



Shaw Environmental, Inc.

FINAL
2008-2009 ANNUAL MONITORING REPORT

**BUILDING AS 4141
MARINE CORP BASE, CAMP LEJUENE
ONSLOW COUNTY, NORTH CAROLINA**

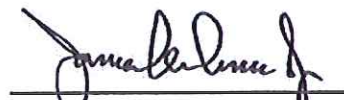
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DEPARTMENT OF THE NAVY
Naval Facilities Engineering Command, Mid-Atlantic
Marine Corps North Carolina IPT
Environmental Business Line
9742 Maryland Avenue
Norfolk, VA 23511-3095

Prepared by:
SHAW ENVIRONMENTAL, INC.
500 East Main Street, Suite 1630
Norfolk, Virginia 23510




Mark Pisarcik
Project Manager


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

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ACRONYMS AND ABBREVIATIONS

AFVR	Aggressive Fluid Vapor Recovery
AMR	Annual Monitoring Report
bls	Below Land Surface
BQL	below the quantitation limit
CAP	Corrective Action Plan
CATLIN	CATLIN Engineers and Scientists
DPE	Dual Phase Extraction
DWM	Division of Waste Management
EEI	Engineering and Environment, Inc.
EPA	Environmental Protection Agency
J.A. Jones	J.A. Jones Environmental Services Company
MCAS	Marine Corps Air Station
NAVFAC	Naval Facilities Engineering Command
NCDENR	North Carolina Department of Environmental and Natural Resources
NCGWQS	North Carolina Groundwater Quality Standards
NGVD	National Geodetic Vertical Datum
OBG	O'Brian & Gere Engineers
Osage	Osage of Virginia
PAH	Poly Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
RAO	Remedial Action Objectives
RCAP	Revised Corrective Action Plan
Shaw	Shaw Environmental, Inc.
SVOCs	Semi-Volatile Organic Compounds
TPH	Total Petroleum Hydrocarbons
µg/L	micrograms per liter
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds
WWTP	wastewater treatment plant

1.0 INTRODUCTION

Shaw Environmental, Inc. (Shaw) has been tasked by the Department of the Navy, Naval Facilities Engineering Command (NAVFAC), Mid-Atlantic under Contract Number N62470-02-D-3260, Task Order 0095 to prepare this Annual Monitoring Report (AMR) 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 September 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, 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**)

1.2 AS 4141 SITE DESCRIPTION

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 USTs 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.

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 AMR is to document the weekly gauging events and evaluate the extent of dissolved phase contamination at the site from the annual sampling event conducted in September 2008. The report also provides a brief environmental history of the site, summarizes the Corrective Action Plan (CAP), 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.

2.0 CONTAMINATION INVESTIGATION 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 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 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 MCAS 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 prepared an AMR 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. (EEI) took over these operations from February 2003 until March 2005. EEI 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 resumed 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 AMR dated June 2006 that documented these activities.

In December 2005, CATLIN conducted soil sampling with thirteen hand augered borings in areas of previously referenced total petroleum hydrocarbons (TPH) contamination. All soil sample results were below Residential and Industrial/Commercial maximum soil contaminant concentrations. 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 2007 and March 2008 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 2007-2008 AMR dated May 2008 that documented the October 2007 and March 2008 gauging of 19 monitoring wells and sampling of nine selected monitoring wells and the monthly removal of free phased product from the five piezometers (AS3905-TP-1 through AS3905-TP-5) using a peristaltic pump.

On October 31, 2008, Shaw completed the installation and started up the dual-phase extraction (DPE) system. The system consists of the following components: Transfer pumps, vapor-liquid separator, oil/water separator, liquid ring vacuum pump, product storage tank, surge tank, air stripper, sump tank, bag filters, and carbon adsorption drums. The DPE system is used for the recovery of free-phase product and groundwater from an existing recovery well (USTAS4141-RW01) and three new recovery wells (USTAS4141-RW03 through USTAS4141-RW05), at Building AS-4141.

This 2008-2009 AMR documents the September 2008 sampling and gauging of selected monitoring wells, weekly gauging of monitoring wells, and the monthly removal of free phased product from the four piezometers (AS3905-TP-1 through AS3905-TP-4) using a peristaltic pump. The maximum concentrations of the chemicals of concern for 2006, 2007, 2008, and the revised site rehabilitation goals for detected chemicals of concern are presented in **Table 2.1**. A layout of the Building AS-4141 site in the JP-5 Line Area is presented in **Figure 2.1**. Free phase product thickness for September 2008 is depicted in **Figure 2.2**.

3.0 GROUNDWATER AND FREE PHASE PRODUCT MONITORING

3.1 GROUNDWATER MONITORING SUMMARY

Groundwater elevations and free phase product thicknesses were measured weekly from June 2008 to April 2009 (**Table 3.2**) in each of nine groundwater monitoring wells (USTAS4141-MW14, USTAS4141-MW15, USTAS4141-MW17, USTAS4141-MW19, USTAS4141-MW20, USTAS4141-MW21, USTAS4141-OBG03R, USTAS4141-OBG06, and USTAS4141-RW01), and four piezometers (USTAS4141-TP01, USTAS4141-TP02, USTAS4141-TP03, USTAS4141-TP04). The groundwater elevation and free phase product thickness historical data for November 2005 to April 2008 are presented in **Appendix A**. The groundwater sample collection field logs for the annual groundwater gauging and sampling event performed in September 2008 are provided in **Appendix B**.

3.2 SEPTEMBER 2008 GAUGING EVENT

In September 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-OBG03R, USTAS4141-OBG06, and USTAS4141-RW01). The depth to groundwater ranged from 2.96 feet below land surface (bls) in monitoring well USTAS4141-MW15 to 7.47 feet bls in monitoring well USTAS4141-MW02. Groundwater elevations ranged from 13.26 feet National Geodetic Vertical Datum (NGVD) in monitoring well USTAS4141-MW19 to 16.25 feet NGVD in monitoring well USTAS4141-MW10. September 2008 gauging data is depicted in Table 3.1.

The shallow groundwater flows from the west to the east at a horizontal hydraulic gradient of 0.037 ft/ft from USTAS4141-MW10 to USTAS4141-OBG03R (**Figure 2.1**). Detectable thickness of free phase product was observed in monitoring wells USTAS4141-MW17, USTAS4141-MW20, USTAS4141-MW21, USTAS4141-RW01, and USTAS4141-OBG03R (**Figure 2.2**). Free phase product thicknesses ranged from 0.02 feet in USTAS4141-MW17 to 0.15 feet in USTAS4141-MW20 and USTAS4141-MW21.

3.3 FREE PHASE PRODUCT THICKNESS AND RECOVERY SUMMARY

3.3.1 Free Phase Product History

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 MCAS 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.

EEI took over monitoring free phase product measurements from early 2003 until March 2005. The EEI 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.

3.3.2 Free Phase Product Results 2008-2009

Free phase product was monitored on a weekly basis starting in June 2008 to April 2009 in nine monitoring wells (USTAS4141-MW14, USTAS4141-MW15, USTAS4141-MW17, USTAS4141-MW19, USTAS4141-MW20, USTAS4141-MW21, USTAS4141-OBG03R, USTAS4141-OBG06, and USTAS4141-RW01), and four piezometers (USTAS4141-TP01, USTAS4141-TP02, USTAS4141-TP03, USTAS4141-TP04).

From June 2008 to April 2009 there were no AFVR events conducted 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. Osage has taken over the product recovery operations for piezometers AS3905-TP1 through AS3905-TP5 to remove free phased product. Product removed from these wells will be in a separate report issued by Osage.

Measured free phase product thicknesses from previous monitoring events in October 2007 and March 2008 as well as on September 10, 2008 that detected measurable free phased product are presented in the table below.

3.3.3 DPE System Installation and Operation

On October 31, 2008, Shaw completed the installation and started up the Dual-Phase Extraction (DPE) system at Site AS4141. The system recovers free phase product and contaminated groundwater from the site via one existing well (RW01) and three new wells (RW03, RW04, and RW05) as shown on Figure 4.1.

The system effectively operated from October 31, 2008, until late January 2009 when it shut down due to damage caused by freezing conditions. The damage was assessed and repairs (piping, pump casing, & bag filter housing replacement) were initiated and completed. The system was successfully re-started on March 5, 2009 and has operated continuously through May 31, 2009, except for minor down time for planned maintenance activities.

During May 2009, heat tape and piping insulation were installed on key areas of the system to prevent future freeze damage.

FREE PHASED PRODUCT THICKNESSES (FEET)

Well	10/25/07	3/28/08	9/10/08
TPZ01	0.65	2.98	0.10
TPZ02	0.03	0.00	0.00
TPZ03	1.08	2.24	0.37
TPZ04	0.20	0.16	0.83
TPZ05	0.98	2.60	0.74
OBG03R	0.27	0.40	0.03
RW01	0.35	0.44	0.13
MW17	0.14	0.00	0.01
MW19	0.00	0.01	0.00
MW20	2.98	2.01	0.06
MW21	3.37	1.59	0.16

Weekly free phase product thickness measurements from June 2008 to April 2009 are presented in **Table 3.2**. Groundwater elevations and free phase product measured for the September 2008 sampling event is provided in **Table 3.1**. The groundwater sample collection field logs for the annual groundwater gauging and sampling event performed in September 2008 are provided in **Appendix B**.

4.0 GROUNDWATER ANALYSIS SUMMARY

4.1 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 polychlorinated biphenyls (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 EEI. 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 52.7 micrograms per liter ($\mu\text{g/l}$), 8.6 $\mu\text{g/l}$, 24.7 $\mu\text{g/l}$, and 60.3 $\mu\text{g/l}$, respectively. The VOCs were BQL in all of the groundwater samples in June 2004. Bis(2-ethylhexyl)phthalate, naphthalene, and benzo(a)anthracene were the only 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 North Carolina Groundwater Quality Standards (NCGWQS) 2L in any of the monitoring wells. Analytical results from the groundwater samples did not detect polyaromatic hydrocarbons (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, VOCs which include 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. 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, VOCs which include 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. 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.

In 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. Monitoring well USTAS4141-MW16 displayed two compounds in excess of NCGWQS (2-methylnaphtalene, 76.6 µg/l; and naphthalene 83.6 µg/l).

In 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. Three monitoring wells displayed compounds in excess of NCGWQS.

- 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].

4.2 GROUNDWATER SAMPLING SEPTEMBER 2008

Prior to sampling, monitoring wells were purged a minimum of one casing volume, until water quality parameters (pH, temperature, conductivity, oxidation-reduction potential, dissolved oxygen, and turbidity) stabilized. The water quality parameters were then measured and recorded and are presented in **Table 4.1**. Sampling was conducted using a peristaltic pump with connected polyethylene discharge tubing and a low flow purging and sampling procedure.

If a monitoring well purged to dryness, the monitoring well was allowed to recharge before sampling. Samples were collected using the laboratory-prepared sample bottles, placed on ice, and shipped under proper chain of custody to Accutest Laboratories Inc., located in Orlando, Florida (NC Certification Number 573). Analyses run included Environmental Protection Agency (EPA) Methods 602 + Xylenes, 625 + 10 largest non-target peaks, and 3030C for Lead. Laboratory reports and chain of custody documentation are included in Appendix B.

Groundwater samples were collected from nine monitoring wells USTAS4141-MW02, USTAS4141-MW07, USTAS4141-MW10, USTAS4141-MW14, USTAS4141-MW15, USTAS4141-MW16, USTAS4141-MW18, USTAS4141-MW19, and USTAS4141-

OBG06 on September 19 through September 22, 2008. Groundwater samples were not collected from five monitoring wells (USTAS4141-MW17, USTAS4141-MW20, USTAS4141-MW21, USTAS4141-RW01, and USTAS4141-OBG03R) due to the presence of free phased product.

Of the nine monitoring wells sampled, one monitoring well (USTAS4141-MW16) contained 101 µg/L of naphthalene, which is in excess of the NCGWQS of 21 µg/L. Analytical results are depicted in **Table 4.2** and **Figure 4.1**. Copies of the groundwater sample collection field logs are provided in **Appendix B** and the laboratory analytical reports are provided in **Appendix C**.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Groundwater elevations and free phase product thicknesses were measured weekly from June 2008 to April 2009 in each of nine groundwater monitoring wells (USTAS4141-MW14, USTAS4141-MW15, USTAS4141-MW17, USTAS4141-MW19, USTAS4141-MW20, USTAS4141-MW21, USTAS4141-OBG03R, USTAS4141-OBG06, and USTAS4141-RW01), and four piezometers (USTAS4141-TP01, USTAS4141-TP02, USTAS4141-TP03, USTAS4141-TP04). In addition, free phase product was measured in monitoring wells USTAS4141-MW17, USTAS4141-MW20, USTAS4141-MW21, USTAS4141-RW01, and USTAS4141-OBG03R during the September 2008 sampling event.

From June 2008 to April 2009, AFVR events were not conducted 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. Osage has taken over the product recovery operations for piezometers AS3905-TP1 through AS3905-TP5 to remove free phased product. Product removed from these wells will be in a separate report issued by Osage.

The persistent presence of measurable free phase product requires that free product recovery efforts be continued at the Building AS-4141 in the JP-5 Line Area. From June 2008 through April 2009 free phase product thicknesses have fluctuated and some wells have actually increased in the thicknesses due to the longer monthly interval between removals. However, continued operation of the recently installed DPE system should improve free phase product removal and begin to show decreasing product level trends in the systems area of influence.

It is recommended that groundwater and free phase product measurements be recorded on a monthly basis, for another year, 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 through USTAS4141-RW05, and piezometers AS3905-TP1 through AS3905-TP5. AFVR events are no longer needed at this site due to the implementation of the DPE system.

It is recommended that the adjacent fuel lines be tightness tested annually to confirm that there are no further leaks in the fuel system.

It is recommended that semi-annual groundwater sample collection and analysis be performed from 14 monitoring wells (USTAS4141-MW07, USTAS4141-MW10, USTAS4141-MW14, USTAS4141-MW16, USTAS4141-MW17, USTAS4141-MW18, USTAS4141-MW19, USTAS4141-MW20, USTAS4141-MW21, USTAS4141-RW01, USTAS4141-RW03, USTAS4141-RW04, USTAS4141-RW05, and USTAS4141-OBG03R). Samples will only be collected from monitoring wells where free phase product is not detected. The samples will be analyzed for VOCs using EPA Method 602/w xylenes and EPA Method 625 (PAHs only).

TABLES

TABLE 2.1

**MCAS NEW RIVER
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 3.1
JP5 Line Area (Building AS-4141)
Groundwater Elevations

Well ID	Date	TOC Elevation	9/19/2008			
	DTB		DTW	DTP	Product Thickness	Groundwater Elevation
MW02	18.92	23.47	7.47	0	0	16.00
MW07	15.54	21.60	3.20	0	0	18.40
MW08	16.58	25.61	NM	0	0	NM
MW10	14.88	21.56	5.31	0	0	16.25
MW13	15.56	18.87	NM	0	0	NM
MW14	24.81	19.56	6.03	0	0	13.53
MW15	12.79	18.11	2.96	0	0	15.15
MW16	14.47	21.29	7.35	0	0	13.94
MW17	14.45	19.77	6.26	6.24	0.02	13.51
MW18	15.07	21.15	7.40	0	0	13.75
MW19	14.57	20.45	6.50	0	0	13.95
MW20	12.93	19.58	6.60	6.45	0.15	12.98
MW21	12.23	19.59	6.60	6.45	0.15	12.99
RW01	23.93	18.70	5.68	5.60	0.08	13.02
RW02	21.00	21.00	NM	0	0	NM
OBG02	12.57	23.84	NM	0	0	NM
OBG03R	12.70	20.63	7.15	7.10	0.05	13.48
OBG04	17.14	20.27	NM	0	0	NM
OBG05	14.15	19.54	NM	0	0	NM
OBG06	17.30	20.88	5.41	0	0	15.47
TPZ01	12.62	20.40	NM	0	0	NM
TPZ02	12.73	20.24	NM	0	0	NM
TPZ03	12.60	20.36	NM	0	0	NM
TPZ04	12.62	20.17	NM	0	0	NM
TPZ05	12.56	20.26	NM	0	0	NM

NM = Not Measured

DTB = Depth to bottom of well (feet)

DTP = Depth to product (feet)

Table 3.2
Groundwater Elevation and Free Product Thickness Table
AS-4141
MCAS New River, North Carolina
April 2008 - April 2009

Monitoring Well	Date	Well Diameter	TOC Elevation	Depth to Product from TOC	Depth to Water from TOC	Free Product Thickness	Groundwater Elevation
USTAS4141-MW14	06/13/08	2	19.56		5.89	0.00	13.67
	06/25/08		19.56		6.13	0.00	13.43
	06/30/08		19.56		6.13	0.00	13.43
	07/08/08		19.56		6.32	0.00	13.24
	07/17/08		19.56		6.30	0.00	13.26
	07/22/08		19.56		6.27	0.00	13.29
	07/29/08		19.56		NG	0.00	
	08/15/08		19.56		6.31	0.00	13.25
	08/22/08		19.56		NG	0.00	
	08/29/08		19.56		6.00	0.00	13.56
	09/10/08		19.56		5.82	0.00	13.74
	10/02/08		19.56		6.05	0.00	13.51
	10/22/08		19.56		6.15	0.00	13.41
	10/29/08		19.56		6.40	0.00	13.16
	11/04/08		19.56		6.74	0.00	12.82
	11/12/08		19.56		6.11	0.00	13.45
	11/21/08		19.56		5.39	0.00	14.17
	11/25/08		19.56		6.82	0.00	12.74
	12/01/08		19.56		6.24	0.00	13.32
	12/08/08		19.56		6.34	0.00	13.22
	12/15/08		19.56		5.92	0.00	13.64
	12/22/08		19.56		5.92	0.00	13.64
	12/29/08		19.56		5.21	0.00	14.35
	01/05/09		19.56		5.88	0.00	13.68
	01/14/09		19.56		5.54	0.00	14.02
	01/21/09		19.56		5.82	0.00	13.74
	01/30/09		19.56		5.88	0.00	13.68
	02/02/09		19.56		5.88	0.00	13.68
	02/09/09		19.56		5.82	0.00	13.74
	02/16/09		19.56		5.97	0.00	13.59
	02/25/09		19.56		5.92	0.00	13.64
	03/04/09		19.56		5.88	0.00	13.68
	03/09/09		19.56		5.99	0.00	13.57
	03/17/09		19.56		5.73	0.00	13.83
	03/26/09		19.56		5.91	0.00	13.65
	04/01/09		19.56		5.69	0.00	13.87
	04/09/09		19.56		5.55	0.00	14.01
	04/13/09		19.56		5.55	0.00	14.01
	04/20/09		19.56		5.64	0.00	13.92
USTAS4141-MW15	06/13/08	2	18.11		NG	0.00	
	06/25/08		18.11		2.60	0.00	15.51
	06/30/08		18.11		3.02	0.00	15.09

Table 3.2
Groundwater Elevation and Free Product Thickness Table
AS-4141
MCAS New River, North Carolina
April 2008 - April 2009

Monitoring Well	Date	Well Diameter	TOC Elevation	Depth to Product from TOC	Depth to Water from TOC	Free Product Thickness	Groundwater Elevation
	07/08/08		18.11		NG	0.00	
	07/17/08		18.11		0.80	0.00	17.31
	07/22/08		18.11		1.68	0.00	16.43
	07/29/08		18.11		NG	0.00	
	08/15/08		18.11		NG	0.00	
	08/22/08		18.11		NG	0.00	
	08/29/08		18.11		NG	0.00	
	09/10/08		18.11		NG	0.00	
	09/19/08		18.11		2.95	0.00	15.16
	10/02/08		18.11		NG	0.00	
	10/22/08		18.11		3.12	0.00	14.99
	10/29/08		18.11	2.90	3.01	0.11	15.10
	11/04/08		18.11		2.77	0.00	15.34
	11/12/08		18.11		NG	0.00	
	11/21/08		18.11	1.60	1.75	0.15	16.36
	11/25/08		18.11		6.82	0.00	11.29
	12/01/08		18.11	3.11	3.18	0.07	14.93
	12/08/08		18.11	2.99	3.02	0.03	15.09
	12/15/08		18.11	2.81	2.85	0.04	15.26
	12/22/08		18.11	3.10	3.17	0.07	14.94
	12/29/08		18.11	2.79	2.84	0.05	15.27
	01/05/09		18.11		2.98	0.00	15.13
	01/14/09		18.11		2.84	0.00	15.27
	01/21/09		18.11	2.87	2.88	0.01	15.23
	01/30/09		18.11		NG	0.00	
	02/02/09		18.11	2.31	2.36	0.05	15.75
	02/09/09		18.11	2.99	3.04	0.05	15.07
	02/16/09		18.11	3.10	3.11	0.01	15.00
	02/25/09		18.11	3.01	3.02	0.01	15.09
	03/04/09		18.11	2.30	2.34	0.04	15.77
	03/09/09		18.11	2.65	2.67	0.02	15.44
	03/17/09		18.11		2.82	0.00	15.29
	03/26/09		18.11		2.89	0.00	15.22
	04/01/09		18.11	3.03	3.05	0.02	15.06
	04/09/09		18.11	3.64	3.65	0.01	14.46
	04/13/09		18.11		NG	0.00	
	04/20/09		18.11	3.92	3.98	0.06	14.13
USTAS4141-MW17	06/13/08	2	19.77		NG	0.00	
	06/25/08		19.77	6.30	6.32	0.02	13.45
	06/30/08		19.77		NG	0.00	
	07/01/08		19.77	6.39	6.42	0.03	13.35
	07/08/08		19.77		6.47	0.00	

Table 3.2
Groundwater Elevation and Free Product Thickness Table
AS-4141
MCAS New River, North Carolina
April 2008 - April 2009

Monitoring Well	Date	Well Diameter	TOC Elevation	Depth to Product from TOC	Depth to Water from TOC	Free Product Thickness	Groundwater Elevation
	07/17/08		19.77	6.40	6.43	0.03	13.34
	07/22/08		19.77	6.46	6.49	0.03	13.28
	07/29/08		19.77	6.18	6.19	0.01	13.58
	08/15/08		19.77	5.95	5.98	0.03	13.79
	08/22/08		19.77		6.15	0.00	13.62
	08/29/08		19.77		6.02	0.00	13.75
	09/10/08		19.77	6.90	6.91	0.01	12.86
	09/19/08		19.77		NG	0.00	
	10/02/08		19.77		6.25	0.00	13.52
	10/22/08		19.77	6.25	6.29	0.04	13.48
	10/29/08		19.77		6.50	0.00	13.27
	11/04/08		19.77	7.40	7.45	0.05	12.32
	11/12/08		19.77	6.40	6.45	0.05	13.32
	11/21/08		19.77		7.50	0.00	12.27
	11/25/08		19.77		6.70	0.00	13.07
	12/01/08		19.77		6.60	0.00	13.17
	12/08/08		19.77		6.82	0.00	12.95
	12/15/08		19.77		6.01	0.00	13.76
	12/22/08		19.77		6.12	0.00	13.65
	12/29/08		19.77		6.10	0.00	13.67
	01/05/09		19.77	5.90	5.94	0.04	13.83
	01/14/09		19.77		6.03	0.00	13.74
	01/21/09		19.77		6.00	0.00	13.77
	01/30/09		19.77		5.91	0.00	13.86
	02/02/09		19.77		5.89	0.00	13.88
	02/09/09		19.77	6.09	6.12	0.03	13.65
	02/16/09		19.77	6.21	6.23	0.02	13.54
	02/25/09		19.77	6.21	6.23	0.02	13.54
	03/04/09		19.77	6.01	6.03	0.02	13.74
	03/09/09		19.77	5.90	5.95	0.05	13.82
	03/17/09		19.77	5.54	5.55	0.01	14.22
	03/26/09		19.77	6.30	6.41	0.11	13.36
	04/01/09		19.77		5.82	0.00	13.95
	04/09/09		19.77	6.18	6.28	0.10	13.49
	04/13/09		19.77		5.93	0.00	13.84
	04/20/09		19.77		5.75	0.00	14.02

Table 3.2
Groundwater Elevation and Free Product Thickness Table
AS-4141
MCAS New River, North Carolina
April 2008 - April 2009

