II MONITORING WELL
	RECOVERY WELL
	TYPE III MONITORING WELL (OCT - 05)
	PIEZOMETER (OCT - 05)
	(13.66) GROUNDWATER ELEVATION (ft.)
	GROUNDWATER ELEVATION CONTOUR LINE WITH FLOW DIRECTION

1. SITE LAYOUT AND MONITORING WELL LOCATIONS DETERMINED IN CORRECTIVE ACTION PLAN PREPARED BY O'BRIEN & GERE ENGINEERS, DATED JUNE 1991.



Shaw Engineering

SCALE: AS SHOWN	SIZE:
TASK ORDER NO. 046	
CONSTR. CONTRACT NO. N62470-02-D-3260	
NAVFAC DRAWING NO.	
SHEET I.D. 2.3	

[illegible]

PROJECT NO. 845823

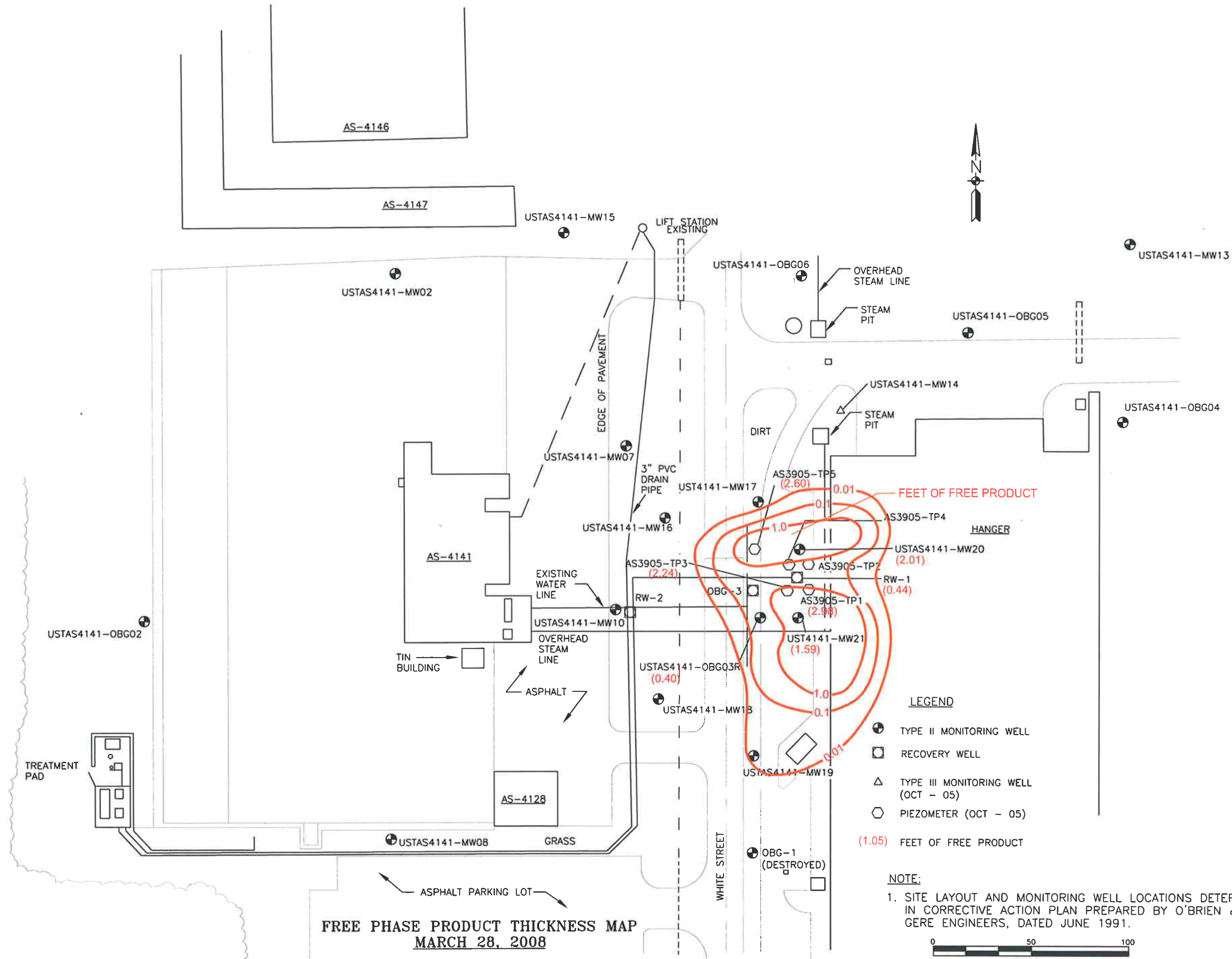
Shaw Environmental, Inc.

LINE AREA SITE MAP
WATER ELEVATION MAP

C-3

5
CT NO.
- D -
NO.
3

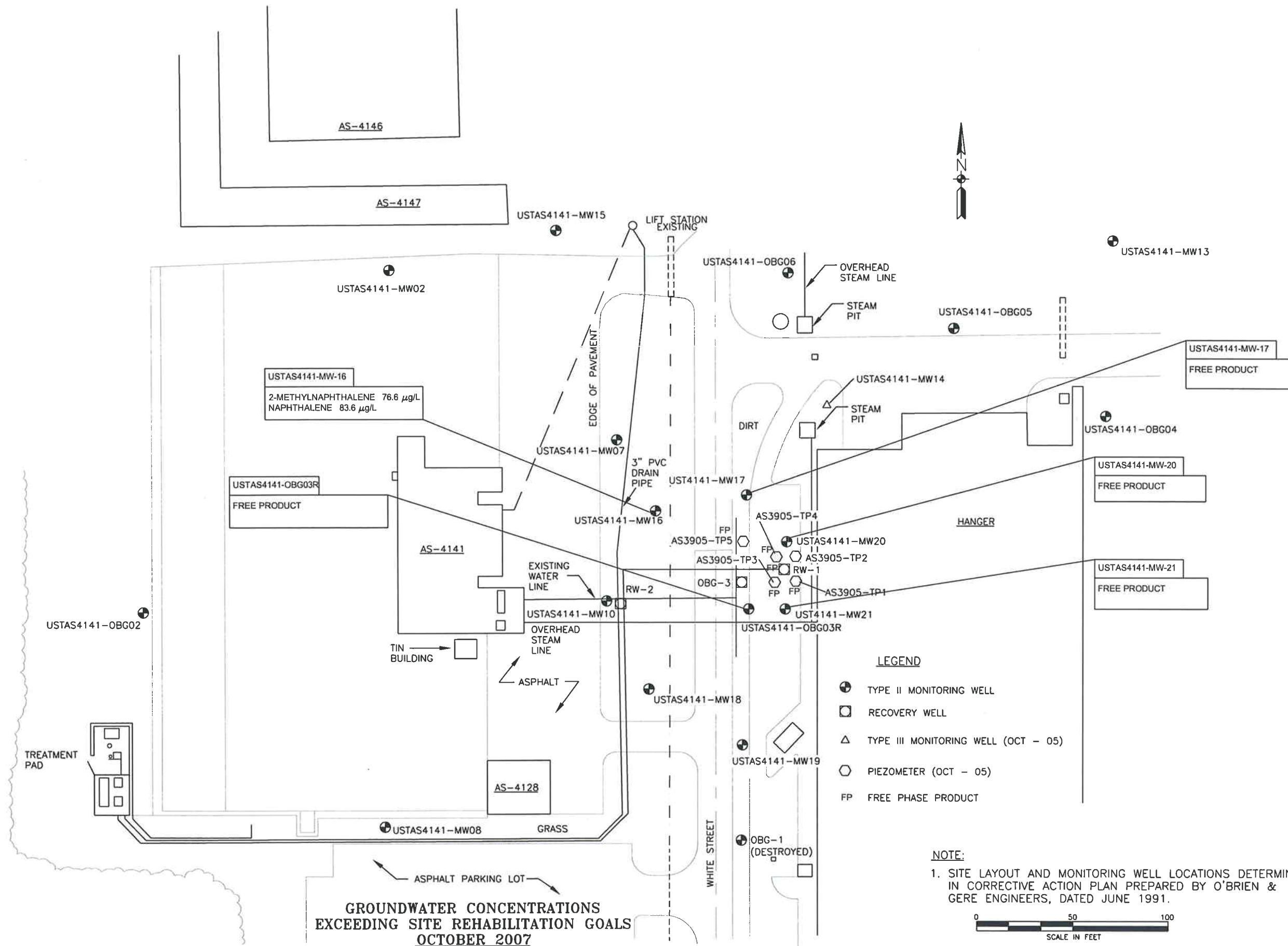
File: Q:\LEUNE-6-05\RAC_IV TO 46 RAPID FUELER\JP-5 ANNUAL_REPORT_2007-2008\JP-5-LINE-FIG 2-4-FP-08.dwg
Plot Date/Time: May 09, 2008 - 9:46am
Plotted By: John Lange



REFERENCE: J. A. JONES MONITORING REPORT.

DEPARTMENT OF THE NAVY		NAVAL FACILITIES ENGINEERING COMMAND		ATLANTIC DIVISION		NORFOLK, VIRGINIA	
NAVAL STATION		BUILDING AS-4141		JP-5 LINE AREA SITE MAP		FREE PHASE PRODUCT THICKNESS MAP	
SCALE: AS SHOWN		TASK ORDER NO. D46		CONSTR. CONTRACT NO. N62470-02-D-3260		NAVFAC DRAWING NO.	
SHEET I.D.		2.4		PROJECT NO. 845823		REV DATE BY	
				Shaw Environmental, Inc.		CHK'D/APP'VD	
				DESIGNED BY RBK		DESCRIPTION/ISSUE	
				DRAWN BY JEL		REVISIONS	
				APPROVED BY			

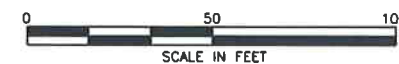
File: O:\LEJUNE-6-05\RAC_IV\TO_46_RAPID_FUELER\JP-5 ANNUAL_REPORT_2007-2008\JP-5-LINE-FIG 3-1-CONT-08.dwg
Plot Date/Time: May 09, 2008 - 10:54am
Xref:
Plotted By: john.lange



GROUNDWATER CONCENTRATIONS
EXCEEDING SITE REHABILITATION GOALS
OCTOBER 2007

NOTE:

1. SITE LAYOUT AND MONITORING WELL LOCATIONS DETERMINED IN CORRECTIVE ACTION PLAN PREPARED BY O'BRIEN & GERE ENGINEERS, DATED JUNE 1991.



REFERENCE: J. A. JONES MONITORING REPORT.

DEPARTMENT OF THE NAVY		NAVAL FACILITIES ENGINEERING COMMAND		NORFOLK, VIRGINIA	
NAVAL STATION		ATLANTIC DIVISION		NORFOLK, VIRGINIA	
BUILDING AS-4141		JP-5 LINE AREA SITE MAP		GROUNDWATER ANALYTICAL RESULTS	
OCTOBER 2007		DESIGNED BY		DRAWN BY	
		CHECKED BY		APPROVED BY	
		PROJECT NO. 845823		REV	
				DATE	
				BY	
				CHK'D	
				APPROV	
				REVISIONS	
				DESCRIPTION/ISSUE	



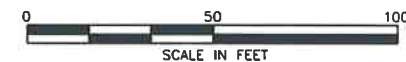
Shaw Environmental, Inc.
DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY
PROJECT NO. 845823
REV
DATE
BY
CHK'D
APPROV

SCALE:	AS SHOWN	SIZE:
TASK ORDER NO.	046	
CONSTR. CONTRACT NO.	N62470-02-D-3260	
NAVFAC DRAWING NO.		
SHEET I.D.	3.1	

Xref:
image:



1. SITE LAYOUT AND MONITORING WELL LOCATIONS DETERMINED IN CORRECTIVE ACTION PLAN PREPARED BY O'BRIEN & GERE ENGINEERS, DATED JUNE 1991.



REFERENCE: J. A. JONES MONITORING REPORT.

[illegible]

APPENDIX A

**HISTORICAL GROUNDWATER ELEVATIONS AND
FREE PHASE PRODUCT THICKNESSES**

JP-5 Line Area (Building AS4141)
Well Gauging Total Fluids Recovery

Well ID	Date		TOC Elevation	11/22/2005				11/30/2005				1/6/2006				Total Fluids Recovery (gal)		
	DTB			DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP		Product Thickness	Groundwater Elevation
MW-14	24.82		19.56	5.62	0	0	13.94		5.57	0	0	13.99		5.28	0	0	14.28	
MW-15	12.79		18.62	1.27	0	0	17.35		2.78	0	0	15.84		3.15	0	0	15.47	
TP-1	12.25		20.4	6.35	0	0	14.05		6.3	0	0	14.1		6.09	0	0	14.31	
TP-2	12.96		20.24	6.31	0	0	13.93		6.24	0	0	14		5.98	0	0	14.26	
TP-3	12.59		20.37	6.72	6.37	0.35	13.65		6.75	6.3	0.45	13.62		6.53	5.81	0.72	13.84	
TP-4	12.61		20.17	5.66	0	0	14.51		5.65	0	0	14.52		5.59	0	0	14.58	
TP-5	12.32		20.26	6.68	6.67	0.01	13.58		6.35	6.3	0.05	13.91		6.69	6.014	0.55	13.57	
OBG-03R	12.71		20.64	8.23	6.81	1.42	12.41		8.15	6.37	1.78	12.49		7.74	5.71	2.03	12.9	81
RW-1	21.48		NM	5.01	4.85	0.16	NM		4.99	4.89	0.1	NM		4.89	4.62	0.27	NM	
OBG-06	17.39		20.88	3.67	0	0	17.21		3.83	0	0	17.05		4.54	0	0	16.34	
																	gas	11.1

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

	Date	1/11/2006				1/16/2006				1/23/2006						
		DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
Well ID	DTB	TOC Elevation														
MW-14	24.82	19.56	0	0	14.07		5.49	0	0	14.07		5.54	0	0	14.02	
MW-15	12.79	18.62	0	0	15.36		3.26	0	0	15.36		3.03	0	0	15.59	
TP-1	12.25	20.4	6.17	0.02	14.21		6.19	6.17	0.36	13.89	5	6.51	6.15	0.36	13.89	5
TP-2	12.96	20.24	0	0	14.13		6.11	0	0	14.13		6.15	0	0	14.09	
TP-3	12.59	20.37	6.65	5.9	13.72		7.69	5.93	1.76	12.68	5	7.69	5.93	1.76	12.68	5
TP-4	12.61	20.17	5.64	0	14.53		5.64	0	0	14.53		5.63	0	0	14.54	
TP-5	12.32	20.26	6.84	6.18	13.42		6.84	6.18	0.66	13.42	5	7.13	6.26	0.87	13.13	5
OBG-03R	12.71	20.64	8.3	5.85	12.34		8.3	5.85	2.45	12.34	81	7.34	6.19	1.16	13.3	81
RW-1	21.48	NM	4.78	4.6	0.18	NM		4.6	0.18	NM		5.19	4.64	0.55	NM	
OBG-06	17.39	20.88	4.67	0	16.21		4.67	0	0	16.21		4.47	0	0	16.41	

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

JP-5 Line Area (Building AS4141)
Well Gauging Total Fluids Recovery

	Date		TOC Elevation	2/6/2006				2/16/2006				2/20/2006						
Well ID	DTB			DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
MW-14	24.82		19.24	5.5	0	0	14.06		5.61	0	0	13.95		5.68	0	0	13.88	
MW-15	12.79		18.62	3.07	0	0	15.55		3.02	0	0	15.6		3.13	0	0	15.49	
TP-1	12.25		20.09	6.5	6.3	0.2	13.25		6.73	6.36	0.37	13.67		6.77	6.45	0.32	13.63	
TP-2	12.96		19.92	6.14	0	30	14.1		6.23	0	0	14.01		6.28	0	0	13.96	
TP-3	12.59		20.06	7.01	6.07	0.94	13.36		7.45	6.08	1.37	12.92		7.6	6.15	1.45	12.77	
TP-4	12.61		19.87	5.64	0	0	14.53		5.64	0	0	14.53		5.64	0	0	14.53	
TP-5	12.32		19.98	6.35	6.11	0.24	13.91		6.98	6.18	0.8	13.28		7.51	6.27	1.24	12.75	
OBG-03R	12.71		20.35	6.63	6.15	0.48	14.01	75	6.75	6.31	0.44	13.89	59.2	6.83	6.4	0.43	13.81	
RW-1	21.48		NM	4.81	4.6	0.21	NM		4.69	0	0	NM		4.79	4.75	0.04	NM	
OBG-06	17.39		21.63	4.33	0	0	16.55		5.06	0	0	15.82		5.22	0	0	15.66	
							gas	12				gas	9.4					

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

	Date		TOC Elevation	3/14/2006				3/21/2006				3/28/2006						
Well ID	DTB			DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
MW-14	24.82		19.24	5.7	0	0	13.86		5.86	0	0	13.7		6.02	0	0	13.54	
MW-15	12.79		18.62	3.1	0	0	15.52		3.23	0	0	15.39		2.96	0	0	15.66	
TP-1	12.25		20.09	6.82	6.48	0.34	13.58		7.02	6.56	0.46	13.38		7.24	6.76	0.48	13.16	
TP-2	12.96		19.92	6.33	0	0	13.91		6.51	0	0	13.73		6.58	0	0	13.66	
TP-3	12.59		20.06	8.25	6.02	2.23	12.12		8.3	6.17	2.13	12.07		8.93	6.24	2.69	11.44	
TP-4	12.61		19.87	5.63	0	0	14.54		5.86	0	0	14.31		5.7	0	0	14.47	
TP-5	12.32		19.98	8.07	6.3	1.77	12.19		8.14	6.23	1.91	12.12		8.31	6.3	2.01	11.95	
OBG-03R	12.71		20.35	6.83	6.48	0.35	13.81		7.01	6.54	0.47	13.63		7.22	6.82	0.4	13.42	
RW-1	21.48		NM	5.54	4.78	0.76	NM		5.81	4.9	0.91	NM		5.85	5.08	0.77	NM	
OBG-06	17.39		21.63	5.18	0	0	15.7		5.29	0	0	15.59		5.68	0	0	15.2	

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

JP-5 Line Area (Building AS4141)
Well Gauging Total Fluids Recovery

	Date		4/6/2006						4/12/2006						4/18/2006					
Well ID	DTB	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)			
MW-14	24.82	19.24	6.1	0	0	13.46		6.12	0	0	13.44		6.04	0	0	13.52				
MW-15	12.79	18.62	3.2	0	0	15.42		4.33	0	0	14.29		4.17	0	0	14.45				
TP-1	12.25	20.09	7.38	6.81	0.57	13.02		7.52	6.86	0.66	12.88		7.28	6.78	0.5	13.12				
TP-2	12.96	19.92	6.68	0	0	13.56		6.84	6.36	0.48	13.4		6.68	0	0	13.56				
TP-3	12.59	20.06	9.33	6.25	3.08	11.04		9.48	6.23	3.25	10.89		9.69	6.13	3.56	10.68				
TP-4	12.61	19.87	5.7	0	0	14.47		5.71	0	0	14.46		5.56	0	0	14.61				
TP-5	12.32	19.98	8.88	6.51	2.37	11.38		8.78	6.46	2.32	11.48		9.09	6.55	2.54	11.17				
OBG-03R	12.71	20.35	7.35	6.93	0.42	13.29		7.34	6.95	0.39	13.3		6.9	6.67	0.23	13.74				
RW-1	21.48	NM	5.29	5.16	0.13	NM		6	5.48	0.52	NM		5.96	5.1	0.86	NM	41.6			
OBG-06	17.39	21.63	5.67	0	0	15.21		5.66	0	0	15.22		6.28	0	0	14.6				
																gas	6.6			

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

	Date		5/2/2006						5/9/2006						5/15/2006					
Well ID	DTB	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)			
MW-14	24.82	19.24	5.8	0	0	13.76		5.77	0	0	13.79		5.86	5.85	0.01	13.7				
MW-15	12.79	18.62	2.6	0	0	16.02		1.74	0	0	16.88		2.63	2.62	0.01	15.99				
TP-1	12.25	20.09	6.7	6.6	0.1	13.7		6.85	6.57	0.28	13.55		6.82	6.61	0.21	13.58				
TP-2	12.96	19.92	6.4	0	0	13.84		6.75	0	0	13.49		6.55	6.43	0.12	13.69				
TP-3	12.59	20.06	7.29	6.34	0.95	13.08		7.14	6.38	0.76	13.23		7.45	6.4	1.05	12.92				
TP-4	12.61	19.87	5.64	0	0	14.53		5.67	0	0	14.5		5.69	5.68	0.01	14.48				
TP-5	12.32	19.98	7.31	6.47	0.84	12.95		7.16	6.55	0.61	13.1		7.56	6.59	0.97	12.7				
OBG-03R	12.71	20.35	6.69	6.63	0.06	13.95		6.98	6.63	0.36	13.66		7.29	6.75	0.54	13.35				
RW-1	21.48	NM	5.03	4.99	0.04	NM		4.91	4.84	0.07	NM		5.1	5.01	0.09	NM				
OBG-06	17.39	21.63	4.64	0	0	16.24		3.89	0	0	16.99		4.85	4.78	0.07	16.03				

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

JP-5 Line Area (Building AS4141)
Well Gauging Total Fluids Recovery

	Date		TOC Elevation	5/24/2006				6/1/2006				6/5/2006						
Well ID	DTB			DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
MW-14	24.82		19.24	6.03	0	0	13.53		6.03	0	0	13.53		6.04	0	0	13.52	
MW-15	12.79		18.62	2.99	0	0	15.63		3.48	0	0	15.14		3.58	0	0	15.04	
TP-1	12.25		20.09	7.17	6.78	0.39	13.23		7.1	6.83	0.27	13.3		7.21	6.82	0.39	13.19	
TP-2	12.96		19.92	6.63	0	0	13.61		6.64	0	0	13.6		6.67	0	0	13.57	
TP-3	12.59		20.06	7.74	6.52	1.22	12.63		7.9	6.5	1.4	12.47		8.05	6.5	1.55	12.32	
TP-4	12.61		19.87	5.68	0	0	14.49		5.73	0	0	14.44		5.71	0	0	14.46	
TP-5	12.32		19.98	7.96	6.76	1.2	12.3		8.2	6.82	1.38	12.06		8.19	6.72	1.47	12.07	
OBG-03R	12.71		20.35	7.04	6.72	0.32	13.6		6.42	5.99	0.43	14.22		7.33	6.94	0.39	13.31	
RW-1	21.48		NM	5.33	5.2	0.13	NM		5.34	5.2	0.14	NM		5.39	5.24	0.15	NM	
OBG-06	17.39		21.63	5.58	0	0	15.3		5.55	0	0	15.33		5.64	0	0	15.24	