Monitoring Well	Date	Well Diameter	TOC Elevation	Depth to Product from TOC	Depth to Water from TOC	Free Product Thickness	Groundwater Elevation
USTAS4141-MW19	06/13/08	2	20.45		6.48	0.00	13.97
	06/25/08		20.45		6.69	0.00	13.76
	06/30/08		20.45		6.72	0.00	13.73
	07/01/08		20.45		NG	0.00	
	07/08/08		20.45		6.95	0.00	13.50
	07/17/08		20.45		6.82	0.00	13.63
	07/22/08		20.45		6.90	0.00	13.55
	07/29/08		20.45		6.54	0.00	13.91
	08/15/08		20.45		6.33	0.00	14.12
	08/22/08		20.45		6.47	0.00	13.98
	08/29/08		20.45		NG	0.00	
	09/10/08		20.45		6.22	0.00	14.23
	09/19/08		20.45		6.50	0.00	13.95
	10/02/08		20.45		6.50	0.00	13.95
	10/22/08		20.45		6.54	0.00	13.91
	10/29/08		20.45		6.54	0.00	13.91
	11/04/08		20.45		6.74	0.00	13.71
	11/12/08		20.45		6.36	0.00	14.09
	11/21/08		20.45		6.33	0.00	14.12
	11/25/08		20.45		6.64	0.00	13.81
	12/01/08		20.45		6.49	0.00	13.96
	12/08/08		20.45		5.65	0.00	14.80
	12/15/08		20.45		6.05	0.00	14.40
	12/22/08		20.45		6.03	0.00	14.42
	12/29/08		20.45		5.95	0.00	14.50
	01/05/09		20.45		6.09	0.00	14.36
	01/14/09		20.45		6.18	0.00	14.27
	01/21/09		20.45		6.05	0.00	14.40
	01/30/09		20.45		5.99	0.00	14.46
	02/02/09		20.45		6.51	0.00	13.94
	02/09/09		20.45		6.21	0.00	14.24
	02/16/09		20.45		6.31	0.00	14.14
	02/25/09		20.45		6.04	0.00	14.41
	03/04/09		20.45		6.74	0.00	13.71
	03/09/09		20.45		5.78	0.00	14.67
	03/17/09		20.45		5.63	0.00	14.82
	03/26/09		20.45		5.98	0.00	14.47
	04/01/09		20.45		5.54	0.00	14.91
	04/09/09		20.45		5.54	0.00	14.91
	04/13/09		20.45		5.71	0.00	14.74
	04/20/09		20.45		5.64	0.00	14.81
USTAS4141-MW20	06/13/08	2	19.58	6.06	7.50	1.44	12.08

Table 3.2
Groundwater Elevation and Free Product Thickness Table
AS-4141
MCAS New River, North Carolina
April 2008 - April 2009

Monitoring Well	Date	Well Diameter	TOC Elevation	Depth to Product from TOC	Depth to Water from TOC	Free Product Thickness	Groundwater Elevation
	06/25/08		19.58	6.43	7.00	0.57	12.58
	06/30/08		19.58	6.48	6.78	0.30	12.80
	07/01/08		19.58	6.60	6.96	0.36	12.62
	07/08/08		19.58	6.62	6.87	0.25	12.71
	07/17/08		19.58	6.60	6.85	0.25	12.73
	07/22/08		19.58	6.68	6.83	0.15	12.75
	07/29/08		19.58	6.40	6.53	0.13	13.05
	08/15/08		19.58	6.21	6.22	0.01	13.36
	08/22/08		19.58		6.37	0.00	13.21
	08/29/08		19.58	6.28	6.33	0.05	13.25
	09/10/08		19.58	6.17	6.23	0.06	13.35
	09/19/08		19.58		NG	0.00	
	10/02/08		19.58	6.50	6.60	0.10	12.98
	10/22/08		19.58	6.60	6.72	0.12	12.86
	10/29/08		19.58	6.64	6.79	0.15	12.79
	11/04/08		19.58	7.99	8.11	0.12	11.47
	11/12/08		19.58	6.65	6.81	0.16	12.77
	11/21/08		19.58		6.90	0.00	12.68
	11/25/08		19.58		7.09	0.00	12.49
	12/01/08		19.58	6.71	6.79	0.08	12.79
	12/08/08		19.58	6.79	6.92	0.13	12.66
	12/15/08		19.58	6.25	6.28	0.03	13.30
	12/22/08		19.58	6.26	6.48	0.22	13.10
	12/29/08		19.58	6.19	6.25	0.06	13.33
	01/05/09		19.58	6.15	6.30	0.15	13.28
	01/14/09		19.58	5.91	6.04	0.13	13.54
	01/21/09		19.58	6.23	6.25	0.02	13.33
	01/30/09		19.58	6.16	6.26	0.10	13.32
	02/02/09		19.58	6.11	6.22	0.11	13.36
	02/09/09		19.58	6.32	6.51	0.19	13.07
	02/16/09		19.58	6.41	6.71	0.30	12.87
	02/25/09		19.58	6.34	6.55	0.21	13.03
	03/04/09		19.58	6.16	6.30	0.14	13.28
	03/09/09		19.58	6.11	6.21	0.10	13.37
	03/17/09		19.58	6.18	6.30	0.12	13.28
	03/26/09		19.58	6.20	6.35	0.15	13.23
	04/01/09		19.58	5.99	6.23	0.24	13.35
	04/09/09		19.58	5.94	6.10	0.16	13.48
	04/13/09		19.58	6.01	6.18	0.17	13.40
	04/20/09		19.58	5.91	5.99	0.08	13.59

Table 3.2
Groundwater Elevation and Free Product Thickness Table
AS-4141
MCAS New River, North Carolina
April 2008 - April 2009

Monitoring Well	Date	Well Diameter	TOC Elevation	Depth to Product from TOC	Depth to Water from TOC	Free Product Thickness	Groundwater Elevation
USTAS4141-MW21	06/13/08	2	19.59	6.34	6.90	0.56	12.69
	06/25/08		19.59	6.50	6.90	0.40	12.69
	06/30/08		19.59	6.52	6.72	0.20	12.87
	07/01/08		19.59	6.66	6.83	0.17	12.76
	07/08/08		19.59	6.70	6.91	0.21	12.68
	07/17/08		19.59	6.64	6.81	0.17	12.78
	07/22/08		19.59	6.68	6.80	0.12	12.79
	07/29/08		19.59	6.39	7.20	0.81	12.39
	08/15/08		19.59	6.20	6.33	0.13	13.26
	08/22/08		19.59	6.37	6.57	0.20	13.02
	08/29/08		19.59	6.27	6.35	0.08	13.24
	09/10/08		19.59	6.15	6.31	0.16	13.28
	09/19/08		19.59		NG	0.00	
	10/02/08		19.59	6.50	6.58	0.08	13.01
	10/22/08		19.59	6.62	6.72	0.10	12.87
	10/29/08		19.59	6.65	6.74	0.09	12.85
	11/04/08		19.59		7.13	0.00	12.46
	11/12/08		19.59	6.64	6.75	0.11	12.84
	11/21/08		19.59	6.67	6.71	0.04	12.88
	11/25/08		19.59	6.82	6.85	0.03	12.74
	12/01/08		19.59	6.64	6.84	0.20	12.75
	12/08/08		19.59	6.71	6.99	0.28	12.60
	12/15/08		19.59	6.22	6.35	0.13	13.24
	12/22/08		19.59	6.29	6.42	0.13	13.17
	12/29/08		19.59	6.39	6.51	0.12	13.08
	01/05/09		19.59	6.29	6.44	0.15	13.15
	01/14/09		19.59	6.34	6.52	0.18	13.07
	01/21/09		19.59		6.21	0.00	13.38
	01/30/09		19.59	6.15	6.22	0.07	13.37
	02/02/09		19.59	6.29	6.43	0.14	13.16
	02/09/09		19.59	6.39	6.60	0.21	12.99
	02/16/09		19.59		6.53	0.00	13.06
	02/25/09		19.59	6.36	6.49	0.13	13.10
	03/04/09		19.59	6.33	6.40	0.07	13.19
	03/09/09		19.59	6.37	6.45	0.08	13.14
	03/17/09		19.59	6.20	6.28	0.08	13.31
	03/26/09		19.59	6.30	6.41	0.11	13.18
	04/01/09		19.59	6.15	6.25	0.10	13.34
	04/09/09		19.59	6.06	6.17	0.11	13.42
	04/13/09		19.59	6.18	6.25	0.07	13.34
	04/20/09		19.59	6.12	6.20	0.08	13.39
USTAS4141-OBG03R	06/13/08	2	20.63	6.91	7.12	0.21	13.51

Table 3.2
Groundwater Elevation and Free Product Thickness Table
AS-4141
MCAS New River, North Carolina
April 2008 - April 2009

Monitoring Well	Date	Well Diameter	TOC Elevation	Depth to Product from TOC	Depth to Water from TOC	Free Product Thickness	Groundwater Elevation
	06/25/08		20.63	7.13	7.30	0.17	13.33
	06/30/08		20.63	7.15	7.23	0.08	13.40
	07/01/08		20.63	7.28	7.42	0.14	13.21
	07/08/08		20.63	7.28	7.31	0.03	13.32
	07/17/08		20.63	7.26	7.30	0.04	13.33
	07/22/08		20.63	7.25	7.29	0.04	13.34
	07/29/08		20.63	6.97	7.01	0.04	13.62
	08/15/08		20.63	6.58	6.59	0.01	14.04
	08/22/08		20.63	6.98	7.03	0.05	13.60
	08/29/08		20.63	6.86	6.87	0.01	13.76
	09/10/08		20.63	6.73	6.76	0.03	13.87
	09/19/08		20.63		NG	0.00	
	10/02/08		20.63	7.13	7.14	0.01	13.49
	10/22/08		20.63	7.15	7.17	0.02	13.46
	10/29/08		20.63	7.14	7.15	0.01	13.48
	11/04/08		20.63		7.50	0.00	13.13
	11/12/08		20.63		7.06	0.00	13.57
	11/21/08		20.63		NG	0.00	
	11/25/08		20.63	7.44	7.49	0.05	13.14
	12/01/08		20.63	7.2	7.30	0.10	13.33
	12/08/08		20.63	7.29	7.31	0.02	13.32
	12/15/08		20.63	6.65	6.80	0.15	13.83
	12/22/08		20.63	6.7	6.79	0.09	13.84
	12/29/08		20.63		6.31	0.00	14.32
	01/05/09		20.63	6.42	6.49	0.07	14.14
	01/14/09		20.63		6.79	0.00	13.84
	01/21/09		20.63		6.68	0.00	13.95
	01/30/09		20.63		6.59	0.00	14.04
	02/02/09		20.63		6.56	0.00	14.07
	02/09/09		20.63		6.74	0.00	13.89
	02/16/09		20.63		6.85	0.00	13.78
	02/25/09		20.63	6.74	6.75	0.01	13.88
	03/04/09		20.63	6.54	6.55	0.01	14.08
	03/09/09		20.63		6.50	0.00	14.13
	03/17/09		20.63		6.55	0.00	14.08
	03/26/09		20.63		6.82	0.00	13.81
	04/01/09		20.63		6.31	0.00	14.32
	04/09/09		20.63		6.44	0.00	14.19
	04/13/09		20.63		6.48	0.00	14.15
	04/20/09		20.63	6.18	6.71	0.53	13.92
USTAS4141-OBG06	06/13/08	2	20.88		5.49	0.00	15.39
	06/25/08		20.88		5.73	0.00	15.15

Table 3.2
Groundwater Elevation and Free Product Thickness Table
AS-4141
MCAS New River, North Carolina
April 2008 - April 2009

Monitoring Well	Date	Well Diameter	TOC Elevation	Depth to Product from TOC	Depth to Water from TOC	Free Product Thickness	Groundwater Elevation
	06/30/08		20.88		5.83	0.00	15.05
	07/01/08		20.88		NG	0.00	
	07/08/08		20.88		5.92	0.00	14.96
	07/17/08		20.88		5.20	0.00	15.68
	07/22/08		20.88		5.68	0.00	15.20
	07/29/08		20.88		NG	0.00	
	08/15/08		20.88		3.80	0.00	17.08
	08/22/08		20.88		NG	0.00	
	08/29/08		20.88		3.94	0.00	16.94
	09/10/08		20.88		4.80	0.00	16.08
	09/19/08		20.88		5.41	0.00	15.47
	10/02/08		20.88		4.54	0.00	16.34
	10/22/08		20.88		4.63	0.00	16.25
	10/29/08		20.88		6.55	0.00	14.33
	11/04/08		20.88		3.88	0.00	17.00
	11/12/08		20.88		5.13	0.00	15.75
	11/21/08		20.88		5.31	0.00	15.57
	11/25/08		20.88		5.63	0.00	15.25
	12/01/08		20.88		5.74	0.00	15.14
	12/08/08		20.88		5.60	0.00	15.28
	12/15/08		20.88		4.31	0.00	16.57
	12/22/08		20.88		4.46	0.00	16.42
	12/29/08		20.88		5.05	0.00	15.83
	01/05/09		20.88		5.09	0.00	15.79
	01/14/09		20.88		4.96	0.00	15.92
	01/21/09		20.88		4.55	0.00	16.33
	01/30/09		20.88		4.59	0.00	16.29
	02/02/09		20.88		4.66	0.00	16.22
	02/09/09		20.88		5.28	0.00	15.60
	02/16/09		20.88		5.57	0.00	15.31
	02/25/09		20.88		5.81	0.00	15.07
	03/04/09		20.88		4.16	0.00	16.72
	03/09/09		20.88		4.76	0.00	16.12
	03/17/09		20.88		5.28	0.00	15.60
	03/26/09		20.88		5.27	0.00	15.61
	04/01/09		20.88		4.31	0.00	16.57
	04/09/09		20.88		4.99	0.00	15.89
	04/13/09		20.88		5.34	0.00	15.54
	04/20/09		20.88		4.09	0.00	16.79
USTAS4141-RW01	06/13/08	6	18.70	5.45	5.46	0.01	13.24
	06/25/08		18.70	5.98	6.00	0.02	12.70

Table 3.2
Groundwater Elevation and Free Product Thickness Table
AS-4141
MCAS New River, North Carolina
April 2008 - April 2009

Monitoring Well	Date	Well Diameter	TOC Elevation	Depth to Product from TOC	Depth to Water from TOC	Free Product Thickness	Groundwater Elevation
	06/30/08		18.70		5.65	0.00	13.05
	07/01/08		18.70	5.79	5.80	0.01	12.90
	07/08/08		18.70		5.82	0.00	12.88
	07/17/08		18.70	5.81	5.82	0.01	12.88
	07/22/08		18.70	5.83	5.84	0.01	12.86
	07/29/08		18.70	5.46	5.48	0.02	13.22
	08/15/08		18.70	5.38	5.39	0.01	13.31
	08/22/08		18.70	5.61	5.68	0.07	13.02
	08/29/08		18.70	5.38	5.46	0.08	13.24
	09/10/08		18.70	5.28	5.41	0.13	13.29
	09/19/08		18.70		NG	0.00	
	10/02/08		18.70	5.65	5.67	0.02	13.03
	10/22/08		18.70	5.73	5.80	0.07	12.90
	10/29/08		18.70	5.83	5.89	0.06	12.81
	11/04/08		18.70		Closed	0.00	Well closed
	11/12/08		18.70			0.00	18.70
	11/21/08		18.70			0.00	18.70
	11/25/08		18.70			0.00	18.70
	12/01/08		18.70			0.00	18.70
	12/08/08		18.70			0.00	18.70
	12/15/08		18.70			0.00	18.70
	12/22/08		18.70			0.00	18.70
	12/29/08		18.70			0.00	18.70
	01/05/09		18.70			0.00	18.70
	01/14/09		18.70			0.00	18.70
	01/21/09		18.70			0.00	18.70
	01/30/09		18.70			0.00	18.70
	02/02/09		18.70			0.00	18.70
	02/09/09		18.70			0.00	18.70
	02/16/09		18.70			0.00	18.70
	02/25/09		18.70			0.00	18.70
	03/04/09		18.70			0.00	18.70
	03/09/09		18.70			0.00	18.70
	03/17/09		18.70			0.00	18.70
	03/26/09		18.70			0.00	18.70
	04/01/09		18.70			0.00	18.70
	04/09/09		18.70			0.00	18.70
	04/13/09		18.70			0.00	18.70
	04/20/09		18.70			0.00	18.70
USTAS4141-TPZ01	06/13/08	1	20.40	6.48	6.75	0.27	13.65
	06/25/08		20.40	6.91	7.50	0.59	12.90
	06/30/08		20.40	6.96	7.33	0.37	13.07

Table 3.2
Groundwater Elevation and Free Product Thickness Table
AS-4141
MCAS New River, North Carolina
April 2008 - April 2009

Monitoring Well	Date	Well Diameter	TOC Elevation	Depth to Product from TOC	Depth to Water from TOC	Free Product Thickness	Groundwater Elevation
	07/01/08		20.40	7.01	7.51	0.50	12.89
	07/08/08		20.40	7.10	7.49	0.39	12.91
	07/17/08		20.40	7.00	7.38	0.38	13.02
	07/22/08		20.40	7.10	7.48	0.38	12.92
	07/29/08		20.40	6.38	6.41	0.03	13.99
	08/15/08		20.40	6.45	6.68	0.23	13.72
	08/22/08		20.40	6.78	6.95	0.17	13.45
	08/29/08		20.40	6.48	6.58	0.10	13.82
	09/10/08		20.40	6.42	6.52	0.10	13.88
	09/19/08		20.40		NG	0.00	
	10/02/08		20.40	6.88	7.18	0.30	13.22
	10/22/08		20.40	7.05	7.31	0.26	13.09
	10/29/08		20.40	5.83	5.89	0.06	14.51
	11/04/08		20.40	8.80	9.03	0.23	11.37
	11/12/08		20.40	7.01	7.35	0.34	13.05
	11/21/08		20.40		7.21	0.00	13.19
	11/25/08		20.40		7.31	0.00	13.09
	12/01/08		20.40	7.05	7.19	0.14	13.21
	12/08/08		20.40	7.14	7.49	0.35	12.91
	12/15/08		20.40	6.57	6.79	0.22	13.61
	12/22/08		20.40	6.54	6.81	0.27	13.59
	12/29/08		20.40	6.49	6.76	0.27	13.64
	01/05/09		20.40	6.49	6.69	0.20	13.71
	01/14/09		20.40	6.61	6.82	0.21	13.58
	01/21/09		20.40	6.50	6.51	0.01	13.89
	01/30/09		20.40	6.44	6.61	0.17	13.79
	02/02/09		20.40	6.44	6.53	0.09	13.87
	02/09/09		20.40	6.64	6.82	0.18	13.58
	02/16/09		20.40	6.80	7.03	0.23	13.37
	02/25/09		20.40	6.68	6.89	0.21	13.51
	03/04/09		20.40	6.47	6.61	0.14	13.79
	03/09/09		20.40	6.43	6.52	0.09	13.88
	03/17/09		20.40	6.54	6.67	0.13	13.73
	03/26/09		20.40	6.60	6.72	0.12	13.68
	04/01/09		20.40	6.34	6.36	0.02	14.04
	04/09/09		20.40	6.33	6.42	0.09	13.98
	04/13/09		20.40	6.42	6.54	0.12	13.86
	04/20/09		20.40	6.22	6.23	0.01	14.17
USTAS4141-TPZ02	06/13/08	1	20.24		5.90	0.00	14.34
	06/25/08		20.24		6.75	0.00	13.49
	06/30/08		20.24		6.77	0.00	13.47
	07/01/08		20.24		NG	0.00	

Table 3.2
Groundwater Elevation and Free Product Thickness Table
AS-4141
MCAS New River, North Carolina
April 2008 - April 2009

Monitoring Well	Date	Well Diameter	TOC Elevation	Depth to Product from TOC	Depth to Water from TOC	Free Product Thickness	Groundwater Elevation
	07/08/08		20.24		6.91	0.00	13.33
	07/17/08		20.24		6.82	0.00	13.42
	07/22/08		20.24		6.92	0.00	13.32
	07/29/08		20.24	5.75	5.77	0.02	14.47
	08/15/08		20.24		6.47	0.00	13.77
	08/22/08		20.24	6.65	6.66	0.01	13.58
	08/29/08		20.24		6.48	0.00	13.76
	09/10/08		20.24		6.40	0.00	13.84
	09/19/08		20.24		NG	0.00	
	10/02/08		20.24		6.75	0.00	13.49
	10/22/08		20.24		6.86	0.00	13.38
	10/29/08		20.24		6.45	0.00	13.79
	11/04/08		20.24		8.74	0.00	11.50
	11/12/08		20.24		6.90	0.00	13.34
	11/21/08		20.24		7.11	0.00	13.13
	11/25/08		20.24		7.23	0.00	13.01
	12/01/08		20.24		6.95	0.00	13.29
	12/08/08		20.24	7.02	7.04	0.02	13.20
	12/15/08		20.24		6.52	0.00	13.72
	12/22/08		20.24		6.52	0.00	13.72
	12/29/08		20.24		6.42	0.00	13.82
	01/05/09		20.24		6.41	0.00	13.83
	01/14/09		20.24		6.54	0.00	13.70
	01/21/09		20.24		6.45	0.00	13.79
	01/30/09		20.24		6.40	0.00	13.84
	02/02/09		20.24		6.36	0.00	13.88
	02/09/09		20.24		6.56	0.00	13.68
	02/16/09		20.24	6.64	6.82	0.18	13.42
	02/25/09		20.24	6.57	6.58	0.01	13.66
	03/04/09		20.24	6.38	6.44	0.06	13.80
	03/09/09		20.24	6.35	6.37	0.02	13.87
	03/17/09		20.24	6.41	6.49	0.08	13.75
	03/26/09		20.24	6.50	6.59	0.09	13.65
	04/01/09		20.24	6.20	6.26	0.06	13.98
	04/09/09		20.24	6.20	6.30	0.10	13.94
	04/13/09		20.24	6.26	6.42	0.16	13.82
	04/20/09		20.24	6.11	6.12	0.01	14.12
USTAS4141-TPZ03	06/13/08	1	20.36	5.68	11.28	5.60	9.08
	06/25/08		20.36	6.73	7.88	1.15	12.48
	06/30/08		20.36	6.81	7.40	0.59	12.96
	07/01/08		20.36	6.92	7.56	0.64	12.80
	07/08/08		20.36	7	7.51	0.51	12.85

Table 3.2
Groundwater Elevation and Free Product Thickness Table
AS-4141
MCAS New River, North Carolina
April 2008 - April 2009

Monitoring Well	Date	Well Diameter	TOC Elevation	Depth to Product from TOC	Depth to Water from TOC	Free Product Thickness	Groundwater Elevation
	07/17/08		20.36	6.92	7.58	0.66	12.78
	07/22/08		20.36	6.96	7.62	0.66	12.74
	07/29/08		20.36	6.98	7.50	0.52	12.86
	08/15/08		20.36	6.55	6.94	0.39	13.42
	08/22/08		20.36	6.75	7.15	0.40	13.21
	08/29/08		20.36	6.61	6.95	0.34	13.41
	09/10/08		20.36	6.5	6.87	0.37	13.49
	09/19/08		20.36		NG	0.00	
	10/02/08		20.36	6.83	7.20	0.37	13.16
	10/22/08		20.36	6.94	7.33	0.39	13.03
	10/29/08		20.36	6.94	7.34	0.40	13.02
	11/04/08		20.36	8.72	9.21	0.49	11.15
	11/12/08		20.36	5.88	6.16	0.28	14.20
	11/21/08		20.36	7.15	7.38	0.23	12.98
	11/25/08		20.36	7.34	7.59	0.25	12.77
	12/01/08		20.36	6.84	8.32	1.48	12.04
	12/08/08		20.36	6.85	8.29	1.44	12.07
	12/15/08		20.36	6.4	7.84	1.44	12.52
	12/22/08		20.36	6.61	7.51	0.90	12.85
	12/29/08		20.36	6.39	7.39	1.00	12.97
	01/05/09		20.36	6.39	7.41	1.02	12.95
	01/14/09		20.36	6.58	7.48	0.90	12.88
	01/21/09		20.36	6.5	7.35	0.85	13.01
	01/30/09		20.36	6.46	6.99	0.53	13.37
	02/02/09		20.36	6.42	6.82	0.40	13.54
	02/09/09		20.36	6.65	7.11	0.46	13.25
	02/16/09		20.36	6.74	7.23	0.49	13.13
	02/25/09		20.36	6.63	7.23	0.60	13.13
	03/04/09		20.36	6.48	6.98	0.50	13.38
	03/09/09		20.36	6.41	6.88	0.47	13.48
	03/17/09		20.36	6.72	7.01	0.29	13.35
	03/26/09		20.36	6.52	7.05	0.53	13.31
	04/01/09		20.36	6.35	6.71	0.36	13.65
	04/09/09		20.36	6.32	6.69	0.37	13.67
	04/13/09		20.36	6.39	6.69	0.30	13.67
	04/20/09		20.36	6.23	6.53	0.30	13.83
USTAS4141-TPZ04	06/13/08	1	20.17	6.04	6.28	0.24	13.89
	06/25/08		20.17	6.06	6.25	0.19	13.92
	06/30/08		20.17	6.06	6.17	0.11	14.00
	07/01/08		20.17	6.10	6.33	0.23	13.84
	07/08/08		20.17	6.03	6.20	0.17	13.97
	07/17/08		20.17	5.58	6.21	0.63	13.96

Table 3.2
Groundwater Elevation and Free Product Thickness Table
AS-4141
MCAS New River, North Carolina
April 2008 - April 2009