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

	Date		TOC Elevation	6/12/2006				6/19/2006				6/27/2006						
Well ID	DTB			DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
MW-14	24.82		19.24	5.91	0	0	13.65		5.69	0	0	13.87		3.25	0	0	16.31	
MW-15	12.79		18.62	3.43	0	0	15.19		3.29	0	0	15.33		3.6	0	0	15.02	
TP-1	12.25		20.09	6.86	6.68	0.18	13.54		6.54	6.42	0.12	13.86		6.24	6.13	0.11	14.16	
TP-2	12.96		19.92	6.59	6.58	0.01	13.65		6.25	0	0	13.99		6.27	0	0	13.97	
TP-3	12.59		20.06	8.09	6.31	1.78	12.28		7.8	6.04	1.76	12.57		7.29	5.73	1.56	13.08	
TP-4	12.61		19.87	5.71	0	0	14.46		5.7	0	0	14.47		5.43	0	0	14.74	
TP-5	12.32		19.98	8.08	6.68	1.4	12.18		7.95	6.35	1.6	12.31		7.76	6.12	1.64	12.5	
OBG-03R	12.71		20.35	7.27	6.84	0.43	13.37		6.99	6.54	0.45	13.65		6.83	6.4	0.43	13.81	
RW-1	21.48		NM	5.26	5.07	0.19	NM		4.96	4.8	0.16	NM		4.73	4.52	0.21	NM	
OBG-06	17.39		21.63	3.75	0	0	17.13		4.45	0	0	16.43		3.38	0	0	17.5	

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

JP-5 Line Area (Building AS4141)
Well Gauging Total Fluids Recovery

	Date		TOC Elevation	7/16/2006				7/12/2006				7/19/2006				Total Fluids Recovery (gal)				
Well ID	DTB			DTW	DTP	Product Thickness	Groundwater Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
MW-14	24.82		19.24	5.32	0	0	14.24					5.67	0	0	13.89	5.76	0	0	13.8	
MW-15	12.79		18.62	3.72	0	0	14.9	3.8	0	0	14.82	3.61	0	0	15.01					
TP-1	12.25		20.09	6.41	6.13	0.28	13.99	6.75	6.43	0.32	13.65	6.72	6.55	0.17	13.68					
TP-2	12.96		19.92	5.97			14.27	6.3	0	0	13.94	6.39	0	0	13.85					
TP-3	12.59		20.06	7.91	5.7	2.21	12.46	8.54	5.95	2.59	11.83	8.17	5.6	2.57	12.2					
TP-4	12.61		19.87	5.64	0	0	14.53	5.68	0	0	14.49	5.64	0	0	14.53					
TP-5	12.32		19.98	8.09	6.01	2.08	12.17	8.7	6.3	2.4	11.56	8.8	6.4	2.4	11.46					
OBG-03R	12.71		20.35	6.94	6.42	0.52	13.7	7.12	6.6	0.52	13.52	7.14	6.61	0.53	13.5					
RW-1	21.48		NM	4.57	4.52	0.05	NM	5.05	4.85	0.2	NM	5.14	4.91	0.23	NM					
OBG-06	17.39		21.63	4.67	0	0	16.21	5.72	0	0	15.16	4.12	0	0	16.76					

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

	Date		7/24/2006						8/2/2006						8/7/2006					
Well ID	DTB	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)			
MW-14	24.82	19.24	5.63	0	0	13.93		4.07	0	0	15.49		5.32	0	0	14.24				
MW-15	12.79	18.62	3.48	0	0	15.14		3.3	0	0	15.32		3.36	0	0	15.26				
TP-1	12.25	20.09	6.56	6.37	0.19	13.84		6.18	6.05	0.13	14.22		6.46	6.25	0.21	13.94				
TP-2	12.96	19.92	6.21			14.03		5.93	0	0	14.31		6.1	0	0	14.14				
TP-3	12.59	20.06	7.19	5.72	1.47	13.18		8.32	5.52	2.8	12.05		6.86	6.11	0.75	13.51				
TP-4	12.61	19.87	5.66	0	0	14.51		5.63	0	0	14.54		5.66	0	0	14.51				
TP-5	12.32	19.98	8.57	6.11	2.46	11.69		8.33	5.8	2.53	11.93		6.95	6.03	0.92	13.31				
OBG-03R	12.71	20.35	7.11	6.43	0.68	13.53		6.95	6.45	0.5	13.69		7.08	6.38	0.7	13.56				
RW-1	21.48	NM	5.01	4.76	0.25	NM		4.65	4.44	0.21	NM		4.89	4.62	0.27	NM				
OBG-06	17.39	21.63	3.63	0	0	17.25		4.01	0	0	16.87		4.61	0	0	16.27				

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

JP-5 Line Area (Building AS4141)
Well Gauging Total Fluids Recovery

	Date		8/14/2006						8/21/2006						8/28/2006					
Well ID	DTB	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)			
MW-14	24.82	19.24	5.52	0	0	14.04		5.71	0	0	13.85		4.98	0	0	14.58				
MW-15	12.79	18.62	2.48	0	0	16.14		2.73	0	0	15.89		2.94	0	0	15.68				
TP-1	12.25	20.09	6.5	6.32	0.18	13.9		6.69	6.48	0.21	13.71		6.25	6.11	0.14	14.15				
TP-2	12.96	19.92	6.18	0	0	14.06		6.38	0	0	13.86		5.98	0	0	14.26				
TP-3	12.59	20.06	6.91	6.09	0.82	13.46		6.95	6.24	0.71	13.42		6.78	5.98	0.8	13.59				
TP-4	12.61	19.87	5.65	0	0	14.52		5.6	0	0	14.57		5.64	0	0	14.53				
TP-5	12.32	19.98	7.15	6.42	0.73	13.11		7.51	6.88	0.63	12.75		6.99	6.22	0.77	13.27				
OBG-03R	12.71	20.35	7.12	6.37	0.75	13.52		7.04	6.32	0.72	13.6		6.96	6.09	0.87	13.68				
RW-1	21.48	NM	4.98	4.67	0.31	NM		5.14	4.88	0.26	NM		4.78	4.46	0.32	NM				
OBG-06	17.39	21.63	4.22	0	0	16.66		5	0	0	15.88		4.27	0	0	16.61				

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

	Date		9/5/2006						9/12/2006						9/20/2006					
Well ID	DTB	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)			
MW-14	24.82	19.24	4.85	0	0	14.71		4.95	0	0	14.61		5.04	0	0	14.52				
MW-15	12.79	18.62	3.08	0	0	15.54		3.28	0	0	15.34		3.12	0	0	15.5				
TP-1	12.25	20.09	6.64	6.57	0.07	13.76		5.79	5.61	0.18	14.61		5.92	5.82	0.1	14.48				
TP-2	12.96	19.92	5.54	0	0	14.7		5.63	0	0	14.61		5.71	0	0	14.53				
TP-3	12.59	20.06	6.42	5.52	0.9	13.95		6.4	5.62	0.78	13.97		6.62	5.77	0.85	13.75				
TP-4	12.61	19.87	5.52	5.47	0.28	14.65		5.75	5.47	0.28	14.42		5.82	5.52	0.3	14.35				
TP-5	12.32	19.98	6.48	5.65	0.83	13.78		6.9	5.66	1.24	13.36		6.63	5.81	0.82	13.63				
OBG-03R	12.71	20.35	6.02	5.77	0.25	14.62		6.41	5.91	0.5	14.23		6.15	5.93	0.22	14.49				
RW-1	21.48	NM	4.3	3.97	0.33	NM		4.18	4.17	0.01	NM		4.34	4.32	0.02	NM				
OBG-06	17.39	21.63	3.5	0	0	17.38		4.67	0	0	16.21		4.92	0	0	15.96				

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

JP-5 Line Area (Building AS4141)
Well Gauging Total Fluids Recovery

	Date		9/27/2006				10/3/2006				10/10/2006			
		TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)		DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	
Well ID														
MW-14	24.82	19.24	5.31	0	0	14.25		5.62	0	0	0	13.94		
MW-15	12.79	18.62	3.01	0	0	15.61		3.43	0	0	0	15.19		
TP-1	12.25	20.09	6.27	6.14	0.13	14.13		6.58	6.43	0.15	0.15	13.82		
TP-2	12.96	19.92	6.01	0	0	14.23		6.29	0	0	0	13.95		
TP-3	12.59	20.06	7	5.95	1.05	13.37		7.28	6.21	1.07	0.96	13.26		
TP-4	12.61	19.87	5.86	5.51	0.35	14.31		6.12	5.51	0.61	0.55	14.11		
TP-5	12.32	19.98	7.23	6.18	1.05	13.03		7.76	6.52	1.24	0.5	13.01		
OBG-03R	12.71	20.35	6.23	6	0.23	14.41		7.23	6.52	0.71	0.6	13.64		
RW-1	21.48	NM	4.59	4.58	0.01	NM		4.92	4.88	0.04	0.09	NM		
OBG-06	17.39	21.63	5.17	0	0	15.71		5.94	0	0	0	15.93		

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

Well ID	Date		TOC Elevation	10/25/2006				10/30/2006				11/9/2006						
	DTB			DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
MW-14	24.82		19.24	5.49	0	0	14.07		5.74	0	0	13.82		5.71	0	0	13.85	
MW-15	12.79		18.62	3.35	0	0	15.27		1.86	0	0	16.76		3.1	0	0	15.52	
TP-1	12.25		20.09	7.03	6.65	0.38	13.37		6.6	6.45	0.15	13.8		6.63	6.54	0.09	13.77	
TP-2	12.96		19.92	6.53	0	0	13.71		6.25	0	0	13.99		6.36	0	0	13.88	
TP-3	12.59		20.06	8.86	6.41	2.45	11.51		7.69	6.23	1.46	12.68		7.48	6.28	1.2	12.89	
TP-4	12.61		19.87	5.86	5.51	0.35	14.31		6.12	5.5	0.62	14.05		5.68	5.57	0.11	14.49	
TP-5	12.32		19.98	8.13	6.62	1.51	12.13		7.63	6.46	1.17	12.63		6.88	6.23	0.65	13.38	
OBG-03R	12.71		20.35	7.3	6.83	0.47	13.34		7.05	6.61	0.44	13.59		7.05	6.61	0.44	13.59	
RW-1	21.48		NM	5.14	5.1	0.04	NM		5.34	5.23	0.11	NM		5.08	4.95	0.13	NM	
OBG-06	17.39		21.63	5.41	0	0	15.47		4.35	0	0	16.53		4.16	0	0	16.72	

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

JP-5 Line Area (Building AS4141)
Well Gauging Total Fluids Recovery

Well ID	Date		TOC Elevation	11/15/2006				11/28/2006				12/5/2006				Total Fluids Recovery (gal)		
	DTB			DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP		Product Thickness	Groundwater Elevation
MW-14	24.82		19.24	5.78	0	0	13.78		4.01	0	0	15.55		5.45	0	0	14.11	
MW-15	12.79		18.62	2.81	0	0	15.81		2.73	0	0	15.89		2.84	0	0	15.78	
TP-1	12.25		20.09	6.76	6.59	0.17	13.64		6.11	6.08	0.03	14.29		6.4	6.28	0.12	14	
TP-2	12.96		19.92	6.43	0	0	13.81		5.92	0	0	14.32		6.12	0	0	14.12	
TP-3	12.59		20.06	7.63	6.31	1.32	12.74		6.9	5.78	1.12	13.47		7.62	5.96	1.66	12.75	
TP-4	12.61		19.87	5.78	0	0	14.39		5.82	5.56	0.26	14.35		5.88	5.54	0.34	14.29	
TP-5	12.32		19.98	7.4	6.55	0.85	12.86		5.98	5.74	0.24	14.28		7.1	6.02	1.08	13.16	
OBG-03R	12.71		20.35	7.12	6.65	0.47	13.52		6.5	6.04	0.46	14.14		6.82	6.34	0.48	13.82	
RW-1	21.48		NM	5.13	4.96	0.17	NM		4.74	0	0	NM		4.82	4.63	0.19	NM	
OBG-06	17.39		21.63	4.85	0	0	16.03		4.57	0	0	16.31		5.22	0	0	15.66	

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

	Date		12/13/2006				12/19/2006				12/27/2006						
Well ID	DTB	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
MW-14	24.82	19.24	5.69	0	0	13.87		5.96	0	0	13.6		5.15	0	0	14.41	
MW-15	12.79	18.62	3.04	0	0	15.58		3.16	0	0	15.46		3.15	0	0	15.47	
TP-1	12.25	20.09	6.84	5.52	1.32	13.56		6.92	6.74	0.18	13.48		6.08	6.06	0.02	14.32	
TP-2	12.96	19.92	6.38	0	0	13.86		6.56	6.55	0.01	13.68		5.96	0	0	14.28	
TP-3	12.59	20.06	8.19	6.15	2.04	12.18		8.39	6.34	2.05	11.98		7.82	5.8	2.02	12.55	
TP-4	12.61	19.87	5.9	5.55	0.35	14.27		5.85	5.56	0.29	14.32		5.74	5.53	0.21	14.43	
TP-5	12.32	19.98	7.64	6.3	1.34	12.62		7.96	6.54	1.42	12.3		5.85	5.04	0.81	14.41	
OBG-03R	12.71	20.35	7.15	6.61	0.54	13.49		7.41	6.85	0.56	13.23		6.68	6.15	0.53	13.96	
RW-1	21.48	NM	5.5	5.29	0.21	NM		5.19	5.16	0.03	NM		4.9	4.89	0.01	NM	
OBG-06	17.39	21.63	5.42	0	0	15.46		5.64	0	0	15.24		4.03	0	0	16.85	

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

JP-5 Line Area (Building AS4141)
Well Gauging Total Fluids Recovery

	Date			1/2/2007				1/11/2007				1/15/2007								
Well ID	DTB	TOC Elevation		DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)		DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)		DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
MW-14	24.82	19.24		5.4	0	0	14.16			5.25	0	0	14.31			5.34	0	0	14.22	
MW-15	12.79	18.62		2.71	0	0	15.91			2.91	0	0	15.71			2.83	0	0	15.79	
TP-1	12.25	20.09		6.27	6.23	0.04	14.13			6.19	6.02	0.17	14.21			6.2	6.04	0.16	14.2	
TP-2	12.96	19.92		6.01	0	0	14.23			5.91	0	0	14.33			5.88	0	0	14.36	
TP-3	12.59	20.06		7.92	5.81	2.11	12.45			7.9	5.63	2.27	12.47			8	5.77	2.23	12.37	
TP-4	12.61	19.87		5.56	5.5	0.06	14.61			5.93	5.55	0.38	14.24			5.72	5.5	0.22	14.45	
TP-5	12.32	19.98		7.03	5.77	1.26	13.23			7.29	5.64	1.65	12.97			7.25	5.75	1.5	13.01	
OBG-03R	12.71	20.35		6.63	6.2	0.43	14.01			6.5	5.99	0.51	14.14			6.5	6.07	0.43	14.14	
RW-1	21.48	NM		4.68	4.65	0.03	NM			4.8	4.75	0.05	NM			4.78	4.76	0.02	NM	
OBG-06	17.39	21.63		4.43	0	0	16.45			4.25	0	0	16.63			4.68	0	0	16.2	

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

Well ID	Date		TOC Elevation	1/23/2007				1/30/2007				2/6/2007						
	DTB			DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
MW-14	24.82		19.24	5.29	0	0	14.27		5.39	0	0	14.17		5.33	0	0	14.23	
MW-15	12.79		18.62	3	0	0	15.62		3.01			15.61		2.95	0	0	15.67	
TP-1	12.25		20.09	6.19	6.03	0.16	14.21		6.45	6.18	0.27	13.95		6.32	6.09	0.23	14.08	
TP-2	12.96		19.92	5.88	0	0	14.36		6.06	6.55	0.01	14.18		5.99	0	0	14.25	
TP-3	12.59		20.06	8.13	5.56	2.57	12.24		8.51	5.69	2.82	11.86		8.53	5.55	2.98	11.84	
TP-4	12.61		19.87	5.72	5.54	0.18	14.45		6.05	5.55	0.5	14.12		5.75	5.49	0.26	14.42	
TP-5	12.32		19.98	7.37	5.66	1.71	12.89		7.73	5.78	1.95	12.53		7.61	5.66	1.95	12.65	
OBG-03R	12.71		20.35	6.45	6	0.45	14.19		6.7	6.18	0.52	13.94		6.58	6.03	0.55	14.06	
RW-1	21.48		NM	4.79	4.78	0.01	NM		5.05	4.95	0.1	NM		5.03	4.83	0.2	NM	
OBG-06	17.39		21.63	4.04	0	0	16.84		4.79	0	0	16.09		4.87	0	0	16.01	

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

JP-5 Line Area (Building AS4141)
Well Gauging Total Fluids Recovery

Well ID	Date		2/14/2007						2/20/2007						3/13/2007					
	DTB	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)			
MW-14	24.82	19.24	5.39	0	0	14.17		3.15	0	0	16.41		5.7	0	0	13.86				
MW-15	12.79	18.62	3.06	0	0	15.56		5.64	0	0	12.98		2.2	0	0	16.42				
TP-1	12.25	20.09	6.25	6.14	0.11	14.15		6.73	6.37	0.36	13.67		6.68	6.42	0.26	13.72				
TP-2	12.96	19.92	6.05	0	0	14.19		6.29	0	0	13.95		5.79	0	0	14.45				
TP-3	12.59	20.06	8.7	6.58	2.12	11.67		9.05	5.83	3.22	11.32		9.58	5.77	3.81	10.79				
TP-4	12.61	19.87	5.85	5.5	0.35	14.32		5.76	5.5	0.26	14.41		6.48	6.15	0.33	13.69				
TP-5	12.32	19.98	7.99	5.8	2.19	12.27		8.25	5.99	2.26	12.01		7.66	5.21	2.45	12.6				
OBG-03R	12.71	20.35	6.65	6.13	0.52	13.99		7.04	6.4	0.64	13.6		7.1	6.46	0.64	13.54				
RW-1	21.48	NM	5	4.85	0.15	NM		5.32	5.15	0.17	NM		5.38	5.13	0.25	NM				
OBG-06	17.39	21.63	4.85	0	0	16.03		5.25	0	0	15.63		5.21	0	0	15.67				

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

	Date		4/10/2007				5/15/2007				6/9/2007						
Well ID	DTB	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
MW-14	24.82	19.24	6.02	0	0	13.54		6.08	0	0	13.48		NM	0	0	NM	
MW-15	12.79	18.62	2.9	0	0	15.72		2.71	0	0	15.91		NM	0	0	NM	
TP-1	12.25	20.09	7.25	6.65	0.6	13.15		8.45	7.77	0.68	11.95		7.12	6.65	0.47	13.28	
TP-2	12.96	19.92	6.64	0	0	13.6		6.7	0	0	13.54		NM	0	0	NM	
TP-3	12.59	20.06	10.05	6	4.05	10.32		11.04	5.86	5.18	9.33		11.54	5.85	5.69	8.83	
TP-4	12.61	19.87	6.99	6.25	0.74	13.18		7.04	6.26	0.78	13.13		6.82	6.2	0.62	13.35	
TP-5	12.32	19.98	9.48	6.24	3.24	10.78		10.03	6.28	3.75	10.23		10.25	6.35	3.9	10.01	
OBG-03R	12.71	20.35	7.55	6.93	0.62	13.09		7.51	6.91	0.6	13.13		7.46	7	0.46	13.18	
RW-1	21.48	NM	5.74	5.55	0.19	NM		5.85	5.55	0.3	NM		NM	0	0	NM	
OBG-06	17.39	21.63	5.84	0	0	15.04		6	0	0	14.88		NM	0	0	NM	

DTB = Depth to bottom of well (feet)
DTP = Depth to product (feet)

JP-5 Line Area (Building AS4141)
Well Gauging Total Fluids Recovery

	Date		7/16/2007					8/15/2007					9/19/2007				
		TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
Well ID																	
MW-14	24.82	19.24	6.49	0	0	13.07		6.43	0	0	13.13		6.82	0	0	12.74	
MW-15	12.79	18.62	3.33	0	0	15.29		2.95	0	0	15.67		3.14	0	0	15.48	
TP-1	12.25	20.09	8.12	7.25	0.87	12.28		7.3	7.06	0.24	13.1		8	7.52	0.48	12.4	
TP-2	12.96	19.92	7.15	7.12	0.03	13.09		7.05	7.03	0.02	13.19		6.73	6.72	0.01	13.51	
TP-3	12.59	20.06	8.71	7	1.71	11.66		8.79	6.87	1.92	11.58		8.5	7.44	1.06	11.87	
TP-4	12.61	19.87	7.13	6.25	0.88	13.04		7.01	6.26	0.75	13.16		6.73	6.34	0.39	13.44	
TP-5	12.32	19.98	8.7	7.55	1.15	11.56		8.91	7.43	1.48	11.35		7.35	6.95	0.4	12.91	
OBG-03R	12.71	20.35	7.61	7.39	0.22	13.03		7.73	7.3	0.43	12.91		7.65	7.55	0.1	12.99	
RW-1	21.48	NM	6.26	5.93	0.33	NM		6.18	5.84	0.34	NM		6.44	6.25	0.19	NM	
OBG-06	17.39	21.63	6.9	0	0	13.98		5.62	0	0	15.26		6.48	0	0	14.4	

DTB = Depth to bottom of well (feet)

DTP = Depth to product (feet)

	Date		10/29/2007				11/27/2007				12/18/2007						
		TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
Well ID																	
MW-14	24.82	19.24	6.96	0	0	12.6		7.29	0	0	12.27		7	0	0	12.56	
MW-15	12.79	18.62	3.5	0	0	15.12		3.63	0	0	14.99		2.85	0	0	15.77	
TP-1	12.25	20.09	8.25	7.6	0.65	12.15		8.49	7.69	0.8	11.91		8.25	8.1	0.15	12.15	
TP-2	12.96	19.92	7.5	7.47	0.03	12.74		7.63	7.5	0.13	12.61		7.8	7.79	0.01	12.44	
TP-3	12.59	20.06	8.53	7.45	1.08	11.84		8.81	7.32	1.49	11.56		9.05	7.25	1.8	11.32	
TP-4	12.61	19.87	6.51	6.31	0.2	13.66		6.68	6.36	0.32	13.49		6.81	6.54	0.27	13.36	
TP-5	12.32	19.98	8.3	7.32	0.98	11.96		9.47	7.41	2.06	10.79		8.08	7.12	0.96	12.18	
OBG-03R	12.71	20.35	8.08	7.81	0.27	12.56		8.36	7.99	0.37	12.28		8.1	7.95	0.15	12.54	
RW-1	21.48	NM	6.7	6.35	0.35	NM		7.15	6.82	0.33	NM		7.1	6.74	0.36	NM	
OBG-06	17.39	21.63	4.38	0	0	16.5		6.65	0	0	14.23		5.18	0	0	15.7	

DTB = Depth to bottom of well (feet)

DTP = Depth to product (feet)

JP-5 Line Area (Building AS4141)
Well Gauging Total Fluids Recovery

Date			2/4/2008				3/13/2008				4/9/2008						
Well ID	DTB	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
MW-14	24.82	19.24	6.97	0	0	12.59		6.93	0	0	12.63		7.05	0	0	12.51	
MW-15	12.79	18.62	2.74	0	0	15.88		2.61	0	0	16.01		2.38	0	0	16.24	
TP-1	12.25	20.09	8.02	4.8	3.22	12.38		7.96	4.99	2.97	12.44		6.98	6.35	0.63	13.42	
TP-2	12.96	19.92	7.2	0	0	13.04		7.17	0	0	13.07		6.53	0	0	13.71	
TP-3	12.59	20.06	9.16	6.97	2.19	11.21		9.12	6.9	2.22	11.25		9.93	5.81	4.12	10.44	
TP-4	12.61	19.87	6.43	6.27	0.16	13.74		6.38	6.24	0.14	13.79		6.25	6	0.25	13.92	
TP-5	12.32	19.98	9.62	6.97	2.65	10.64		9.58	7.01	2.57	10.68		9.57	5.9	3.67	10.69	
OBG-03R	12.71	20.35	7.88	7.44	0.44	12.76		7.8	7.33	0.47	12.84		6.92	6.63	0.29	13.72	
RW-1	21.48	NM	6.54	6.08	0.46	NM		6.51	6.07	0.44	NM		5.77	5.27	0.5	NM	
OBG-06	17.39	21.63	5.06	0	0	15.82		5	0	0	15.88		4.01	0	0	16.87	

DTB = Depth to bottom of well (feet)

DTP = Depth to product (feet)

Well ID	Date		TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)	DTW	DTP	Product Thickness	Groundwater Elevation	Total Fluids Recovery (gal)
	DTB																	
MW-14	24.82		19.24															
MW-15	12.79		18.62															
TP-1	12.25		20.09															
TP-2	12.96		19.92															
TP-3	12.59		20.06															
TP-4	12.61		19.87															
TP-5	12.32		19.98															
OBG-03R	12.71		20.35															
RW-1	21.48		NM															
OBG-06	17.39		21.63															

DTB = Depth to bottom of well (feet)

DTP = Depth to product (feet)

APPENDIX B

GROUNDWATER SAMPLE COLLECTION FIELD LOGS

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: AS 4141
			WELL NO. USTAS4141-MW 62
			SAMPLE NO. USTAS4141-MW 62
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 10/26/07
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 0900
PHONE: 910-451-2390		WEATHER: cloudy 70's	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailer	☐ No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH	5.76	5.74				(STD)
Specific Conductivity	0.266	0.177				(m S/cm ²)
Turbidity (Turb)	147.6	268.5				(NTU)
Dissolved Oxygen (DO)	4.65	1.05				(mg/l)
Temperature (Temp)	24.90	27.06				(°C)
ORP	73.9	68.7				

Depth to Bottom	203.04	(In) (Minus)	Depth to Water	47.28	(In) =	155.76	HT (in)
Depth to Bottom	16.92	(Ft) (Minus)	Depth to Water	3.94	(Ft) =	12.98	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		155.76	1	3.14	489	.0043	2.1	6.3	3 1/4
	Middle				3.14		.0043			
	Bottom				3.14		.0043			
	Total				3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141 MW02	3 X 40 ml	HCL
PAH 610	USTAS4141 MW02	2 X 1 L Amber	4 deg. C.
COMMENTS: Purged Dry 3 1/4 gal. Allowed To Recharge and Sampled			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: AS 4141
			WELL NO. USTAS4141-MW 07
			SAMPLE NO. USTAS4141-MW 07
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 10/27/07
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 1300
PHONE: 910-451-2390		WEATHER: cloudy 70's	
LEL:		Well Locked: [X] Yes	
PID:		Sampling Device: Bailor ☐ No	

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH	5.89	6.45				(STD)
Specific Conductivity	0.257	0.139				(m S/cm ²)
Turbidity (Turb)	999.4	1015.6				(NTU)
Dissolved Oxygen (DO)	5.56	5.04				(mg/l)
Temperature (Temp)	24.37	26.73				(°C)
ORP	147.9	137.5				

Depth to Bottom	173.04	(In) (Minus)	Depth to Water	45.84	(In)	=	127.20	HT (in)
Depth to Bottom	14.42	(Ft) (Minus)	Depth to Water	3.82	(Ft)	=	10.60	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		127.20	1	3.14	399	.0043	1.7	5.2	3
	Middle				3.14		.0043			
	Bottom				3.14		.0043			
	Total				3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141-MW07	3 X 40 ml	HCL
PAH 610	USTAS4141-MW07	2 X 1 L Amber	4 deg. C.
COMMENTS: organic growth in well (purged out) Purged Dry @ 3gal Allowed to Recharge & Sampled			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			

 Shaw Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: AS 4141
			WELL NO. USTAS4141-MW10
			SAMPLE NO. USTAS4141-MW10
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 10/27/07
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 1600
PHONE: 910-451-2390		WEATHER: Cloudy 70'S	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailer	☐ No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH	6.50	6.43				(STD)
Specific Conductivity	0.532	0.540				(m S/cm ^o)
Turbidity (Turb)	14.0	5.5				(NTU)
Dissolved Oxygen (DO)	6.17	1.88				(mg/l)
Temperature (Temp)	24.92	26.18				(°C)
ORP	31.2	18.4				

Depth to Bottom	178.68	(In) (Minus)	Depth to Water	67.08	(In)	=	111.60	HT (in)
Depth to Bottom	14.89	(Ft) (Minus)	Depth to Water	5.59	(Ft)	=	9.30	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			111.60	1	3.14	350	.0043	1.5	4.5	2 1/2
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141 MW10	3 X 40 ml	HCL
PAH 610	USTAS4141 MW10	2 X 1 L Amber	4 deg. C.

COMMENTS: Duplicate Sample Taken			
Purged Dry Allowed to Recharge & Sampled			
2 1/2 gallons purged Dry at			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			



Shaw Environmental & Infrastructure, Inc.

WELL OR
GROUND WATER
DATA SHEET

PROJECT NUMBER: 125709

PROJECT NAME: AS 4141

WELL NO. USTAS4141-MW14

SAMPLE NO. USTAS4141-MW14

PROJECT LOCATION: Camp Lejeune	LOGGER: Mark Martin	DATE 10/26/07
PROJECT CONTACT: Mark Martin	SAMPLER: Mark Martin	TIME 1000
PHONE: 910-451-2390	WEATHER: cloudy 70°s	
LEL:	Well Locked: [X] Yes	
PID:	Sampling Device: Bailor	☐ No

FIELD MEASUREMENTS

	1	2	3	4	Avg.	
PH	6.70	6.94	6.94	6.94		(STD)
Specific Conductivity	0.724	0.842	0.875	0.876		(m S/cm)
Turbidity (Turb)	78.3	13.5	0	0		(NTU)
Dissolved Oxygen (DO)	5.01	0.74	0.63	0.57		(mg/l)
Temperature (Temp)	24.61	24.33	24.34	24.33		(°C)
ORP	2.0	-21.5	-24.9	-24.8		

Depth to Bottom	297.72	(In) (Minus)	Depth to Water	86.64	(In) =	211.08	HT (in)
Depth to Bottom	24.81	(Ft) (Minus)	Depth to Water	7.22	(Ft) =	17.59	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			211.08	1	3.14	663	.0043	2.9	8.6	9
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141-MW14	3 X 40 ml	HCL
PAH 610	USTAS4141-MW14	2 X 1-L Amber	4 deg. C.

COMMENTS:

PURGE DISCHARGED:

DRUM: ☐

DRUM#

SITE TREATMENT: [X]

OTHER: ☐

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: AS 4141
			WELL NO. USTAS4141-MW/5
			SAMPLE NO. USTAS4141-MW/5
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 10/25/07
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 0900
PHONE: 910-451-2390		WEATHER: Cloudy 70's	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailor	No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH	6.58	6.60	6.64	6.61		(STD)
Specific Conductivity	0.609	0.610	0.617	0.600		(m S/cm ²)
Turbidity (Turb)	413.7	79.1	10.8	0		(NTU)
Dissolved Oxygen (DO)	3.26	1.66	1.55	1.15		(mg/l)
Temperature (Temp)	28.95	31.44	32.37	31.52		(°C)
ORP	-12.1	-29.7	-33.3	-34.3		

Depth to Bottom	153.24	(In) (Minus)	Depth to Water	47.52	(In) =	105.72	HT (in)
Depth to Bottom	12.77	(Ft) (Minus)	Depth to Water	3.96	(Ft) =	8.81	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			105.72	1	3.14	332	.0043	1.4	4.3	5
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141-MW/5	3 X 40 ml	HCL
PAH 610	USTAS4141-MW/5	2 X 1 L Amber	4 deg. C.
COMMENTS:			
PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: AS 4141
			WELL NO. USTAS4141-MW/6
			SAMPLE NO. USTAS4141-MW/6
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 10/25/07
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 1015
PHONE: 910-451-2390		WEATHER: cloudy 70'S	
LEL:		Well Locked: [X] Yes	
PID:		Sampling Device: Bailor	☐ No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH	6.42	6.27	6.26	6.31		(STD)
Specific Conductivity	0462	0.427	0.438	0.458		(m S/cm ²)
Turbidity (Turb)	994.1	232.0	81.4	49.9		(NTU)
Dissolved Oxygen (DO)	3.56	1.34	1.04	0.86		(mg/l)
Temperature (Temp)	24.12	24.74	24.99	24.34		(°C)
ORP	13.2	14.6	10.9	-22.6		

Depth to Bottom	173.40	(In) (Minus)	Depth to Water	112.56	(In)	=	60.84	HT (in)
Depth to Bottom	44.45	(Ft) (Minus)	Depth to Water	9.38	(Ft)	=	5.07	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			60.84	1	3.14	191	.0043	0.8	2.5	3
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141-MW16	3 X 40 ml	HCL
PAH 610	USTAS4141-MW16	2 X 1 L Amber	4 deg. C.

COMMENTS: Fuel odor <u>no</u> Product			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: AS 4141
			WELL NO. USTAS4141-MW 17
			SAMPLE NO. USTAS4141-MW 17
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 10/26/07
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 1100
PHONE: 910-451-2390		WEATHER: cloudy 70's	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailer	☐ No

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

Depth to Bottom	173.40	(In) (Minus)	Depth to Water	88.56	(In) =	84.84	HT (in)
Depth to Bottom	14.45	(Ft) (Minus)	Depth to Water	7.38	(Ft) =	7.07	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			84.84	1	3.14	266	.0043	1.1	3.4	0
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141	3 X 40 ml	HCL
PAH 610	USTAS4141	2 X 1 L Amber	4 deg. C.

COMMENTS: Product. 7.38 - 7.52' = 0.14' product
well not sampled

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

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: AS 4141
			WELL NO. USTAS4141-MW <u>18</u>
			SAMPLE NO. USTAS4141-MW <u>18</u>
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE <u>10/25/07</u>
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME <u>1100</u>
PHONE: 910-451-2390		WEATHER: <u>Cloudy 70's</u>	
LEL:			Well Locked: ☒ Yes
PID:			Sampling Device: Bailor ☐ No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH	<u>6.40</u>	<u>6.39</u>	<u>6.36</u>	<u>6.37</u>		(STD)
Specific Conductivity	<u>0.616</u>	<u>0.614</u>	<u>0.605</u>	<u>0.614</u>		(m S/cm ²)
Turbidity (Turb)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>		(NTU)
Dissolved Oxygen (DO)	<u>5.39</u>	<u>1.92</u>	<u>1.39</u>	<u>1.24</u>		(mg/l)
Temperature (Temp)	<u>26.34</u>	<u>27.24</u>	<u>27.14</u>	<u>26.58</u>		(°C)
ORP	<u>26.1</u>	<u>9.7</u>	<u>8.6</u>	<u>4.1</u>		

Depth to Bottom	<u>180.84</u>	(In) (Minus)	Depth to Water	<u>89.04</u>	(In) =	<u>91.80</u>	HT (in)
Depth to Bottom	<u>15.07</u>	(Ft) (Minus)	Depth to Water	<u>7.42</u>	(Ft) =	<u>7.65</u>	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			<u>91.80</u>	<u>1</u>	<u>3.14</u>	<u>288</u>	<u>.0043</u>	<u>1.2</u>		<u>3.7</u>	<u>4</u>
Middle					<u>3.14</u>		<u>.0043</u>				
Bottom					<u>3.14</u>		<u>.0043</u>				
Total					<u>3.14</u>		<u>.0043</u>				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141 ~ <u>MW 18</u>	3 X 40 ml	HCL
PAH 610	USTAS4141 ~ <u>MW 18</u>	2 X 1 L Amber	4 deg. C.
COMMENTS:			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: ☒ Yes
OTHER: ☐			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: AS 4141
			WELL NO. USTAS4141-MW 19
			SAMPLE NO. USTAS4141-MW 19
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 10/26/07
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 1100
PHONE: 910-451-2390		WEATHER: Cloudy 70'S	
LEL:		Well Locked: [X] Yes	
PID:		Sampling Device: Bailor	☐ No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH	6.15	6.14	6.13	6.13		(STD)
Specific Conductivity	0.295	0.290	0.287	0.287		(m S/cm ²)
Turbidity (Turb)	995.5	629.4	33.1	0		(NTU)
Dissolved Oxygen (DO)	4.28	3.98	1.25	0.66		(mg/l)
Temperature (Temp)	23.83	23.85	23.85	23.85		(°C)
ORP	140.2	126.1	86.1	76.4		

Depth to Bottom	174.84	(In) (Minus)	Depth to Water	96.84	(In) =	78.00	HT (in)
Depth to Bottom	14.57	(Ft) (Minus)	Depth to Water	8.07	(Ft) =	6.50	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			78.00	1	3.14	295	.0043	1.1	3.2	4
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141, MW 19	3 X 40 ml	HCL
PAH 610	USTAS4141, MW 19	2 X 1 L Amber	4 deg. C.
COMMENTS:			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: AS 4141
			WELL NO. USTAS4141-MWP-1001
			SAMPLE NO. USTAS4141-MWP-1001
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 10/27/07
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 1445
PHONE: 910-451-2390		WEATHER:	
LEL:		Well Locked: ☒ Yes	
PID:		Sampling Device: Bailor	☐ No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH						(STD)
Specific Conductivity						(m S/cm ²)
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)

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 602	USTAS4141	3 X 40 ml	HCL
PAH 610	USTAS4141	2 X 1 L Amber	4 deg. C.
COMMENTS: Product in well NO SAMPLE TAKEN			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: ☒
OTHER: ☐			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: AS 4141
			WELL NO. USTAS4141- ~~NEW~~ <i>OBG 3R</i>
			SAMPLE NO. USTAS4141- ~~NEW~~ <i>OBG 3R</i>
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE <i>10/26/07</i>
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME <i>1100</i>
PHONE: 910-451-2390		WEATHER:	
LEL:		Well Locked: ☒ Yes	
PID:		Sampling Device: Bailer	☐ No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH						(STD)
Specific Conductivity						(m S/cm ^o)
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)

d = <u>2</u>	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 602	USTAS4141	3 X 40 ml	HCL
PAH 610	USTAS4141	2 X 1 L Amber	4 deg. C.
COMMENTS: <i>Product in well 8.09 - 8.11 = 0.02 Product</i> <i>Well NOT sampled</i>			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: ☒
OTHER: ☐			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125709
			PROJECT NAME: AS 4141
			WELL NO. USTAS4141- ~~11W~~ OB66
			SAMPLE NO. USTAS4141- ~~11W~~ OB66
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 10/25/07
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 1330
PHONE: 910-451-2390		WEATHER: Cloudy 70'S	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailer	☐ No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH	5.50	4.86	4.83	4.83		(STD)
Specific Conductivity	0.361	0.351	0.374	0.377		(m S/cm)
Turbidity (Turb)	800.8	159.4	87.1	80.5		(NTU)
Dissolved Oxygen (DO)	5.82	1.28	1.15	1.02		(mg/l)
Temperature (Temp)	24.49	25.39	25.17	25.10		(°C)
ORP	244.9	251.6	230.4	227.2		

Depth to Bottom	208.20	(In) (Minus)	Depth to Water	78.00	(In) =	130.20	HT (in)
Depth to Bottom	17.35	(Ft) (Minus)	Depth to Water	6.50	(Ft) =	10.85	HT (ft)

d = <u>2</u> MEASUREMENTS (IN INCHES)											
r = <u>1</u> Multiply Together						Vol.					
d/2 = 1	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged	
TOP			130.20	1	3.14	409	.0043	1.8	5.3	6	
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141- OB606	3 X 40 ml	HCL
PAH 610	USTAS4141- OB606	2 X 1 L Amber	4 deg. C.
COMMENTS: Organic growth in well purged out			
PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: [X]
OTHER: ☐			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125006
			PROJECT NAME: AS 41541
			WELL NO. USTAS4141-MW 02
			SAMPLE NO. USTAS4141-MW 02
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 3/28/08
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 11:15
PHONE: 910-451-2390		WEATHER:	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailor	No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH	5.99					(STD)
Specific Conductivity	0.387					(m S/cm ^o)
Turbidity (Turb)	17.5					(NTU)
Dissolved Oxygen (DO)	7.35					(mg/l)
Temperature (Temp)	25.34					(°C)
ORP	93.1					

Depth to Bottom	201.84	(In) (Minus)	Depth to Water	57.12	(In)	=	144.72	HT (in)
Depth to Bottom	16.92	(Ft) (Minus)	Depth to Water	4.76	(Ft)	=	12.06	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			144.72	1	3.14	454	.0043	2.0	5.9	2
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141-MW 02	3 X 40 ml	HCL
PAH 610	USTAS4141-MW 02	2 X 1 L Amber	4 deg. C.
Lead 6010	USTAS4141-MW 02	1 X 500ml Poly	HN03

COMMENTS: Duplicate sample taken Purged Dry 1 x Vol Allowed to Recharge & Sampled

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

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125006	
			PROJECT NAME: AS 41541	
			WELL NO. USTAS4141-MW07	
			SAMPLE NO. USTAS4141-MW07	
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin		DATE: 3/28/08
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin		TIME: 0930
PHONE: 910-451-2390		WEATHER: pc 60's		
LEL:				Well Locked: [X] Yes
PID:		Sampling Device: Bailer		No

FIELD MEASUREMENTS						
	1	2	3	4	Avg	
PH	6.57					(STD)
Specific Conductivity	0.487					(m S/cm ^o)
Turbidity (Turb)	874.4					(NTU)
Dissolved Oxygen (DO)	6.13					(mg/l)
Temperature (Temp)	25.17					(°C)
ORP	156.9					

Depth to Bottom	173.08	(In) (Minus)	Depth to Water	43.56	(In)	=	129.48	HT (in)
Depth to Bottom	144.2	(Ft) (Minus)	Depth to Water	3.63	(Ft)	=	10.79	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			129.48	1	3.14	407	.0043	1.7			5.2	2.
Middle					3.14		.0043					
Bottom					3.14		.0043					
Total					3.14		.0043					

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141-MW	3 X 40 ml	HCL
PAH 610	USTAS4141-MW	2 X 1 L Amber	4 deg. C.
Lead 6010	USTAS4141-MW	1 X 500ml Poly	HN03

COMMENTS: Bio-SMAS in well (ORGANIC GROWTH)			
Purged Dry, 1x VOL.			
PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125006
			PROJECT NAME: AS 41541
			WELL NO. USTAS4141-MW <i>10</i>
			SAMPLE NO. USTAS4141-MW <i>10</i>
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE <i>3/28/08</i>
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME <i>1050</i>
PHONE: 910-451-2390		WEATHER:	
LEL:			Well Locked: ☒ Yes
PID:		Sampling Device: Bailer	No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH	<i>6.76</i>					(STD)
Specific Conductivity	<i>86.57</i>					(m S/cm ^o)
Turbidity (Turb)	<i>653.9</i>					(NTU)
Dissolved Oxygen (DO)	<i>5.79</i>					(mg/l)
Temperature (Temp)	<i>25.20</i>					(°C)
ORP	<i>48.9</i>					

Depth to Bottom	<i>178.68</i>	(In) (Minus)	Depth to Water	<i>64.68</i>	(In)	=	<i>114.00</i>	HT (in)
Depth to Bottom	<i>14.89</i>	(Ft) (Minus)	Depth to Water	<i>5.39</i>	(Ft)	=	<i>9.50</i>	HT (ft)

d = <i>2</i>	MEASUREMENTS (IN INCHES)										
r = <i>1</i>	Multiply Together					Vol.					
d/2 = <i>1</i>	BOTTOM	TOP	Layer Thickness	r ²	Π	Cubic in.	Conversion Factor	EST. GALLONS	Purge Vol.	Vol. Purged	
	TOP		<i>114.00</i>	<i>1</i>	<i>3.14</i>	<i>358</i>	<i>.0043</i>	<i>1.5</i>	<i>4.6</i>	<i>1.5</i>	
	Middle				<i>3.14</i>		<i>.0043</i>				
	Bottom				<i>3.14</i>		<i>.0043</i>				
	Total				<i>3.14</i>		<i>.0043</i>				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141-MW <i>10</i>	3 X 40 ml	HCL
PAH 610	USTAS4141-MW <i>10</i>	2 X 1 L Amber	4 deg. C.
Lead 6010	USTAS4141-MW <i>10</i>	1 X 500ml Poly	HN03

COMMENTS: *Bio Smas in well (ORGANIC Growth)*
Purged dry 1 x Vol.

PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: ☒ Yes
OTHER:			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125006
			PROJECT NAME: AS 41541
			WELL NO. USTAS4141-MW 14
			SAMPLE NO. USTAS4141-MW14
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 3/28/08
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 0700
PHONE: 910-451-2390		WEATHER: PC 60S	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailer	No

FIELD MEASUREMENTS							
	1	2	3	4	Avg.		
PH	7.12						(STD)
Specific Conductivity	0.938						(m S/cm ²)
Turbidity (Turb)	0						(NTU)
Dissolved Oxygen (DO)	7.19						(mg/l)
Temperature (Temp)	25.53						(°C)
ORP	-17.4						

Depth to Bottom	297.72	(In) (Minus)	Depth to Water	77.64	(In)	=	220.08	HT (in)
Depth to Bottom	24.81	(Ft) (Minus)	Depth to Water	6.47	(Ft)	=	18.34	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		220.08	1	3.14	691	.0043	3.0		8.9	3.0
	Middle				3.14		.0043				
	Bottom				3.14		.0043				
	Total				3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141-MW 14	3 X 40 ml	HCL
PAH 610	USTAS4141-MW 14	2 X 1 L Amber	4 deg. C.
Lead 6010	USTAS4141-MW 14	1 X 500ml Poly	HN03

COMMENTS: Purge Dry 1X Vol. Allowed To Recharge AND Sampled.