Monitoring Well	Date	Well Diameter	TOC Elevation	Depth to Product from TOC	Depth to Water from TOC	Free Product Thickness	Groundwater Elevation
	07/22/08		20.17	5.93	6.08	0.15	14.09
	07/29/08		20.17	5.87	5.89	0.02	14.28
	08/15/08		20.17	5.90	5.95	0.05	14.22
	08/22/08		20.17	5.90	6.12	0.22	14.05
	08/29/08		20.17	5.85	6.50	0.65	13.67
	09/10/08		20.17	5.77	6.60	0.83	13.57
	09/19/08		20.17		NG	0.00	
	10/02/08		20.17	5.90	6.18	0.28	13.99
	10/22/08		20.17	5.81	6.60	0.79	13.57
	10/29/08		20.17	5.75	6.60	0.85	13.57
	11/04/08		20.17	5.85	6.40	0.55	13.77
	11/12/08		20.17	5.88	6.16	0.28	14.01
	11/21/08		20.17	5.99	6.67	0.68	13.50
	11/25/08		20.17	6.20	6.55	0.35	13.62
	12/01/08		20.17	6.14	6.65	0.51	13.52
	12/08/08		20.17	6.15	6.49	0.34	13.68
	12/15/08		20.17	5.91	6.62	0.71	13.55
	12/22/08		20.17	6.01	6.65	0.64	13.52
	12/29/08		20.17	5.99	6.59	0.60	13.58
	01/05/09		20.17	6.00	6.61	0.61	13.56
	01/14/09		20.17	6.00	6.55	0.55	13.62
	01/21/09		20.17	6.01	6.60	0.59	13.57
	01/30/09		20.17	6.01	6.59	0.58	13.58
	02/02/09		20.17	6.08	6.37	0.29	13.80
	02/09/09		20.17	6.11	6.54	0.43	13.63
	02/16/09		20.17	6.11	6.51	0.40	13.66
	02/25/09		20.17	6.08	6.48	0.40	13.69
	03/04/09		20.17	5.97	6.40	0.43	13.77
	03/09/09		20.17	5.96	6.45	0.49	13.72
	03/17/09		20.17	5.98	6.58	0.60	13.59
	03/26/09		20.17	6.00	6.52	0.52	13.65
	04/01/09		20.17	5.82	6.42	0.60	13.75
	04/09/09		20.17	5.82	6.64	0.82	13.53
	04/13/09		20.17	5.86	6.46	0.60	13.71
	04/20/09		20.17	5.80	6.45	0.65	13.72
USTAS141-TPZ05	06/13/08	1	20.26	5.75	10.61	4.86	9.65
	06/25/08		20.26	6.58	8.10	1.52	12.16
	06/30/08		20.26	6.75	7.52	0.77	12.74
	07/01/08		20.26	6.81	7.72	0.91	12.54
	07/08/08		20.26	6.12	6.15	0.03	14.11
	07/17/08		20.26	6.85	7.52	0.67	12.74
	07/22/08		20.26	6.91	7.53	0.62	12.73

Table 3.2
Groundwater Elevation and Free Product Thickness Table
AS-4141
MCAS New River, North Carolina
April 2008 - April 2009

Monitoring Well	Date	Well Diameter	TOC Elevation	Depth to Product from TOC	Depth to Water from TOC	Free Product Thickness	Groundwater Elevation
	07/29/08		20.26	6.11	6.18	0.07	14.08
	08/15/08		20.26	6.06	6.20	0.14	14.06
	08/22/08		20.26	6.62	7.19	0.57	13.07
	08/29/08		20.26	6.51	7.00	0.49	13.26
	09/10/08		20.26	6.35	7.09	0.74	13.17
	09/19/08		20.26		NG	0.00	
	10/02/08		20.26		NG	0.00	
	10/22/08		20.26		NG	0.00	
	10/29/08		20.26	6.91	8.00	1.09	12.26
	11/04/08		20.26	7.64	8.42	0.78	11.84
	11/12/08		20.26		6.89	0.00	13.37
	11/21/08		20.26	6.91	7.35	0.44	12.91
	11/25/08		20.26	7.04	7.59	0.55	12.67
	12/01/08		20.26	6.89	7.41	0.52	12.85
	12/08/08		20.26	6.95	7.42	0.47	12.84
	12/15/08		20.26	6.50	6.70	0.20	13.56
	12/22/08		20.26	6.55	6.68	0.13	13.58
	12/29/08		20.26	6.35	6.95	0.60	13.31
	01/05/09		20.26	6.34	7.10	0.76	13.16
	01/14/09		20.26	6.55	7.10	0.55	13.16
	01/21/09		20.26	6.38	6.95	0.57	13.31
	01/30/09		20.26	6.41	6.69	0.28	13.57
	02/02/09		20.26	6.41	6.94	0.53	13.32
	02/09/09		20.26	6.51	7.14	0.63	13.12
	02/16/09		20.26	6.62	7.31	0.69	12.95
	02/25/09		20.26	6.65	7.41	0.76	12.85
	03/04/09		20.26	6.59	7.15	0.56	13.11
	03/09/09		20.26	6.32	6.84	0.52	13.42
	03/17/09		20.26	7.05	7.42	0.37	12.84
	03/26/09		20.26	6.40	7.09	0.69	13.17
	04/01/09		20.26	6.42	7.11	0.69	13.15
	04/09/09		20.26	6.17	6.83	0.66	13.43
	04/13/09		20.26	6.32	6.83	0.51	13.43
	04/20/09		20.26	6.18	6.71	0.53	13.55

Table 4.1
Field Data Summary
 Building AS4141 (JP5 Line Area)
 MCAS New River, North Carolina
September 2008

Client Sample ID:		USTAS4141-MW02	USTAS4141-MW07	USTAS4141-MW10	USTAS4141-MW14	USTAS4141-MW15	USTAS4141-MW16	USTAS4141-MW18	USTAS4141-MW19	USTAS4141-OBG06
Date Sampled:		09/19/08	09/19/08	09/22/08	09/19/08	09/19/08	09/22/08	09/22/08	9/19/08	09/19/08
Analyte	Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters										
Depth to Water	feet	7.47	3.20	5.31	6.03	2.96	7.35	7.4	6.50	5.41
pH	-	6.10	5.89	6.17	6.7	6.38	6.22	6.19	5.52	5.3
Conductivity	mS/m	0.412	0.259	0.449	0.776	0.626	0.629	0.652	0.278	0.254
Turbidity	NTU	8.57	9.2	9.1	9.2	1.3	1.98	7.8	3.2	5.3
Dissolved Oxygen	mg/L	2.59	2.27	3.13	2.72	0.56	1.1	1.20	0.74	0.42
Temperature	°C	26.30	26.39	26.86	24.22	34.35	26.35	26.25	26.55	25.35
Oxidation-Reduction Potential	mV	-44.5	-23.5	-51.2	-108.9	-95.6	-91.8	-76.2	-34.2	-76.7

NS = not sampled

Table 4.2

JP5 Line Area (Building AS-4141)
MCAS New River, North Carolina
Groundwater Analytical Results

Date: 5/14/2009			Name: JP 5 Wells																
Analytical Method:			EPA 625																
Contaminant of Concern			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Bis(2-chloroethoxy)methane	Bis(2-chloroethyl)ether	Bis(2-chloroisopropyl)ether	Bis(2-ethylhexyl)phthalate	4-bromophenyl phenyl ether	Butylbenzylphthalate	2-Chloronaphthalene	2-Chlorophenol	4-Chloro-3-methylphenol
Sample ID	Date Collected	Sample Depth (ft bgs)	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71
USTASS4141-MW07	9/19/2008	N/A	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71
USTASS4141-MW10	9/22/2008	N/A	1.02 J	<5.39	<5.39	<5.39	<5.39	<5.39	<5.39	<5.39	<5.39	<5.39	<5.39	<5.39	63.5	<5.39	<5.39	<5.39	<5.39
USTASS4141-OBG-03R	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW14	9/19/2008	N/A	<5.57	<5.57	<5.57	<5.57	<5.57	<5.57	<5.57	<5.57	<5.57	<5.57	<5.57	<5.57	<5.57	<5.57	<5.57	<5.57	<5.57
USTASS4141-OBG-06	9/19/2008	N/A	<5.75	<5.75	<5.75	<5.75	<5.75	<5.75	<5.75	<5.75	<5.75	<5.75	<5.75	<5.75	<5.75	<5.75	<5.75	<5.75	<5.75
USTASS4141-MW02	9/19/2008	N/A	<6.09	<6.09	<6.09	<6.09	<6.09	<6.09	<6.09	<6.09	<6.09	<6.09	<6.09	<6.09	<6.09	<6.09	<6.09	<6.09	<6.09
USTASS4141-MW15	9/19/2008	N/A	<5.40	<5.40	<5.40	<5.40	<5.40	<5.40	<5.40	<5.40	<5.40	<5.40	<5.40	<5.40	0.648 J	<5.40	<5.40	<5.40	<5.40
USTASS4141-MW19	9/19/2008	N/A	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	0.467 J	<5.19	<5.19	<5.19	<5.19
USTASS4141-RW01	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW21	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW20	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW17	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW16	9/22/2008	N/A	1.41 J	<5.65	<5.65	<5.65	<5.65	<5.65	<5.65	<5.65	<5.65	<5.65	<5.65	<5.65	0.508 J	<5.65	<5.65	<5.65	<5.65
USTASS4141-MW18	9/22/2008	N/A	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	0.571 J	<5.19	<5.19	<5.19	<5.19
GWQS (ug/L)			80	210	2100	0.0479	0.00479	0.0479	210	0.479	NS	0.031	NS	2.500	NS	NS	NS	0.36	NS
GCL (ug/L)			2120	1965	2100	22	1.5	0.6	210	0.4	NS	31	NS	2500	NS	NS	NS	NS	NS

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 4.2

JP5 Line Area (Building AS-4141)
MCAS New River, North Carolina
Groundwater Analytical Results

Date: 5/14/2009			Name: JP 5 Wells																	
Analytical Method:			EPA 625																	
Contaminant of Concern			4-Chlorophenyl phenyl eth	Chrysene	Dibenzo(a,h)anthracene	Di-n-Butylphthalate	3,3'-Dichlorobenzidine	2,4-Dichlorophenol	Diethylphthalate	Dimethylphthalate	2,4-Dimethylphenol	Di-n-octylphthalate	4,6-Dinitro-2-methylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	Diphenylamine	Fluoranthene	Fluorene	
Sample ID	Date Collected	Sample Depth (ft bgs)																		
USTASS4141-MW07	9/19/2008	N/A	<5.71	<5.71	<5.71	<5.71	<11.4	<5.71	0.857 J	<5.71	<5.71	<5.71	<28.6	<28.6	<5.71	<5.71	<5.71	<5.71	<5.71	
USTASS4141-MW10	9/22/2008	N/A	<5.39	<5.39	<5.39	<5.39	<10.8	<5.39	1.72 J	<5.39	<5.39	<5.39	<26.9	<26.9	<5.39	<5.39	<5.39	<5.39	<5.39	
USTASS4141-OBG-03R	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	
USTASS4141-MW14	9/19/2008	N/A	<5.57	<5.57	<5.57	<5.57	<11.1	<5.57	<5.57	<5.57	<5.57	<5.57	<27.8	<27.8	<5.57	<5.57	<5.57	<5.57	<5.57	
USTASS4141-OBG-06	9/19/2008	N/A	<5.75	<5.75	<5.75	<5.75	<11.5	<5.75	<5.75	<5.75	<5.75	<5.75	<28.8	<28.8	<5.75	<5.75	<5.75	<5.75	<5.75	
USTASS4141-MW02	9/19/2008	N/A	<6.09	<6.09	<6.09	<6.09	<12.2	<6.09	<6.09	<6.09	<6.09	<6.09	<30.5	<30.5	<6.09	<6.09	<6.09	<6.09	<6.09	
USTASS4141-MW15	9/19/2008	N/A	<5.40	<5.40	<5.40	<5.40	<10.8	<5.40	<5.40	<5.40	<5.40	<5.40	<27.0	<27.0	<5.40	<5.40	<5.40	<5.40	<5.40	
USTASS4141-MW19	9/19/2008	N/A	<5.19	<5.19	<5.19	<5.19	<10.4	<5.19	<5.19	<5.19	<5.19	<5.19	<25.9	<25.9	<5.19	<5.19	<5.19	<5.19	<5.19	
USTASS4141-RW01	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	
USTASS4141-MW21	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	
USTASS4141-MW20	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	
USTASS4141-MW17	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	
USTASS4141-MW16	9/22/2008	N/A	<5.65	<5.65	<5.65	<5.65	<11.3	<5.65	1.81 J	<5.65	<5.65	<5.65	<28.2	<28.2	<5.65	<5.65	<5.65	<5.65	1.13 J	
USTASS4141-MW18	9/22/2008	N/A	<5.19	<5.19	<5.19	<5.19	<10.4	<5.19	<5.19	<5.19	<5.19	<5.19	<26.0	<26.0	<5.19	<5.19	<5.19	<5.19	<5.19	
GWQS (ug/L)			NS	4.79	0.0047	700	NS	NS	5000	NS	140	140	NS	NS	NS	NS	NS	280	280	
GCL (ug/L)			NS	0.8	0.25	NS	NS	NS	NS	NS	140000	NS	NS	NS	NS	NS	NS	280	950	

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 4.2

JP5 Line Area (Building AS-4141)
MCAS New River, North Carolina
Groundwater Analytical Results

Date: 5/14/2009			Name: JP 5 Wells																	
Analytical Method:			EPA 625																	
Contaminant of Concern			Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadien	Hexachloroethane	Indeno(1,2,3-cd)pyrene	Isophorone	Naphthalene	Nitrobenzene	2-Nitrophenol	4-Nitrophenol	N-Nitrosodi-n-propylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	1,2,4-Trichlorobenzene	2,4,6-Trichlorophenol	
Sample ID	Date Collected	Sample Depth (ft bgs)	<5.71	<5.71	<11.4	<5.71	<5.71	<5.71	<5.71	<5.71	<5.71	<28.6	<5.71	<28.6	<5.71	<5.71	<5.71	<5.71	<5.71	
USTASS4141-MW07	9/19/2008	N/A	<5.39	<5.39	<10.8	<5.39	<5.39	<5.39	<5.39	<5.39	<5.39	<26.9	<5.39	<26.9	<5.39	<5.39	<5.39	<5.39	<5.39	
USTASS4141-OBG-03R	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	
USTASS4141-MW14	9/19/2008	N/A	<5.57	<5.57	<11.1	<5.57	<5.57	<5.57	<5.57	<5.57	<5.57	<27.8	<5.57	<27.8	<5.57	<5.57	<5.57	<5.57	<5.57	
USTASS4141-OBG-06	9/19/2008	N/A	<5.75	<5.75	<11.5	<5.75	<5.75	<5.75	<5.75	<5.75	<5.75	<28.8	<5.75	<28.8	<5.75	<5.75	<5.75	<5.75	<5.75	
USTASS4141-MW02	9/19/2008	N/A	<6.09	<6.09	<12.2	<6.09	<6.09	<6.09	<6.09	<6.09	<6.09	<30.5	<6.09	<30.5	<6.09	<6.09	<6.09	<6.09	<6.09	
USTASS4141-MW15	9/19/2008	N/A	<5.40	<5.40	<10.8	<5.40	<5.40	<5.40	<5.40	<5.40	<5.40	<27.0	<5.40	<27.0	<5.40	<5.40	<5.40	<5.40	<5.40	
USTASS4141-MW19	9/19/2008	N/A	<5.19	<5.19	<10.4	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	<25.9	<5.19	<25.9	<5.19	<5.19	<5.19	<5.19	<5.19	
USTASS4141-RW01	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	
USTASS4141-MW21	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	
USTASS4141-MW20	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	
USTASS4141-MW17	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	
USTASS4141-MW16	9/22/2008	N/A	<5.65	<5.65	<11.3	<5.65	<5.65	<5.65	101	<5.65	<5.65	<28.2	<5.65	<28.2	<5.65	<5.65	<5.65	<5.65	<5.65	
USTASS4141-MW18	9/22/2008	N/A	<5.19	<5.19	<10.4	<5.19	<5.19	<5.19	<5.19	<5.19	<5.19	<26.0	<5.19	<26.0	<5.19	<5.19	<5.19	<5.19	<5.19	
GWQS (ug/L)			0.020	0.440	NS	NS	0.0479	36.8	21	NS	NS	NS	NS	0.29	210	300	210	70	NS	
GCL (ug/L)			NS	440	NS	NS	31	NS	15500	NS	NS	NS	NS	290	410	300000	210	9500	NS	

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 4.2
Building AS-4141 (JP5 Line Area)
Groundwater Analytical Results
MCAS New River, North Carolina

Date: 5/14/2009			Name: JP 5 Wells							
Analytical Method:			EPA 602							
Contaminant of Concern			Benzene	Diisopropyl ether (DIPE)	Ethylbenzene	Methyl Tert Butyl Ether	Toluene	m and p-Xylenes	o-Xylenes	Lead
Sample ID	Date Collected	Sample Depth (ft bgs)								
USTASS4141-MW07	9/19/2008*	N/A	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<5.00
USTASS4141-MW10	9/22/2008	N/A	<1.00	<1.00	1.30	<2.00	0.576 J	2.04	0.616 J	1.45 JB
USTASS4141-OBG-03R	9/19/2008*	N/A	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW14	9/19/2008*	N/A	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<5.00
USTASS4141-OBG-06	9/19/2008*	N/A	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	5.10
USTASS4141-MW02	9/19/2008*	N/A	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<5.00
USTASS4141-MW15	9/19/2008*	N/A	<1.00	<1.00	1.39	0.567 J	0.433 J	<2.00	1.06	<5.00
USTASS4141-MW19	9/19/2008*	N/A	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<5.00
USTASS4141-RW01	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW21	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW20	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW17	9/19/2008	N/A	FP	FP	FP	FP	FP	FP	FP	FP
USTASS4141-MW16	9/22/2008	N/A	<1.00	<1.00	8.15	<2.00	<1.00	6.66	0.321 J	1.40 JB
USTASS4141-MW18	9/22/2008	N/A	<1.00	<1.00	<1.00	<2.00	<1.00	<2.00	<2.00	1.45 JB
GWQS (ug/L)			1	70	550	200	1000	530	530	15
GCL (ug/L)			5000	70000	84500	200000	257500	87500	87500	15000

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

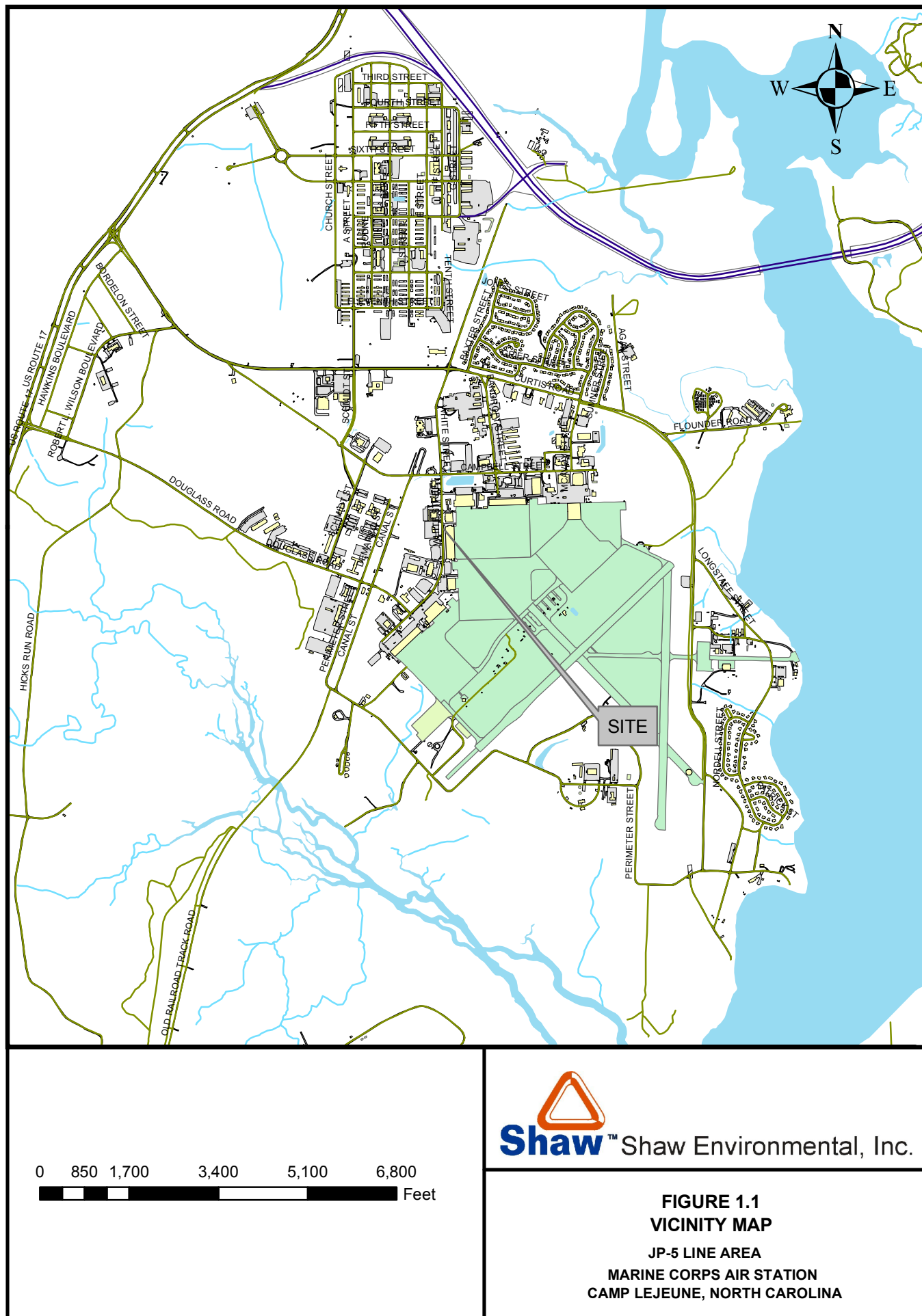
FP = not sampled due to free product

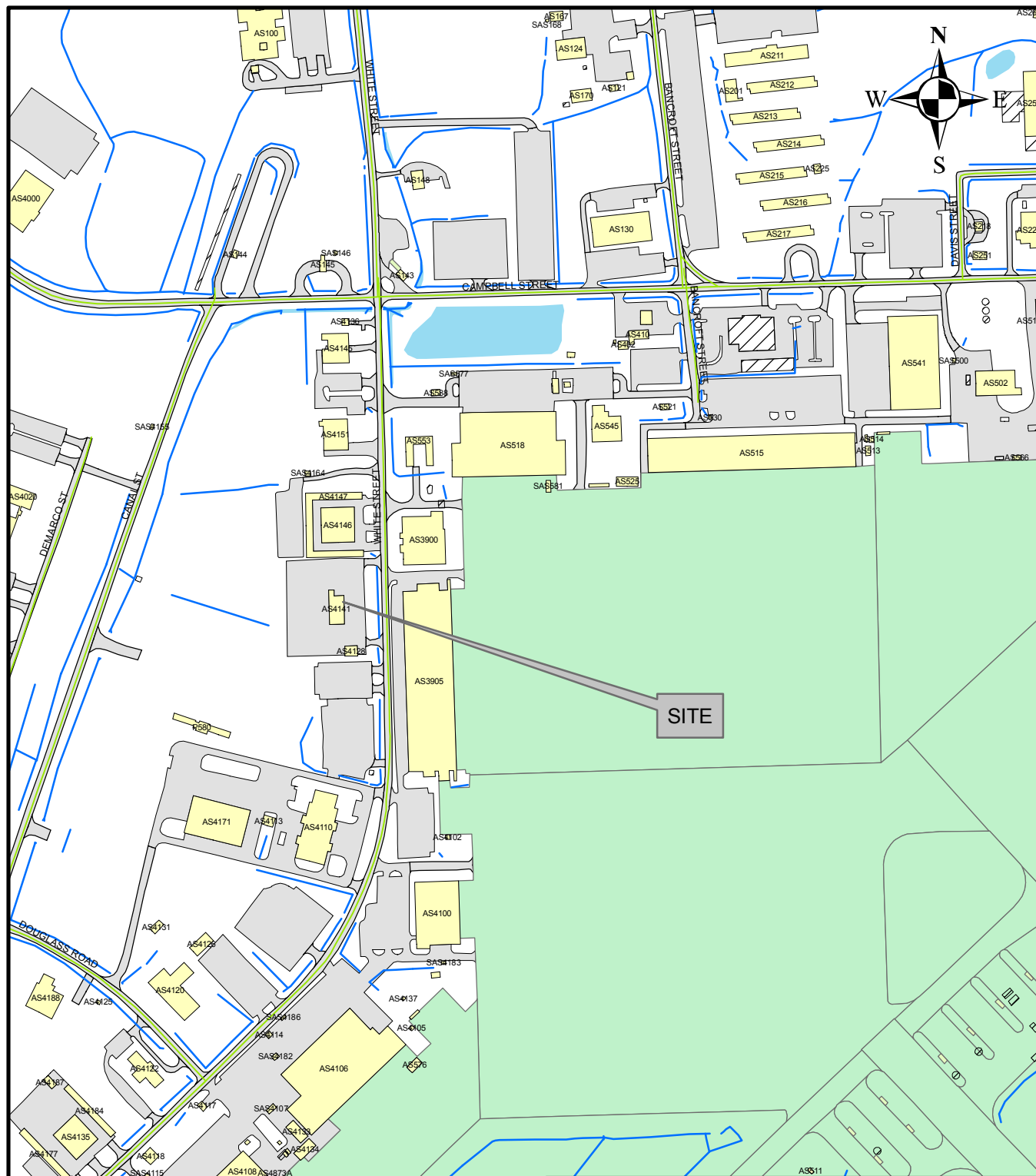
J Numerical value is an estimate between laboratory reporting limit and laboratory method detection limit

B Amount in prep blank greater than the method detection limit

*Due to a laboratory error, the required HNO₃ preservative was missing from the sample containers when provided to the client. The samples were re-collected on 09/25/2009, the data from the 09/25/2009 samples was used in this table.