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

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125006
			PROJECT NAME: AS 41541
			WELL NO. USTAS4141-MW15
			SAMPLE NO. USTAS4141-MW15
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 3/27/88
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 1400
PHONE: 910-451-2390		WEATHER: pc 60'S	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailor	No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH	6.99	7.12	7.15	7.15		(STD)
Specific Conductivity	6.839	0.821	0.821	0.820		(m S/cm ²)
Turbidity (Turb)	17.4	1.1	0	0		(NTU)
Dissolved Oxygen (DO)	7.35	4.41	2.87	1.56		(mg/l)
Temperature (Temp)	29.76	29.23	29.17	29.18		(°C)
ORP	-47.6	-63.9	-77.1	-79.0		

Depth to Bottom	153.24	(In) (Minus)	Depth to Water	35.76	(In) =	117.48	HT (in)
Depth to Bottom	12.77	(Ft) (Minus)	Depth to Water	2.98	(Ft) =	9.79	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		117.48	1	3.14	369	.0043	1.6	4.8	5
	Middle				3.14		.0043			
	Bottom				3.14		.0043			
	Total				3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141-MW 15	3 X 40 ml	HCL
PAH 610	USTAS4141-MW 15	2 X 1 L Amber	4 deg. C.
Lead 6010	USTAS4141-MW 15	1 X 500ml Poly	HN03

COMMENTS:			
PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125006
			PROJECT NAME: AS 41541
			WELL NO. USTAS4141-MW <u>02-16</u>
			SAMPLE NO. USTAS4141-MW <u>02-16</u>
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE <u>3/27/08</u>
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME <u>1440</u>
PHONE: 910-451-2390		WEATHER: <u>PC 60-70's</u>	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailer	No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH	6.87	6.82	6.79	6.79		(STD)
Specific Conductivity	0.391	0.363	0.359	0.359		(m S/cm ²)
Turbidity (Turb)	199.4	73.9	1.4	0		(NTU)
Dissolved Oxygen (DO)	6.57	4.29	1.31	0.79		(mg/l)
Temperature (Temp)	25.56	25.76	25.75	25.74		(°C)
ORP	113.8	86.9	63.1	57.6		

Depth to Bottom	<u>173.40</u>	(In) (Minus)	Depth to Water	<u>98.88</u>	(In)	=	<u>74.52</u>	HT (in)
Depth to Bottom	<u>14.45</u>	(Ft) (Minus)	Depth to Water	<u>8.24</u>	(Ft)	=	<u>6.21</u>	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			<u>74.52</u>	<u>1</u>	3.14	<u>234</u>	.0043	<u>1.0</u>	<u>3</u>	<u>3.5</u>
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141-MW <u>02-16</u>	3 X 40 ml	HCL
PAH 610	USTAS4141-MW <u>02-16</u>	2 X 1 L Amber	4 deg. C.
Lead 6010	USTAS4141-MW <u>02-16</u>	1 X 500ml Poly	HN03
COMMENTS: <u>P.</u>			
PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125006
			PROJECT NAME: AS 41541
			WELL NO. USTAS4141-MW17
			SAMPLE NO. USTAS4141-MW17
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 3/28/68
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 0845
PHONE: 910-451-2390		WEATHER: PC 60'S	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailer	No

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

Depth to Bottom	173.40	(In) (Minus)	Depth to Water	78.72	(In)	=	94.68	HT (in)
Depth to Bottom	14.45	(Ft) (Minus)	Depth to Water	6.56	(Ft)	=	7.89	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			94.68	1	3.14	297	.0043	1.3		3.8	4
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141-MW17	3 X 40 ml	HCL
PAH 610	USTAS4141-MW 17	2 X 1 L Amber	4 deg. C.
Lead 6010	USTAS4141-MW17	1 X 500ml Poly	HN03

COMMENTS: strong fuel odor in purge water.
no field readings taken due to odor.

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

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125006
			PROJECT NAME: AS 41541
			WELL NO. USTAS4141-MW 18
			SAMPLE NO. USTAS4141-MW 18
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 3/27/08
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 1515
PHONE: 910-451-2390		WEATHER: PC 70'S	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailer	No

FIELD MEASUREMENTS						
	1	2	3	4	Avg:	
PH	6.75	6.67	6.53	6.53		(STD)
Specific Conductivity	0.791	0.790	0.790	0.790		(m S/cm ^o)
Turbidity (Turb)	0	0	0	0		(NTU)
Dissolved Oxygen (DO)	6.83	5.76	2.17	1.57		(mg/l)
Temperature (Temp)	26.17	26.22	26.23	26.25		(°C)
ORP	53.9	37.6	12.9	12.8		

Depth to Bottom	180.84	(In) (Minus)	Depth to Water	82.44	(In)	=	98.40	HT (in)
Depth to Bottom	15.07	(Ft) (Minus)	Depth to Water	6.87	(Ft)	=	8.20	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			98.40	1	3.14	309	.0043	1.3		4.0	5
Middle					3.14		.0043				
Bottom					3.14		.0043				
Total					3.14		.0043				

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141-MW 18	3 X 40 ml	HCL
PAH 610	USTAS4141-MW 18	2 X 1 L Amber	4 deg. C.
Lead 6010	USTAS4141-MW 18	1 X 500ml Poly	HN03
COMMENTS:			
PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 126006
			PROJECT NAME: AS 4141
			WELL NO. USTAS4141-MW 19
			SAMPLE NO. USTAS4141-MW 19
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 3/28/08
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME
PHONE: 910-451-2390		WEATHER:	
LEL:			Well Locked: ☒ Yes
PID:		Sampling Device: Bailer	☐ No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH						(STD)
Specific Conductivity						(m S/cm ²)
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)

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 602	USTAS4141-MW	3 X 40 ml	HCL
PAH 610	USTAS4141-MW	2 X 1 L Amber	4 deg. C.
Lead 6010	USTAS4141-MW	1 X 500ml Poly	HN03

COMMENTS: NO SAMPLE TAKEN Product
IN Well 0.01' product 6.40' / 6.41'

PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: ☒
OTHER: ☐			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 126006
			PROJECT NAME: AS 4141
			WELL NO. USTAS4141-MW <i>RW01</i>
			SAMPLE NO. USTAS4141-MW <i>RW01</i>
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE <i>3/28/08</i>
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME
PHONE: 910-451-2390		WEATHER:	
LEL:			Well Locked: ☒ Yes
PID:		Sampling Device: Bailer	☐ No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH						(STD)
Specific Conductivity						(m S/cm ^o)
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)

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.
	TOP			1	3.14		.0043			
	Middle				3.14		.0043			
	Bottom				3.14		.0043			
	Total				3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141-MW	3 X 40 ml	HCL
PAH 610	USTAS4141-MW	2 X 1 L Amber	4 deg. C.
Lead 6010	USTAS4141-MW	1 X 500ml Poly	HN03

COMMENTS: *NO SAMPLE TAKEN Product in well 0.44' 6.63'/6.19.*

PURGE DISCHARGED:	DRUM: ☐	DRUM#	SITE TREATMENT: ☒
OTHER: ☐			

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 126006
			PROJECT NAME: AS 4141
			WELL NO. USTAS4141-MW <i>08603R</i>
			SAMPLE NO. USTAS4141-MW <i>08603R</i>
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE <i>3/28/08</i>
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME
PHONE: 910-451-2390		WEATHER:	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailer	☐ No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH						(STD)
Specific Conductivity						(m S/cm ²)
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)

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 602	USTAS4141-MW	3 X 40 ml	HCL
PAH 610	USTAS4141-MW	2 X 1 L Amber	4 deg. C.
Lead 6010	USTAS4141-MW	1 X 500ml Poly	HN03

COMMENTS: *NO sample TAKEN Product in well 0.40' 7.71/7.31*

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

 Shaw Environmental & Infrastructure, Inc.	WELL OR GROUND WATER DATA SHEET		PROJECT NUMBER: 125006
			PROJECT NAME: AS 41541
			WELL NO. USTAS4141-MW 08606
			SAMPLE NO. USTAS4141-MW 08606
PROJECT LOCATION: Camp Lejeune		LOGGER: Mark Martin	DATE 3/28/08
PROJECT CONTACT: Mark Martin		SAMPLER: Mark Martin	TIME 0800
PHONE: 910-451-2390		WEATHER: PC 60S	
LEL:			Well Locked: [X] Yes
PID:		Sampling Device: Bailer	No

FIELD MEASUREMENTS						
	1	2	3	4	Avg.	
PH	6.42	5.96	5.31	5.31		(STD)
Specific Conductivity	0.489	0.476	0.469	0.469		(m S/cm ²)
Turbidity (Turb)	170.1	0.8	0	0		(NTU)
Dissolved Oxygen (DO)	5.93	4.97	3.17	1.17		(mg/l)
Temperature (Temp)	24.38	24.52	24.52	24.52		(°C)
ORP	197.4	238.4	256.1	256.3		

Depth to Bottom	208.20	(In) (Minus)	Depth to Water	61.92	(In)	=	146.28	HT (in)
Depth to Bottom	17.35	(Ft) (Minus)	Depth to Water	5.16	(Ft)	=	12.19	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			146.28	1	3.14	459	.0043	2.0	5.9	6
Middle					3.14		.0043			
Bottom					3.14		.0043			
Total					3.14		.0043			

ANALYTE	CONTAINER NUMBER	SIZE	PRESERVATIVE
VOC 602	USTAS4141-MW 08606	3 X 40 ml	HCL
PAH 610	USTAS4141-MW 08606	2 X 1 L Amber	4 deg. C.
Lead 6010	USTAS4141-MW 08606	1 X 500ml Poly	HN03
COMMENTS: Organic growth in well purged out			
PURGE DISCHARGED:	DRUM:	DRUM#	SITE TREATMENT: [X]
OTHER:			

APPENDIX C

GROUNDWATER SAMPLE LABORATORY ANALYTICAL REPORTS



11/12/07



Technical Report for

Shaw E & I, Inc.

Camp Lejeune-AS4141

126006

Accutest Job Number: F53489

Sampling Date: 10/25/07

Report to:

Shaw E & I, Inc.

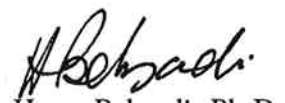
natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 36



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
This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Sample Results	4
2.1: F53489-1: USTAS4141-MW15	5
2.2: F53489-2: USTAS4141-MW16	8
2.3: F53489-3: USTAS4141-MW18	11
2.4: F53489-4: USTAS4141-OBG06	14
Section 3: Misc. Forms	17
3.1: Chain of Custody	18
Section 4: GC/MS Semi-volatiles - QC Data Summaries	20
4.1: Method Blank Summary	21
4.2: Blank Spike Summary	23
4.3: Matrix Spike/Matrix Spike Duplicate Summary	24
Section 5: GC Volatiles - QC Data Summaries	25
5.1: Method Blank Summary	26
5.2: Blank Spike Summary	28
5.3: Matrix Spike/Matrix Spike Duplicate Summary	30
Section 6: Metals Analysis - QC Data Summaries	32
6.1: Prep QC MP13244: Pb	33



Sample Summary

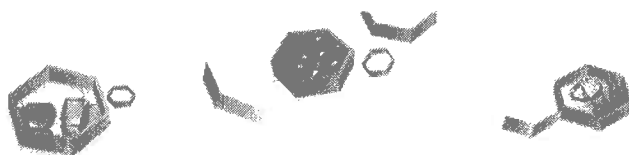
Shaw E & I, Inc.

Job No: F53489

Camp Lejeune-AS4141

Project No: 126006

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F53489-1	10/25/07	09:00 MM	10/26/07	AQ	Ground Water	USTAS4141-MW15
F53489-2	10/25/07	10:15 MM	10/26/07	AQ	Ground Water	USTAS4141-MW16
F53489-3	10/25/07	11:00 MM	10/26/07	AQ	Ground Water	USTAS4141-MW18
F53489-4	10/25/07	13:30 MM	10/26/07	AQ	Ground Water	USTAS4141-OBG06
F53489-5	10/25/07	00:00 MM	10/26/07	AQ	Trip Blank Water	USTAS4141-TRIP BLANK



Sample Results

Report of Analysis

Report of Analysis

Page 1 of 1

Client Sample ID:	USTAS4141-MW15	Date Sampled:	10/25/07
Lab Sample ID:	F53489-1	Date Received:	10/26/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R11620.D	1	10/31/07	NJ	10/31/07	OP22963	SR535
Run #2							

Run #	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	1.3	ug/l	
208-96-8	Acenaphthylene	ND	4.8	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.96	ug/l	
90-12-0	1-Methylnaphthalene	4.2	4.8	1.2	ug/l	J
91-57-6	2-Methylnaphthalene	4.3	4.8	0.96	ug/l	J
91-20-3	Naphthalene	ND	4.8	1.2	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	62%		40-106%
1718-51-0	Terphenyl-d14	66%		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

Page 1 of 1

Client Sample ID:	USTAS4141-MW15	Date Sampled:	10/25/07
Lab Sample ID:	F53489-1	Date Received:	10/26/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 601/602		
Project:	Camp Lejeune-AS4141		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ030715.D	1	10/30/07	NJ	n/a	n/a	GQQ1163
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	6.0	6.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	1.0	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	98%		73-118%

(a) Confirmed by GC/MS

(b) Elevated reporting limits 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

Page 1 of 1

Client Sample ID: USTAS4141-MW15
Lab Sample ID: F53489-1
Matrix: AQ - Ground Water
Project: Camp Lejeune-AS4141

Date Sampled: 10/25/07
Date Received: 10/26/07
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.1 U	5.0	2.1	ug/l	1	10/27/07	10/26/07 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6076

(2) Prep QC Batch: MP13244

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID: USTAS4141-MW16 Lab Sample ID: F53489-2 Matrix: AQ - Ground Water Method: EPA 625 EPA 625 Project: Camp Lejeune-AS4141							
				Date Sampled: 10/25/07 Date Received: 10/26/07 Percent Solids: n/a			
Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	R11621.D	1	10/31/07	NJ	10/31/07	OP22963	SR535
	Initial Volume	Final Volume					
Run #1	1050 ml	1.0 ml					
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	1.3	ug/l	
208-96-8	Acenaphthylene	ND	4.8	1.0	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	1.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.95	ug/l	
90-12-0	1-Methylnaphthalene	78.9	4.8	1.2	ug/l	
91-57-6	2-Methylnaphthalene	76.6	4.8	0.95	ug/l	
91-20-3	Naphthalene	83.6	4.8	1.1	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%		42-108%
321-60-8	2-Fluorobiphenyl	61%		40-106%
1718-51-0	Terphenyl-d14	71%		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

Page 1 of 1

Client Sample ID: USTAS4141-MW16 Lab Sample ID: F53489-2 Matrix: AQ - Ground Water Method: EPA 601/602 Project: Camp Lejeune-AS4141							
				Date Sampled: 10/25/07 Date Received: 10/26/07 Percent Solids: n/a			
Run #1 ^a	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	QQ030716.D	1	10/30/07	NJ	n/a	n/a	GQQ1163
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	41	41	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene ^b	ND	13	13	ug/l	
100-41-4	Ethylbenzene	10.6	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)	16.0	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	110%		70-120%
98-08-8	aaa-Trifluorotoluene	97%		73-118%

(a) All hits confirmed by GC/MS.

(b) Elevated reporting limits 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

Page 1 of 1

Client Sample ID: USTAS4141-MW16
Lab Sample ID: F53489-2
Matrix: AQ - Ground Water
Project: Camp Lejeune-AS4141

Date Sampled: 10/25/07
Date Received: 10/26/07
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead ^a	8.4 U	20	8.4	ug/l	1	10/27/07	10/26/07 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6076

(2) Prep QC Batch: MP13244

(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

Page 1 of 1

Client Sample ID: USTAS4141-MW18							
Lab Sample ID: F53489-3				Date Sampled: 10/25/07			
Matrix: AQ - Ground Water				Date Received: 10/26/07			
Method: EPA 625 EPA 625				Percent Solids: n/a			
Project: Camp Lejeune-AS4141							
	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R11622.D	1	10/31/07	NJ	10/31/07	OP22963	SR535
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	1.4	ug/l	
208-96-8	Acenaphthylene	ND	4.9	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.9	0.97	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.9	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.9	0.97	ug/l	
91-20-3	Naphthalene	ND	4.9	1.2	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	65%		42-108%
321-60-8	2-Fluorobiphenyl	64%		40-106%
1718-51-0	Terphenyl-d14	66%		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

Page 1 of 1

Client Sample ID:	USTAS4141-MW18	Date Sampled:	10/25/07
Lab Sample ID:	F53489-3	Date Received:	10/26/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 601/602		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ030657.D	1	10/29/07	NJ	n/a	n/a	GQQ1160
Run #2							

Run #	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	98%		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

Page 1 of 1

Client Sample ID: USTAS4141-MW18
Lab Sample ID: F53489-3
Matrix: AQ - Ground Water
Project: Camp Lejeune-AS4141

Date Sampled: 10/25/07
Date Received: 10/26/07
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead ^a	42 U	50	42	ug/l	1	10/27/07	10/26/07 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6076

(2) Prep QC Batch: MP13244

(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

Page 1 of 1

Client Sample ID:	USTAS4141-OBG06	Date Sampled:	10/25/07
Lab Sample ID:	F53489-4	Date Received:	10/26/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R11623.D	1	10/31/07	NJ	10/31/07	OP22963	SR535
Run #2							

Run #	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	1.3	ug/l	
208-96-8	Acenaphthylene	ND	4.8	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.96	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	1.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	1.2	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	60%		40-106%
1718-51-0	Terphenyl-d14	68%		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

Page 1 of 1

Client Sample ID:	USTAS4141-OBG06	Date Sampled:	10/25/07
Lab Sample ID:	F53489-4	Date Received:	10/26/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 601/602		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ030658.D	1	10/29/07	NJ	n/a	n/a	GQQ1160
Run #2							

Run #	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	98%		70-120%
98-08-8	aaa-Trifluorotoluene	98%		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

Page 1 of 1

Client Sample ID: USTAS4141-OBG06	Date Sampled: 10/25/07
Lab Sample ID: F53489-4	Date Received: 10/26/07
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Camp Lejeune-AS4141	

Metals Analysis

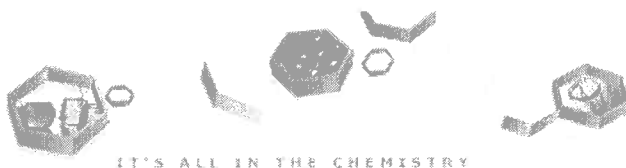
Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.1 U	5.0	2.1	ug/l	1	10/27/07	10/26/07 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6076

(2) Prep QC Batch: MP13244

RL = Reporting Limit
MDL = Method Detection Limit

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



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

F53489

COC Number:
125709-AS4141-102507

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 CAMP LEJEUNE -AS4141					Project Location CAMP LEJEUNE, NC					Analysis Desired										
Project Number 125709			Contact Mark Martin		P.O. Number			Reviewed by		VOC 602/ w Xylenes PAH 625 Total Lead By 3030C										
Client Rep US NAVY - LANTDIV					Project Manager Joe Colella															
Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description	Number of Containers													
1	USTAS4141-MW15	10/25/07	9:00		X	USTAS4141-MW15	6	X	X	X										
2	USTAS4141-MW16	10/25/07	10:15		X	USTAS4141-MW16	6	X	X	X										
3	USTAS4141-MW18	10/25/07	11:00		X	USTAS4141-MW18	6	X	X	X										
4	USTAS4141-OBG06	10/25/07	13:30		X	USTAS4141-OBG06	6	X	X	X										
5	USTAS4151-TRIPBLANK	10/25/07			X	USTAS4151-TRIPBLANK	2	X												
6																				
7																				
8																				
9																				
10																				

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 -- 5	<i>[Signature]</i>	FedEx 8626 7690 6964	10/25/07	16:00	14 Day TAT
2		FX	<i>[Signature]</i>	10/26/07	09:30	
3						

2.4

F53489: Chain of Custody

Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F53489 CLIENT: SHA w PROJECT: Camp Lejeune - AS 4/41
 DATE/TIME RECEIVED: 10-26-07 09:30 # OF COOLERS RECEIVED: 1 COOLER TEMPS: 2.4
 METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER
 AIRBILL NUMBERS: 8626 7690 6964

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

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 OR LAB FILTERED METALS ? 0

SUMMARY OF COMMENTS:

Coc states there's a trip blank none provided

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 Jmc 10-26-07 TECHNICIAN SIGNATURE/DATE Jc 10-26-07 ASBD 10/03/06

F53489: 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: F53489
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22963-MB	R11619.D	1	10/31/07	NJ	10/31/07	OP22963	SR535

The QC reported here applies to the following samples:

Method: EPA 625

F53489-1, F53489-2, F53489-3, F53489-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	1.4	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	1.2	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	58%	42-108%
321-60-8	2-Fluorobiphenyl	58%	40-106%
1718-51-0	Terphenyl-d14	71%	39-121%

Method Blank Summary

Page 1 of 1

Job Number: F53489
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22963-MB	R11653.D	1	11/01/07	NJ	10/31/07	OP22963	SR536

The QC reported here applies to the following samples:

Method: EPA 625

F53489-1, F53489-2, F53489-3, F53489-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	1.4	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	1.2	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	59% 42-108%
321-60-8	2-Fluorobiphenyl	58% 40-106%
1718-51-0	Terphenyl-d14	71% 39-121%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F53489
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22963-MS	R11625.D	1	10/31/07	NJ	10/31/07	OP22963	SR535
OP22963-MSD	R11626.D	1	10/31/07	NJ	10/31/07	OP22963	SR535
F53490-1	R11624.D	1	10/31/07	NJ	10/31/07	OP22963	SR535

The QC reported here applies to the following samples:

Method: EPA 625

F53489-1, F53489-2, F53489-3, F53489-4

CAS No.	Compound	F53490-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		96.2	72.1	75	77.0	80	7	58-106/21
208-96-8	Acenaphthylene	ND		96.2	71.7	75	76.7	80	7	58-105/21
120-12-7	Anthracene	ND		96.2	78.8	82	82.5	86	5	65-108/19
56-55-3	Benzo(a)anthracene	ND		96.2	77.8	81	82.0	85	5	63-111/19
50-32-8	Benzo(a)pyrene	ND		96.2	79.5	83	82.7	86	4	62-106/20
205-99-2	Benzo(b)fluoranthene	ND		96.2	73.7	77	77.9	81	6	63-109/20
191-24-2	Benzo(g,h,i)perylene	ND		96.2	80.9	84	84.9	88	5	61-111/21
207-08-9	Benzo(k)fluoranthene	ND		96.2	83.2	87	85.2	89	2	64-111/20
218-01-9	Chrysene	ND		96.2	78.4	82	82.3	86	5	64-111/19
53-70-3	Dibenzo(a,h)anthracene	ND		96.2	82.7	86	86.7	90	5	62-112/20
206-44-0	Fluoranthene	ND		96.2	82.8	86	86.2	90	4	65-114/21
86-73-7	Fluorene	ND		96.2	75.0	78	79.9	83	6	61-106/19
193-39-5	Indeno(1,2,3-cd)pyrene	ND		96.2	101	105	105	109	4	61-113/20
90-12-0	1-Methylnaphthalene	ND		96.2	71.9	75	78.4	82	9	52-102/25
91-57-6	2-Methylnaphthalene	ND		96.2	74.6	78	78.9	82	6	56-112/26
91-20-3	Naphthalene	ND		96.2	67.3	70	71.0	74	5	50-104/28
85-01-8	Phenanthrene	ND		96.2	77.1	80	81.6	85	6	65-108/20
129-00-0	Pyrene	ND		96.2	77.1	80	81.1	84	5	60-113/20

CAS No.	Surrogate Recoveries	MS	MSD	F53490-1	Limits
4165-60-0	Nitrobenzene-d5	67%	70%	66%	42-108%
321-60-8	2-Fluorobiphenyl	67%	70%	63%	40-106%
1718-51-0	Terphenyl-d14	76%	79%	77%	39-121%



GC Volatiles

5

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: F53489
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1160-MB	QQ030646.D 1		10/29/07	NJ	n/a	n/a	GQQ1160

The QC reported here applies to the following samples:

Method: EPA 601/602

F53489-3, F53489-4

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	97% 70-120%
98-08-8	aaa-Trifluorotoluene	98% 73-118%

Method Blank Summary

Page 1 of 1

Job Number: F53489
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1163-MB	QQ030714.D1		10/30/07	NJ	n/a	n/a	GQQ1163

The QC reported here applies to the following samples:

Method: EPA 601/602

F53489-1, F53489-2

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	101% 70-120%
98-08-8	aaa-Trifluorotoluene	100% 73-118%

Blank Spike Summary

Page 1 of 1

Job Number: F53489
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1160-BS	QQ030645.D 1		10/29/07	NJ	n/a	n/a	GQQ1160

The QC reported here applies to the following samples:

Method: EPA 601/602

F53489-3, F53489-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.3	97	80-120
108-90-7	Chlorobenzene	20	19.4	97	79-118
95-50-1	1,2-Dichlorobenzene	20	19.1	96	76-117
541-73-1	1,3-Dichlorobenzene	20	19.1	96	78-120
106-46-7	1,4-Dichlorobenzene	20	19.3	97	78-117
100-41-4	Ethylbenzene	20	19.0	95	79-121
1634-04-4	Methyl Tert Butyl Ether	20	18.5	93	72-113
108-88-3	Toluene	20	19.1	96	79-121
1330-20-7	Xylenes (total)	60	58.0	97	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	107%	70-120%
98-08-8	aaa-Trifluorotoluene	102%	73-118%

Blank Spike Summary

Page 1 of 1

Job Number: F53489
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1163-BS	QQ030713.D1		10/30/07	NJ	n/a	n/a	GQQ1163

The QC reported here applies to the following samples:

Method: EPA 601/602

F53489-1, F53489-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	18.8	94	80-120
108-90-7	Chlorobenzene	20	18.7	94	79-118
95-50-1	1,2-Dichlorobenzene	20	18.2	91	76-117
541-73-1	1,3-Dichlorobenzene	20	18.3	92	78-120
106-46-7	1,4-Dichlorobenzene	20	18.4	92	78-117
100-41-4	Ethylbenzene	20	18.3	92	79-121
1634-04-4	Methyl Tert Butyl Ether	20	17.9	90	72-113
108-88-3	Toluene	20	18.4	92	79-121
1330-20-7	Xylenes (total)	60	55.9	93	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	103%	70-120%
98-08-8	aaa-Trifluorotoluene	98%	73-118%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F53489
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F53489-3MS	QQ030659.D 1		10/29/07	NJ	n/a	n/a	GQQ1160
F53489-3MSD	QQ030660.D 1		10/29/07	NJ	n/a	n/a	GQQ1160
F53489-3	QQ030657.D 1		10/29/07	NJ	n/a	n/a	GQQ1160

The QC reported here applies to the following samples:

Method: EPA 601/602

F53489-3, F53489-4

CAS No.	Compound	F53489-3		Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits
		ug/l	Q							Rec/RPD
71-43-2	Benzene	ND		20	18.7	94	18.7	94	0	80-120/10
108-90-7	Chlorobenzene	ND		20	18.8	94	18.9	95	1	79-118/10
95-50-1	1,2-Dichlorobenzene	ND		20	18.5	93	18.6	93	1	76-117/18
541-73-1	1,3-Dichlorobenzene	ND		20	18.7	94	18.8	94	1	78-120/13
106-46-7	1,4-Dichlorobenzene	ND		20	18.6	93	18.8	94	1	78-117/11
100-41-4	Ethylbenzene	ND		20	18.5	93	18.5	93	0	79-121/9
1634-04-4	Methyl Tert Butyl Ether	ND		20	18.0	90	18.5	93	3	72-113/13
108-88-3	Toluene	ND		20	18.6	93	18.6	93	0	79-121/10
1330-20-7	Xylenes (total)	ND		60	56.3	94	56.7	95	1	80-119/8

CAS No.	Surrogate Recoveries	MS	MSD	F53489-3	Limits
460-00-4	4-Bromofluorobenzene	105%	105%	99%	70-120%
98-08-8	aaa-Trifluorotoluene	99%	100%	98%	73-118%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F53489
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F53490-1MS	QQ030718.D 1		10/30/07	NJ	n/a	n/a	GQQ1163
F53490-1MSD	QQ030719.D 1		10/30/07	NJ	n/a	n/a	GQQ1163
F53490-1 ^a	QQ030717.D 1		10/30/07	NJ	n/a	n/a	GQQ1163

The QC reported here applies to the following samples:

Method: EPA 601/602

F53489-1, F53489-2

CAS No.	Compound	F53490-1 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	18.6	93	18.3	92	2	80-120/10
108-90-7	Chlorobenzene	ND	20	18.6	93	18.3	92	2	79-118/10
95-50-1	1,2-Dichlorobenzene	0.90	J 20	18.8	90	18.4	88	2	76-117/18
541-73-1	1,3-Dichlorobenzene	ND	20	18.3	92	18.0	90	2	78-120/13
106-46-7	1,4-Dichlorobenzene	ND	20	18.4	92	18.1	91	2	78-117/11
100-41-4	Ethylbenzene	ND	20	18.2	91	18.0	90	1	79-121/9
1634-04-4	Methyl Tert Butyl Ether	ND	20	18.4	92	18.1	91	2	72-113/13
108-88-3	Toluene	ND	20	18.3	92	18.1	91	1	79-121/10
1330-20-7	Xylenes (total)	ND	60	56.0	93	55.1	92	2	80-119/8

CAS No.	Surrogate Recoveries	MS	MSD	F53490-1	Limits
460-00-4	4-Bromofluorobenzene	104%	107%	100%	70-120%
98-08-8	aaa-Trifluorotoluene	98%	101%	97%	73-118%

(a) All hits confirmed by dual column analysis.



Metals Analysis

9

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: F53489
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

QC Batch ID: MP13244
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/27/07

Metal	RL	IDL	MB raw	final
Aluminum	200	48		
Antimony	6.0	3.3		
Arsenic	10	3.7		
Barium	200	5		
Beryllium	4.0	1		
Cadmium	5.0	1		
Calcium	1000	100		
Chromium	10	.92		
Cobalt	50	1		
Copper	25	1.2		
Iron	300	14		
Lead	5.0	2.1	-0.28	<5.0
Magnesium	5000	100		
Manganese	15	1		
Molybdenum	50	1.2		
Nickel	40	1		
Potassium	10000	100		
Selenium	10	4		
Silver	10	.77		
Sodium	10000	500		
Thallium	10	5.6		
Tin	50	2.4		
Vanadium	50	1		
Zinc	20	5		

Associated samples MP13244: F53489-1, F53489-2, F53489-3, F53489-4

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

6.1.1
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F53489
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

QC Batch ID: MP13244
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

10/27/07

10/27/07

Metal	F53489-1 Original DUP	RPD	QC Limits	F53489-1 Original MS	Spikelot MPFLICP1 % Rec	QC Limits			
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead	0.0	0.0 (a)	NC	0-20	0.0	499	500	99.8	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Tin									
Vanadium									
Zinc									

Associated samples MP13244: F53489-1, F53489-2, F53489-3, F53489-4

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

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

6.1.2
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F53489
 Account: ITVAVAB - Shaw E & I, Inc.
 Project: Camp Lejeune-AS4141

QC Batch ID: MP13244
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/27/07

Metal	BSP Result	Spikelot MPFLICP1 % Rec	QC Limits
-------	---------------	----------------------------	--------------

Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	497	500	99.4	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Thallium				
Tin				
Vanadium				
Zinc				

Associated samples MP13244: F53489-1, F53489-2, F53489-3, F53489-4

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

6.1.3
6

SERIAL DILUTION RESULTS SUMMARY

Login Number: F53489
 Account: ITVAVAB - Shaw E & I, Inc.
 Project: Camp Lejeune-AS4141

QC Batch ID: MP13244
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/27/07

Metal	F53489-1	Original	SDL 1:5	RPD	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 MP13244: F53489-1, F53489-2, F53489-3, F53489-4

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

6.1.4
 6



11/28/07

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-AS4141

126006

Accutest Job Number: F53559

Sampling Date: 10/27/07



Report to:

Shaw E & I, Inc.

natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 33



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
This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Sample Results	4
2.1: F53559-1: USTAS4141-MW07	5
2.2: F53559-2: USTAS4141-MW10	8
2.3: F53559-3: USTAS4141-MW10D	11
Section 3: Misc. Forms	14
3.1: Chain of Custody	15
Section 4: GC/MS Semi-volatiles - QC Data Summaries	17
4.1: Method Blank Summary	18
4.2: Blank Spike Summary	20
4.3: Matrix Spike/Matrix Spike Duplicate Summary	21
Section 5: GC Volatiles - QC Data Summaries	22
5.1: Method Blank Summary	23
5.2: Blank Spike Summary	25
5.3: Matrix Spike/Matrix Spike Duplicate Summary	27
Section 6: Metals Analysis - QC Data Summaries	29
6.1: Prep QC MP13273: Pb	30



Sample Summary

Shaw E & I, Inc.

Job No: F53559

Camp Lejeune-AS4141

Project No: 126006

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
F53559-1	10/27/07	15:00 MM	10/30/07	AQ Ground Water	USTAS4141-MW07
F53559-2	10/27/07	16:00 MM	10/30/07	AQ Ground Water	USTAS4141-MW10
F53559-3	10/27/07	16:00 MM	10/30/07	AQ Ground Water	USTAS4141-MW10D



IT'S ALL IN THE CHEMISTRY

Sample Results

Report of Analysis

Report of Analysis

Page 1 of 1

Client Sample ID:	USTAS4141-MW07	Date Sampled:	10/27/07
Lab Sample ID:	F53559-1	Date Received:	10/30/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-AS4141		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R11631.D	1	11/01/07	NJ	10/31/07	OP22963	SR535
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	1.3	ug/l	
208-96-8	Acenaphthylene	ND	4.8	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.96	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	1.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	1.2	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	62%		40-106%
1718-51-0	Terphenyl-d14	69%		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

Page 1 of 1

Client Sample ID:	USTAS4141-MW07	Date Sampled:	10/27/07
Lab Sample ID:	F53559-1	Date Received:	10/30/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 601/602		
Project:	Camp Lejeune-AS4141		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ031001.D	1	11/07/07	NJ	n/a	n/a	GQQ1175
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	105%		70-120%
98-08-8	aaa-Trifluorotoluene	90%		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

Page 1 of 1

Client Sample ID: USTAS4141-MW07	Date Sampled: 10/27/07
Lab Sample ID: F53559-1	Date Received: 10/30/07
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Camp Lejeune-AS4141	

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.1 U	5.0	2.1	ug/l	1	10/30/07	10/30/07 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6083

(2) Prep QC Batch: MP13273

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID:	USTAS4141-MW10	Date Sampled:	10/27/07
Lab Sample ID:	F53559-2	Date Received:	10/30/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R11632.D	1	11/01/07	NJ	10/31/07	OP22963	SR535
Run #2							

Run #	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	4.9	1.4	ug/l	
208-96-8	Acenaphthylene	ND	4.9	1.1	ug/l	
120-12-7	Anthracene	ND	4.9	0.98	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.9	0.98	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.9	0.98	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.9	0.98	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.98	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.9	0.98	ug/l	
218-01-9	Chrysene	ND	4.9	0.98	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.98	ug/l	
206-44-0	Fluoranthene	ND	4.9	0.98	ug/l	
86-73-7	Fluorene	ND	4.9	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.9	0.98	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.9	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.9	0.98	ug/l	
91-20-3	Naphthalene	ND	4.9	1.2	ug/l	
85-01-8	Phenanthrene	ND	4.9	0.98	ug/l	
129-00-0	Pyrene	ND	4.9	0.98	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	56%		42-108%
321-60-8	2-Fluorobiphenyl	59%		40-106%
1718-51-0	Terphenyl-d14	70%		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

Page 1 of 1

Client Sample ID: USTAS4141-MW10 Lab Sample ID: F53559-2 Matrix: AQ - Ground Water Method: EPA 601/602 Project: Camp Lejeune-AS4141							
				Date Sampled: 10/27/07 Date Received: 10/30/07 Percent Solids: n/a			
Run #1 ^a	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	QQQ031048.D	1	11/08/07	NJ	n/a	n/a	GQQ1177
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	8.0	8.0	ug/l	
541-73-1	1,3-Dichlorobenzene ^b	ND	2.0	2.0	ug/l	
106-46-7	1,4-Dichlorobenzene ^b	ND	2.0	2.0	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	111%		70-120%		
98-08-8	aaa-Trifluorotoluene	87%		73-118%		

(a) Confirmed by GC/MS

(b) Elevated reporting limits 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

Page 1 of 1

Client Sample ID: USTAS4141-MW10
Lab Sample ID: F53559-2
Matrix: AQ - Ground Water
Project: Camp Lejeune-AS4141

Date Sampled: 10/27/07
Date Received: 10/30/07
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead ^a	21 U	50	21	ug/l	1	10/30/07	10/30/07 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6083

(2) Prep QC Batch: MP13273

(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

Page 1 of 1

Client Sample ID:	USTAS4141-MW10D	Date Sampled:	10/27/07
Lab Sample ID:	F53559-3	Date Received:	10/30/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-AS4141		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	R11654.D	4	11/01/07	NJ	10/31/07	OP22963	SR536
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	19	5.4	ug/l	
208-96-8	Acenaphthylene	ND	19	4.3	ug/l	
120-12-7	Anthracene	ND	19	3.9	ug/l	
56-55-3	Benzo(a)anthracene	ND	19	3.9	ug/l	
50-32-8	Benzo(a)pyrene	ND	19	3.9	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	19	3.9	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	19	3.9	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	19	3.9	ug/l	
218-01-9	Chrysene	ND	19	3.9	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	19	3.9	ug/l	
206-44-0	Fluoranthene	ND	19	3.9	ug/l	
86-73-7	Fluorene	ND	19	4.7	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	19	3.9	ug/l	
90-12-0	1-Methylnaphthalene	ND	19	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	19	3.9	ug/l	
91-20-3	Naphthalene	ND	19	4.7	ug/l	
85-01-8	Phenanthrene	ND	19	3.9	ug/l	
129-00-0	Pyrene	ND	19	3.9	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	75%		42-108%
321-60-8	2-Fluorobiphenyl	76%		40-106%
1718-51-0	Terphenyl-d14	70%		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

Page 1 of 1

Client Sample ID:	USTAS4141-MW10D	Date Sampled:	10/27/07
Lab Sample ID:	F53559-3	Date Received:	10/30/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 601/602		
Project:	Camp Lejeune-AS4141		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ031049.D	1	11/08/07	NJ	n/a	n/a	GQQ1177
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	6.0	6.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	1.0	ug/l	J
106-46-7	1,4-Dichlorobenzene	ND	1.0	1.0	ug/l	J
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	110%		70-120%
98-08-8	aaa-Trifluorotoluene	87%		73-118%

(a) Confirmed by GC/MS

(b) Elevated reporting limits 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

Page 1 of 1

Client Sample ID:	USTAS4141-MW10D	Date Sampled:	10/27/07
Lab Sample ID:	F53559-3	Date Received:	10/30/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Camp Lejeune-AS4141		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead ^a	21 U	50	21	ug/l	1	10/30/07	10/30/07 RS	SW846 6010B ¹	SM 3030C ²

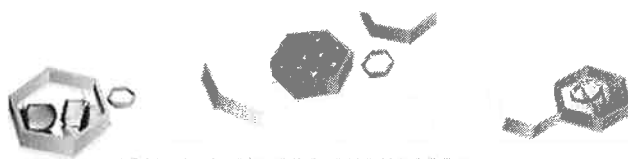
(1) Instrument QC Batch: MA6083

(2) Prep QC Batch: MP13273

(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



IT'S ALL IN THE CHEMISTRY



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

COC Number:
125008-AS4141-102707



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 CAMP LEJEUNE -AS4141			Project Location CAMP LEJEUNE, NC							Analysis Desired								
Project Number 125006		Contact Mark Martin		P.O. Number			Reviewed by		VOC 6021 w xylenes	PAH 625	Total Lead By 3030C							
Client Rep US NAVY - LANTDIV			Project Manager Joe Colella															
Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description	Number of Containers											
①	USTAS4141-MW07	10/27/07	15:00		X	USTAS4141-MW07	6	X	X	X								
②	USTAS4141-MW10	10/27/07	16:00		X	USTAS4141-MW10	6	X	X	X								
③	USTAS4141-MW10D	10/27/07	16:00		X	USTAS4141-MW10 Dup	6	X	X	X								
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks 14 Day TAT
1	1 -- 3	<i>[Signature]</i>	FedEx 8626 7890 8942	1600	16:00	
2	<i>EX</i>	<i>EX</i>	<i>E.T</i>	10-30-07	09:10	
3						

2.8

F53559: Chain of Custody

Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F53559 CLIENT: Shaw PROJECT: Camp Legume - AS441
 DATE/TIME RECEIVED: 10/30/07 09:30 # OF COOLERS RECEIVED: 1 COOLER TEMPS: 2.8
 METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER
 AIRBILL NUMBERS: 8602 7690 6948

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

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 OR 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. 10/30/07 TECHNICIAN SIGNATURE/DATE _____ ASBD 10/03/06

F53559: 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: F53559
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22963-MB	R11619.D	1	10/31/07	NJ	10/31/07	OP22963	SR535

The QC reported here applies to the following samples:

Method: EPA 625

F53559-1, F53559-2, F53559-3

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	1.4	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	1.2	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	58% 42-108%
321-60-8	2-Fluorobiphenyl	58% 40-106%
1718-51-0	Terphenyl-d14	71% 39-121%

Method Blank Summary

Page 1 of 1

Job Number: 559 F5

Account: ITVAVAB Shaw E & I, Inc.

Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2296	B .IR1165	1	11/01/07	NJ	1/07 10/	OP2296 6	SR5

The QC reported here applies to the following samples:

Method: EPA 625

559- F5 559-2FF 559- 5

	CAS No.	Compound	Result	RL	MDL	Units	Q
2-9	8	Acenaphthene	ND	5.0	1.4	ug/l	
	208-96-8	Acenaphthylene	ND	5.0	1.1	ug/l	
	120-12-7	Anthracene	ND	5.0	1.0	ug/l	
	56-55-	Benzo(a)anthracene	ND	5.0	1.0	ug/l	
2-8	50-	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	
-70	5	Dibenzo(a,h)anthracene	ND	5.0	1.0	ug/l	
	206-44-0	Fluoranthene	ND	5.0	1.0	ug/l	
-7	86-7	Fluorene	ND	5.0	1.2	ug/l	
9-5	19	Indeno(1,2, d)pyrene	ND	5.0	1.0	ug/l	
	90-12-0	1-Methylnaphthalene	ND	5.0	1.	ug/l	
	91-57-6	2-Methylnaphthalene	ND	5.0	1.0	ug/l	
	91-20-	Naphthalene	ND	5.0	1.2	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	59% 42-108%
21-60-8	2-Fluorobiphenyl	58% 40-106%
1718-51-0	Terphenyl-d14	71% 9-121%

Blank Spike Summary

Page 1 of 1

Job Number: F53559
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22963-BS	R11618.D	1	10/31/07	NJ	10/31/07	OP22963	SR535

The QC reported here applies to the following samples:

Method: EPA 625

F53559-1, F53559-2, F53559-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	34.8	70	58-106
208-96-8	Acenaphthylene	50	34.5	69	58-105
120-12-7	Anthracene	50	39.3	79	65-108
56-55-3	Benzo(a)anthracene	50	40.1	80	63-111
50-32-8	Benzo(a)pyrene	50	40.3	81	62-106
205-99-2	Benzo(b)fluoranthene	50	37.6	75	63-109
191-24-2	Benzo(g,h,i)perylene	50	41.1	82	61-111
207-08-9	Benzo(k)fluoranthene	50	41.4	83	64-111
218-01-9	Chrysene	50	40.4	81	64-111
53-70-3	Dibenzo(a,h)anthracene	50	42.1	84	62-112
206-44-0	Fluoranthene	50	42.8	86	65-114
86-73-7	Fluorene	50	37.2	74	61-106
193-39-5	Indeno(1,2,3-cd)pyrene	50	50.8	102	61-113
90-12-0	1-Methylnaphthalene	50	34.3	69	52-102
91-57-6	2-Methylnaphthalene	50	35.2	70	56-112
91-20-3	Naphthalene	50	28.9	58	50-104
85-01-8	Phenanthrene	50	38.6	77	65-108
129-00-0	Pyrene	50	37.9	76	60-113

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	59%	42-108%
321-60-8	2-Fluorobiphenyl	62%	40-106%
1718-51-0	Terphenyl-d14	75%	39-121%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F53559
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP22963-MS	R11625.D	1	10/31/07	NJ	10/31/07	OP22963	SR535
OP22963-MSD	R11626.D	1	10/31/07	NJ	10/31/07	OP22963	SR535
F53490-1	R11624.D	1	10/31/07	NJ	10/31/07	OP22963	SR535

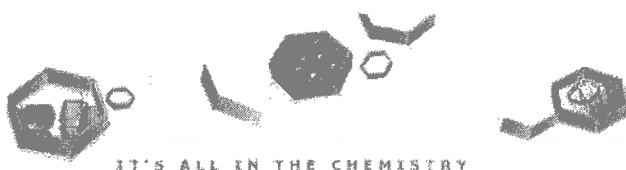
The QC reported here applies to the following samples:

Method: EPA 625

F53559-1, F53559-2, F53559-3

CAS No.	Compound	F53490-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		96.2	72.1	75	77.0	80	7	58-106/21
208-96-8	Acenaphthylene	ND		96.2	71.7	75	76.7	80	7	58-105/21
120-12-7	Anthracene	ND		96.2	78.8	82	82.5	86	5	65-108/19
56-55-3	Benzo(a)anthracene	ND		96.2	77.8	81	82.0	85	5	63-111/19
50-32-8	Benzo(a)pyrene	ND		96.2	79.5	83	82.7	86	4	62-106/20
205-99-2	Benzo(b)fluoranthene	ND		96.2	73.7	77	77.9	81	6	63-109/20
191-24-2	Benzo(g,h,i)perylene	ND		96.2	80.9	84	84.9	88	5	61-111/21
207-08-9	Benzo(k)fluoranthene	ND		96.2	83.2	87	85.2	89	2	64-111/20
218-01-9	Chrysene	ND		96.2	78.4	82	82.3	86	5	64-111/19
53-70-3	Dibenzo(a,h)anthracene	ND		96.2	82.7	86	86.7	90	5	62-112/20
206-44-0	Fluoranthene	ND		96.2	82.8	86	86.2	90	4	65-114/21
86-73-7	Fluorene	ND		96.2	75.0	78	79.9	83	6	61-106/19
193-39-5	Indeno(1,2,3-cd)pyrene	ND		96.2	101	105	105	109	4	61-113/20
90-12-0	1-Methylnaphthalene	ND		96.2	71.9	75	78.4	82	9	52-102/25
91-57-6	2-Methylnaphthalene	ND		96.2	74.6	78	78.9	82	6	56-112/26
91-20-3	Naphthalene	ND		96.2	67.3	70	71.0	74	5	50-104/28
85-01-8	Phenanthrene	ND		96.2	77.1	80	81.6	85	6	65-108/20
129-00-0	Pyrene	ND		96.2	77.1	80	81.1	84	5	60-113/20

CAS No.	Surrogate Recoveries	MS	MSD	F53490-1	Limits
4165-60-0	Nitrobenzene-d5	67%	70%	66%	42-108%
321-60-8	2-Fluorobiphenyl	67%	70%	63%	40-106%
1718-51-0	Terphenyl-d14	76%	79%	77%	39-121%



GC Volatiles

5

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: F53559
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1175-MB	QQ031000.D 1		11/07/07	NJ	n/a	n/a	GQQ1175

The QC reported here applies to the following samples:

Method: EPA 601/602

F53559-1

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	103% 70-120%
98-08-8	aaa-Trifluorotoluene	88% 73-118%

Method Blank Summary

Page 1 of 1

Job Number: F53559
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1177-MB	QQ031047.D 1		11/08/07	NJ	n/a	n/a	GQQ1177

The QC reported here applies to the following samples:

Method: EPA 601/602

F53559-2, F53559-3

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	102% 70-120%
98-08-8	aaa-Trifluorotoluene	87% 73-118%

Blank Spike Summary

Page 1 of 1

Job Number: F53559
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1175-BS	QQ030999.D1		11/07/07	NJ	n/a	n/a	GQQ1175

The QC reported here applies to the following samples:

Method: EPA 601/602

F53559-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	18.2	91	80-120
108-90-7	Chlorobenzene	20	18.3	92	79-118
95-50-1	1,2-Dichlorobenzene	20	18.0	90	76-117
541-73-1	1,3-Dichlorobenzene	20	18.1	91	78-120
106-46-7	1,4-Dichlorobenzene	20	18.1	91	78-117
100-41-4	Ethylbenzene	20	18.1	91	79-121
1634-04-4	Methyl Tert Butyl Ether	20	16.9	85	72-113
108-88-3	Toluene	20	18.1	91	79-121
1330-20-7	Xylenes (total)	60	54.8	91	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	109%	70-120%
98-08-8	aaa-Trifluorotoluene	90%	73-118%

Blank Spike Summary

Page 1 of 1

Job Number: F53559
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1177-BS	QQ031046.D1		11/08/07	NJ	n/a	n/a	GQQ1177

The QC reported here applies to the following samples:

Method: EPA 601/602

F53559-2, F53559-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	17.6	88	80-120
108-90-7	Chlorobenzene	20	17.8	89	79-118
95-50-1	1,2-Dichlorobenzene	20	17.5	88	76-117
541-73-1	1,3-Dichlorobenzene	20	17.5	88	78-120
106-46-7	1,4-Dichlorobenzene	20	17.4	87	78-117
100-41-4	Ethylbenzene	20	17.3	87	79-121
1634-04-4	Methyl Tert Butyl Ether	20	17.1	86	72-113
108-88-3	Toluene	20	17.4	87	79-121
1330-20-7	Xylenes (total)	60	52.9	88	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	108%	70-120%
98-08-8	aaa-Trifluorotoluene	87%	73-118%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F53559
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F53559-1MS	QQ031002.D1		11/07/07	NJ	n/a	n/a	GQQ1175
F53559-1MSD	QQ031003.D1		11/07/07	NJ	n/a	n/a	GQQ1175
F53559-1	QQ031001.D1		11/07/07	NJ	n/a	n/a	GQQ1175

The QC reported here applies to the following samples:

Method: EPA 601/602

F53559-1

CAS No.	Compound	F53559-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	17.8	89	17.8	89	0	80-120/10
108-90-7	Chlorobenzene	ND	20	17.8	89	17.8	89	0	79-118/10
95-50-1	1,2-Dichlorobenzene	ND	20	17.1	86	17.4	87	2	76-117/18
541-73-1	1,3-Dichlorobenzene	ND	20	17.3	87	17.4	87	1	78-120/13
106-46-7	1,4-Dichlorobenzene	ND	20	17.3	87	17.3	87	0	78-117/11
100-41-4	Ethylbenzene	ND	20	17.5	88	17.6	88	1	79-121/9
1634-04-4	Methyl Tert Butyl Ether	ND	20	17.4	87	17.4	87	0	72-113/13
108-88-3	Toluene	ND	20	17.6	88	17.7	89	1	79-121/10
1330-20-7	Xylenes (total)	ND	60	53.2	89	53.5	89	1	80-119/8

CAS No.	Surrogate Recoveries	MS	MSD	F53559-1	Limits
460-00-4	4-Bromofluorobenzene	109%	109%	105%	70-120%
98-08-8	aaa-Trifluorotoluene	90%	90%	90%	73-118%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F53559
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F53559-3MS	QQ031050.D1		11/08/07	NJ	n/a	n/a	GQQ1177
F53559-3MSD	QQ031051.D1		11/08/07	NJ	n/a	n/a	GQQ1177
F53559-3 ^a	QQ031049.D1		11/08/07	NJ	n/a	n/a	GQQ1177

The QC reported here applies to the following samples:

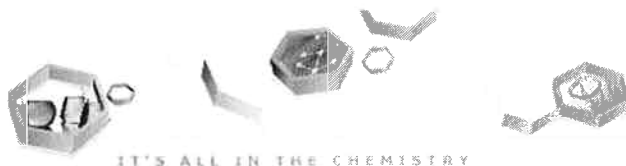
Method: EPA 601/602

F53559-2, F53559-3

CAS No.	Compound	F53559-3 ug/l	Spike Q	ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	17.0	85	17.0	85	0	80-120/10
108-90-7	Chlorobenzene	ND		20	17.0	85	17.0	85	0	79-118/10
95-50-1	1,2-Dichlorobenzene	5.9		20	23.6	89	23.8	90	1	76-117/18
541-73-1	1,3-Dichlorobenzene	0.81	J	20	17.9	85	18.0	86	1	78-120/13
106-46-7	1,4-Dichlorobenzene	0.75	J	20	17.8	85	17.8	85	0	78-117/11
100-41-4	Ethylbenzene	ND		20	16.3	82	16.3	82	0	79-121/9
1634-04-4	Methyl Tert Butyl Ether	ND		20	16.7	84	16.7	84	0	72-113/13
108-88-3	Toluene	ND		20	16.8	84	16.8	84	0	79-121/10
1330-20-7	Xylenes (total)	ND		60	49.7	83	49.6	83	0	80-119/8

CAS No.	Surrogate Recoveries	MS	MSD	F53559-3	Limits
460-00-4	4-Bromofluorobenzene	116%	115%	110%	70-120%
98-08-8	aaa-Trifluorotoluene	88%	87%	87%	73-118%

(a) Confirmed by GC/MS



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: F53559
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

QC Batch ID: MP13273
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/30/07

Metal	RL	IDL	MB raw	final
Aluminum	200	48		
Antimony	6.0	3.3		
Arsenic	10	3.7		
Barium	200	5		
Beryllium	4.0	1		
Cadmium	5.0	1		
Calcium	1000	100		
Chromium	10	.92		
Cobalt	50	1		
Copper	25	1.2		
Iron	300	14		
Lead	5.0	2.1	-1.7	<5.0
Magnesium	5000	100		
Manganese	15	1		
Molybdenum	50	1.2		
Nickel	40	1		
Potassium	10000	100		
Selenium	10	4		
Silver	10	.77		
Sodium	10000	500		
Thallium	10	5.6		
Tin	50	2.4		
Vanadium	50	1		
Zinc	20	5		

Associated samples MP13273: F53559-1, F53559-2, F53559-3

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

6.1.1
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F53559
 Account: ITVAVAB - Shaw E & I, Inc.
 Project: Camp Lejeune-AS4141

QC Batch ID: MP13273
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/30/07 10/30/07

Metal	F53559-1 Original DUP		RPD	QC Limits	F53559-1 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	465	500	93.0 80-120
Magnesium								
Manganese								
Molybdenum								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Tin								
Vanadium								
Zinc								

Associated samples MP13273: F53559-1, F53559-2, F53559-3

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

6.1.2
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F53559
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

QC Batch ID: MP13273
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/30/07

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	456	500	91.2	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Thallium				
Tin				
Vanadium				
Zinc				

Associated samples MP13273: F53559-1, F53559-2, F53559-3

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

6.1.3
6

SERIAL DILUTION RESULTS SUMMARY

Login Number: F53559
 Account: ITVAVAB - Shaw E & I, Inc.
 Project: Camp Lejeune-AS4141

QC Batch ID: MP13273
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/30/07

F53559-1				QC
Metal	Original	SDL 1:5	RPD	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 MP13273: F53559-1, F53559-2, F53559-3

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

6.1.4
 6



11/28/07

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-AS4141

126006

Accutest Job Number: F53577

Sampling Date: 10/30/07

Report to:

Shaw E & I, Inc.

natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 30



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
This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Sample Results	4
2.1: F53577-1: USTAS4141-MW02	5
2.2: F53577-2: USTAS4141-MW14	8
2.3: F53577-3: USTAS4141-MW19	11
2.4: F53577-4: USTAS4151-TRIP BLANK	14
Section 3: Misc. Forms	15
3.1: Chain of Custody	16
Section 4: GC/MS Semi-volatiles - QC Data Summaries	18
4.1: Method Blank Summary	19
4.2: Blank Spike Summary	20
4.3: Matrix Spike/Matrix Spike Duplicate Summary	21
Section 5: GC Volatiles - QC Data Summaries	22
5.1: Method Blank Summary	23
5.2: Blank Spike Summary	24
5.3: Matrix Spike/Matrix Spike Duplicate Summary	25
Section 6: Metals Analysis - QC Data Summaries	26
6.1: Prep QC MP13284: Pb	27

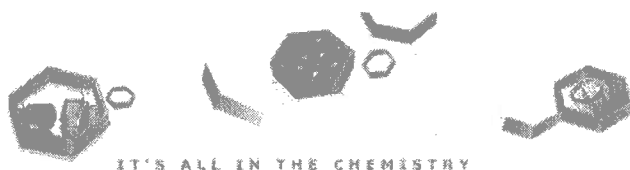
Sample Summary

Shaw E & I, Inc.

Job No: F53577

Camp Lejeune-AS4141
Project No: 126006

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F53577-1	10/30/07	13:00 MM	10/31/07	AQ	Ground Water	USTAS4141-MW02
F53577-2	10/30/07	13:45 MM	10/31/07	AQ	Ground Water	USTAS4141-MW14
F53577-3	10/30/07	14:30 MM	10/31/07	AQ	Ground Water	USTAS4141-MW19
F53577-4	10/30/07	00:00 MM	10/31/07	AQ	Trip Blank Water	USTAS4151-TRIP BLANK



Sample Results

Report of Analysis

Report of Analysis

Page 1 of 1

Client Sample ID:	USTAS4141-MW02	Date Sampled:	10/30/07
Lab Sample ID:	F53577-1	Date Received:	10/31/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U005641.D	1	11/07/07	NJ	11/06/07	OP23018	SU261
Run #2							

Run #	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	1.3	ug/l	
208-96-8	Acenaphthylene	ND	4.8	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.96	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	1.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	1.2	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	76%		42-108%
321-60-8	2-Fluorobiphenyl	73%		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

Page 1 of 1

Client Sample ID:	USTAS4141-MW02	Date Sampled:	10/30/07
Lab Sample ID:	F53577-1	Date Received:	10/31/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 601/602		
Project:	Camp Lejeune-AS4141		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ031006.D	1	11/07/07	NJ	n/a	n/a	GQQ1175
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	103%		70-120%
98-08-8	aaa-Trifluorotoluene	89%		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

Page 1 of 1

Client Sample ID: USTAS4141-MW02
Lab Sample ID: F53577-1
Matrix: AQ - Ground Water
Project: Camp Lejeune-AS4141

Date Sampled: 10/30/07
Date Received: 10/31/07
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.1 U	5.0	2.1	ug/l	1	10/31/07	11/01/07 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6085

(2) Prep QC Batch: MP13284

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID:	USTAS4141-MW14	Date Sampled:	10/30/07
Lab Sample ID:	F53577-2	Date Received:	10/31/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-AS4141		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U005644.D	1	11/07/07	NJ	11/06/07	OP23018	SU261
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	1.4	ug/l	
208-96-8	Acenaphthylene	ND	4.9	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.9	0.97	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.9	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.9	0.97	ug/l	
91-20-3	Naphthalene	ND	4.9	1.2	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	72%		42-108%
321-60-8	2-Fluorobiphenyl	69%		40-106%
1718-51-0	Terphenyl-d14	74%		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

Page 1 of 1

Client Sample ID:	USTAS4141-MW14	Date Sampled:	10/30/07
Lab Sample ID:	F53577-2	Date Received:	10/31/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 601/602		
Project:	Camp Lejeune-AS4141		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ031007.D	1	11/07/07	NJ	n/a	n/a	GQQ1175
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	90%		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

Page 1 of 1

Client Sample ID: USTAS4141-MW14
Lab Sample ID: F53577-2
Matrix: AQ - Ground Water
Project: Camp Lejeune-AS4141

Date Sampled: 10/30/07
Date Received: 10/31/07
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.1 U	5.0	2.1	ug/l	1	10/31/07	11/01/07 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6085

(2) Prep QC Batch: MP13284

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID:	USTAS4141-MW19	Date Sampled:	10/30/07
Lab Sample ID:	F53577-3	Date Received:	10/31/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-AS4141		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U005645.D	1	11/07/07	NJ	11/06/07	OP23018	SU261
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	1.4	ug/l	
208-96-8	Acenaphthylene	ND	4.9	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.9	0.97	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.9	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.9	0.97	ug/l	
91-20-3	Naphthalene	ND	4.9	1.2	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	74%		42-108%
321-60-8	2-Fluorobiphenyl	60%		40-106%
1718-51-0	Terphenyl-d14	45%		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

Page 1 of 1

Client Sample ID: USTAS4141-MW19
Lab Sample ID: F53577-3
Matrix: AQ - Ground Water
Method: EPA 601/602
Project: Camp Lejeune-AS4141

Date Sampled: 10/30/07
Date Received: 10/31/07
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ031008.D	1	11/07/07	NJ	n/a	n/a	GQQ1175
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	87%		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

Page 1 of 1

Client Sample ID: USTAS4141-MW19
Lab Sample ID: F53577-3
Matrix: AQ - Ground Water
Project: Camp Lejeune-AS4141

Date Sampled: 10/30/07
Date Received: 10/31/07
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.1 U	5.0	2.1	ug/l	1	10/31/07	11/01/07 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6085

(2) Prep QC Batch: MP13284

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID:	USTAS4151-TRIP BLANK	Date Sampled:	10/30/07
Lab Sample ID:	F53577-4	Date Received:	10/31/07
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	EPA 601/602		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ031011.D	1	11/08/07	NJ	n/a	n/a	GQQ1175
Run #2							

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

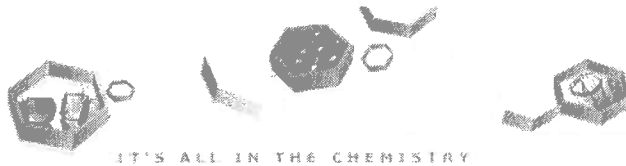
Purgeable Aromatics, Full List

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	87%		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:

- Chain of Custody

COC Number:
125708-AS4141-103007



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 -AS4141					CAMP LEJEUNE, NC															
Project Number			Contact		P.O. Number			Reviewed by												
125006			Mark Martin																	
Client Rep					Project Manager															
US NAVY - LANTDIV					Joe Colella															
Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description	Number of Containers	VOC 6021 w xylenes	PAH 625	Total Lead By 3030C										
1	USTAS4141-MW02	10/30/07	1300		X	USTAS4141-MW02	6	X	X	X										
2	USTAS4141-MW14	10/30/07	1345		X	USTAS4141-MW14	6	X	X	X										
3	USTAS4141-MW19	10/30/07	1430		X	USTAS4141-MW19	6	X	X	X										
4	USTAS4151-TRIPBLANK	10/30/07			X	USTAS4151-TRIPBLANK	2	X												
5																				
6																				
7																				
8																				
9																				
10																				

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 -- 4	<i>[Signature]</i>	FedEx 8826 7890 6920	10/31/07	16:00	Resampled 14 Day TAT
2		FX	E.T.	10-31-07	09:00	
3						

28

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F53577 CLIENT: Shaw PROJECT: Camp Lejeune - 454141
 DATE/TIME RECEIVED: 10-31-07 09:00 # OF COOLERS RECEIVED: 1 COOLER TEMPS: 2.4
 METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER
 AIRBILL NUMBERS: 8626 7690 6920

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

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 OR 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. 10-31-07 TECHNICIAN SIGNATURE/DATE Jc 10-31-07 ASBD 10/03/06

F53577: 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: F53577

Account: ITVAVAB Shaw E & I, Inc.

Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23018-MB	U005640.D	1	11/07/07	NJ	11/06/07	OP23018	SU261

The QC reported here applies to the following samples:

Method: EPA 625

F53577-1, F53577-2, F53577-3

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	1.4	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	1.2	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	69% 40-106%
1718-51-0	Terphenyl-d14	79% 39-121%

Blank Spike Summary

Page 1 of 1

Job Number: F53577
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23018-BS	U005639.D	1	11/07/07	NJ	11/06/07	OP23018	SU261

4.2
4

The QC reported here applies to the following samples:

Method: EPA 625

F53577-1, F53577-2, F53577-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	39.0	78	58-106
208-96-8	Acenaphthylene	50	39.3	79	58-105
120-12-7	Anthracene	50	39.7	79	65-108
56-55-3	Benzo(a)anthracene	50	39.6	79	63-111
50-32-8	Benzo(a)pyrene	50	39.8	80	62-106
205-99-2	Benzo(b)fluoranthene	50	39.7	79	63-109
191-24-2	Benzo(g,h,i)perylene	50	40.4	81	61-111
207-08-9	Benzo(k)fluoranthene	50	40.3	81	64-111
218-01-9	Chrysene	50	39.0	78	64-111
53-70-3	Dibenzo(a,h)anthracene	50	40.7	81	62-112
206-44-0	Fluoranthene	50	40.5	81	65-114
86-73-7	Fluorene	50	38.9	78	61-106
193-39-5	Indeno(1,2,3-cd)pyrene	50	41.2	82	61-113
90-12-0	1-Methylnaphthalene	50	36.5	73	52-102
91-57-6	2-Methylnaphthalene	50	38.7	77	56-112
91-20-3	Naphthalene	50	35.2	70	50-104
85-01-8	Phenanthrene	50	40.0	80	65-108
129-00-0	Pyrene	50	40.7	81	60-113

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	78%	42-108%
321-60-8	2-Fluorobiphenyl	75%	40-106%
1718-51-0	Terphenyl-d14	80%	39-121%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F53577
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23018-MS	U005642.D	1	11/07/07	NJ	11/06/07	OP23018	SU261
OP23018-MSD	U005643.D	1	11/07/07	NJ	11/06/07	OP23018	SU261
F53577-1	U005641.D	1	11/07/07	NJ	11/06/07	OP23018	SU261

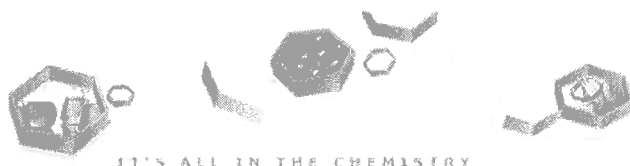
The QC reported here applies to the following samples:

Method: EPA 625

F53577-1, F53577-2, F53577-3

CAS No.	Compound	F53577-1 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND	96.2	76.5	80	82.2	85	7	58-106/21
208-96-8	Acenaphthylene	ND	96.2	77.3	80	83.0	86	7	58-105/21
120-12-7	Anthracene	ND	96.2	77.3	80	82.8	86	7	65-108/19
56-55-3	Benzo(a)anthracene	ND	96.2	76.6	80	83.1	86	8	63-111/19
50-32-8	Benzo(a)pyrene	ND	96.2	78.1	81	83.9	87	7	62-106/20
205-99-2	Benzo(b)fluoranthene	ND	96.2	77.9	81	83.6	87	7	63-109/20
191-24-2	Benzo(g,h,i)perylene	ND	96.2	79.9	83	84.6	88	6	61-111/21
207-08-9	Benzo(k)fluoranthene	ND	96.2	76.9	80	85.0	88	10	64-111/20
218-01-9	Chrysene	ND	96.2	77.1	80	81.8	85	6	64-111/19
53-70-3	Dibenzo(a,h)anthracene	ND	96.2	79.9	83	85.0	88	6	62-112/20
206-44-0	Fluoranthene	ND	96.2	80.5	84	84.1	87	4	65-114/21
86-73-7	Fluorene	ND	96.2	77.5	81	83.0	86	7	61-106/19
193-39-5	Indeno(1,2,3-cd)pyrene	ND	96.2	81.1	84	87.6	91	8	61-113/20
90-12-0	1-Methylnaphthalene	ND	96.2	75.7	79	80.3	84	6	52-102/25
91-57-6	2-Methylnaphthalene	ND	96.2	78.3	81	84.4	88	7	56-112/26
91-20-3	Naphthalene	ND	96.2	74.9	78	79.2	82	6	50-104/28
85-01-8	Phenanthrene	ND	96.2	77.1	80	82.5	86	7	65-108/20
129-00-0	Pyrene	ND	96.2	77.6	81	84.3	88	8	60-113/20

CAS No.	Surrogate Recoveries	MS	MSD	F53577-1	Limits
4165-60-0	Nitrobenzene-d5	78%	84%	76%	42-108%
321-60-8	2-Fluorobiphenyl	74%	81%	73%	40-106%
1718-51-0	Terphenyl-d14	77%	85%	77%	39-121%



GC 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: F53577
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1175-MB	QQ031000.D1		11/07/07	NJ	n/a	n/a	GQQ1175

The QC reported here applies to the following samples:

Method: EPA 601/602

F53577-1, F53577-2, F53577-3, F53577-4

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	103% 70-120%
98-08-8	aaa-Trifluorotoluene	88% 73-118%

Blank Spike Summary

Page 1 of 1

Job Number: F53577
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1175-BS	QQ030999.D 1		11/07/07	NJ	n/a	n/a	GQQ1175

The QC reported here applies to the following samples:

Method: EPA 601/602

F53577-1, F53577-2, F53577-3, F53577-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	18.2	91	80-120
108-90-7	Chlorobenzene	20	18.3	92	79-118
95-50-1	1,2-Dichlorobenzene	20	18.0	90	76-117
541-73-1	1,3-Dichlorobenzene	20	18.1	91	78-120
106-46-7	1,4-Dichlorobenzene	20	18.1	91	78-117
100-41-4	Ethylbenzene	20	18.1	91	79-121
1634-04-4	Methyl Tert Butyl Ether	20	16.9	85	72-113
108-88-3	Toluene	20	18.1	91	79-121
1330-20-7	Xylenes (total)	60	54.8	91	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	109%	70-120%
98-08-8	aaa-Trifluorotoluene	90%	73-118%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F53577
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F53559-1MS	QQ031002.D 1		11/07/07	NJ	n/a	n/a	GQQ1175
F53559-1MSD	QQ031003.D 1		11/07/07	NJ	n/a	n/a	GQQ1175
F53559-1	QQ031001.D 1		11/07/07	NJ	n/a	n/a	GQQ1175

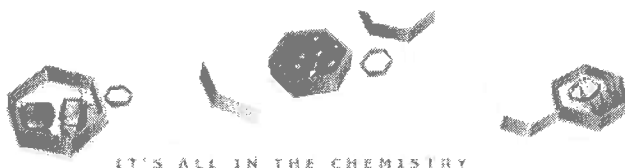
The QC reported here applies to the following samples:

Method: EPA 601/602

F53577-1, F53577-2, F53577-3, F53577-4

CAS No.	Compound	F53559-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	17.8	89	17.8	89	0	80-120/10
108-90-7	Chlorobenzene	ND	20	17.8	89	17.8	89	0	79-118/10
95-50-1	1,2-Dichlorobenzene	ND	20	17.1	86	17.4	87	2	76-117/18
541-73-1	1,3-Dichlorobenzene	ND	20	17.3	87	17.4	87	1	78-120/13
106-46-7	1,4-Dichlorobenzene	ND	20	17.3	87	17.3	87	0	78-117/11
100-41-4	Ethylbenzene	ND	20	17.5	88	17.6	88	1	79-121/9
1634-04-4	Methyl Tert Butyl Ether	ND	20	17.4	87	17.4	87	0	72-113/13
108-88-3	Toluene	ND	20	17.6	88	17.7	89	1	79-121/10
1330-20-7	Xylenes (total)	ND	60	53.2	89	53.5	89	1	80-119/8

CAS No.	Surrogate Recoveries	MS	MSD	F53559-1	Limits
460-00-4	4-Bromofluorobenzene	109%	109%	105%	70-120%
98-08-8	aaa-Trifluorotoluene	90%	90%	90%	73-118%



IT'S ALL IN THE CHEMISTRY

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: F53577
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

QC Batch ID: MP13284
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/31/07

Metal	RL	IDL	MB raw	final
Aluminum	200	48		
Antimony	6.0	3.3		
Arsenic	10	3.7		
Barium	200	5		
Beryllium	4.0	1		
Cadmium	5.0	1		
Calcium	1000	100		
Chromium	10	.92		
Cobalt	50	1		
Copper	25	1.2		
Iron	300	14		
Lead	5.0	2.1	-2.3	<5.0
Magnesium	5000	100		
Manganese	15	1		
Molybdenum	50	1.2		
Nickel	40	1		
Potassium	10000	100		
Selenium	10	4		
Silver	10	.77		
Sodium	10000	500		
Thallium	10	5.6		
Tin	50	2.4		
Vanadium	50	1		
Zinc	20	5		

Associated samples MP13284: F53577-1, F53577-2, F53577-3

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

6.1.1

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F53577
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

QC Batch ID: MP13284
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/31/07 10/31/07

Metal	F53577-1 Original DUP	RPD	QC Limits	F53577-1 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	499 500 99.8 80-120
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Thallium						
Tin						
Vanadium						
Zinc						

Associated samples MP13284: F53577-1, F53577-2, F53577-3

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

6.1.2
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F53577
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

QC Batch ID: MP13284
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/31/07

Metal	BSP Result	Spikelot MPFLICP1 % Rec	QC Limits
-------	---------------	----------------------------	--------------

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead 498 500 99.6 80-120

Magnesium

Manganese

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Vanadium

Zinc

Associated samples MP13284: F53577-1, F53577-2, F53577-3

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

6.1.3

6

SERIAL DILUTION RESULTS SUMMARY

Login Number: F53577
 Account: ITVAVAB - Shaw E & I, Inc.
 Project: Camp Lejeune-AS4141

QC Batch ID: MP13284
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/31/07

Metal	F53577-1	Original	SDL 1:5	RPD	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 MP13284: F53577-1, F53577-2, F53577-3

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

6.1.4
 6



04/23/08

Technical Report for

Shaw E & I, Inc.

Camp Lejeune-AS4141

126006

Accutest Job Number: F56535

Sampling Dates: 03/26/08 - 03/28/08



Report to:

Shaw E & I, Inc.

natasha.sullivan@shawgrp.com

ATTN: Natasha Sullivan

Total number of pages in report: 56



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
This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Sample Results	4
2.1: F56535-1: USTAS4151-MW15	5
2.2: F56535-2: USTAS4151-MW16	8
2.3: F56535-3: USTAS4151-MW18	11
2.4: F56535-4: USTAS4151-MW14	14
2.5: F56535-5: USTAS4151-OBG06	17
2.6: F56535-6: USTAS4151-MW17	20
2.7: F56535-7: USTAS4151-MW07	23
2.8: F56535-8: USTAS4151-MW10	26
2.9: F56535-9: USTAS4151-MW02	29
2.10: F56535-10: USTAS4151-MW02D	32
2.11: F56535-11: USTAS4151-TRIPBLANK	35
Section 3: Misc. Forms	36
3.1: Chain of Custody	37
Section 4: GC/MS Semi-volatiles - QC Data Summaries	39
4.1: Method Blank Summary	40
4.2: Blank Spike Summary	42
4.3: Matrix Spike/Matrix Spike Duplicate Summary	43
Section 5: GC Volatiles - QC Data Summaries	44
5.1: Method Blank Summary	45
5.2: Blank Spike Summary	47
5.3: Matrix Spike/Matrix Spike Duplicate Summary	49
Section 6: Metals Analysis - QC Data Summaries	51
6.1: Prep QC MP14103: Pb	52



Sample Summary

Shaw E & I, Inc.

Job No: F56535

Camp Lejeune-AS4141
Project No: 126006

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F56535-1	03/27/08	14:00 MM	03/29/08	AQ	Ground Water	USTAS4151-MW15
F56535-2	03/27/08	14:40 MM	03/29/08	AQ	Ground Water	USTAS4151-MW16
F56535-3	03/27/08	15:15 MM	03/29/08	AQ	Ground Water	USTAS4151-MW18
F56535-4	03/28/08	07:00 MM	03/29/08	AQ	Ground Water	USTAS4151-MW14
F56535-5	03/28/08	08:00 MM	03/29/08	AQ	Ground Water	USTAS4151-OBG06
F56535-6	03/28/08	08:45 MM	03/29/08	AQ	Ground Water	USTAS4151-MW17
F56535-7	03/28/08	09:30 MM	03/29/08	AQ	Ground Water	USTAS4151-MW07
F56535-8	03/28/08	10:50 MM	03/29/08	AQ	Ground Water	USTAS4151-MW10
F56535-9	03/28/08	11:15 MM	03/29/08	AQ	Ground Water	USTAS4151-MW02
F56535-10	03/28/08	11:15 MM	03/29/08	AQ	Ground Water	USTAS4151-MW02D
F56535-11	03/26/08	00:00 MM	03/29/08	AQ	Trip Blank Water	USTAS4151-TRIPBLANK



Sample Results

Report of Analysis

Report of Analysis

Page 1 of 1

Client Sample ID: USTAS4151-MW15
 Lab Sample ID: F56535-1
 Matrix: AQ - Ground Water
 Method: EPA 625 EPA 625
 Project: Camp Lejeune-AS4141

Date Sampled: 03/27/08
 Date Received: 03/29/08
 Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X001560.D	1	04/05/08	NJ	04/02/08	OP24597	SX79
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	1.4	ug/l	
208-96-8	Acenaphthylene	ND	4.9	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.9	0.97	ug/l	
90-12-0	1-Methylnaphthalene	2.4	4.9	1.3	ug/l	J
91-57-6	2-Methylnaphthalene	3.0	4.9	0.97	ug/l	J
91-20-3	Naphthalene	ND	4.9	1.2	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	79%		42-108%
321-60-8	2-Fluorobiphenyl	75%		40-106%
1718-51-0	Terphenyl-d14	83%		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

Page 1 of 1

Client Sample ID: USTAS4151-MW15
 Lab Sample ID: F56535-1
 Matrix: AQ - Ground Water
 Method: EPA 602
 Project: Camp Lejeune-AS4141

Date Sampled: 03/27/08
 Date Received: 03/29/08
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ034541.D	1	03/31/08	TD	n/a	n/a	GQQ1327
Run #2							

Run #	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	8.0	8.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	1.0	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	93%		73-118%

(a) Confirmed by GC/MS.

(b) Elevated reporting limits 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

Page 1 of 1

Client Sample ID: USTAS4151-MW15
Lab Sample ID: F56535-1
Matrix: AQ - Ground Water
Project: Camp Lejeune-AS4141

Date Sampled: 03/27/08
Date Received: 03/29/08
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.1 U	5.0	2.1	ug/l	1	03/31/08	03/31/08 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6367

(2) Prep QC Batch: MP14103

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID:	USTAS4151-MW16	Date Sampled:	03/27/08
Lab Sample ID:	F56535-2	Date Received:	03/29/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X001561.D	1	04/05/08	NJ	04/02/08	OP24597	SX79
Run #2							

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

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.8	1.3	ug/l	
208-96-8	Acenaphthylene	ND	4.8	1.0	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	1.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.95	ug/l	
90-12-0	1-Methylnaphthalene	70.6	4.8	1.2	ug/l	
91-57-6	2-Methylnaphthalene	49.3	4.8	0.95	ug/l	
91-20-3	Naphthalene	65.6	4.8	1.1	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	72%		42-108%
321-60-8	2-Fluorobiphenyl	72%		40-106%
1718-51-0	Terphenyl-d14	82%		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

Page 1 of 1

Client Sample ID:	USTAS4151-MW16	Date Sampled:	03/27/08
Lab Sample ID:	F56535-2	Date Received:	03/29/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ034542.D	1	03/31/08	TD	n/a	n/a	GQQ1327
Run #2							

Run #	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	0.57	1.0	0.50	ug/l	J
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene ^b	ND	48	48	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene ^b	ND	14	14	ug/l	
100-41-4	Ethylbenzene	5.4	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)	5.8	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	106%		70-120%
98-08-8	aaa-Trifluorotoluene	93%		73-118%

(a) All hits confirmed by GC/MS.

(b) Elevated reporting limits 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

Page 1 of 1

Client Sample ID: USTAS4151-MW16
Lab Sample ID: F56535-2
Matrix: AQ - Ground Water
Project: Camp Lejeune-AS4141

Date Sampled: 03/27/08
Date Received: 03/29/08
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.1 U	5.0	2.1	ug/l	1	03/31/08	03/31/08 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6367

(2) Prep QC Batch: MP14103

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID: USTAS4151-MW18
 Lab Sample ID: F56535-3
 Matrix: AQ - Ground Water
 Method: EPA 625 EPA 625
 Project: Camp Lejeune-AS4141

Date Sampled: 03/27/08
 Date Received: 03/29/08
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X001562.D	1	04/05/08	NJ	04/02/08	OP24597	SX79
Run #2							

Run #	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	4.9	1.4	ug/l	
208-96-8	Acenaphthylene	ND	4.9	1.1	ug/l	
120-12-7	Anthracene	ND	4.9	0.98	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.9	0.98	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.9	0.98	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.9	0.98	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.98	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.9	0.98	ug/l	
218-01-9	Chrysene	ND	4.9	0.98	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.98	ug/l	
206-44-0	Fluoranthene	ND	4.9	0.98	ug/l	
86-73-7	Fluorene	ND	4.9	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.9	0.98	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.9	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.9	0.98	ug/l	
91-20-3	Naphthalene	ND	4.9	1.2	ug/l	
85-01-8	Phenanthrene	ND	4.9	0.98	ug/l	
129-00-0	Pyrene	ND	4.9	0.98	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%		42-108%
321-60-8	2-Fluorobiphenyl	75%		40-106%
1718-51-0	Terphenyl-d14	74%		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

Page 1 of 1

Client Sample ID:	USTAS4151-MW18	Date Sampled:	03/27/08
Lab Sample ID:	F56535-3	Date Received:	03/29/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ034580.D	1	04/01/08	TD	n/a	n/a	GQQ1329
Run #2							

Run #	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	93%		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

Page 1 of 1

Client Sample ID: USTAS4151-MW18

Lab Sample ID: F56535-3

Matrix: AQ - Ground Water

Project: Camp Lejeune-AS4141

Date Sampled: 03/27/08

Date Received: 03/29/08

Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	6.9	5.0	2.1	ug/l	1	03/31/08	03/31/08 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6367

(2) Prep QC Batch: MP14103

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID: USTAS4151-MW14
 Lab Sample ID: F56535-4
 Matrix: AQ - Ground Water
 Method: EPA 625 EPA 625
 Project: Camp Lejeune-AS4141

Date Sampled: 03/28/08
 Date Received: 03/29/08
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X001563.D	1	04/05/08	NJ	04/02/08	OP24597	SX79
Run #2							

Run #	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	1.3	ug/l	
208-96-8	Acenaphthylene	ND	4.8	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.96	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	1.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	1.2	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	73%		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

Page 1 of 1

Client Sample ID:	USTAS4151-MW14	Date Sampled:	03/28/08
Lab Sample ID:	F56535-4	Date Received:	03/29/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ034581.D	1	04/01/08	TD	n/a	n/a	GQQ1329
Run #2							

Run #	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	97%		70-120%
98-08-8	aaa-Trifluorotoluene	91%		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

Page 1 of 1

Client Sample ID: USTAS4151-MW14
Lab Sample ID: F56535-4
Matrix: AQ - Ground Water
Project: Camp Lejeune-AS4141

Date Sampled: 03/28/08
Date Received: 03/29/08
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.1 U	5.0	2.1	ug/l	1	03/31/08	03/31/08 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6367

(2) Prep QC Batch: MP14103

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID:	USTAS4151-OBG06	Date Sampled:	03/28/08
Lab Sample ID:	F56535-5	Date Received:	03/29/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X001564.D	1	04/05/08	NJ	04/02/08	OP24597	SX79
Run #2							

Run #	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	1.3	ug/l	
208-96-8	Acenaphthylene	ND	4.8	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.96	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.8	1.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.96	ug/l	
91-20-3	Naphthalene	ND	4.8	1.2	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	78%		40-106%
1718-51-0	Terphenyl-d14	86%		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

Page 1 of 1

Client Sample ID: USTAS4151-OBG06
 Lab Sample ID: F56535-5
 Matrix: AQ - Ground Water
 Method: EPA 602
 Project: Camp Lejeune-AS4141

Date Sampled: 03/28/08
 Date Received: 03/29/08
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ034547.D	1	03/31/08	TD	n/a	n/a	GQQ1327
Run #2							

Run #	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	98%		70-120%
98-08-8	aaa-Trifluorotoluene	93%		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

Page 1 of 1

Client Sample ID: USTAS4151-OBG06
Lab Sample ID: F56535-5
Matrix: AQ - Ground Water
Project: Camp Lejeune-AS4141

Date Sampled: 03/28/08
Date Received: 03/29/08
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	2.3 B	5.0	2.1	ug/l	1	03/31/08	03/31/08 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6367

(2) Prep QC Batch: MP14103

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID: USTAS4151-MW17
 Lab Sample ID: F56535-6
 Matrix: AQ - Ground Water
 Method: EPA 625 EPA 625
 Project: Camp Lejeune-AS4141

Date Sampled: 03/28/08
 Date Received: 03/29/08
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	L040388.D	4	04/08/08	NJ	04/02/08	OP24597	SL2055
Run #2							

Run #	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	5.4	ug/l	
208-96-8	Acenaphthylene	ND	19	4.2	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	4.6	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	19	3.8	ug/l	
90-12-0	1-Methylnaphthalene	163	19	5.0	ug/l	
91-57-6	2-Methylnaphthalene	176	19	3.8	ug/l	
91-20-3	Naphthalene	274	19	4.6	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	92%		42-108%
321-60-8	2-Fluorobiphenyl	76%		40-106%
1718-51-0	Terphenyl-d14	76%		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

Page 1 of 1

Client Sample ID: USTAS4151-MW17
 Lab Sample ID: F56535-6
 Matrix: AQ - Ground Water
 Method: EPA 602
 Project: Camp Lejeune-AS4141

Date Sampled: 03/28/08
 Date Received: 03/29/08
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ034548.D	1	03/31/08	TD	n/a	n/a	GQQ1327
Run #2							

Run #	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	4.0	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	36	36	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene ^b	ND	10	10	ug/l	
100-41-4	Ethylbenzene	3.0	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)	7.5	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	105%		70-120%
98-08-8	aaa-Trifluorotoluene	91%		73-118%

(a) All hits confirmed by GC/MS.

(b) Elevated reporting limits 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

Page 1 of 1

Client Sample ID: USTAS4151-MW17
Lab Sample ID: F56535-6
Matrix: AQ - Ground Water
Project: Camp Lejeune-AS4141

Date Sampled: 03/28/08
Date Received: 03/29/08
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	3.1 B	5.0	2.1	ug/l	1	03/31/08	03/31/08 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6367

(2) Prep QC Batch: MP14103

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID:	USTAS4151-MW07	Date Sampled:	03/28/08
Lab Sample ID:	F56535-7	Date Received:	03/29/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L040389.D	1	04/08/08	NJ	04/02/08	OP24597	SL2055
Run #2							

Run #	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	1.3	ug/l	
208-96-8	Acenaphthylene	ND	4.8	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.96	ug/l	
90-12-0	1-Methylnaphthalene	1.6	4.8	1.2	ug/l	J
91-57-6	2-Methylnaphthalene	1.5	4.8	0.96	ug/l	J
91-20-3	Naphthalene	2.7	4.8	1.2	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	77%		42-108%
321-60-8	2-Fluorobiphenyl	72%		40-106%
1718-51-0	Terphenyl-d14	71%		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

Page 1 of 1

Client Sample ID:	USTAS4151-MW07	Date Sampled:	03/28/08
Lab Sample ID:	F56535-7	Date Received:	03/29/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-AS4141		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ034549.D	1	03/31/08	TD	n/a	n/a	GQQ1327
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	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	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	94%		73-118%

(a) Confirmed by GC/MS.

(b) Elevated reporting limits 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

Page 1 of 1

Client Sample ID: USTAS4151-MW07
Lab Sample ID: F56535-7
Matrix: AQ - Ground Water
Project: Camp Lejeune-AS4141

Date Sampled: 03/28/08
Date Received: 03/29/08
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	37.2	5.0	2.1	ug/l	1	03/31/08	03/31/08 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6367

(2) Prep QC Batch: MP14103

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID: USTAS4151-MW10
 Lab Sample ID: F56535-8
 Matrix: AQ - Ground Water
 Method: EPA 625 EPA 625
 Project: Camp Lejeune-AS4141

Date Sampled: 03/28/08
 Date Received: 03/29/08
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X001567.D	1	04/05/08	NJ	04/02/08	OP24597	SX79
Run #2							

Run #	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	1.3	ug/l	
208-96-8	Acenaphthylene	ND	4.8	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.96	ug/l	
90-12-0	1-Methylnaphthalene	1.8	4.8	1.2	ug/l	J
91-57-6	2-Methylnaphthalene	1.8	4.8	0.96	ug/l	J
91-20-3	Naphthalene	3.4	4.8	1.2	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	79%		42-108%
321-60-8	2-Fluorobiphenyl	76%		40-106%
1718-51-0	Terphenyl-d14	80%		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

Page 1 of 1

Client Sample ID: USTAS4151-MW10
 Lab Sample ID: F56535-8
 Matrix: AQ - Ground Water
 Method: EPA 602
 Project: Camp Lejeune-AS4141

Date Sampled: 03/28/08
 Date Received: 03/29/08
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QQ034550.D	1	03/31/08	TD	n/a	n/a	GQQ1327
Run #2							

Run #	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	1.0	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	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	98%		70-120%
98-08-8	aaa-Trifluorotoluene	92%		73-118%

(a) Confirmed by GC/MS.