FIGURES

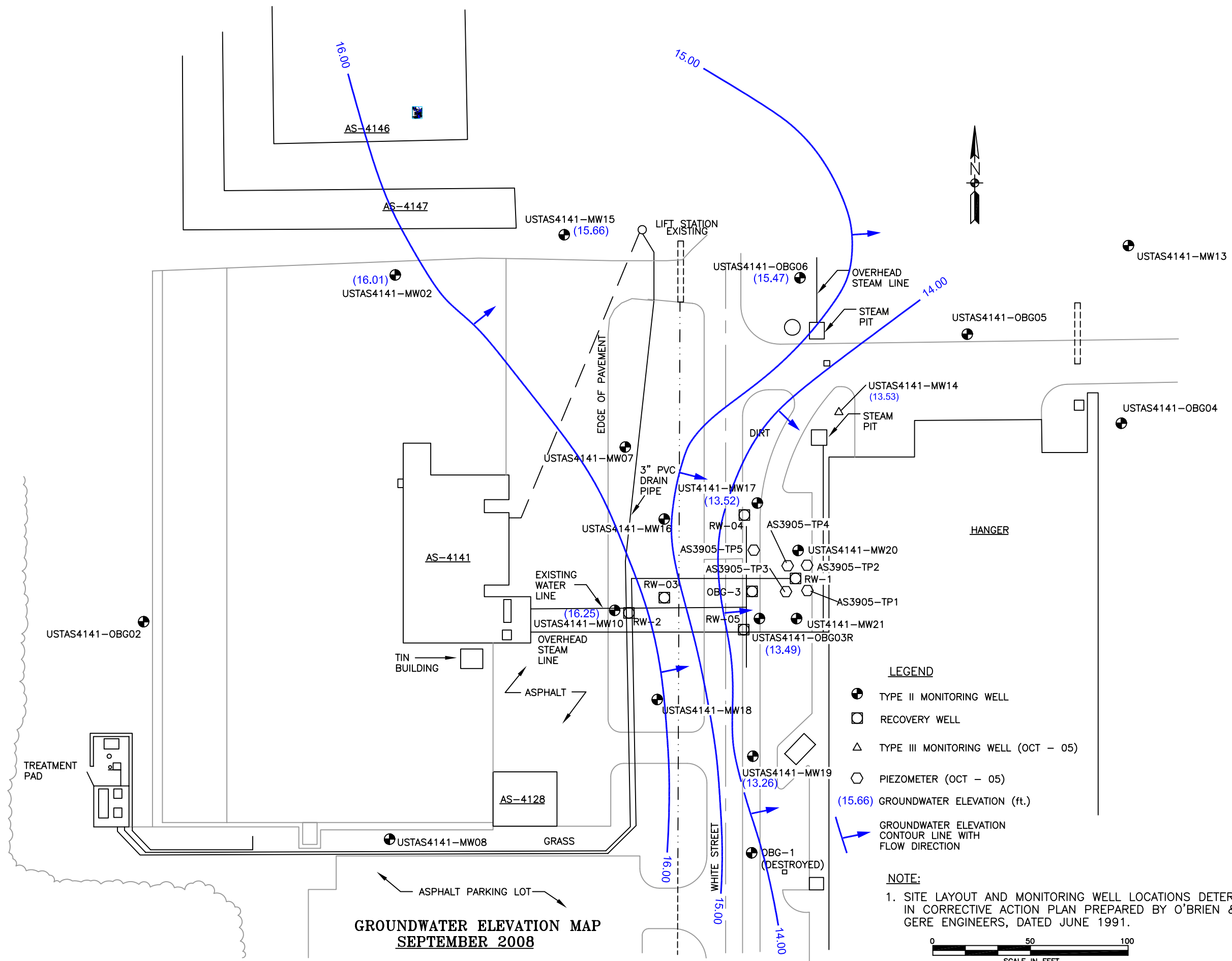




0 190 380 760 1,140 1,520 Feet

 Shaw Environmental, Inc.

FIGURE 1.2
LOCATION MAP
JP-5 LINE AREA
MARINE CORPS AIR STATION
CAMP LEJEUNE, NORTH CAROLINA

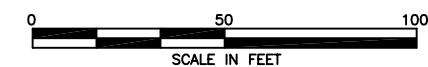


LEGEND

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

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.



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 STATION		NORFOLK, VIRGINIA	
ATLANTIC DIVISION		BUILDING AS-4141	
JP-5 LINE AREA SITE MAP		FREE PHASE PRODUCT THICKNESS MAP	
		SEPTEMBER 2008	
SCALE: AS SHOWN		SIZE:	
TASK ORDER NO. 046			
CONSTR. CONTRACT NO. N62470-02-D-3260			
NAVFAC DRAWING NO.			
SHEET I.D.		2.2	

APPENDIX A

HISTORICAL GROUNDWATER ELEVATION AND FREE PHASE PRODUCT THICKNESS

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	5	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	5.9	0.75	13.72	5	7.69	5.93	1.76	12.68	5	6.15	5.93	0.72	13.54	5
TP-4	12.61	20.17	0	0	14.53		5.64	0	0	14.53		5.63	0	0	14.54	
TP-5	12.32	20.26	6.18	0.66	13.42	5	6.84	6.18	0.87	13.13	5	7.13	6.26	0.87	13.13	5
OBG-03R	12.71	20.64	5.85	2.45	12.34	81	8.3	5.85	1.16	13.3	81	7.34	6.19	1.16	13.3	126
RW-1	21.48	NM	4.6	0.18	NM		4.78	4.6	0.55	NM		5.19	4.64	0.54	NM	
OBG-06	17.39	20.88	0	0	16.21		4.67	0	0	16.41		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		3/14/2006				3/21/2006				3/28/2006						
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	5.7	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	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	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	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	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	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	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	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	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	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	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	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	5.32	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		TOC Elevation	8/14/2006				8/21/2006				8/28/2006						
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	5.52	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		TOC Elevation	9/5/2006				9/12/2006				9/20/2006						
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	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				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	5.49	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

	Date		TOC Elevation	11/15/2006				11/28/2006				12/5/2006				Total Fluids Recovery (gal)		
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	5.78	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		15.58		3.16		0	15.46		3.15	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		1/12/2007						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		5.4	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		1/23/2007						1/30/2007						2/6/2007					
	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	5.29	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		TOC Elevation	2/4/2008				3/13/2008				4/9/2008						
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	6.97	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

Well ID: USTAS4141-
Sample ID: MW07
Well Condition: OK

1-

Water Column (feet):	12.34
Casing Volume (gal):	2.01
Purge/Sample Method:	Low Flow Method
Start Purge Date/Time:	11/6/02
Total Volume Purged (gal):	34
Sample Time/Date	1705
Sampler Name:	te

[illegible]

Project Number:	CTO 013	Well ID:	USTAS4141- MW10
Project Name:	AS4141	Sample ID:	MW10
Date:	04/09/2008 9/22/08	Well Condition:	OK
Weather:	↑ 60's / 10° E		

Protective Casing Diameter (inch):	N/A - MAX HOLE	Water Column (feet):	9.57
Inner Casing Diameter (inch):	2" (0.163)	Casing Volume (gal):	1.55
Depth to Product from TOC (feet):	N/A	Purge/Sample Method:	Low Flow Method
Initial Depth to Water from TOC (feet):	7.35 5.31	Start Purge Date/Time:	1000
Product Thickness (feet):	N/A	Total Volume Purged (gal):	2+
Total Depth from TOC (feet):	14.88	Sample Time/Date	1050
		Sampler Name:	te

[illegible]

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/PID readings, or change in pump interval setting).

In parking lot 2' ft manhole cover - Sheen in puddle H2O
 * 1037 - During spring - well went dry - turn pump off.

Project Number:	CTO 013	Well ID:	USTAS4141-
Project Name:	AS4141	Sample ID:	MW14
Date:	9/19/2008	Well Condition:	NEED (2) Balls
Weather:	↑ 80's /		

Protective Casing Diameter (inch):	<u>N/A</u>	Water Column (feet):	<u>18.78</u>
Inner Casing Diameter (inch):	<u>2" (0.163)</u>	Casing Volume (gal):	<u>3.06</u>
Depth to Product from TOC (feet):	<u>N/A</u>	Purge/Sample Method:	<u>Low Flow Method</u>
Initial Depth to Water from TOC (feet):	<u>~~24.81~~ 6.03</u>	Start Purge Date/Time:	<u>1340</u>
Product Thickness (feet):	<u>N/A</u>	Total Volume Purged (gal):	<u>4</u>
Total Depth from TOC (feet):	<u>24.81</u>	Sample Time/Date	<u>1/20</u>
		Sampler Name:	<u>te</u>

[illegible]

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings, or change in pump interval setting):

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings, or change in pump interval setting):

Project Number:	CTO 013	Well ID:	USTAS4141- MW16
Project Name:	AS4141	Sample ID:	MW16
Date:	9/19/2008 9/22/08	Well Condition:	NEED (2) Batts
Weather:	↑ 60's / lt. Rain		

Protective Casing Diameter (inch):	<u>N/A</u>	Water Column (feet):	<u>7.72</u>
Inner Casing Diameter (inch):	<u>2" (0.163)</u>	Casing Volume (gal):	<u>1.160</u>
Depth to Product from TOC (feet):	<u>N/A</u>	Purge/Sample Method:	<u>Low Flow Method</u>
Initial Depth to Water from TOC (feet):	<u>~~7.47~~ 7.35</u>	Start Purge Date/Time:	<u>0915</u>
Product Thickness (feet):	<u>N</u>	Total Volume Purged (gal):	<u>2⁺</u>
Total Depth from TOC (feet):	<u>14.47</u>	Sample Time/Date	<u>0950</u>
		Sampler Name:	<u>te</u>

[illegible]

Green in pure water - well parallel to product line -

6025 + 10 TICs 602 + xylene Pb (3030)

Project Number:	CTO 013
Project Name:	AS4141
Date:	9/19/2008
Weather:	80's

Well ID: USTAS4141-08606
Sample ID: 08606
Well Condition: OK

Protective Casing Diameter (inch):	4"
Inner Casing Diameter (inch):	2" (0.163)
Depth to Product from TOC (feet):	N/A
Initial Depth to Water from TOC (feet):	5.41
Product Thickness (feet):	N/A
Total Depth from TOC (feet):	17.36

Water Column (feet):	<u>11.89</u>
Casing Volume (gal):	<u>1.93</u>
Purge/Sample Method:	Low Flow Method
Start Purge Date/Time:	<u>1430</u>
Total Volume Purged (gal):	<u>3+</u>
Sample Time/Date	<u>1500</u>
Sampler Name:	te

[illegible]

Observations During Sampling (e.g. slow recharge, turbidity, odor, sheen, PID/FID readings, or change in pump interval setting):

APPENDIX C

GROUNDWATER LABORATORY ANALYTICAL REPORTS

Shaun Whitworth
Osage of Virginia
2618 A Colley Ave
Norfolk, VA 23517

Report Number: G649-67

Client Project: CTO 013

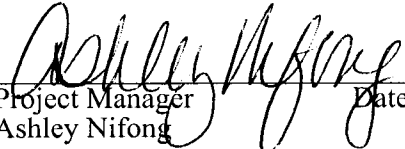
Dear Shaun Whitworth,

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

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

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

Sincerely,
SGS Environmental Services, Inc.

 7/30/08
Project Manager Date
Ashley Nifong

Case Narrative
Osage of Virginia
SGS Project: **G649-67**
Project Name: **CTO 013 AS4141**

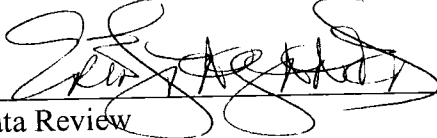
SGS Environmental Services Inc.

September 30, 2008

- Six water samples and a trip blank were accepted into the laboratory on September 19, 2008 at 1845 for various analyses as indicated on the chain of custody. The samples were received in good condition, within temperature and holding time limits.
- All extractions and analyses were completed within holding time limits, with the following quality control exceptions.

3030c Pb Analysis

- Due to a laboratory error, the required HNO₃ preservative was missing from the sample containers when provided to the client. This discrepancy was noticed during the log-in process on Monday, September 22 and the samples were immediately preserved prior to digestion.

 Date 9/30/08
Data Review

List of Reporting Abbreviations
And Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

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

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

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

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

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

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

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

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

Results for Volatiles

by GC 602

Client Sample ID: USTAS4141-OBG06

Analyzed By: RSB

Client Project ID: CTO 013

Date Collected: 9/19/2008 15:00

Lab Sample ID: G649-67-1A

Date Received: 9/19/2008

Lab Project ID: G649-67

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	9/25/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	9/25/2008	
Ethylbenzene	BQL	1.00	0.19	1	9/25/2008	
Methyl-tert butyl ether (MTBE)	BQL	1.00	0.306	1	9/25/2008	
Toluene	BQL	1.00	0.313	1	9/25/2008	
m/p-Xylene	BQL	2.00	0.481	1	9/25/2008	
o-Xylene	BQL	1.00	0.405	1	9/25/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.6	96.5

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: USTAS4141-MW02

Analyzed By: RSB

Client Project ID: CTO 013

Date Collected: 9/19/2008 16:30

Lab Sample ID: G649-67-2A

Date Received: 9/19/2008

Lab Project ID: G649-67

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	9/25/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	9/25/2008	
Ethylbenzene	BQL	1.00	0.19	1	9/25/2008	
Methyl-tert butyl ether (MTBE)	BQL	1.00	0.306	1	9/25/2008	
Toluene	BQL	1.00	0.313	1	9/25/2008	
m/p-Xylene	BQL	2.00	0.481	1	9/25/2008	
o-Xylene	BQL	1.00	0.405	1	9/25/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.9	97.2

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: USTAS4141-MW07

Analyzed By: RSB

Client Project ID: CTO 013

Date Collected: 9/19/2008 17:05

Lab Sample ID: G649-67-3A

Date Received: 9/19/2008

Lab Project ID: G649-67

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	9/25/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	9/25/2008	
Ethylbenzene	BQL	1.00	0.19	1	9/25/2008	
Methyl-tert butyl ether (MTBE)	BQL	1.00	0.306	1	9/25/2008	
Toluene	BQL	1.00	0.313	1	9/25/2008	
m/p-Xylene	BQL	2.00	0.481	1	9/25/2008	
o-Xylene	BQL	1.00	0.405	1	9/25/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.7	96.7

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: USTAS4141-MW14

Analyzed By: RSB

Client Project ID: CTO 013

Date Collected: 9/19/2008 14:20

Lab Sample ID: G649-67-4A

Date Received: 9/19/2008

Lab Project ID: G649-67

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	9/25/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	9/25/2008	
Ethylbenzene	BQL	1.00	0.19	1	9/25/2008	
Methyl-tert butyl ether (MTBE)	BQL	1.00	0.306	1	9/25/2008	
Toluene	BQL	1.00	0.313	1	9/25/2008	
m/p-Xylene	BQL	2.00	0.481	1	9/25/2008	
o-Xylene	BQL	1.00	0.405	1	9/25/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.6	96.5

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: USTAS4141-MW15

Analyzed By: RSB

Client Project ID: CTO 013

Date Collected: 9/19/2008 15:45

Lab Sample ID: G649-67-5A

Date Received: 9/19/2008

Lab Project ID: G649-67

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	9/25/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	9/25/2008	
Ethylbenzene	1.39	1.00	0.19	1	9/25/2008	
Methyl-tert butyl ether (MTBE)	0.567	1.00	0.306	1	9/25/2008	J
Toluene	0.433	1.00	0.313	1	9/25/2008	J
m/p-Xylene	BQL	2.00	0.481	1	9/25/2008	
o-Xylene	1.06	1.00	0.405	1	9/25/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.6	102

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: USTAS4141-MW19

Analyzed By: RSB

Client Project ID: CTO 013

Date Collected: 9/19/2008 13:25

Lab Sample ID: G649-67-6A

Date Received: 9/19/2008

Lab Project ID: G649-67

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	9/25/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	9/25/2008	
Ethylbenzene	BQL	1.00	0.19	1	9/25/2008	
Methyl-tert butyl ether (MTBE)	BQL	1.00	0.306	1	9/25/2008	
Toluene	BQL	1.00	0.313	1	9/25/2008	
m/p-Xylene	BQL	2.00	0.481	1	9/25/2008	
o-Xylene	BQL	1.00	0.405	1	9/25/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.7	96.9

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: Trip Blank
 Client Project ID: CTO 013
 Lab Sample ID: G649-67-7A
 Lab Project ID: G649-67

Analyzed By: RSB
 Date Collected: 9/19/2008 0:00
 Date Received: 9/19/2008
 Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	9/25/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	9/25/2008	
Ethylbenzene	BQL	1.00	0.19	1	9/25/2008	
Methyl-tert butyl ether (MTBE)	BQL	1.00	0.306	1	9/25/2008	
Toluene	BQL	1.00	0.313	1	9/25/2008	
m/p-Xylene	BQL	2.00	0.481	1	9/25/2008	
o-Xylene	BQL	1.00	0.405	1	9/25/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.8	97

Comments:

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

Results for Volatiles

by GC 602

Client Sample ID: Method Blank

Analyzed By: RSB

Client Project ID:

Date Collected:

Lab Sample ID: VBLK1092508A

Date Received:

Lab Project ID:

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	9/25/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	9/25/2008	
Ethylbenzene	BQL	1.00	0.19	1	9/25/2008	
Methyl-tert butyl ether (MTBE)	BQL	1.00	0.306	1	9/25/2008	
Toluene	BQL	1.00	0.313	1	9/25/2008	
m/p-Xylene	BQL	2.00	0.481	1	9/25/2008	
o-Xylene	BQL	1.00	0.405	1	9/25/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.0	97.6

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Summary Results for QC Check

Method: 602

Filename : 1092508/003R

Compound	SA	Result	Rec	QC Limits	
	ug/L	ug/L	(%) #	Lower	Upper
Benzene	20.0	21.9	109.3	77.0	123.0
• Diisopropyl ether	20.0	21.0	105.1	43.1	156.9
Ethylbenzene	20.0	21.0	104.8	63.0	137.0
• MTBE	20.0	21.2	106.2	46.8	153.2
Toluene	20.0	21.0	104.8	77.5	127.0
• m,p-Xylene	40.0	42.2	105.5	11.2	188.8
• o-Xylene	20.0	20.9	104.6	47.6	152.4

Flags :

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

Summary Results for Laboratory Control Spike

Method: 602

Filename : 1092508/004R

Compound	SA	Result	Rec	LCS Limits	
	ug/L	ug/L	(%) #	Lower	Upper
Benzene	10.0	9.1	90.9	39	150
• Diisopropyl ether	10.0	9.2	91.9	30	170
Ethylbenzene	10.0	9.0	90.4	32	160
• MTBE	10.0	9.4	93.9	35	165
Toluene	10.0	9.1	91.3	46	148
• m,p-Xylene	20.0	18.0	89.9	D	239
• o-Xylene	10.0	8.9	89.2	36	164

Flags :

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

Summary Results for MS-MSD

Method : 602

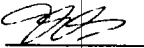
Sample : G128-2245-1B x40
 MS : G128-2245-1B x40
 MSD : G128-2245-1B x40

1092508/017F::1092508/017R
 1092508/019f::1092508/019R
 1092508/020f::1092508/020R

Compound	SA	µg/L			P(%)		P Limits		RPD	
		Sam.	MS	MSD	MS	MSD	Lower	Upper	(30%)	#
Benzene	10.0	ND	9.1	8.5	91	85	39	150	7.0	
Chlorobenzene	10.0	ND	8.7	9.3	87	93	55	135	7.5	
1,2-Dichlorobenzene	20.0	ND	17.7	19.0	85	91	37	154	7.1	
1,3-Dichlorobenzene	10.0	ND	8.7	9.4	87	94	50	141	7.7	
1,4-Dichlorobenzene	20.0	2.0	17.1	18.4	75	82	42	143	7.8	
• Diisopropyl ether	10.0	ND	8.9	8.4	89	84	30	170	5.7	
Ethylbenzene	10.0	ND	8.9	8.4	89	84	32	160	5.9	
• MTBE	20.0	ND	9.1	8.7	46	44	35	165	4.7	
Toluene	10.0	ND	9.0	8.4	90	84	46	148	6.0	
• m,p-Xylene	20.0	ND	17.9	16.8	89	84	D	239	6.4	
• o-Xylene	20.0	ND	8.8	8.3	44	41	36	164	6.8	

Flags :

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

Reviewed By: 

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-OBG06
 Client Project ID: CTO 013
 Lab Sample ID: G649-67-1J
 Lab Project ID: G649-67

Analyzed By: DES
 Date Collected: 9/19/2008 15:00
 Date Received: 9/19/2008
 Date Extracted: 9/22/2008
 Matrix: Water

Initial/Final Amt: 869 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.75	0.857	1	9/24/2008	
Acenaphthylene	BQL	5.75	0.857	1	9/24/2008	
Anthracene	BQL	5.75	1.01	1	9/24/2008	
Benzo[a]anthracene	BQL	5.75	0.783	1	9/24/2008	
Benzo[a]pyrene	BQL	5.75	0.731	1	9/24/2008	
Benzo[b]fluoranthene	BQL	5.75	0.823	1	9/24/2008	
Benzo[g,h,i]perylene	BQL	5.75	0.708	1	9/24/2008	
Benzo[k]fluoranthene	BQL	5.75	0.633	1	9/24/2008	
Bis(2-chloroethoxy)methane	BQL	5.75	1.19	1	9/24/2008	
Bis(2-chloroethyl)ether	BQL	5.75	1.20	1	9/24/2008	
Bis(2-chloroisopropyl)ether	BQL	5.75	1.12	1	9/24/2008	
Bis(2-ethylhexyl)phthalate	BQL	5.75	0.472	1	9/24/2008	
4-bromophenyl phenyl ether	BQL	5.75	0.898	1	9/24/2008	
Butylbenzylphthalate	BQL	5.75	0.512	1	9/24/2008	
2-Chloronaphthalene	BQL	5.75	0.995	1	9/24/2008	
2-Chlorophenol	BQL	5.75	1.35	1	9/24/2008	
4-Chloro-3-methylphenol	BQL	5.75	0.915	1	9/24/2008	
4-Chlorophenyl phenyl ether	BQL	5.75	3.75	1	9/24/2008	
Chrysene	BQL	5.75	0.639	1	9/24/2008	
Dibenzo[a,h]anthracene	BQL	5.75	0.506	1	9/24/2008	
Di-n-Butylphthalate	BQL	5.75	0.949	1	9/24/2008	
3,3'-Dichlorobenzidine	BQL	11.5	1.40	1	9/24/2008	
2,4-Dichlorophenol	BQL	5.75	1.29	1	9/24/2008	
Diethylphthalate	BQL	5.75	0.852	1	9/24/2008	
Dimethylphthalate	BQL	5.75	0.639	1	9/24/2008	
2,4-Dimethylphenol	BQL	5.75	1.86	1	9/24/2008	
Di-n-octylphthalate	BQL	5.75	0.667	1	9/24/2008	
4,6-Dinitro-2-methylphenol	BQL	28.8	0.633	1	9/24/2008	
2,4-Dinitrophenol	BQL	28.8	0.736	1	9/24/2008	
2,4-Dinitrotoluene	BQL	5.75	0.616	1	9/24/2008	
2,6-Dinitrotoluene	BQL	5.75	0.748	1	9/24/2008	
Diphenylamine *	BQL	5.75	0.656	1	9/24/2008	
Fluoranthene	BQL	5.75	0.811	1	9/24/2008	
Fluorene	BQL	5.75	0.834	1	9/24/2008	
Hexachlorobenzene	BQL	5.75	0.581	1	9/24/2008	
Hexachlorobutadiene	BQL	5.75	0.875	1	9/24/2008	
Hexachlorocyclopentadiene	BQL	11.5	11.5	1	9/24/2008	
Hexachloroethane	BQL	5.75	0.857	1	9/24/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.75	2.63	1	9/24/2008	
Isophorone	BQL	5.75	1.02	1	9/24/2008	
Naphthalene	BQL	5.75	1.05	1	9/24/2008	
Nitrobenzene	BQL	5.75	1.21	1	9/24/2008	
2-Nitrophenol	BQL	5.75	1.42	1	9/24/2008	
4-Nitrophenol	BQL	28.8	1.24	1	9/24/2008	
N-Nitrosodi-n-propylamine	BQL	5.75	1.73	1	9/24/2008	
Pentachlorophenol	BQL	28.8	1.63	1	9/24/2008	
Phenanthrene	BQL	5.75	0.512	1	9/24/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-OBG06
 Client Project ID: CTO 013
 Lab Sample ID: G649-67-1J
 Lab Project ID: G649-67

Analyzed By: DES
 Date Collected: 9/19/2008 15:00
 Date Received: 9/19/2008
 Date Extracted: 9/22/2008
 Matrix: Water

Initial/Final Amt: 869 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.75	1.22	1	9/24/2008	
Pyrene	BQL	5.75	2.38	1	9/24/2008	
1,2,4-Trichlorobenzene	BQL	5.75	0.829	1	9/24/2008	
2,4,6-Trichlorophenol	BQL	5.75	1.06	1	9/24/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.7	87		
2-Fluorophenol		10	7.3	73		
Nitrobenzene-d5		10	8.7	87		
Phenol-d6		10	8.6	86		
2,4,6-Tribromophenol		10	9.8	98		
4-Terphenyl-d14		10	8	80		