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

Page 1 of 1

Client Sample ID: USTAS4151-MW10
Lab Sample ID: F56535-8
Matrix: AQ - Ground Water
Project: Camp Lejeune-AS4141

Date Sampled: 03/28/08
Date Received: 03/29/08
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	3.4 B	5.0	2.1	ug/l	1	03/31/08	03/31/08 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6367

(2) Prep QC Batch: MP14103

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID:	USTAS4151-MW02	Date Sampled:	03/28/08
Lab Sample ID:	F56535-9	Date Received:	03/29/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X001570.D	1	04/05/08	NJ	04/02/08	OP24597	SX79
Run #2							

Run #	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	1.4	ug/l	
208-96-8	Acenaphthylene	ND	4.9	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.9	0.97	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.9	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.9	0.97	ug/l	
91-20-3	Naphthalene	1.8	4.9	1.2	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	75%		42-108%
321-60-8	2-Fluorobiphenyl	73%		40-106%
1718-51-0	Terphenyl-d14	79%		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

Page 1 of 1

Client Sample ID:	USTAS4151-MW02	Date Sampled:	03/28/08
Lab Sample ID:	F56535-9	Date Received:	03/29/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-AS4141		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ034551.D	1	03/31/08	TD	n/a	n/a	GQQ1327
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	95%		70-120%
98-08-8	aaa-Trifluorotoluene	90%		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

Page 1 of 1

Client Sample ID: USTAS4151-MW02
 Lab Sample ID: F56535-9
 Matrix: AQ - Ground Water
 Project: Camp Lejeune-AS4141

Date Sampled: 03/28/08
 Date Received: 03/29/08
 Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	4.4 B	5.0	2.1	ug/l	1	03/31/08	03/31/08 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6367

(2) Prep QC Batch: MP14103

RL = Reporting Limit
 MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID:	USTAS4151-MW02D	Date Sampled:	03/28/08
Lab Sample ID:	F56535-10	Date Received:	03/29/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X001571.D	1	04/05/08	NJ	04/02/08	OP24597	SX79
Run #2							

Run #	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	1.4	ug/l	
208-96-8	Acenaphthylene	ND	4.9	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.9	0.97	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.9	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.9	0.97	ug/l	
91-20-3	Naphthalene	1.4	4.9	1.2	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	78%		42-108%
321-60-8	2-Fluorobiphenyl	75%		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

Page 1 of 1

Client Sample ID:	USTAS4151-MW02D	Date Sampled:	03/28/08
Lab Sample ID:	F56535-10	Date Received:	03/29/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ034552.D	1	03/31/08	TD	n/a	n/a	GQQ1327
Run #2							

Run #	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	96%		70-120%
98-08-8	aaa-Trifluorotoluene	92%		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

Page 1 of 1

Client Sample ID: USTAS4151-MW02D

Lab Sample ID: F56535-10

Matrix: AQ - Ground Water

Project: Camp Lejeune-AS4141

Date Sampled: 03/28/08

Date Received: 03/29/08

Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	5.3	5.0	2.1	ug/l	1	03/31/08	03/31/08 RS	SW846 6010B ¹	SM 3030C ²

(1) Instrument QC Batch: MA6367

(2) Prep QC Batch: MP14103

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Page 1 of 1

Client Sample ID:	USTAS4151-TRIPBLANK	Date Sampled:	03/26/08
Lab Sample ID:	F56535-11	Date Received:	03/29/08
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	EPA 602		
Project:	Camp Lejeune-AS4141		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QQ034553.D	1	03/31/08	TD	n/a	n/a	GQQ1327
Run #2							

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

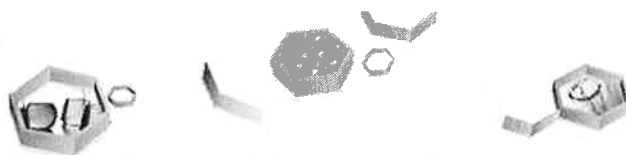
Purgeable Aromatics, Full List

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	96%		70-120%
98-08-8	aaa-Trifluorotoluene	92%		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



IT'S ALL IN THE CHEMISTRY



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

COC Number:
125709-AS4141-032808

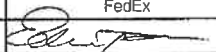


Shaw Environmental & Infrastructure, Inc.

F56535

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 -AS4141				CAMP LEJEUNE, NC																	
Project Number		Contact		P.O. Number		Reviewed by															
125006		Mark Martin																			
Client Rep				Project Manager																	
US NAVY - LANTDIV				Joe Colella																	
Item No.	Sample Number	Date	Time	Comp	Grab	Sample Description	Number of Containers	VOC 6021 w xylenes	PAH 625	Total Lead By 3030C											
1	USTAS4151-MW15	3/27/08	14:00		X	USTAS4151-MW15	6	X	X	X											
2	USTAS4151-MW16	3/27/08	14:40		X	USTAS4151-MW16	6	X	X	X											
3	USTAS4151-MW18	3/27/08	15:15		X	USTAS4151-MW18	6	X	X	X											
4	USTAS4151-MW14	3/28/08	7:00		X	USTAS4151-MW14	6	X	X	X											
5	USTAS4151-OBG06	3/28/08	8:00		X	USTAS4151-OBG06	6	X	X	X											
6	USTAS4151-MW17	3/28/08	8:45		X	USTAS4151-MW17	6	X	X	X											
7	USTAS4151-MW07	3/28/08	9:30		X	USTAS4151-MW07	6	X	X	X											
8	USTAS4151-MW10	3/28/08	10:50		X	USTAS4151-MW10	6	X	X	X											
9	USTAS4151-MW02	3/28/08	11:15		X	USTAS4151-MW02	6	X	X	X											
10	USTAS4151-MW02D	3/28/08	11:15		X	USTAS4151-MW02D	6	X	X	X											
11	USTAS4151-TRIPBLANK	10/26/07			X	USTAS4151-TRIPBLANK	2	X													

Transfer Number	Item Number	Transfers Relinquished By	Transfers Accepted By	Date	Time	Remarks
1	1 -- 11		FedEx	3/28/08	16:00	14 Day TAT FedEx 8639 1417 4002, 8639 1433 4107, 8639 1433 4092
2		FX		3-29-08	09:00	
3						

2.4 2.0 2.4

F56535: Chain of Custody

Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F56535 CLIENT: Shaw PROJECT: Camp Lejeune - AS 4/41
 DATE/TIME RECEIVED: 3-29-08 09:00 # OF COOLERS RECEIVED: 3 COOLER TEMPS: 2.4 2.0 2.6
 METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER
 AIRBILL NUMBERS: 4639 1433 4092

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 GOC
- ☒ TRIP BLANK INTACT
- ☐ TRIP BLANK NOT INTACT
- ☒ RECEIVED WATER TRIP BLANK
- ☐ RECEIVED SOIL TRIP BLANK

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)

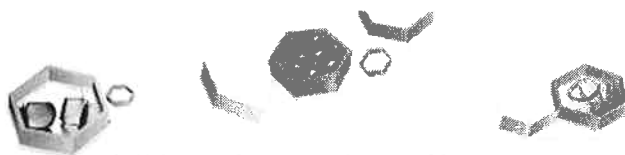
MISC. INFORMATION

NUMBER OF ENCORES ? 0
 NUMBER OF 5035 FIELD KITS ? 0
 NUMBER OF LAB FILTERED METALS ? 0

SUMMARY OF COMMENTS: _____

TECHNICIAN SIGNATURE/DATE E.T. 3-29-08 TECHNICIAN SIGNATURE/DATE F.M. 3-29-08 ASBD 12/17/07

F56535: Chain of Custody
 Page 2 of 2



IT'S ALL IN THE CHEMISTRY

Section 4

4

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: F56535
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24597-MB	X001559.D	1	04/04/08	NJ	04/02/08	OP24597	SX79

The QC reported here applies to the following samples:

Method: EPA 625

F56535-1, F56535-2, F56535-3, F56535-4, F56535-5, F56535-6, F56535-7, F56535-8, F56535-9, F56535-10

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	1.4	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	1.2	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	75%	40-106%
1718-51-0	Terphenyl-d14	88%	39-121%

Method Blank Summary

Page 1 of 1

Job Number: F56535
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24597-MB	L040387.D	1	04/08/08	NJ	04/02/08	OP24597	SL2055

The QC reported here applies to the following samples:

Method: EPA 625

F56535-1, F56535-2, F56535-3, F56535-4, F56535-5, F56535-6, F56535-7, F56535-8, F56535-9, F56535-10

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	1.4	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.1	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	1.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	1.3	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	1.2	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	76% 42-108%
321-60-8	2-Fluorobiphenyl	73% 40-106%
1718-51-0	Terphenyl-d14	85% 39-121%

Blank Spike Summary

Page 1 of 1

Job Number: F56535
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24597-BS	X001558.D	1	04/04/08	NJ	04/02/08	OP24597	SX79

The QC reported here applies to the following samples:

Method: EPA 625

F56535-1, F56535-2, F56535-3, F56535-4, F56535-5, F56535-6, F56535-7, F56535-8, F56535-9, F56535-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	42.8	86	58-106
208-96-8	Acenaphthylene	50	42.3	85	58-105
120-12-7	Anthracene	50	42.7	85	65-108
56-55-3	Benzo(a)anthracene	50	43.3	87	63-111
50-32-8	Benzo(a)pyrene	50	43.1	86	62-106
205-99-2	Benzo(b)fluoranthene	50	43.3	87	63-109
191-24-2	Benzo(g,h,i)perylene	50	46.3	93	61-111
207-08-9	Benzo(k)fluoranthene	50	45.0	90	64-111
218-01-9	Chrysene	50	43.4	87	64-111
53-70-3	Dibenzo(a,h)anthracene	50	44.2	88	62-112
206-44-0	Fluoranthene	50	43.5	87	65-114
86-73-7	Fluorene	50	43.7	87	61-106
193-39-5	Indeno(1,2,3-cd)pyrene	50	41.7	83	61-113
90-12-0	1-Methylnaphthalene	50	40.5	81	52-102
91-57-6	2-Methylnaphthalene	50	42.4	85	56-112
91-20-3	Naphthalene	50	38.4	77	50-104
85-01-8	Phenanthrene	50	43.1	86	65-108
129-00-0	Pyrene	50	44.6	89	60-113

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	83%	42-108%
321-60-8	2-Fluorobiphenyl	83%	40-106%
1718-51-0	Terphenyl-d14	95%	39-121%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F56535
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24597-MS	X001568.D	1	04/05/08	NJ	04/02/08	OP24597	SX79
OP24597-MSD	X001569.D	1	04/05/08	NJ	04/02/08	OP24597	SX79
F56535-8	X001567.D	1	04/05/08	NJ	04/02/08	OP24597	SX79

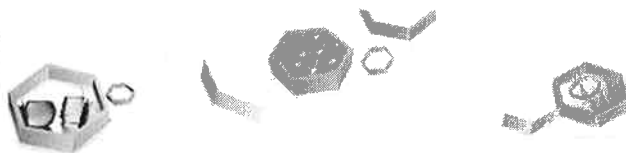
The QC reported here applies to the following samples:

Method: EPA 625

F56535-1, F56535-2, F56535-3, F56535-4, F56535-5, F56535-6, F56535-7, F56535-8, F56535-9, F56535-10

CAS No.	Compound	F56535-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		96.2	77.9	81	79.1	82	2	58-106/21
208-96-8	Acenaphthylene	ND		96.2	77.3	80	78.7	82	2	58-105/21
120-12-7	Anthracene	ND		96.2	79.1	82	79.7	83	1	65-108/19
56-55-3	Benzo(a)anthracene	ND		96.2	79.1	82	79.9	83	1	63-111/19
50-32-8	Benzo(a)pyrene	ND		96.2	78.9	82	78.7	82	0	62-106/20
205-99-2	Benzo(b)fluoranthene	ND		96.2	79.4	83	79.3	82	0	63-109/20
191-24-2	Benzo(g,h,i)perylene	ND		96.2	85.4	89	84.6	88	1	61-111/21
207-08-9	Benzo(k)fluoranthene	ND		96.2	79.8	83	80.1	83	0	64-111/20
218-01-9	Chrysene	ND		96.2	77.6	81	78.3	81	1	64-111/19
53-70-3	Dibenzo(a,h)anthracene	ND		96.2	78.0	81	81.3	85	4	62-112/20
206-44-0	Fluoranthene	ND		96.2	80.4	84	84.0	87	4	65-114/21
86-73-7	Fluorene	ND		96.2	80.1	83	81.3	85	1	61-106/19
193-39-5	Indeno(1,2,3-cd)pyrene	ND		96.2	78.4	82	76.7	80	2	61-113/20
90-12-0	1-Methylnaphthalene	1.8	J	96.2	78.6	80	79.7	81	1	52-102/25
91-57-6	2-Methylnaphthalene	1.8	J	96.2	81.3	83	83.9	85	3	56-112/26
91-20-3	Naphthalene	3.4	J	96.2	77.2	77	78.9	79	2	50-104/28
85-01-8	Phenanthrene	ND		96.2	79.2	82	79.7	83	1	65-108/20
129-00-0	Pyrene	ND		96.2	81.4	85	80.0	83	2	60-113/20

CAS No.	Surrogate Recoveries	MS	MSD	F56535-8	Limits
4165-60-0	Nitrobenzene-d5	79%	81%	79%	42-108%
321-60-8	2-Fluorobiphenyl	79%	79%	76%	40-106%
1718-51-0	Terphenyl-d14	90%	89%	80%	39-121%



IT'S ALL IN THE CHEMISTRY

GC 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: F56535
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1327-MB	QQ034533.D1		03/31/08	TD	n/a	n/a	GQQ1327

The QC reported here applies to the following samples:

Method: EPA 602

F56535-1, F56535-2, F56535-5, F56535-6, F56535-7, F56535-8, F56535-9, F56535-10, F56535-11

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	98% 70-120%
98-08-8	aaa-Trifluorotoluene	93% 73-118%

Method Blank Summary

Page 1 of 1

Job Number: F56535
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1329-MB	QQ034579.D 1		04/01/08	TD	n/a	n/a	GQQ1329

The QC reported here applies to the following samples:

Method: EPA 602

F56535-3, F56535-4

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	99% 70-120%
98-08-8	aaa-Trifluorotoluene	93% 73-118%

Blank Spike Summary

Page 1 of 1

Job Number: F56535
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1327-BS	QQ034534.D1		03/31/08	TD	n/a	n/a	GQQ1327

The QC reported here applies to the following samples:

Method: EPA 602

F56535-1, F56535-2, F56535-5, F56535-6, F56535-7, F56535-8, F56535-9, F56535-10, F56535-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.2	101	80-120
108-90-7	Chlorobenzene	20	19.0	95	79-118
95-50-1	1,2-Dichlorobenzene	20	18.9	95	76-117
541-73-1	1,3-Dichlorobenzene	20	19.3	97	78-120
106-46-7	1,4-Dichlorobenzene	20	19.4	97	78-117
100-41-4	Ethylbenzene	20	19.1	96	79-121
1634-04-4	Methyl Tert Butyl Ether	20	20.0	100	72-113
108-88-3	Toluene	20	20.2	101	79-121
1330-20-7	Xylenes (total)	60	60.5	101	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	105%	70-120%
98-08-8	aaa-Trifluorotoluene	95%	73-118%

Blank Spike Summary

Page 1 of 1

Job Number: F56535
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GQQ1329-BS	QQ034578.D1		04/01/08	TD	n/a	n/a	GQQ1329

The QC reported here applies to the following samples:

Method: EPA 602

F56535-3, F56535-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.0	100	80-120
108-90-7	Chlorobenzene	20	18.8	94	79-118
95-50-1	1,2-Dichlorobenzene	20	18.7	94	76-117
541-73-1	1,3-Dichlorobenzene	20	19.0	95	78-120
106-46-7	1,4-Dichlorobenzene	20	19.1	96	78-117
100-41-4	Ethylbenzene	20	18.4	92	79-121
1634-04-4	Methyl Tert Butyl Ether	20	20.0	100	72-113
108-88-3	Toluene	20	19.8	99	79-121
1330-20-7	Xylenes (total)	60	59.1	99	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	103%	70-120%
98-08-8	aaa-Trifluorotoluene	93%	73-118%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F56535
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F56501-7MS	QQ034538.D1		03/31/08	TD	n/a	n/a	GQQ1327
F56501-7MSD	QQ034539.D1		03/31/08	TD	n/a	n/a	GQQ1327
F56501-7	QQ034537.D1		03/31/08	TD	n/a	n/a	GQQ1327

The QC reported here applies to the following samples:

Method: EPA 602

F56535-1, F56535-2, F56535-5, F56535-6, F56535-7, F56535-8, F56535-9, F56535-10, F56535-11

CAS No.	Compound	F56501-7 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	19.1	96	19.3	97	1	80-120/10
108-90-7	Chlorobenzene	1.0 U	20	18.0	90	18.0	90	0	79-118/10
95-50-1	1,2-Dichlorobenzene	1.0 U	20	17.7	89	17.7	89	0	76-117/18
541-73-1	1,3-Dichlorobenzene	1.0 U	20	18.2	91	18.0	90	1	78-120/13
106-46-7	1,4-Dichlorobenzene	1.0 U	20	18.2	91	18.2	91	0	78-117/11
100-41-4	Ethylbenzene	1.0 U	20	17.6	88	17.7	89	1	79-121/9
1634-04-4	Methyl Tert Butyl Ether	1.0 U	20	18.5	93	19.5	98	5	72-113/13
108-88-3	Toluene	1.0 U	20	18.9	95	19.0	95	1	79-121/10
1330-20-7	Xylenes (total)	3.0 U	60	56.5	94	56.6	94	0	80-119/8

CAS No.	Surrogate Recoveries	MS	MSD	F56501-7	Limits
460-00-4	4-Bromofluorobenzene	105%	103%	98%	70-120%
98-08-8	aaa-Trifluorotoluene	94%	96%	94%	73-118%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F56535
Account: ITVAVAB Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F56535-4MS	QQ034582.D 1		04/01/08	TD	n/a	n/a	GQQ1329
F56535-4MSD	QQ034583.D 1		04/01/08	TD	n/a	n/a	GQQ1329
F56535-4	QQ034581.D 1		04/01/08	TD	n/a	n/a	GQQ1329

The QC reported here applies to the following samples:

Method: EPA 602

F56535-3, F56535-4

CAS No.	Compound	F56535-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	20.0	100	20.0	100	0	80-120/10
108-90-7	Chlorobenzene	ND		20	18.6	93	18.5	93	1	79-118/10
95-50-1	1,2-Dichlorobenzene	ND		20	18.0	90	18.1	91	1	76-117/18
541-73-1	1,3-Dichlorobenzene	ND		20	18.5	93	18.4	92	1	78-120/13
106-46-7	1,4-Dichlorobenzene	ND		20	18.5	93	18.6	93	1	78-117/11
100-41-4	Ethylbenzene	ND		20	18.3	92	18.2	91	1	79-121/9
1634-04-4	Methyl Tert Butyl Ether	ND		20	20.4	102	19.9	100	2	72-113/13
108-88-3	Toluene	ND		20	19.7	99	19.7	99	0	79-121/10
1330-20-7	Xylenes (total)	ND		60	58.6	98	58.4	97	0	80-119/8

CAS No.	Surrogate Recoveries	MS	MSD	F56535-4	Limits
460-00-4	4-Bromofluorobenzene	103%	101%	97%	70-120%
98-08-8	aaa-Trifluorotoluene	94%	92%	91%	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: F56535
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

QC Batch ID: MP14103
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 03/31/08

Metal	RL	IDL	MB raw	final
Aluminum	200	48		
Antimony	6.0	3.3		
Arsenic	10	3.7		
Barium	200	5		
Beryllium	4.0	1		
Cadmium	5.0	1		
Calcium	1000	100		
Chromium	10	.92		
Cobalt	50	1		
Copper	25	1.2		
Iron	300	14		
Lead	5.0	2.1	-1.4	<5.0
Magnesium	5000	100		
Manganese	15	1		
Molybdenum	50	1.2		
Nickel	40	1		
Potassium	10000	100		
Selenium	10	4		
Silver	10	.77		
Sodium	10000	500		
Thallium	10	5.6		
Tin	50	2.4		
Vanadium	50	1		
Zinc	20	5		

Associated samples MP14103: F56535-1, F56535-2, F56535-3, F56535-4, F56535-5, F56535-6, F56535-7, F56535-8, F56535-9, F56535-10

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

6.1.1
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F56535
 Account: ITVAVAB - Shaw E & I, Inc.
 Project: Camp Lejeune-AS4141

QC Batch ID: MP14103
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 03/31/08 03/31/08

Metal	F56491-1 Original DUP	RPD	QC Limits	F56491-1 Original MS	Spikelot MPFLICP1 % Rec	QC Limits
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead	6.5	5.7	13.1	0-20	6.5	464
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Thallium						
Tin						
Vanadium						
Zinc						

Associated samples MP14103: F56535-1, F56535-2, F56535-3, F56535-4, F56535-5, F56535-6, F56535-7, F56535-8, F56535-9, F56535-10

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: F56535
 Account: ITVAVAB - Shaw E & I, Inc.
 Project: Camp Lejeune-AS4141

QC Batch ID: MP14103
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 03/31/08

Metal	F56491-1 Original MSD	Spikelot MPFLICPl % Rec	MSD RPD	QC Limit
-------	--------------------------	----------------------------	------------	-------------

Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead	6.5	466	500	91.9	0.4	20
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Thallium						
Tin						
Vanadium						
Zinc						

Associated samples MP14103: F56535-1, F56535-2, F56535-3, F56535-4, F56535-5, F56535-6, F56535-7, F56535-8, F56535-9, F56535-10

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

6.1.2
 6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F56535
Account: ITVAVAB - Shaw E & I, Inc.
Project: Camp Lejeune-AS4141

QC Batch ID: MP14103
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 03/31/08

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	455	500	91.0	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Thallium				
Tin				
Vanadium				
Zinc				

Associated samples MP14103: F56535-1, F56535-2, F56535-3, F56535-4, F56535-5, F56535-6, F56535-7, F56535-8, F56535-9, F56535-10

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

6.1.3
6

SERIAL DILUTION RESULTS SUMMARY

Login Number: F56535
 Account: ITVAVAB - Shaw E & I, Inc.
 Project: Camp Lejeune-AS4141

QC Batch ID: MP14103
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 03/31/08

Metal	F56491-1		QC	
	Original	SDL 1:5	RPD	Limits

Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	6.47	15.0	132.5(a)	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Thallium				
Tin				
Vanadium				
Zinc				

Associated samples MP14103: F56535-1, F56535-2, F56535-3, F56535-4, F56535-5, F56535-6, F56535-7, F56535-8, F56535-9, F56535-10

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).

6.1.4
6