Comments:

Flags:

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

Reviewed By: CIA

Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: USTAS4141-OBG06
Client Project ID: CTO 013
Lab Sample ID: G649-67-1J
Lab Project ID: G649-67
Sample Wt/Vol: 869 ML
Dilution: 1

Analyzed By: DES
Date Collected: 9/19/2008 15:00
Date Received: 9/19/2008
Date Extracted: 9/22/2008
Date Analyzed: 9/24/2008
Matrix: Water

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

Comment:

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

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

Reviewed by: CM

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-MW02
 Client Project ID: CTO 013
 Lab Sample ID: G649-67-2H
 Lab Project ID: G649-67

Analyzed By: DES
 Date Collected: 9/19/2008 16:30
 Date Received: 9/19/2008
 Date Extracted: 9/22/2008
 Matrix: Water

Initial/Final Amt: 821 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	6.09	0.907	1	9/24/2008	
Acenaphthylene	BQL	6.09	0.907	1	9/24/2008	
Anthracene	BQL	6.09	1.07	1	9/24/2008	
Benzo[a]anthracene	BQL	6.09	0.828	1	9/24/2008	
Benzo[a]pyrene	BQL	6.09	0.773	1	9/24/2008	
Benzo[b]fluoranthene	BQL	6.09	0.871	1	9/24/2008	
Benzo[g,h,i]perylene	BQL	6.09	0.749	1	9/24/2008	
Benzo[k]fluoranthene	BQL	6.09	0.670	1	9/24/2008	
Bis(2-chloroethoxy)methane	BQL	6.09	1.25	1	9/24/2008	
Bis(2-chloroethyl)ether	BQL	6.09	1.27	1	9/24/2008	
Bis(2-chloroisopropyl)ether	BQL	6.09	1.19	1	9/24/2008	
Bis(2-ethylhexyl)phthalate	BQL	6.09	0.499	1	9/24/2008	
4-bromophenyl phenyl ether	BQL	6.09	0.950	1	9/24/2008	
Butylbenzylphthalate	BQL	6.09	0.542	1	9/24/2008	
2-Chloronaphthalene	BQL	6.09	1.05	1	9/24/2008	
2-Chlorophenol	BQL	6.09	1.43	1	9/24/2008	
4-Chloro-3-methylphenol	BQL	6.09	0.968	1	9/24/2008	
4-Chlorophenyl phenyl ether	BQL	6.09	3.96	1	9/24/2008	
Chrysene	BQL	6.09	0.676	1	9/24/2008	
Dibenzo[a,h]anthracene	BQL	6.09	0.536	1	9/24/2008	
Di-n-Butylphthalate	BQL	6.09	1.00	1	9/24/2008	
3,3'-Dichlorobenzidine	BQL	12.2	1.49	1	9/24/2008	
2,4-Dichlorophenol	BQL	6.09	1.36	1	9/24/2008	
Diethylphthalate	BQL	6.09	0.901	1	9/24/2008	
Dimethylphthalate	BQL	6.09	0.676	1	9/24/2008	
2,4-Dimethylphenol	BQL	6.09	1.97	1	9/24/2008	
Di-n-octylphthalate	BQL	6.09	0.706	1	9/24/2008	
4,6-Dinitro-2-methylphenol	BQL	30.5	0.670	1	9/24/2008	
2,4-Dinitrophenol	BQL	30.5	0.780	1	9/24/2008	
2,4-Dinitrotoluene	BQL	6.09	0.652	1	9/24/2008	
2,6-Dinitrotoluene	BQL	6.09	0.792	1	9/24/2008	
Diphenylamine *	BQL	6.09	0.694	1	9/24/2008	
Fluoranthene	BQL	6.09	0.859	1	9/24/2008	
Fluorene	BQL	6.09	0.883	1	9/24/2008	
Hexachlorobenzene	BQL	6.09	0.615	1	9/24/2008	
Hexachlorobutadiene	BQL	6.09	0.926	1	9/24/2008	
Hexachlorocyclopentadiene	BQL	12.2	12.2	1	9/24/2008	
Hexachloroethane	BQL	6.09	0.907	1	9/24/2008	
Indeno(1,2,3-c,d)pyrene	BQL	6.09	2.78	1	9/24/2008	
Isophorone	BQL	6.09	1.08	1	9/24/2008	
Naphthalene	BQL	6.09	1.11	1	9/24/2008	
Nitrobenzene	BQL	6.09	1.28	1	9/24/2008	
2-Nitrophenol	BQL	6.09	1.50	1	9/24/2008	
4-Nitrophenol	BQL	30.5	1.32	1	9/24/2008	
N-Nitrosodi-n-propylamine	BQL	6.09	1.83	1	9/24/2008	
Pentachlorophenol	BQL	30.5	1.72	1	9/24/2008	
Phenanthrene	BQL	6.09	0.542	1	9/24/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-MW02
 Client Project ID: CTO 013
 Lab Sample ID: G649-67-2H
 Lab Project ID: G649-67

Analyzed By: DES
 Date Collected: 9/19/2008 16:30
 Date Received: 9/19/2008
 Date Extracted: 9/22/2008
 Matrix: Water

Initial/Final Amt: 821 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	6.09	1.29	1	9/24/2008	
Pyrene	BQL	6.09	2.52	1	9/24/2008	
1,2,4-Trichlorobenzene	BQL	6.09	0.877	1	9/24/2008	
2,4,6-Trichlorophenol	BQL	6.09	1.13	1	9/24/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	9.1	91		
2-Fluorophenol		10	7.7	77		
Nitrobenzene-d5		10	9	90		
Phenol-d6		10	9	90		
2,4,6-Tribromophenol		10	10.3	103		
4-Terphenyl-d14		10	7.8	78		

Comments:

Flags:

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

Reviewed By: WR

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTAS4141-MW02
 Client Project ID: CTO 013
 Lab Sample ID: G649-67-2H
 Lab Project ID: G649-67
 Sample Wt/Vol: 821 ML
 Dilution: 1

Analyzed By: DES
 Date Collected: 9/19/2008 16:30
 Date Received: 9/19/2008
 Date Extracted: 9/22/2008
 Date Analyzed: 9/24/2008
 Matrix: Water

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

Comment:

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

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

Reviewed by: 

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-MW07

Client Project ID: CTO 013

Lab Sample ID: G649-67-3H

Lab Project ID: G649-67

Analyzed By: DES

Date Collected: 9/19/2008 17:05

Date Received: 9/19/2008

Date Extracted: 9/22/2008

Matrix: Water

Initial/Final Amt: 875 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.71	0.851	1	9/24/2008	
Acenaphthylene	BQL	5.71	0.851	1	9/24/2008	
Anthracene	BQL	5.71	1.00	1	9/24/2008	
Benzo[a]anthracene	BQL	5.71	0.777	1	9/24/2008	
Benzo[a]pyrene	BQL	5.71	0.726	1	9/24/2008	
Benzo[b]fluoranthene	BQL	5.71	0.817	1	9/24/2008	
Benzo[g,h,i]perylene	BQL	5.71	0.703	1	9/24/2008	
Benzo[k]fluoranthene	BQL	5.71	0.629	1	9/24/2008	
Bis(2-chloroethoxy)methane	BQL	5.71	1.18	1	9/24/2008	
Bis(2-chloroethyl)ether	BQL	5.71	1.19	1	9/24/2008	
Bis(2-chloroisopropyl)ether	BQL	5.71	1.11	1	9/24/2008	
Bis(2-ethylhexyl)phthalate	BQL	5.71	0.469	1	9/24/2008	
4-bromophenyl phenyl ether	BQL	5.71	0.891	1	9/24/2008	
Butylbenzylphthalate	BQL	5.71	0.509	1	9/24/2008	
2-Chloronaphthalene	BQL	5.71	0.989	1	9/24/2008	
2-Chlorophenol	BQL	5.71	1.34	1	9/24/2008	
4-Chloro-3-methylphenol	BQL	5.71	0.909	1	9/24/2008	
4-Chlorophenyl phenyl ether	BQL	5.71	3.72	1	9/24/2008	
Chrysene	BQL	5.71	0.634	1	9/24/2008	
Dibenzo[a,h]anthracene	BQL	5.71	0.503	1	9/24/2008	
Di-n-Butylphthalate	BQL	5.71	0.943	1	9/24/2008	
3,3'-Dichlorobenzidine	BQL	11.4	1.39	1	9/24/2008	
2,4-Dichlorophenol	BQL	5.71	1.28	1	9/24/2008	
Diethylphthalate	0.857	5.71	0.846	1	9/24/2008	J
Dimethylphthalate	BQL	5.71	0.634	1	9/24/2008	
2,4-Dimethylphenol	BQL	5.71	1.85	1	9/24/2008	
Di-n-octylphthalate	BQL	5.71	0.663	1	9/24/2008	
4,6-Dinitro-2-methylphenol	BQL	28.6	0.629	1	9/24/2008	
2,4-Dinitrophenol	BQL	28.6	0.731	1	9/24/2008	
2,4-Dinitrotoluene	BQL	5.71	0.611	1	9/24/2008	
2,6-Dinitrotoluene	BQL	5.71	0.743	1	9/24/2008	
Diphenylamine *	BQL	5.71	0.651	1	9/24/2008	
Fluoranthene	BQL	5.71	0.806	1	9/24/2008	
Fluorene	BQL	5.71	0.829	1	9/24/2008	
Hexachlorobenzene	BQL	5.71	0.577	1	9/24/2008	
Hexachlorobutadiene	BQL	5.71	0.869	1	9/24/2008	
Hexachlorocyclopentadiene	BQL	11.4	11.4	1	9/24/2008	
Hexachloroethane	BQL	5.71	0.851	1	9/24/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.71	2.61	1	9/24/2008	
Isophorone	BQL	5.71	1.01	1	9/24/2008	
Naphthalene	BQL	5.71	1.04	1	9/24/2008	
Nitrobenzene	BQL	5.71	1.20	1	9/24/2008	
2-Nitrophenol	BQL	5.71	1.41	1	9/24/2008	
4-Nitrophenol	BQL	28.6	1.23	1	9/24/2008	
N-Nitrosodi-n-propylamine	BQL	5.71	1.71	1	9/24/2008	
Pentachlorophenol	BQL	28.6	1.62	1	9/24/2008	
Phenanthrene	BQL	5.71	0.509	1	9/24/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-MW07

Client Project ID: CTO 013

Lab Sample ID: G649-67-3H

Lab Project ID: G649-67

Initial/Final Amt: 875 mL / 5.0 mL

Analyzed By: DES

Date Collected: 9/19/2008 17:05

Date Received: 9/19/2008

Date Extracted: 9/22/2008

Matrix: Water

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.71	1.21	1	9/24/2008	
Pyrene	BQL	5.71	2.36	1	9/24/2008	
1,2,4-Trichlorobenzene	BQL	5.71	0.823	1	9/24/2008	
2,4,6-Trichlorophenol	BQL	5.71	1.06	1	9/24/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.7	87		
2-Fluorophenol		10	7.7	77		
Nitrobenzene-d5		10	8.7	87		
Phenol-d6		10	8.8	88		
2,4,6-Tribromophenol		10	10.3	103		
4-Terphenyl-d14		10	7.9	79		

Comments:**Flags:**

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: USTAS4141-MW07
Client Project ID: CTO 013
Lab Sample ID: G649-67-3H
Lab Project ID: G649-67
Sample Wt/Vol: 875 ML
Dilution: 1

Analyzed By: DES
Date Collected: 9/19/2008 17:05
Date Received: 9/19/2008
Date Extracted: 9/22/2008
Date Analyzed: 9/24/2008
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Alkane, Unknown	9.74			7.07
2	Alkane, Unknown	8.54			6.5
3	Unknown	8.48			4.5
4					
5					
6					
7					
8					
9					
10					

Comment:

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

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

Reviewed by: 

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-MW14

Client Project ID: CTO 013

Lab Sample ID: G649-67-4H

Lab Project ID: G649-67

Analyzed By: DES

Date Collected: 9/19/2008 14:20

Date Received: 9/19/2008

Date Extracted: 9/22/2008

Matrix: Water

Initial/Final Amt: 898 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.57	0.830	1	9/24/2008	
Acenaphthylene	BQL	5.57	0.830	1	9/24/2008	
Anthracene	BQL	5.57	0.974	1	9/24/2008	
Benzo[a]anthracene	BQL	5.57	0.757	1	9/24/2008	
Benzo[a]pyrene	BQL	5.57	0.707	1	9/24/2008	
Benzo[b]fluoranthene	BQL	5.57	0.796	1	9/24/2008	
Benzo[g,h,i]perylene	BQL	5.57	0.685	1	9/24/2008	
Benzo[k]fluoranthene	BQL	5.57	0.612	1	9/24/2008	
Bis(2-chloroethoxy)methane	BQL	5.57	1.15	1	9/24/2008	
Bis(2-chloroethyl)ether	BQL	5.57	1.16	1	9/24/2008	
Bis(2-chloroisopropyl)ether	BQL	5.57	1.09	1	9/24/2008	
Bis(2-ethylhexyl)phthalate	BQL	5.57	0.457	1	9/24/2008	
4-bromophenyl phenyl ether	BQL	5.57	0.869	1	9/24/2008	
Butylbenzylphthalate	BQL	5.57	0.496	1	9/24/2008	
2-Chloronaphthalene	BQL	5.57	0.963	1	9/24/2008	
2-Chlorophenol	BQL	5.57	1.30	1	9/24/2008	
4-Chloro-3-methylphenol	BQL	5.57	0.885	1	9/24/2008	
4-Chlorophenyl phenyl ether	BQL	5.57	3.62	1	9/24/2008	
Chrysene	BQL	5.57	0.618	1	9/24/2008	
Dibenzo[a,h]anthracene	BQL	5.57	0.490	1	9/24/2008	
Di-n-Butylphthalate	BQL	5.57	0.919	1	9/24/2008	
3,3'-Dichlorobenzidine	BQL	11.1	1.36	1	9/24/2008	
2,4-Dichlorophenol	BQL	5.57	1.25	1	9/24/2008	
Diethylphthalate	BQL	5.57	0.824	1	9/24/2008	
Dimethylphthalate	BQL	5.57	0.618	1	9/24/2008	
2,4-Dimethylphenol	BQL	5.57	1.80	1	9/24/2008	
Di-n-octylphthalate	BQL	5.57	0.646	1	9/24/2008	
4,6-Dinitro-2-methylphenol	BQL	27.8	0.612	1	9/24/2008	
2,4-Dinitrophenol	BQL	27.8	0.713	1	9/24/2008	
2,4-Dinitrotoluene	BQL	5.57	0.596	1	9/24/2008	
2,6-Dinitrotoluene	BQL	5.57	0.724	1	9/24/2008	
Diphenylamine *	BQL	5.57	0.635	1	9/24/2008	
Fluoranthene	BQL	5.57	0.785	1	9/24/2008	
Fluorene	BQL	5.57	0.807	1	9/24/2008	
Hexachlorobenzene	BQL	5.57	0.562	1	9/24/2008	
Hexachlorobutadiene	BQL	5.57	0.846	1	9/24/2008	
Hexachlorocyclopentadiene	BQL	11.1	11.1	1	9/24/2008	
Hexachloroethane	BQL	5.57	0.830	1	9/24/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.57	2.54	1	9/24/2008	
Isophorone	BQL	5.57	0.986	1	9/24/2008	
Naphthalene	BQL	5.57	1.01	1	9/24/2008	
Nitrobenzene	BQL	5.57	1.17	1	9/24/2008	
2-Nitrophenol	BQL	5.57	1.37	1	9/24/2008	
4-Nitrophenol	BQL	27.8	1.20	1	9/24/2008	
N-Nitrosodi-n-propylamine	BQL	5.57	1.67	1	9/24/2008	
Pentachlorophenol	BQL	27.8	1.58	1	9/24/2008	
Phenanthrene	BQL	5.57	0.496	1	9/24/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-MW14
 Client Project ID: CTO 013
 Lab Sample ID: G649-67-4H
 Lab Project ID: G649-67

Analyzed By: DES
 Date Collected: 9/19/2008 14:20
 Date Received: 9/19/2008
 Date Extracted: 9/22/2008
 Matrix: Water

Initial/Final Amt: 898 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.57	1.18	1	9/24/2008	
Pyrene	BQL	5.57	2.30	1	9/24/2008	
1,2,4-Trichlorobenzene	BQL	5.57	0.802	1	9/24/2008	
2,4,6-Trichlorophenol	BQL	5.57	1.03	1	9/24/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.6	86		
2-Fluorophenol		10	7.5	75		
Nitrobenzene-d5		10	8.7	87		
Phenol-d6		10	8.8	88		
2,4,6-Tribromophenol		10	10.4	104		
4-Terphenyl-d14		10	8	80		

Comments:

Flags:

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

Reviewed By: 

Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: USTAS4141-MW14
Client Project ID: CTO 013
Lab Sample ID: G649-67-4H
Lab Project ID: G649-67
Sample Wt/Vol: 898 ML
Dilution: 1

Analyzed By: DES
Date Collected: 9/19/2008 14:20
Date Received: 9/19/2008
Date Extracted: 9/22/2008
Date Analyzed: 9/24/2008
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Alkane, Unknown	8.54			6.93
2					
3					
4					
5					
6					
7					
8					
9					
10					

Comment:

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

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

Reviewed by: 

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-MW15
 Client Project ID: CTO 013
 Lab Sample ID: G649-67-5H
 Lab Project ID: G649-67

Analyzed By: DES
 Date Collected: 9/19/2008 15:45
 Date Received: 9/19/2008
 Date Extracted: 9/22/2008
 Matrix: Water

Initial/Final Amt: 926 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.40	0.805	1	9/24/2008	
Acenaphthylene	BQL	5.40	0.805	1	9/24/2008	
Anthracene	BQL	5.40	0.945	1	9/24/2008	
Benzo[a]anthracene	BQL	5.40	0.734	1	9/24/2008	
Benzo[a]pyrene	BQL	5.40	0.686	1	9/24/2008	
Benzo[b]fluoranthene	BQL	5.40	0.772	1	9/24/2008	
Benzo[g,h,i]perylene	BQL	5.40	0.664	1	9/24/2008	
Benzo[k]fluoranthene	BQL	5.40	0.594	1	9/24/2008	
Bis(2-chloroethoxy)methane	BQL	5.40	1.11	1	9/24/2008	
Bis(2-chloroethyl)ether	BQL	5.40	1.12	1	9/24/2008	
Bis(2-chloroisopropyl)ether	BQL	5.40	1.05	1	9/24/2008	
Bis(2-ethylhexyl)phthalate	0.648	5.40	0.443	1	9/24/2008	J
4-bromophenyl phenyl ether	BQL	5.40	0.842	1	9/24/2008	
Butylbenzylphthalate	BQL	5.40	0.481	1	9/24/2008	
2-Chloronaphthalene	BQL	5.40	0.934	1	9/24/2008	
2-Chlorophenol	BQL	5.40	1.26	1	9/24/2008	
4-Chloro-3-methylphenol	BQL	5.40	0.859	1	9/24/2008	
4-Chlorophenyl phenyl ether	BQL	5.40	3.52	1	9/24/2008	
Chrysene	BQL	5.40	0.599	1	9/24/2008	
Dibenzo[a,h]anthracene	BQL	5.40	0.475	1	9/24/2008	
Di-n-Butylphthalate	BQL	5.40	0.891	1	9/24/2008	
3,3'-Dichlorobenzidine	BQL	10.8	1.32	1	9/24/2008	
2,4-Dichlorophenol	BQL	5.40	1.21	1	9/24/2008	
Diethylphthalate	BQL	5.40	0.799	1	9/24/2008	
Dimethylphthalate	BQL	5.40	0.599	1	9/24/2008	
2,4-Dimethylphenol	BQL	5.40	1.75	1	9/24/2008	
Di-n-octylphthalate	BQL	5.40	0.626	1	9/24/2008	
4,6-Dinitro-2-methylphenol	BQL	27.0	0.594	1	9/24/2008	
2,4-Dinitrophenol	BQL	27.0	0.691	1	9/24/2008	
2,4-Dinitrotoluene	BQL	5.40	0.578	1	9/24/2008	
2,6-Dinitrotoluene	BQL	5.40	0.702	1	9/24/2008	
Diphenylamine *	BQL	5.40	0.616	1	9/24/2008	
Fluoranthene	BQL	5.40	0.761	1	9/24/2008	
Fluorene	BQL	5.40	0.783	1	9/24/2008	
Hexachlorobenzene	BQL	5.40	0.545	1	9/24/2008	
Hexachlorobutadiene	BQL	5.40	0.821	1	9/24/2008	
Hexachlorocyclopentadiene	BQL	10.8	10.8	1	9/24/2008	
Hexachloroethane	BQL	5.40	0.805	1	9/24/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.40	2.47	1	9/24/2008	
Isophorone	BQL	5.40	0.956	1	9/24/2008	
Naphthalene	BQL	5.40	0.983	1	9/24/2008	
Nitrobenzene	BQL	5.40	1.13	1	9/24/2008	
2-Nitrophenol	BQL	5.40	1.33	1	9/24/2008	
4-Nitrophenol	BQL	27.0	1.17	1	9/24/2008	
N-Nitrosodi-n-propylamine	BQL	5.40	1.62	1	9/24/2008	
Pentachlorophenol	BQL	27.0	1.53	1	9/24/2008	
Phenanthrene	BQL	5.40	0.481	1	9/24/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-MW15
 Client Project ID: CTO 013
 Lab Sample ID: G649-67-5H
 Lab Project ID: G649-67

Analyzed By: DES
 Date Collected: 9/19/2008 15:45
 Date Received: 9/19/2008
 Date Extracted: 9/22/2008
 Matrix: Water

Initial/Final Amt: 926 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.40	1.14	1	9/24/2008	
Pyrene	BQL	5.40	2.23	1	9/24/2008	
1,2,4-Trichlorobenzene	BQL	5.40	0.778	1	9/24/2008	
2,4,6-Trichlorophenol	BQL	5.40	0.999	1	9/24/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.9	89		
2-Fluorophenol		10	7.4	74		
Nitrobenzene-d5		10	9.1	91		
Phenol-d6		10	9.1	91		
2,4,6-Tribromophenol		10	10.6	106		
4-Terphenyl-d14		10	8.2	82		

Comments:

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTAS4141-MW15
 Client Project ID: CTO 013
 Lab Sample ID: G649-67-5H
 Lab Project ID: G649-67
 Sample Wt/Vol: 926 ML
 Dilution: 1

Analyzed By: DES
 Date Collected: 9/19/2008 15:45
 Date Received: 9/19/2008
 Date Extracted: 9/22/2008
 Date Analyzed: 9/24/2008
 Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Benzene, 2-ethenyl-1,4-dimethyl-	4.96	002039-89-6	95	12.9
2	Naphthalene, 2,3-dimethyl-	6.67	000581-40-8	98	11.8
3	Benzene, 1,4-diethyl-	4.23	000105-05-5	97	11.8
4	Unknown	4.29			9.6
5	1H-Indene, 2,3-dihydro-1,6-dimethyl-	5.26	017059-48-2	94	7.84
6	Naphthalene, 1,7-dimethyl-	6.60	000575-37-1	98	7.68
7	Aromatic, Unknown	4.87			7.62
8	Naphthalene, 2,7-dimethyl-	6.70	000582-16-1	96	7.21
9	Naphthalene, 1,2,3,4-tetrahydro-6-methyl-	5.73	001680-51-9	93	5.8
10					

Comment:

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

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

Reviewed by: 

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-MW19
 Client Project ID: CTO 013
 Lab Sample ID: G649-67-6I
 Lab Project ID: G649-67

Analyzed By: DES
 Date Collected: 9/19/2008 13:25
 Date Received: 9/19/2008
 Date Extracted: 9/22/2008
 Matrix: Water

Initial/Final Amt: 964 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.19	0.773	1	9/24/2008	
Acenaphthylene	BQL	5.19	0.773	1	9/24/2008	
Anthracene	BQL	5.19	0.908	1	9/24/2008	
Benzo[a]anthracene	BQL	5.19	0.705	1	9/24/2008	
Benzo[a]pyrene	BQL	5.19	0.659	1	9/24/2008	
Benzo[b]fluoranthene	BQL	5.19	0.742	1	9/24/2008	
Benzo[g,h,i]perylene	BQL	5.19	0.638	1	9/24/2008	
Benzo[k]fluoranthene	BQL	5.19	0.571	1	9/24/2008	
Bis(2-chloroethoxy)methane	BQL	5.19	1.07	1	9/24/2008	
Bis(2-chloroethyl)ether	BQL	5.19	1.08	1	9/24/2008	
Bis(2-chloroisopropyl)ether	BQL	5.19	1.01	1	9/24/2008	
Bis(2-ethylhexyl)phthalate	0.467	5.19	0.425	1	9/24/2008	J
4-bromophenyl phenyl ether	BQL	5.19	0.809	1	9/24/2008	
Butylbenzylphthalate	BQL	5.19	0.462	1	9/24/2008	
2-Chloronaphthalene	BQL	5.19	0.897	1	9/24/2008	
2-Chlorophenol	BQL	5.19	1.21	1	9/24/2008	
4-Chloro-3-methylphenol	BQL	5.19	0.825	1	9/24/2008	
4-Chlorophenyl phenyl ether	BQL	5.19	3.38	1	9/24/2008	
Chrysene	BQL	5.19	0.576	1	9/24/2008	
Dibenzo[a,h]anthracene	BQL	5.19	0.456	1	9/24/2008	
Di-n-Butylphthalate	BQL	5.19	0.856	1	9/24/2008	
3,3'-Dichlorobenzidine	BQL	10.4	1.27	1	9/24/2008	
2,4-Dichlorophenol	BQL	5.19	1.16	1	9/24/2008	
Diethylphthalate	BQL	5.19	0.768	1	9/24/2008	
Dimethylphthalate	BQL	5.19	0.576	1	9/24/2008	
2,4-Dimethylphenol	BQL	5.19	1.68	1	9/24/2008	
Di-n-octylphthalate	BQL	5.19	0.602	1	9/24/2008	
4,6-Dinitro-2-methylphenol	BQL	25.9	0.571	1	9/24/2008	
2,4-Dinitrophenol	BQL	25.9	0.664	1	9/24/2008	
2,4-Dinitrotoluene	BQL	5.19	0.555	1	9/24/2008	
2,6-Dinitrotoluene	BQL	5.19	0.674	1	9/24/2008	
Diphenylamine *	BQL	5.19	0.591	1	9/24/2008	
Fluoranthene	BQL	5.19	0.731	1	9/24/2008	
Fluorene	BQL	5.19	0.752	1	9/24/2008	
Hexachlorobenzene	BQL	5.19	0.524	1	9/24/2008	
Hexachlorobutadiene	BQL	5.19	0.788	1	9/24/2008	
Hexachlorocyclopentadiene	BQL	10.4	10.4	1	9/24/2008	
Hexachloroethane	BQL	5.19	0.773	1	9/24/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.19	2.37	1	9/24/2008	
Isophorone	BQL	5.19	0.918	1	9/24/2008	
Naphthalene	BQL	5.19	0.944	1	9/24/2008	
Nitrobenzene	BQL	5.19	1.09	1	9/24/2008	
2-Nitrophenol	BQL	5.19	1.28	1	9/24/2008	
4-Nitrophenol	BQL	25.9	1.12	1	9/24/2008	
N-Nitrosodi-n-propylamine	BQL	5.19	1.56	1	9/24/2008	
Pentachlorophenol	BQL	25.9	1.47	1	9/24/2008	
Phenanthrene	BQL	5.19	0.462	1	9/24/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-MW19
 Client Project ID: CTO 013
 Lab Sample ID: G649-67-6I
 Lab Project ID: G649-67

Analyzed By: DES
 Date Collected: 9/19/2008 13:25
 Date Received: 9/19/2008
 Date Extracted: 9/22/2008
 Matrix: Water

Initial/Final Amt: 964 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.19	1.10	1	9/24/2008	
Pyrene	BQL	5.19	2.14	1	9/24/2008	
1,2,4-Trichlorobenzene	BQL	5.19	0.747	1	9/24/2008	
2,4,6-Trichlorophenol	BQL	5.19	0.960	1	9/24/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.8	88		
2-Fluorophenol		10	7.7	77		
Nitrobenzene-d5		10	8.6	86		
Phenol-d6		10	9	90		
2,4,6-Tribromophenol		10	10.4	104		
4-Terphenyl-d14		10	8.3	83		

Comments:

Flags:

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

Reviewed By: 

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTAS4141-MW19
 Client Project ID: CTO 013
 Lab Sample ID: G649-67-6I
 Lab Project ID: G649-67
 Sample Wt/Vol: 964 ML
 Dilution: 1

Analyzed By: DES
 Date Collected: 9/19/2008 13:25
 Date Received: 9/19/2008
 Date Extracted: 9/22/2008
 Date Analyzed: 9/24/2008
 Matrix: Water

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

Comment:

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

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

Reviewed by: 

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB12440
Lab Project ID:

Analyzed By: DES
Date Collected:
Date Received:
Date Extracted: 9/22/2008
Matrix: WATER

Initial/Final Amt: 1000 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.00	0.745	1	9/24/2008	
Acenaphthylene	BQL	5.00	0.745	1	9/24/2008	
Anthracene	BQL	5.00	0.875	1	9/24/2008	
Benzo[a]anthracene	BQL	5.00	0.680	1	9/24/2008	
Benzo[a]pyrene	BQL	5.00	0.635	1	9/24/2008	
Benzo[b]fluoranthene	BQL	5.00	0.715	1	9/24/2008	
Benzo[g,h,i]perylene	BQL	5.00	0.615	1	9/24/2008	
Benzo[k]fluoranthene	BQL	5.00	0.550	1	9/24/2008	
Bis(2-chloroethoxy)methane	BQL	5.00	1.03	1	9/24/2008	
Bis(2-chloroethyl)ether	BQL	5.00	1.04	1	9/24/2008	
Bis(2-chloroisopropyl)ether	BQL	5.00	0.975	1	9/24/2008	
Bis(2-ethylhexyl)phthalate	BQL	5.00	0.410	1	9/24/2008	
4-bromophenyl phenyl ether	BQL	5.00	0.780	1	9/24/2008	
Butylbenzylphthalate	BQL	5.00	0.445	1	9/24/2008	
2-Chloronaphthalene	BQL	5.00	0.865	1	9/24/2008	
2-Chlorophenol	BQL	5.00	1.17	1	9/24/2008	
4-Chloro-3-methylphenol	BQL	5.00	0.795	1	9/24/2008	
4-Chlorophenyl phenyl ether	BQL	5.00	3.25	1	9/24/2008	
Chrysene	BQL	5.00	0.555	1	9/24/2008	
Dibenzo[a,h]anthracene	BQL	5.00	0.440	1	9/24/2008	
Di-n-Butylphthalate	BQL	5.00	0.825	1	9/24/2008	
3,3'-Dichlorobenzidine	BQL	10.0	1.22	1	9/24/2008	
2,4-Dichlorophenol	BQL	5.00	1.12	1	9/24/2008	
Diethylphthalate	BQL	5.00	0.740	1	9/24/2008	
Dimethylphthalate	BQL	5.00	0.555	1	9/24/2008	
2,4-Dimethylphenol	BQL	5.00	1.62	1	9/24/2008	
Di-n-octylphthalate	BQL	5.00	0.580	1	9/24/2008	
4,6-Dinitro-2-methylphenol	BQL	25.0	0.550	1	9/24/2008	
2,4-Dinitrophenol	BQL	25.0	0.640	1	9/24/2008	
2,4-Dinitrotoluene	BQL	5.00	0.535	1	9/24/2008	
2,6-Dinitrotoluene	BQL	5.00	0.650	1	9/24/2008	
Diphenylamine *	BQL	5.00	0.570	1	9/24/2008	
Fluoranthene	BQL	5.00	0.705	1	9/24/2008	
Fluorene	BQL	5.00	0.725	1	9/24/2008	
Hexachlorobenzene	BQL	5.00	0.505	1	9/24/2008	
Hexachlorobutadiene	BQL	5.00	0.760	1	9/24/2008	
Hexachlorocyclopentadiene	BQL	10.0	10.0	1	9/24/2008	
Hexachloroethane	BQL	5.00	0.745	1	9/24/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.00	2.29	1	9/24/2008	
Isophorone	BQL	5.00	0.885	1	9/24/2008	
Naphthalene	BQL	5.00	0.910	1	9/24/2008	
Nitrobenzene	BQL	5.00	1.05	1	9/24/2008	
2-Nitrophenol	BQL	5.00	1.23	1	9/24/2008	
4-Nitrophenol	BQL	25.0	1.08	1	9/24/2008	
N-Nitrosodi-n-propylamine	BQL	5.00	1.50	1	9/24/2008	
Pentachlorophenol	BQL	25.0	1.41	1	9/24/2008	
Phenanthrene	BQL	5.00	0.445	1	9/24/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: Method Blank

Client Project ID:

Lab Sample ID: PB12440

Lab Project ID:

Analyzed By: DES

Date Collected:

Date Received:

Date Extracted: 9/22/2008

Matrix: WATER

Initial/Final Amt: 1000 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.00	1.06	1	9/24/2008	
Pyrene	BQL	5.00	2.07	1	9/24/2008	
1,2,4-Trichlorobenzene	BQL	5.00	0.720	1	9/24/2008	
2,4,6-Trichlorophenol	BQL	5.00	0.925	1	9/24/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.8	88		
2-Fluorophenol		10	7.8	78		
Nitrobenzene-d5		10	8.7	87		
Phenol-d6		10	8.8	88		
2,4,6-Tribromophenol		10	10	100		
4-Terphenyl-d14		10	7.8	78		

Comments:**Flags:**

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: MP

Results for 625 Laboratory Control Spike

Sample ID: LCS12440

Analyst: DES

Matrix: Water

Date Analyzed: 09/24/08 11:05

File: 0924609.D

Inst: MSD6

Compound	Spiked (µg/L)	Measured (µg/L)	Recovery (%)	Limits (%)	
				Lower	Upper
Acenaphthene	10	9.48	94.8	47.0	145
Acenaphthylene	10	9.21	92.1	33.0	145
Anthracene	10	8.59	85.9	27.0	133
Benzo[a]anthracene	10	9.79	97.9	33.0	143
Benzo[a]pyrene	10	9.80	98.0	17.0	163
Benzo[b]fluoranthene	10	10.67	106.7	24.0	159
Benzo[g,h,i]perylene	10	9.63	96.3	D	219
Benzo[k]fluoranthene	10	9.11	91.1	11.0	162
Bis(2-chloroethoxy)methane	10	8.73	87.3	33.0	184
Bis(2-chloroethyl)ether	10	8.76	87.6	12.0	158
Bis(2-chloroisopropyl)ether	10	8.76	87.6	36.0	166
Bis(2-ethylhexyl)phthalate	10	9.04	90.4	8.0	158
4-bromophenyl phenyl ether	10	8.98	89.8	53.0	127
Butylbenzylphthalate	10	9.20	92.0	D	152
2-Chloronaphthalene	10	7.41	74.1	60.0	118
2-Chlorophenol	10	8.80	88.0	23.0	134
4-Chloro-3-methylphenol	10	9.65	96.5	22.0	147
4-Chlorophenyl phenyl ether	10	9.67	96.7	25.0	158
Chrysene	10	8.89	88.9	17.0	168
Dibenzo[a,h]anthracene	10	9.80	98.0	D	227
Di-n-Butylphthalate	10	9.01	90.1	1.0	118
3,3'-Dichlorobenzidine	10	8.24	82.4	D	262
2,4-Dichlorophenol	10	9.06	90.6	39.0	135
Diethylphthalate	10	9.75	97.5	D	114
Dimethylphthalate	10	9.43	94.3	D	112
2,4-Dimethylphenol	10	7.17	71.7	32.0	119
Di-n-octylphthalate	10	9.90	99.0	4.0	146
4,6-Dinitro-2-methylphenol	10	8.26	82.6	D	181
2,4-Dinitrophenol	10	9.02	90.2	D	191
2,4-Dinitrotoluene	10	9.76	97.6	39.0	139
2,6-Dinitrotoluene	10	9.90	99.0	50.0	158
Diphenylamine *	10	8.86	88.6	63.8	100
Fluoranthene	10	9.19	91.9	26.0	137
Fluorene	10	9.86	98.6	59.0	121
Hexachlorobenzene	10	8.47	84.7	D	152
Hexachlorobutadiene	10	7.43	74.3	24.0	116
Hexachlorocyclopentadiene	10	5.27	52.7	D	417
Hexachloroethane	10	6.07	60.7	40.0	113
Indeno(1,2,3-c,d)pyrene	10	10.05	100.5	D	171
Isophorone	10	7.95	79.5	21.0	196
Naphthalene	10	8.83	88.3	21.0	133

Results for 625 Laboratory Control Spike

Sample ID: LCS12440

Analyst: DES

Matrix: Water

Date Analyzed: 09/24/08 11:05

File: 0924609.D

Inst: MSD6

Compound	Spiked (µg/L)	Measured (µg/L)	Recovery (%)	Limits (%)	
				Lower	Upper
Nitrobenzene	10	8.78	87.8	35.0	180
2-Nitrophenol	10	9.36	93.6	29.0	182
4-Nitrophenol	10	9.48	94.8	D	132
N-Nitrosodi-n-propylamine	10	9.62	96.2	D	230
Pentachlorophenol	10	8.42	84.2	14.0	176
Phenanthrene	10	9.08	90.8	54.0	120
Phenol	10	8.65	86.5	5.0	112
Pyrene	10	9.10	91.0	52.0	115
1,2,4-Trichlorobenzene	10	7.48	74.8	44.0	142
2,4,6-Trichlorophenol	10	9.31	93.1	37.0	144

Surrogate Results Compound	Spiked (µg/L)	Measured (µg/L)	Recovery (%)	Limits (%)	
				Lower	Upper
2-Fluorobiphenyl	10	8.64	86.4	49.9	107
2-Fluorophenol	10	7.66	76.6	33.1	118
Nitrobenzene-d5	10	8.46	84.6	46.0	118
Phenol-d6	10	8.75	87.5	49.0	120
2,4,6-Tribromophenol	10	10.15	101.5	29.3	152
4-Terphenyl-d14	10	7.89	78.9	22.1	142

Flags: * = Out of limits.

NA = Not applicable

Reviewed By: CD

Results for 625 Laboratory Control Spike Duplicate

Sample ID: LCSD12440

Date Analyzed: 09/24/08 11:50

Analyst: DES

File: 0924611.D

Matrix: Water

Inst: MSD6

Compound	Spiked (µg/L)	Measured (µg/L)	Recovery (%)	Limits (%)		RPD (%)	#	Limit (%)
				Lower	Upper			
Acenaphthene	10	8.90	89.0	47.0	145	6.3		30
Acenaphthylene	10	8.49	84.9	33.0	145	8.1		30
Anthracene	10	8.20	82.0	27.0	133	4.6		30
Benzo[a]anthracene	10	9.56	95.6	33.0	143	2.4		30
Benzo[a]pyrene	10	9.34	93.4	17.0	163	4.8		30
Benzo[b]fluoranthene	10	10.23	102.3	24.0	159	4.2		30
Benzo[g,h,i]perylene	10	9.48	94.8	D	219	1.6		30
Benzo[k]fluoranthene	10	8.72	87.2	11.0	162	4.4		30
Bis(2-chloroethoxy)methane	10	8.17	81.7	33.0	184	6.6		30
Bis(2-chloroethyl)ether	10	8.00	80.0	12.0	158	9.1		30
Bis(2-chloroisopropyl)ether	10	8.13	81.3	36.0	166	7.5		30
Bis(2-ethylhexyl)phthalate	10	8.97	89.7	8.0	158	0.8		30
4-bromophenyl phenyl ether	10	8.41	84.1	53.0	127	6.6		30
Butylbenzylphthalate	10	9.08	90.8	D	152	1.3		30
2-Chloronaphthalene	10	6.89	68.9	60.0	118	7.3		30
2-Chlorophenol	10	7.97	79.7	23.0	134	9.9		30
4-Chloro-3-methylphenol	10	9.04	90.4	22.0	147	6.5		30
4-Chlorophenyl phenyl ether	10	9.09	90.9	25.0	158	6.2		30
Chrysene	10	8.52	85.2	17.0	168	4.3		30
Dibenzo[a,h]anthracene	10	9.53	95.3	D	227	2.8		30
Di-n-Butylphthalate	10	8.76	87.6	1.0	118	2.8		30
3,3'-Dichlorobenzidine	10	7.80	78.0	D	262	5.5		30
2,4-Dichlorophenol	10	8.47	84.7	39.0	135	6.7		30
Diethylphthalate	10	9.31	93.1	D	114	4.6		30
Dimethylphthalate	10	8.87	88.7	D	112	6.1		30
2,4-Dimethylphenol	10	6.53	65.3	32.0	119	9.3		30
Di-n-octylphthalate	10	9.41	94.1	4.0	146	5.1		30
4,6-Dinitro-2-methylphenol	10	8.28	82.8	D	181	0.2		30
2,4-Dinitrophenol	10	9.15	91.5	D	191	1.4		30
2,4-Dinitrotoluene	10	9.23	92.3	39.0	139	5.6		30
2,6-Dinitrotoluene	10	9.25	92.5	50.0	158	6.8		30
Diphenylamine	10	8.00	80.0	63.8	100	10.2		30
Fluoranthene	10	8.88	88.8	26.0	137	3.4		30
Fluorene	10	9.28	92.8	59.0	121	6.1		30
Hexachlorobenzene	10	7.92	79.2	D	152	6.7		30
Hexachlorobutadiene	10	5.90	59.0	24.0	116	23.0		30
Hexachlorocyclopentadiene	10	4.56	45.6	D	417	14.4		30
Hexachloroethane	10	4.73	47.3	40.0	113	24.8		30
Indeno(1,2,3-c,d)pyrene	10	9.79	97.9	D	171	2.6		30
Isophorone	10	7.46	74.6	21.0	196	6.4		30
Naphthalene	10	7.81	78.1	21.0	133	12.3		30

Results for 625 Laboratory Control Spike Duplicate

Sample ID: LCSD12440

Date Analyzed: 09/24/08 11:50

Analyst: DES

File: 0924611.D

Matrix: Water

Inst: MSD6

Compound	Spiked (µg/L)	Measured (µg/L)	Recovery (%)	Limits (%)		RPD (%)	#	Limit (%)
				Lower	Upper			
Nitrobenzene	10	8.09	80.9	35.0	180	8.2		30
2-Nitrophenol	10	8.77	87.7	29.0	182	6.5		30
4-Nitrophenol	10	9.07	90.7	D	132	4.4		30
N-Nitrosodi-n-propylamine	10	9.13	91.3	D	230	5.2		30
Pentachlorophenol	10	7.99	79.9	14.0	176	5.2		30
Phenanthrene	10	8.66	86.6	54.0	120	4.7		30
Phenol	10	7.98	79.8	5.0	112	8.1		30
Pyrene	10	8.94	89.4	52.0	115	1.8		30
1,2,4-Trichlorobenzene	10	6.32	63.2	44.0	142	16.8		30
2,4,6-Trichlorophenol	10	8.70	87.0	37.0	144	6.8		30

Surrogate Results	Spiked (µg/L)	Measured (µg/L)	Recovery (%)	Limits (%)	
Compound				Lower	Upper
2-Fluorobiphenyl	10	7.97	79.7	49.9	107
2-Fluorophenol	10	6.9	69	33.1	118
Nitrobenzene-d5	10	8.02	80.2	46.0	118
Phenol-d6	10	8.04	80.4	49.0	120
2,4,6-Tribromophenol	10	9.56	95.6	29.3	152
4-Terphenyl-d14	10	7.87	78.7	22.1	142

Flags: * = Out of limits.

Reviewed By: MD

NA = Not applicable

Results for Metals

Client Sample ID: USTAS4141-OBG06

Client Project ID: CTO 013

Lab Sample ID: G649-67-1

Lab Project ID: G649-67

ICP InitWt/Vol: 50 mL Final Vol: 50 mL

Hg InitWt/Vol: Final Vol:

Prep Batch: 12437

Analyzed By: PSW

Date Collected: 9/19/2008 15:00

Date Received: 9/19/2008

Matrix: WATER

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Lead	0.625	5.00	0.617	25	UG/L	6020	9/23/2008	J

Comments

BQL = Below Quantitation Limits

DF = Dilution Factor

J = Between MDL and RL

B= Amount in Prep Blank > MDL

Samples Prepared by 3030C

Reviewed By: 

METALS.XLS

Results for Metals

Client Sample ID: USTAS4141-MW02

Analyzed By: PSW

Client Project ID: CTO 013

Date Collected: 9/19/2008 16:30

Lab Sample ID: G649-67-2

Date Received: 9/19/2008

Lab Project ID: G649-67

Matrix: WATER

ICP InitWt/Vol: 50 mL Final Vol: 50 mL

Hg InitWt/Vol: Final Vol:

Prep Batch: 12437

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Lead	BQL	5.00	0.617	25	UG/L	6020	9/23/2008	

Comments

BQL = Below Quantitation Limits

DF = Dilution Factor

J = Between MDL and RL

B= Amount in Prep Blank > MDL

Samples Prepared by 3030C

Reviewed By: 

METALS.XLS

Results for Metals

Client Sample ID: USTAS4141-MW07

Analyzed By: PSW

Client Project ID: CTO 013

Date Collected: 9/19/2008 17:05

Lab Sample ID: G649-67-3

Date Received: 9/19/2008

Lab Project ID: G649-67

Matrix: WATER

ICP InitWt/Vol: 50 mL Final Vol: 50 mL

Hg InitWt/Vol: Final Vol:

Prep Batch: 12437

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Lead	BQL	5.00	0.617	25	UG/L	6020	9/23/2008	

Comments

BQL = Below Quantitation Limits

DF = Dilution Factor

J = Between MDL and RL

B= Amount in Prep Blank > MDL

Samples Prepared by 3030C

Reviewed By: 

METALS.XLS

Results for Metals

Client Sample ID: USTAS4141-MW14

Analyzed By: PSW

Client Project ID: CTO 013

Date Collected: 9/19/2008 14:20

Lab Sample ID: G649-67-4

Date Received: 9/19/2008

Lab Project ID: G649-67

Matrix: WATER

ICP InitWt/Vol: 50 mL Final Vol: 50 mL

Hg InitWt/Vol: Final Vol:

Prep Batch: 12437

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Lead	BQL	5.00	0.617	25	UG/L	6020	9/23/2008	

Comments

BQL = Below Quantitation Limits

DF = Dilution Factor

J = Between MDL and RL

B= Amount in Prep Blank > MDL

Samples Prepared by 3030C

Reviewed By: 

METALS.XLS

Results for Metals

Client Sample ID: USTAS4141-MW15

Analyzed By: PSW

Client Project ID: CTO 013

Date Collected: 9/19/2008 15:45

Lab Sample ID: G649-67-5

Date Received: 9/19/2008

Lab Project ID: G649-67

Matrix: WATER

ICP InitWt/Vol: 50 mL Final Vol: 50 mL

Hg InitWt/Vol: Final Vol:

Prep Batch: 12437

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Lead	BQL	5.00	0.617	25	UG/L	6020	9/23/2008	

Comments

BQL = Below Quantitation Limits

DF = Dilution Factor

J = Between MDL and RL

B= Amount in Prep Blank > MDL

Samples Prepared by 3030C

Reviewed By


METALS.XLS

Results for Metals

Client Sample ID: USTAS4141-MW19

Analyzed By: PSW

Client Project ID: CTO 013

Date Collected: 9/19/2008 13:25

Lab Sample ID: G649-67-6

Date Received: 9/19/2008

Lab Project ID: G649-67

Matrix: WATER

ICP InitWt/Vol: 50 mL Final Vol: 50 mL

Hg InitWt/Vol: Final Vol:

Prep Batch: 12437

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Lead	BQL	5.00	0.617	25	UG/L	6020	9/23/2008	

Comments

BQL = Below Quantitation Limits

DF = Dilution Factor

J = Between MDL and RL

B= Amount in Prep Blank > MDL

Samples Prepared by 3030C

Reviewed By: 

METALS.XLS

Results for Metals

Client Sample ID: Lab Blank
Client Project ID:
Lab Sample ID: pb12437
Lab Project ID:
ICP InitWt/Vol: 50 mL Final Vol: 50 mL
Hg InitWt/Vol: Final Vol:
Prep Batch: 12437
Analyzed By: PSW
Date Collected:
Date Received:
Matrix: WATER

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Lead	BQL	5.00	0.617	25	UG/L	6020	9/23/2008	

Comments

BQL = Below Quantitation Limits

DF = Dilution Factor

J = Between MDL and RL

B= Amount in Prep Blank > MDL

Samples Prepared by 3030C

Reviewed By:


METALS.XLS

METALS Results for LCS/LCD

ICP Batch: 12437

HG Batch:

Other:

Matrix: WATER

Units: MG/L

Analyte	TRUE Value	LCS	LCS %REC	LCD	LCD %REC	Limit		RPD	RPD Limit
						Lower	Upper		
Lead	0.400	0.367	91.8	0.372	93.0	80	120	1.35	20

Comments

*=Out of Limits

NA = Not applicable, due to sample concentration greater than three times spike concentration

Reviewed By:



MS/MSD Results for METALS

Lab ID: G649-67-1
MS Lab ID: G649-67-1
MSD Lab ID: G649-67-1
ICP Batch: 12437
HG Batch:
Other:

Analyzed By: PSW
Matrix: Water
Units: MG/L

Analyte	Sample Result	SA MS	MS Result	MS %REC	SA MSD	MSD Result	MSD %REC	Limit		RPD	RPD Limit
								Lower	Upper		
Lead	BQL	0.400	0.445	111	0.400	0.401	100	75	125	10.4	20

Comments

*=Out of Limits

NA = Not applicable, due to sample concentration greater than three times spike concentration

Reviewed By: 



CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

Locations Nationwide
• Alaska
• Ohio
• New Jersey
• West Virginia
• Hawaii
• Maryland
• North Carolina

www.us.sgs.com

074163

1		Client: OSAGE of VA		SGS Reference: 649-67		PAGE 1 OF 1			
CONTACT: THOMAS BLANK		PHONE NO: 757 274-4941							
PROJECT: OTO 013		SITE/PWSID#: AS4141							
REPORTS TO:		E-MAIL:							
InVOICE TO: Shawn Whitworth		FAX NO.: 757 440-0411							
QUOTE #		P.O. NUMBER							
2		Norfolk VA 23517		OTO 015					
LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE	Preservatives Used	Analysis Required	REMARKS
	USTAS4141-08606	9/19/08	1500	W	6	C= COMP	X	X	
	USTAS4141-MW02	↑	1630	W	6	G= GRAB	X	X	
	USTAS4141-MW07	↑	1705	W	6		X	X	
	USTAS4141-MW14	↑	1420	W	6		X	X	
	USTAS4141-MW15	↓	1545	W	6		X	X	
	USTAS4141-MW19	↓	1325	W	6		X	X	
	TRIP BLANK	9/19/08	1700	W	1		X		
5					4				
Collected/Relinquished By: (1)		Date	Time	Received By:	Date	Time	Shipping Carrier: Hand Delivered		Samples Received Cold? (Circle) YES NO
Relinquished By: (2)		Date	Time	Received By:	Date	Time	Shipping Ticket No:		Temperature (C): 6.40
Relinquished By: (3)		Date	Time	Received By:	Date	Time	Special Deliverable Requirements: EDD Format		Chain of Custody Seal: (Circle) INTACT BROKEN
Relinquished By: (4)		Date	Time	Received By:	Date	Time	Special Instructions: Email Results to: swithworth@osageva.com		(ABSENT)
		Date	Time	Received By:	Date	Time	Requested Turnaround Time: cellerman@osageva.com		
		Date	Time	Received By:	Date	Time	☐ RUSH ☒ STD		

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

0200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
05500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

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

Shaun Whitworth
Osage of Virginia
2618 A Colley Ave
Norfolk, VA 23517

Report Number: G649-68

Client Project: CTO 013

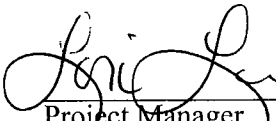
Dear Shaun Whitworth,

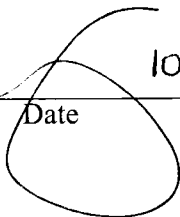
Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period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

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

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

Sincerely,
SGS Environmental Services, Inc.


for Project Manager
Ashley Nifong

 10/3/08
Date

List of Reporting Abbreviations
And Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

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

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

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

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

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

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

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

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

Results for Volatiles

by GC 602

Client Sample ID: USTAS4141-MW10

Analyzed By: RSB

Client Project ID: CTO 013

Date Collected: 9/22/2008 10:50

Lab Sample ID: G649-68-1A

Date Received: 9/23/2008

Lab Project ID: G649-68

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.428	1	9/29/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.391	1	9/29/2008	
Ethylbenzene	1.30	1.00	0.341	1	9/29/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.778	1	9/29/2008	
Toluene	0.576	1.00	0.404	1	9/29/2008	J
m/p-Xylene	2.04	2.00	0.671	1	9/29/2008	
o-Xylene	0.616	2.00	0.302	1	9/29/2008	J

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.2	103

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: USTAS4141-MW16

Analyzed By: RSB

Client Project ID: CTO 013

Date Collected: 9/22/2008 9:50

Lab Sample ID: G649-68-2A

Date Received: 9/23/2008

Lab Project ID: G649-68

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.428	1	9/29/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.391	1	9/29/2008	
Ethylbenzene	8.15	1.00	0.341	1	9/29/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.778	1	9/29/2008	
Toluene	BQL	1.00	0.404	1	9/29/2008	
m/p-Xylene	6.66	2.00	0.671	1	9/29/2008	
o-Xylene	0.321	2.00	0.302	1	9/29/2008	J

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.2	103

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: USTAS4141-MW18

Analyzed By: RSB

Client Project ID: CTO 013

Date Collected: 9/22/2008 11:30

Lab Sample ID: G649-68-3B

Date Received: 9/23/2008

Lab Project ID: G649-68

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	10/1/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	10/1/2008	
Ethylbenzene	BQL	1.00	0.19	1	10/1/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	10/1/2008	
Toluene	BQL	1.00	0.313	1	10/1/2008	
m/p-Xylene	BQL	2.00	0.481	1	10/1/2008	
o-Xylene	BQL	2.00	0.405	1	10/1/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	38.9	97.4

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: USTAS4141-Duplicate

Analyzed By: RSB

Client Project ID: CTO 013

Date Collected: 9/22/2008 0:00

Lab Sample ID: G649-68-4A

Date Received: 9/23/2008

Lab Project ID: G649-68

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.428	1	9/29/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.391	1	9/29/2008	
Ethylbenzene	10.6	1.00	0.341	1	9/29/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.778	1	9/29/2008	
Toluene	BQL	1.00	0.404	1	9/29/2008	
m/p-Xylene	10.3	2.00	0.671	1	9/29/2008	
o-Xylene	0.499	2.00	0.302	1	9/29/2008	J

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.2	101

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: Trip Blank

Analyzed By: RSB

Client Project ID: CTO 013

Date Collected: 9/22/2008 0:00

Lab Sample ID: G649-68-5A

Date Received: 9/23/2008

Lab Project ID: G649-68

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.428	1	9/29/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.391	1	9/29/2008	
Ethylbenzene	BQL	1.00	0.341	1	9/29/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.778	1	9/29/2008	
Toluene	BQL	1.00	0.404	1	9/29/2008	
m/p-Xylene	BQL	2.00	0.671	1	9/29/2008	
o-Xylene	BQL	2.00	0.302	1	9/29/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.7	104

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Results for Volatiles

by GC 602

Client Sample ID: Method Blank

Analyzed By: RSB

Client Project ID:

Date Collected:

Lab Sample ID: VBLK5092908A

Date Received:

Lab Project ID:

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.428	1	9/29/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.391	1	9/29/2008	
Ethylbenzene	BQL	1.00	0.341	1	9/29/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.778	1	9/29/2008	
Toluene	BQL	1.00	0.404	1	9/29/2008	
m/p-Xylene	BQL	2.00	0.671	1	9/29/2008	
o-Xylene	BQL	2.00	0.302	1	9/29/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	41.0	103

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Summary Results for Laboratory Control Spike

Method: 602

Filename : 5092908/004f

Compound	SA ug/L	Result ug/L	Rec (%)	#	LCS Limits	
					Lower	Upper
Benzene	10.0	9.0	89.8		39	150
• Diisopropyl ether	10.0	8.9	89.0		30	170
Ethylbenzene	10.0	9.5	95.2		32	160
• MTBE	10.0	8.5	85.0		35	165
Toluene	10.0	9.0	89.8		46	148
• m,p-Xylene	20.0	18.7	93.7		D	239
• o-Xylene	10.0	9.2	92.4		36	164

Flags :

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

Summary Results for MS-MSD

Method: 602

Sample : 5092908/117b::5092908/017f

MS : 5092908/119b::5092908/019f

MSD : 5092908/120b::5092908/020f

Compound	SA	µg/L			REC(%)		REC Limits		RPD	
		Sam.	MS	MSD	MS	MSD	Lower	Upper	(30%)	#
Benzene	10.0	ND	8.7	7.8	87	78	39	150	10.5	
• Diisopropyl ether	10.0	ND	8.7	7.5	87	75	30	170	14.1	
Ethylbenzene	10.0	ND	10.1	8.4	101	84	32	160	18.9	
• MTBE	10.0	ND	8.3	7.5	83	75	35	165	9.6	
Toluene	10.0	ND	9.2	7.9	92	79	46	148	15.8	
• m,p-Xylene	20.0	ND	18.8	16.4	94	82	D	239	13.6	
• o-Xylene	10.0	ND	9.3	8.0	93	80	36	164	14.3	

Flags :

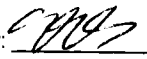
+ = out of QC limits.

• = lab generated limits.

D = Detected

ND = None Detected

SA= Spike Added

Reviewed By: 

Results for Volatiles

by GC 602

Client Sample ID: Method Blank

Analyzed By: RSB

Client Project ID:

Date Collected:

Lab Sample ID: VBLK3093008B

Date Received:

Lab Project ID:

Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	10/1/2008	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	10/1/2008	
Ethylbenzene	BQL	1.00	0.19	1	10/1/2008	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	10/1/2008	
Toluene	BQL	1.00	0.313	1	10/1/2008	
m/p-Xylene	BQL	2.00	0.481	1	10/1/2008	
o-Xylene	BQL	2.00	0.405	1	10/1/2008	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	39.3	98.3

Comments:

All values corrected for dilution.

BQL = Below quantitation limit.

Summary Results for Laboratory Control Spike

Method: 602

Filename : 3093008/026R

Compound	SA	Result	Rec	LCS Limits	
	ug/L	ug/L	(%) #	Lower	Upper
Benzene	10.0	10.2	101.7	39	160
Chlorobenzene	10.0	10.3	103.1	55	135
1,2-Dichlorobenzene	20.0	20.9	104.4	37	154
1,3-Dichlorobenzene	10.0	10.4	104.1	50	141
1,4-Dichlorobenzene	20.0	20.9	104.5	42	143
• Diisopropyl ether	10.0	10.2	102.1	30	170
Ethylbenzene	10.0	10.7	107.1	32	160
• MTBE	20.0	20.2	101.1	35	165
Toluene	10.0	10.2	102.4	46	148
• m,p-Xylene	20.0	21.3	106.4	D	239
• o-Xylene	20.0	20.7	103.7	36	164

Flags :

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

Summary Results for MS-MSD

Method: 602

Sample : 3093008/037F::3093008/037R

MS : 3093008/039F::3093008/039R

MSD : 3093008/040F::3093008/040R

Compound	SA	µg/L			REC(%)		REC Limits		RPD	
		Sam.	MS	MSD	MS	MSD	Lower	Upper	(30%)	#
Benzene	10.0	ND	10.3	7.3	103	73	39	150	33.7	+
Chlorobenzene	10.0	ND	10.5	7.5	105	75	55	135	33.4	+
1,2-Dichlorobenzene	20.0	ND	21.3	15.2	106	76	37	154	33.5	+
1,3-Dichlorobenzene	10.0	ND	10.6	7.5	106	75	50	141	34.2	+
1,4-Dichlorobenzene	20.0	ND	21.4	15.4	107	77	42	143	32.6	+
• Diisopropyl ether	10.0	ND	10.4	7.5	104	75	30	170	33.2	+
Ethylbenzene	10.0	ND	11.0	7.6	110	76	32	160	36.5	+
• MTBE	20.0	25.5	20.4	15.3	102	77	35	165	28.4	
Toluene	10.0	ND	10.5	7.5	105	75	46	148	33.7	+
• m,p-Xylene	20.0	ND	21.9	15.1	110	76	D	239	36.5	+
• o-Xylene	20.0	ND	21.2	15.0	106	75	36	164	34.1	+

Flags :

+ = out of QC limits.

• = lab generated limits.

D = Detected

ND = None Detected

SA= Spike Added

Reviewed By: 

Results for Semivolatiles by GCMS 625

Client Sample ID: USTAS4141-MW10

Client Project ID: CTO 013

Lab Sample ID: G649-68-1J

Lab Project ID: G649-68

Analyzed By: DES

Date Collected: 9/22/2008 10:50

Date Received: 9/23/2008

Date Extracted: 9/24/2009

Matrix: Water

Initial/Final Amt: 928 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	1.02	5.39	0.803	1	9/25/2008	J
Acenaphthylene	BQL	5.39	0.803	1	9/25/2008	
Anthracene	BQL	5.39	0.943	1	9/25/2008	
Benzo[a]anthracene	BQL	5.39	0.733	1	9/25/2008	
Benzo[a]pyrene	BQL	5.39	0.684	1	9/25/2008	
Benzo[b]fluoranthene	BQL	5.39	0.770	1	9/25/2008	
Benzo[g,h,i]perylene	BQL	5.39	0.663	1	9/25/2008	
Benzo[k]fluoranthene	BQL	5.39	0.593	1	9/25/2008	
Bis(2-chloroethoxy)methane	BQL	5.39	1.11	1	9/25/2008	
Bis(2-chloroethyl)ether	BQL	5.39	1.12	1	9/25/2008	
Bis(2-chloroisopropyl)ether	BQL	5.39	1.05	1	9/25/2008	
Bis(2-ethylhexyl)phthalate	63.5	5.39	0.442	1	9/25/2008	
4-bromophenyl phenyl ether	BQL	5.39	0.841	1	9/25/2008	
Butylbenzylphthalate	BQL	5.39	0.480	1	9/25/2008	
2-Chloronaphthalene	BQL	5.39	0.932	1	9/25/2008	
2-Chlorophenol	BQL	5.39	1.26	1	9/25/2008	
4-Chloro-3-methylphenol	BQL	5.39	0.857	1	9/25/2008	
4-Chlorophenyl phenyl ether	BQL	5.39	3.51	1	9/25/2008	
Chrysene	BQL	5.39	0.598	1	9/25/2008	
Dibenzo[a,h]anthracene	BQL	5.39	0.474	1	9/25/2008	
Di-n-Butylphthalate	BQL	5.39	0.889	1	9/25/2008	
3,3'-Dichlorobenzidine	BQL	10.8	1.31	1	9/25/2008	
2,4-Dichlorophenol	BQL	5.39	1.21	1	9/25/2008	
Diethylphthalate	1.72	5.39	0.797	1	9/25/2008	J
Dimethylphthalate	BQL	5.39	0.598	1	9/25/2008	
2,4-Dimethylphenol	BQL	5.39	1.75	1	9/25/2008	
Di-n-octylphthalate	BQL	5.39	0.625	1	9/25/2008	
4,6-Dinitro-2-methylphenol	BQL	26.9	0.593	1	9/25/2008	
2,4-Dinitrophenol	BQL	26.9	0.690	1	9/25/2008	
2,4-Dinitrotoluene	BQL	5.39	0.577	1	9/25/2008	
2,6-Dinitrotoluene	BQL	5.39	0.700	1	9/25/2008	
Diphenylamine *	BQL	5.39	0.614	1	9/25/2008	
Fluoranthene	BQL	5.39	0.760	1	9/25/2008	
Fluorene	BQL	5.39	0.781	1	9/25/2008	
Hexachlorobenzene	BQL	5.39	0.544	1	9/25/2008	
Hexachlorobutadiene	BQL	5.39	0.819	1	9/25/2008	
Hexachlorocyclopentadiene	BQL	10.8	10.8	1	9/25/2008	
Hexachloroethane	BQL	5.39	0.803	1	9/25/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.39	2.46	1	9/25/2008	
Isophorone	BQL	5.39	0.954	1	9/25/2008	
Naphthalene	BQL	5.39	0.981	1	9/25/2008	
Nitrobenzene	BQL	5.39	1.13	1	9/25/2008	
2-Nitrophenol	BQL	5.39	1.33	1	9/25/2008	
4-Nitrophenol	BQL	26.9	1.16	1	9/25/2008	
N-Nitrosodi-n-propylamine	BQL	5.39	1.62	1	9/25/2008	
Pentachlorophenol	BQL	26.9	1.52	1	9/25/2008	
Phenanthrene	BQL	5.39	0.480	1	9/25/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-MW10
 Client Project ID: CTO 013
 Lab Sample ID: G649-68-1J
 Lab Project ID: G649-68

Analyzed By: DES
 Date Collected: 9/22/2008 10:50
 Date Received: 9/23/2008
 Date Extracted: 9/24/2009
 Matrix: Water

Initial/Final Amt: 928 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.39	1.14	1	9/25/2008	
Pyrene	BQL	5.39	2.23	1	9/25/2008	
1,2,4-Trichlorobenzene	BQL	5.39	0.776	1	9/25/2008	
2,4,6-Trichlorophenol	BQL	5.39	0.997	1	9/25/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.9	89		
2-Fluorophenol		10	8.2	82		
Nitrobenzene-d5		10	9.1	91		
Phenol-d6		10	9.2	92		
2,4,6-Tribromophenol		10	12.3	123		
4-Terphenyl-d14		10	7.6	76		

Comments:

Flags:

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

Reviewed By: 

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTAS4141-MW10
 Client Project ID: CTO 013
 Lab Sample ID: G649-68-1J
 Lab Project ID: G649-68
 Sample Wt/Vol: 982 ML
 Dilution: 1

Analyzed By: DES
 Date Collected: 9/22/2008 10:50
 Date Received: 9/23/2008
 Date Extracted: 9/24/2008
 Date Analyzed: 9/25/2008
 Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Aromatic, Unknown	4.18			25.6
2	Ethanone, 1-(2,5-dimethylphenyl)-	4.59	002142-73-6	90	22
3	Benzene, 1,3-diethyl-	4.23	000141-93-5	95	18.1
4	Benzene, 1,2-diethyl-	4.31	000135-01-3	98	14.4
5	2,3-Dihydro-1-methylindene	4.96	027133-93-3	95	14.1
6	Unknown	5.66			12.4
7	Naphthalene, 1,2,3,4-tetrahydro-6-methyl-	5.89	001680-51-9	96	12.2
8	Alkane, Unknown	4.87			10.8
9	Naphthalene, decahydro-	4.37	000091-17-8	95	10.4
10	1H-Indene, 2,3-dihydro-1,6-dimethyl-	5.26	017059-48-2	91	7.72

Comment:

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

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

Reviewed by: 

Results for Semivolatiles by GCMS 625

Client Sample ID: USTAS4141-MW16
 Client Project ID: CTO 013
 Lab Sample ID: G649-68-2H
 Lab Project ID: G649-68

Analyzed By: DES
 Date Collected: 9/22/2008 9:50
 Date Received: 9/23/2008
 Date Extracted: 9/24/2009
 Matrix: Water

Initial/Final Amt: 885 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	1.41	5.65	0.842	1	9/26/2008	J
Acenaphthylene	BQL	5.65	0.842	1	9/26/2008	
Anthracene	BQL	5.65	0.989	1	9/26/2008	
Benzo[a]anthracene	BQL	5.65	0.768	1	9/26/2008	
Benzo[a]pyrene	BQL	5.65	0.718	1	9/26/2008	
Benzo[b]fluoranthene	BQL	5.65	0.808	1	9/26/2008	
Benzo[g,h,i]perylene	BQL	5.65	0.695	1	9/26/2008	
Benzo[k]fluoranthene	BQL	5.65	0.621	1	9/26/2008	
Bis(2-chloroethoxy)methane	BQL	5.65	1.16	1	9/26/2008	
Bis(2-chloroethyl)ether	BQL	5.65	1.18	1	9/26/2008	
Bis(2-chloroisopropyl)ether	BQL	5.65	1.10	1	9/26/2008	
Bis(2-ethylhexyl)phthalate	0.508	5.65	0.463	1	9/26/2008	J
4-bromophenyl phenyl ether	BQL	5.65	0.881	1	9/26/2008	
Butylbenzylphthalate	BQL	5.65	0.503	1	9/26/2008	
2-Chloronaphthalene	BQL	5.65	0.977	1	9/26/2008	
2-Chlorophenol	BQL	5.65	1.32	1	9/26/2008	
4-Chloro-3-methylphenol	BQL	5.65	0.898	1	9/26/2008	
4-Chlorophenyl phenyl ether	BQL	5.65	3.68	1	9/26/2008	
Chrysene	BQL	5.65	0.627	1	9/26/2008	
Dibenzo[a,h]anthracene	BQL	5.65	0.497	1	9/26/2008	
Di-n-Butylphthalate	BQL	5.65	0.932	1	9/26/2008	
3,3'-Dichlorobenzidine	BQL	11.3	1.38	1	9/26/2008	
2,4-Dichlorophenol	BQL	5.65	1.27	1	9/26/2008	
Diethylphthalate	1.81	5.65	0.836	1	9/26/2008	J
Dimethylphthalate	BQL	5.65	0.627	1	9/26/2008	
2,4-Dimethylphenol	BQL	5.65	1.83	1	9/26/2008	
Di-n-octylphthalate	BQL	5.65	0.655	1	9/26/2008	
4,6-Dinitro-2-methylphenol	BQL	28.2	0.621	1	9/26/2008	
2,4-Dinitrophenol	BQL	28.2	0.723	1	9/26/2008	
2,4-Dinitrotoluene	BQL	5.65	0.605	1	9/26/2008	
2,6-Dinitrotoluene	BQL	5.65	0.734	1	9/26/2008	
Diphenylamine *	BQL	5.65	0.644	1	9/26/2008	
Fluoranthene	BQL	5.65	0.797	1	9/26/2008	
Fluorene	1.13	5.65	0.819	1	9/26/2008	J
Hexachlorobenzene	BQL	5.65	0.571	1	9/26/2008	
Hexachlorobutadiene	BQL	5.65	0.859	1	9/26/2008	
Hexachlorocyclopentadiene	BQL	11.3	11.3	1	9/26/2008	
Hexachloroethane	BQL	5.65	0.842	1	9/26/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.65	2.58	1	9/26/2008	
Isophorone	BQL	5.65	1.00	1	9/26/2008	
Naphthalene	101	5.65	1.03	1	9/26/2008	
Nitrobenzene	BQL	5.65	1.19	1	9/26/2008	
2-Nitrophenol	BQL	5.65	1.39	1	9/26/2008	
4-Nitrophenol	BQL	28.2	1.22	1	9/26/2008	
N-Nitrosodi-n-propylamine	BQL	5.65	1.69	1	9/26/2008	
Pentachlorophenol	BQL	28.2	1.60	1	9/26/2008	
Phenanthrene	BQL	5.65	0.503	1	9/26/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-MW16
 Client Project ID: CTO 013
 Lab Sample ID: G649-68-2H
 Lab Project ID: G649-68

Analyzed By: DES
 Date Collected: 9/22/2008 9:50
 Date Received: 9/23/2008
 Date Extracted: 9/24/2009
 Matrix: Water

Initial/Final Amt: 885 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.65	1.20	1	9/26/2008	
Pyrene	BQL	5.65	2.33	1	9/26/2008	
1,2,4-Trichlorobenzene	BQL	5.65	0.814	1	9/26/2008	
2,4,6-Trichlorophenol	BQL	5.65	1.05	1	9/26/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.7	87		
2-Fluorophenol		10	8	80		
Nitrobenzene-d5		10	8.9	88		
Phenol-d6		10	8.9	89		
2,4,6-Tribromophenol		10	12.6	126		
4-Terphenyl-d14		10	8	80		

Comments:

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTAS4141-MW16
 Client Project ID: CTO 013
 Lab Sample ID: G649-68-2H
 Lab Project ID: G649-68
 Sample Wt/Vol: 885 ML
 Dilution: 1

Analyzed By: DES
 Date Collected: 9/22/2008 9:50
 Date Received: 9/23/2008
 Date Extracted: 9/24/2008
 Date Analyzed: 9/26/2008
 Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Benzene, 1,4-diethyl-	4.29	000105-05-5	96	66.8
2	Benzene, 1,2,4,5-tetramethyl-	4.96	000095-93-2	93	48.2
3	Unknown	7.43			41.3
4	Benzene, 2-ethyl-1,4-dimethyl-	4.43	001758-88-9	95	36.4
5	Benzene, 4-ethyl-1,2-dimethyl-	4.45	000934-80-5	91	34.4
6	Aromatic, Unknown	4.60			34.1
7	Naphthalene, 2,3-dimethyl-	6.68	000581-40-8	98	33.3
8	Benzene, 1-methyl-4-propyl-	4.36	001074-55-1	90	31.8
9	Aromatic, Unknown	4.17			30.2
10					

Comment:

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

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

Reviewed by: 

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-MW18
 Client Project ID: CTO 013
 Lab Sample ID: G649-68-3H
 Lab Project ID: G649-68

Analyzed By: DES
 Date Collected: 9/22/2008 11:30
 Date Received: 9/23/2008
 Date Extracted: 9/24/2009
 Matrix: Water

Initial/Final Amt: 963 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.19	0.774	1	9/26/2008	
Acenaphthylene	BQL	5.19	0.774	1	9/26/2008	
Anthracene	BQL	5.19	0.909	1	9/26/2008	
Benzo[a]anthracene	BQL	5.19	0.706	1	9/26/2008	
Benzo[a]pyrene	BQL	5.19	0.659	1	9/26/2008	
Benzo[b]fluoranthene	BQL	5.19	0.742	1	9/26/2008	
Benzo[g,h,i]perylene	BQL	5.19	0.639	1	9/26/2008	
Benzo[k]fluoranthene	BQL	5.19	0.571	1	9/26/2008	
Bis(2-chloroethoxy)methane	BQL	5.19	1.07	1	9/26/2008	
Bis(2-chloroethyl)ether	BQL	5.19	1.08	1	9/26/2008	
Bis(2-chloroisopropyl)ether	BQL	5.19	1.01	1	9/26/2008	
Bis(2-ethylhexyl)phthalate	0.571	5.19	0.426	1	9/26/2008	J
4-bromophenyl phenyl ether	BQL	5.19	0.810	1	9/26/2008	
Butylbenzylphthalate	BQL	5.19	0.462	1	9/26/2008	
2-Chloronaphthalene	BQL	5.19	0.898	1	9/26/2008	
2-Chlorophenol	BQL	5.19	1.21	1	9/26/2008	
4-Chloro-3-methylphenol	BQL	5.19	0.826	1	9/26/2008	
4-Chlorophenyl phenyl ether	BQL	5.19	3.38	1	9/26/2008	
Chrysene	BQL	5.19	0.576	1	9/26/2008	
Dibenzo[a,h]anthracene	BQL	5.19	0.457	1	9/26/2008	
Di-n-Butylphthalate	BQL	5.19	0.857	1	9/26/2008	
3,3'-Dichlorobenzidine	BQL	10.4	1.27	1	9/26/2008	
2,4-Dichlorophenol	BQL	5.19	1.16	1	9/26/2008	
Diethylphthalate	BQL	5.19	0.768	1	9/26/2008	
Dimethylphthalate	BQL	5.19	0.576	1	9/26/2008	
2,4-Dimethylphenol	BQL	5.19	1.68	1	9/26/2008	
Di-n-octylphthalate	BQL	5.19	0.602	1	9/26/2008	
4,6-Dinitro-2-methylphenol	BQL	26.0	0.571	1	9/26/2008	
2,4-Dinitrophenol	BQL	26.0	0.665	1	9/26/2008	
2,4-Dinitrotoluene	BQL	5.19	0.556	1	9/26/2008	
2,6-Dinitrotoluene	BQL	5.19	0.675	1	9/26/2008	
Diphenylamine *	BQL	5.19	0.592	1	9/26/2008	
Fluoranthene	BQL	5.19	0.732	1	9/26/2008	
Fluorene	BQL	5.19	0.753	1	9/26/2008	
Hexachlorobenzene	BQL	5.19	0.524	1	9/26/2008	
Hexachlorobutadiene	BQL	5.19	0.789	1	9/26/2008	
Hexachlorocyclopentadiene	BQL	10.4	10.4	1	9/26/2008	
Hexachloroethane	BQL	5.19	0.774	1	9/26/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.19	2.37	1	9/26/2008	
Isophorone	BQL	5.19	0.919	1	9/26/2008	
Naphthalene	BQL	5.19	0.945	1	9/26/2008	
Nitrobenzene	BQL	5.19	1.09	1	9/26/2008	
2-Nitrophenol	BQL	5.19	1.28	1	9/26/2008	
4-Nitrophenol	BQL	26.0	1.12	1	9/26/2008	
N-Nitrosodi-n-propylamine	BQL	5.19	1.56	1	9/26/2008	
Pentachlorophenol	BQL	26.0	1.47	1	9/26/2008	
Phenanthrene	BQL	5.19	0.462	1	9/26/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-MW18

Client Project ID: CTO 013

Lab Sample ID: G649-68-3H

Lab Project ID: G649-68

Analyzed By: DES

Date Collected: 9/22/2008 11:30

Date Received: 9/23/2008

Date Extracted: 9/24/2009

Matrix: Water

Initial/Final Amt: 963 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.19	1.10	1	9/26/2008	
Pyrene	BQL	5.19	2.14	1	9/26/2008	
1,2,4-Trichlorobenzene	BQL	5.19	0.748	1	9/26/2008	
2,4,6-Trichlorophenol	BQL	5.19	0.961	1	9/26/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.9	89		
2-Fluorophenol		10	8	80		
Nitrobenzene-d5		10	8.7	87		
Phenol-d6		10	8.9	89		
2,4,6-Tribromophenol		10	11.3	113		
4-Terphenyl-d14		10	7.9	79		

Comments:**Flags:**

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: USTAS4141-MW18
Client Project ID: CTO 013
Lab Sample ID: G649-68-3H
Lab Project ID: G649-68
Sample Wt/Vol: 963 ML
Dilution: 1

Analyzed By: DES
Date Collected: 9/22/2008 11:30
Date Received: 9/23/2008
Date Extracted: 9/24/2008
Date Analyzed: 9/26/2008
Matrix: Water

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

Comment:

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

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

Reviewed by: 

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-Duplicate
 Client Project ID: CTO 013
 Lab Sample ID: G649-68-4I
 Lab Project ID: G649-68

Analyzed By: DES
 Date Collected: 9/22/2008 0:00
 Date Received: 9/23/2008
 Date Extracted: 9/24/2009
 Matrix: Water

Initial/Final Amt: 891 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	1.29	5.61	0.836	1	9/26/2008	J
Acenaphthylene	BQL	5.61	0.836	1	9/26/2008	
Anthracene	BQL	5.61	0.982	1	9/26/2008	
Benzo[a]anthracene	BQL	5.61	0.763	1	9/26/2008	
Benzo[a]pyrene	BQL	5.61	0.713	1	9/26/2008	
Benzo[b]fluoranthene	BQL	5.61	0.802	1	9/26/2008	
Benzo[g,h,i]perylene	BQL	5.61	0.690	1	9/26/2008	
Benzo[k]fluoranthene	BQL	5.61	0.617	1	9/26/2008	
Bis(2-chloroethoxy)methane	BQL	5.61	1.16	1	9/26/2008	
Bis(2-chloroethyl)ether	BQL	5.61	1.17	1	9/26/2008	
Bis(2-chloroisopropyl)ether	BQL	5.61	1.09	1	9/26/2008	
Bis(2-ethylhexyl)phthalate	BQL	5.61	0.460	1	9/26/2008	
4-bromophenyl phenyl ether	BQL	5.61	0.875	1	9/26/2008	
Butylbenzylphthalate	BQL	5.61	0.499	1	9/26/2008	
2-Chloronaphthalene	BQL	5.61	0.971	1	9/26/2008	
2-Chlorophenol	BQL	5.61	1.31	1	9/26/2008	
4-Chloro-3-methylphenol	BQL	5.61	0.892	1	9/26/2008	
4-Chlorophenyl phenyl ether	BQL	5.61	3.65	1	9/26/2008	
Chrysene	BQL	5.61	0.623	1	9/26/2008	
Dibenzo[a,h]anthracene	BQL	5.61	0.494	1	9/26/2008	
Di-n-Butylphthalate	BQL	5.61	0.926	1	9/26/2008	
3,3'-Dichlorobenzidine	BQL	11.2	1.37	1	9/26/2008	
2,4-Dichlorophenol	BQL	5.61	1.26	1	9/26/2008	
Diethylphthalate	1.91	5.61	0.831	1	9/26/2008	J
Dimethylphthalate	BQL	5.61	0.623	1	9/26/2008	
2,4-Dimethylphenol	BQL	5.61	1.82	1	9/26/2008	
Di-n-octylphthalate	BQL	5.61	0.651	1	9/26/2008	
4,6-Dinitro-2-methylphenol	BQL	28.1	0.617	1	9/26/2008	
2,4-Dinitrophenol	BQL	28.1	0.718	1	9/26/2008	
2,4-Dinitrotoluene	BQL	5.61	0.600	1	9/26/2008	
2,6-Dinitrotoluene	BQL	5.61	0.730	1	9/26/2008	
Diphenylamine *	BQL	5.61	0.640	1	9/26/2008	
Fluoranthene	BQL	5.61	0.791	1	9/26/2008	
Fluorene	1.12	5.61	0.814	1	9/26/2008	J
Hexachlorobenzene	BQL	5.61	0.567	1	9/26/2008	
Hexachlorobutadiene	BQL	5.61	0.853	1	9/26/2008	
Hexachlorocyclopentadiene	BQL	11.2	11.2	1	9/26/2008	
Hexachloroethane	BQL	5.61	0.836	1	9/26/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.61	2.56	1	9/26/2008	
Isophorone	BQL	5.61	0.993	1	9/26/2008	
Naphthalene	118	5.61	1.02	1	9/26/2008	
Nitrobenzene	BQL	5.61	1.18	1	9/26/2008	
2-Nitrophenol	BQL	5.61	1.38	1	9/26/2008	
4-Nitrophenol	BQL	28.1	1.21	1	9/26/2008	
N-Nitrosodi-n-propylamine	BQL	5.61	1.68	1	9/26/2008	
Pentachlorophenol	BQL	28.1	1.59	1	9/26/2008	
Phenanthrene	BQL	5.61	0.499	1	9/26/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: USTAS4141-Duplicate
 Client Project ID: CTO 013
 Lab Sample ID: G649-68-4I
 Lab Project ID: G649-68

Analyzed By: DES
 Date Collected: 9/22/2008 0:00
 Date Received: 9/23/2008
 Date Extracted: 9/24/2009
 Matrix: Water

Initial/Final Amt: 891 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.61	1.19	1	9/26/2008	
Pyrene	BQL	5.61	2.32	1	9/26/2008	
1,2,4-Trichlorobenzene	BQL	5.61	0.808	1	9/26/2008	
2,4,6-Trichlorophenol	BQL	5.61	1.04	1	9/26/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	9.5	95		
2-Fluorophenol		10	8.6	86		
Nitrobenzene-d5		10	9.7	97		
Phenol-d6		10	9.5	95		
2,4,6-Tribromophenol		10	13.9	139		
4-Terphenyl-d14		10	8.6	86		

Comments:

Flags:

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

Reviewed By: 

Results of Library Search for Semivolatile Compounds

by GCMS

Client Sample ID: USTAS4141-Duplicate
 Client Project ID: CTO 013
 Lab Sample ID: G649-68-4I
 Lab Project ID: G649-68
 Sample Wt/Vol: 891 ML
 Dilution: 1

Analyzed By: DES
 Date Collected: 9/22/2008 0:00
 Date Received: 9/23/2008
 Date Extracted: 9/24/2008
 Date Analyzed: 9/26/2008
 Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result (ug/L)
1	Benzene, 1,4-diethyl-	4.29	000105-05-5	95	71.2
2	Benzene, 1,2,4,5-tetramethyl-	4.97	000095-93-2	93	53
3	Benzene, 2-ethyl-1,4-dimethyl-	4.43	001758-88-9	95	44.4
4	Benzene, 1-methyl-2-(1-methylethyl)-	4.45	000527-84-4	94	38.6
5	Benzene, 1-methyl-4-propyl-	4.36	001074-55-1	94	35.7
6	Naphthalene, 2,3-dimethyl-	6.67	000581-40-8	98	35.5
7	Unknown	4.59			34.4
8	Benzene, 1-methyl-2-propyl-	4.25	001074-17-5	90	32
9	Alkane, Unknown	4.18			31.2
10					

Comment:

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Reviewed by: 

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB12463
Lab Project ID:

Analyzed By: DES
Date Collected:
Date Received:
Date Extracted: 9/24/2009
Matrix: WATER

Initial/Final Amt: 1000 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.00	0.745	1	9/25/2008	
Acenaphthylene	BQL	5.00	0.745	1	9/25/2008	
Anthracene	BQL	5.00	0.875	1	9/25/2008	
Benzo[a]anthracene	BQL	5.00	0.680	1	9/25/2008	
Benzo[a]pyrene	BQL	5.00	0.635	1	9/25/2008	
Benzo[b]fluoranthene	BQL	5.00	0.715	1	9/25/2008	
Benzo[g,h,i]perylene	BQL	5.00	0.615	1	9/25/2008	
Benzo[k]fluoranthene	BQL	5.00	0.550	1	9/25/2008	
Bis(2-chloroethoxy)methane	BQL	5.00	1.03	1	9/25/2008	
Bis(2-chloroethyl)ether	BQL	5.00	1.04	1	9/25/2008	
Bis(2-chloroisopropyl)ether	BQL	5.00	0.975	1	9/25/2008	
Bis(2-ethylhexyl)phthalate	BQL	5.00	0.410	1	9/25/2008	
4-bromophenyl phenyl ether	BQL	5.00	0.780	1	9/25/2008	
Butylbenzylphthalate	BQL	5.00	0.445	1	9/25/2008	
2-Chloronaphthalene	BQL	5.00	0.865	1	9/25/2008	
2-Chlorophenol	BQL	5.00	1.17	1	9/25/2008	
4-Chloro-3-methylphenol	BQL	5.00	0.795	1	9/25/2008	
4-Chlorophenyl phenyl ether	BQL	5.00	3.25	1	9/25/2008	
Chrysene	BQL	5.00	0.555	1	9/25/2008	
Dibenzo[a,h]anthracene	BQL	5.00	0.440	1	9/25/2008	
Di-n-Butylphthalate	BQL	5.00	0.825	1	9/25/2008	
3,3'-Dichlorobenzidine	BQL	10.0	1.22	1	9/25/2008	
2,4-Dichlorophenol	BQL	5.00	1.12	1	9/25/2008	
Diethylphthalate	BQL	5.00	0.740	1	9/25/2008	
Dimethylphthalate	BQL	5.00	0.555	1	9/25/2008	
2,4-Dimethylphenol	BQL	5.00	1.62	1	9/25/2008	
Di-n-octylphthalate	BQL	5.00	0.580	1	9/25/2008	
4,6-Dinitro-2-methylphenol	BQL	25.0	0.550	1	9/25/2008	
2,4-Dinitrophenol	BQL	25.0	0.640	1	9/25/2008	
2,4-Dinitrotoluene	BQL	5.00	0.535	1	9/25/2008	
2,6-Dinitrotoluene	BQL	5.00	0.650	1	9/25/2008	
Diphenylamine *	BQL	5.00	0.570	1	9/25/2008	
Fluoranthene	BQL	5.00	0.705	1	9/25/2008	
Fluorene	BQL	5.00	0.725	1	9/25/2008	
Hexachlorobenzene	BQL	5.00	0.505	1	9/25/2008	
Hexachlorobutadiene	BQL	5.00	0.760	1	9/25/2008	
Hexachlorocyclopentadiene	BQL	10.0	10.0	1	9/25/2008	
Hexachloroethane	BQL	5.00	0.745	1	9/25/2008	
Indeno(1,2,3-c,d)pyrene	BQL	5.00	2.29	1	9/25/2008	
Isophorone	BQL	5.00	0.885	1	9/25/2008	
Naphthalene	BQL	5.00	0.910	1	9/25/2008	
Nitrobenzene	BQL	5.00	1.05	1	9/25/2008	
2-Nitrophenol	BQL	5.00	1.23	1	9/25/2008	
4-Nitrophenol	BQL	25.0	1.08	1	9/25/2008	
N-Nitrosodi-n-propylamine	BQL	5.00	1.50	1	9/25/2008	
Pentachlorophenol	BQL	25.0	1.41	1	9/25/2008	
Phenanthrene	BQL	5.00	0.445	1	9/25/2008	

**Results for Semivolatiles
by GCMS 625**

Client Sample ID: Method Blank

Client Project ID:

Lab Sample ID: PB12463

Lab Project ID:

Analyzed By: DES

Date Collected:

Date Received:

Date Extracted: 9/24/2009

Matrix: WATER

Initial/Final Amt: 1000 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.00	1.06	1	9/25/2008	
Pyrene	BQL	5.00	2.07	1	9/25/2008	
1,2,4-Trichlorobenzene	BQL	5.00	0.720	1	9/25/2008	
2,4,6-Trichlorophenol	BQL	5.00	0.925	1	9/25/2008	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.6	86		
2-Fluorophenol		10	7.1	71		
Nitrobenzene-d5		10	8.1	81		
Phenol-d6		10	8.3	83		
2,4,6-Tribromophenol		10	8.5	85		
4-Terphenyl-d14		10	8.2	82		

Comments:**Flags:**

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

Results for 625 Laboratory Control Spike

Sample ID: LCS12463

Analyst: DES

Matrix: Water

Date Analyzed: 09/25/08 16:53

File: 0925610.D

Inst: MSD6

Compound	Spiked (µg/L)	Measured (µg/L)	Recovery (%)	Limits (%)	
				Lower	Upper
Acenaphthene	10	8.55	85.5	47.0	145
Acenaphthylene	10	8.28	82.8	33.0	145
Anthracene	10	7.98	79.8	27.0	133
Benzo[a]anthracene	10	9.00	90.0	33.0	143
Benzo[a]pyrene	10	9.01	90.1	17.0	163
Benzo[b]fluoranthene	10	9.95	99.5	24.0	159
Benzo[g,h,i]perylene	10	7.98	79.8	D	219
Benzo[k]fluoranthene	10	8.73	87.3	11.0	162
Bis(2-chloroethoxy)methane	10	7.86	78.6	33.0	184
Bis(2-chloroethyl)ether	10	7.43	74.3	12.0	158
Bis(2-chloroisopropyl)ether	10	7.51	75.1	36.0	166
Bis(2-ethylhexyl)phthalate	10	8.37	83.7	8.0	158
4-bromophenyl phenyl ether	10	8.19	81.9	53.0	127
Butylbenzylphthalate	10	8.48	84.8	D	152
2-Chloronaphthalene	10	6.58	65.8	60.0	118
2-Chlorophenol	10	7.59	75.9	23.0	134
4-Chloro-3-methylphenol	10	8.69	86.9	22.0	147
4-Chlorophenyl phenyl ether	10	8.84	88.4	25.0	158
Chrysene	10	8.22	82.2	17.0	168
Dibenzo[a,h]anthracene	10	8.34	83.4	D	227
Di-n-Butylphthalate	10	8.28	82.8	1.0	118
3,3'-Dichlorobenzidine	10	6.85	68.5	D	262
2,4-Dichlorophenol	10	8.04	80.4	39.0	135
Diethylphthalate	10	8.71	87.1	D	114
Dimethylphthalate	10	8.49	84.9	D	112
2,4-Dimethylphenol	10	7.19	71.9	32.0	119
Di-n-octylphthalate	10	9.22	92.2	4.0	146
4,6-Dinitro-2-methylphenol	10	6.84	68.4	D	181
2,4-Dinitrophenol	10	6.54	65.4	D	191
2,4-Dinitrotoluene	10	8.77	87.7	39.0	139
2,6-Dinitrotoluene	10	8.71	87.1	50.0	158
Diphenylamine *	10	8.12	81.2	63.8	100
Fluoranthene	10	8.55	85.5	26.0	137
Fluorene	10	8.94	89.4	59.0	121
Hexachlorobenzene	10	7.72	77.2	D	152
Hexachlorobutadiene	10	5.37	53.7	24.0	116
Hexachlorocyclopentadiene	10	5.41	54.1	D	417
Hexachloroethane	10	4.14	41.4	40.0	113
Indeno(1,2,3-c,d)pyrene	10	8.72	87.2	D	171
Isophorone	10	7.27	72.7	21.0	196
Naphthalene	10	7.51	75.1	21.0	133

Results for 625 Laboratory Control Spike

Sample ID: LCS12463

Date Analyzed: 09/25/08 16:53

Analyst: DES

File: 0925610.D

Matrix: Water

Inst: MSD6

Compound	Spiked (µg/L)	Measured (µg/L)	Recovery (%)	Limits (%)	
				Lower	Upper
Nitrobenzene	10	7.75	77.5	35.0	180
2-Nitrophenol	10	8.00	80.0	29.0	182
4-Nitrophenol	10	7.67	76.7	D	132
N-Nitrosodi-n-propylamine	10	8.42	84.2	D	230
Pentachlorophenol	10	6.66	66.6	14.0	176
Phenanthrene	10	8.34	83.4	54.0	120
Phenol	10	7.57	75.7	5.0	112
Pyrene	10	8.48	84.8	52.0	115
1,2,4-Trichlorobenzene	10	5.98	59.8	44.0	142
2,4,6-Trichlorophenol	10	7.94	79.4	37.0	144

Surrogate Results	Spiked (µg/L)	Measured (µg/L)	Recovery (%)	Limits (%)	
Compound				Lower	Upper
2-Fluorobiphenyl	10	7.9	79	49.9	107
2-Fluorophenol	10	6.71	67.1	33.1	118
Nitrobenzene-d5	10	7.87	78.7	46.0	118
Phenol-d6	10	7.8	78	49.0	120
2,4,6-Tribromophenol	10	9.23	92.3	29.3	152
4-Terphenyl-d14	10	7.74	77.4	22.1	142

Flags: * = Out of limits.

NA = Not applicable

Reviewed By: 

Results for 625 Laboratory Control Spike Duplicate

Sample ID: LCSD12463

Date Analyzed: 09/25/08 17:38

Analyst: DES

File: 0925612.D

Matrix: Water

Inst: MSD6

Compound	Spiked (µg/L)	Measured (µg/L)	Recovery (%)	Limits (%)		RPD (%)	Limit (%)
				Lower	Upper	#	
Acenaphthene	10	9.42	94.2	47.0	145	9.7	30
Acenaphthylene	10	9.24	92.4	33.0	145	11.0	30
Anthracene	10	8.68	86.8	27.0	133	8.4	30
Benzo[a]anthracene	10	9.96	99.6	33.0	143	10.1	30
Benzo[a]pyrene	10	10.08	100.8	17.0	163	11.2	30
Benzo[b]fluoranthene	10	10.94	109.4	24.0	159	9.5	30
Benzo[g,h,i]perylene	10	8.95	89.5	D	219	11.5	30
Benzo[k]fluoranthene	10	9.79	97.9	11.0	162	11.4	30
Bis(2-chloroethoxy)methane	10	8.73	87.3	33.0	184	10.5	30
Bis(2-chloroethyl)ether	10	8.72	87.2	12.0	158	16.0	30
Bis(2-chloroisopropyl)ether	10	8.69	86.9	36.0	166	14.6	30
Bis(2-ethylhexyl)phthalate	10	9.56	95.6	8.0	158	13.3	30
4-bromophenyl phenyl ether	10	9.09	90.9	53.0	127	10.4	30
Butylbenzylphthalate	10	9.58	95.8	D	152	12.2	30
2-Chloronaphthalene	10	7.49	74.9	60.0	118	12.9	30
2-Chlorophenol	10	8.87	88.7	23.0	134	15.6	30
4-Chloro-3-methylphenol	10	9.63	96.3	22.0	147	10.3	30
4-Chlorophenyl phenyl ether	10	9.75	97.5	25.0	158	9.8	30
Chrysene	10	9.03	90.3	17.0	168	9.4	30
Dibenzo[a,h]anthracene	10	9.21	92.1	D	227	9.9	30
Di-n-Butylphthalate	10	9.07	90.7	1.0	118	9.1	30
3,3'-Dichlorobenzidine	10	8.69	86.9	D	262	23.7	30
2,4-Dichlorophenol	10	9.09	90.9	39.0	135	12.3	30
Diethylphthalate	10	9.64	96.4	D	114	10.1	30
Dimethylphthalate	10	9.41	94.1	D	112	10.3	30
2,4-Dimethylphenol	10	7.56	75.6	32.0	119	5.0	30
Di-n-octylphthalate	10	10.15	101.5	4.0	146	9.6	30
4,6-Dinitro-2-methylphenol	10	7.75	77.5	D	181	12.5	30
2,4-Dinitrophenol	10	7.34	73.4	D	191	11.5	30
2,4-Dinitrotoluene	10	9.58	95.8	39.0	139	8.8	30
2,6-Dinitrotoluene	10	9.74	97.4	50.0	158	11.2	30
Diphenylamine	10	8.93	89.3	63.8	100	9.5	30
Fluoranthene	10	9.24	92.4	26.0	137	7.8	30
Fluorene	10	10.04	100.4	59.0	121	11.6	30
Hexachlorobenzene	10	8.60	86.0	D	152	10.8	30
Hexachlorobutadiene	10	6.75	67.5	24.0	116	22.8	30
Hexachlorocyclopentadiene	10	6.06	60.6	D	417	11.3	30
Hexachloroethane	10	5.39	53.9	40.0	113	26.2	30
Indeno(1,2,3-c,d)pyrene	10	9.49	94.9	D	171	8.5	30
Isophorone	10	7.95	79.5	21.0	196	8.9	30
Naphthalene	10	8.61	86.1	21.0	133	13.6	30

Results for 625 Laboratory Control Spike Duplicate

Sample ID: LCSD12463

Date Analyzed: 09/25/08 17:38

Analyst: DES

File: 0925612.D

Matrix: Water

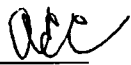
Inst: MSD6

Compound	Spiked (µg/L)	Measured (µg/L)	Recovery (%)	Limits (%)		RPD (%)	#	Limit (%)
				Lower	Upper			
Nitrobenzene	10	8.54	85.4	35.0	180	9.7		30
2-Nitrophenol	10	9.05	90.5	29.0	182	12.3		30
4-Nitrophenol	10	8.52	85.2	D	132	10.5		30
N-Nitrosodi-n-propylamine	10	9.61	96.1	D	230	13.2		30
Pentachlorophenol	10	7.92	79.2	14.0	176	17.3		30
Phenanthrene	10	9.03	90.3	54.0	120	7.9		30
Phenol	10	8.78	87.8	5.0	112	14.8		30
Pyrene	10	9.56	95.6	52.0	115	12.0		30
1,2,4-Trichlorobenzene	10	7.16	71.6	44.0	142	18.0		30
2,4,6-Trichlorophenol	10	9.00	90.0	37.0	144	12.5		30

Surrogate Results	Spiked (µg/L)	Measured (µg/L)	Recovery (%)	Limits (%)	
Compound				Lower	Upper
2-Fluorobiphenyl	10	8.63	86.3	49.9	107
2-Fluorophenol	10	7.95	79.5	33.1	118
Nitrobenzene-d5	10	8.43	84.3	46.0	118
Phenol-d6	10	8.77	87.7	49.0	120
2,4,6-Tribromophenol	10	10.05	100.5	29.3	152
4-Terphenyl-d14	10	8.32	83.2	22.1	142

Flags: * = Out of limits.

NA = Not applicable

Reviewed By: 

Results for Metals

Client Sample ID: USTAS4141-MW10

Analyzed By: PSW

Client Project ID: CTO 013

Date Collected: 9/22/2008 10:50

Lab Sample ID: G649-68-1

Date Received: 9/23/2008

Lab Project ID: G649-68

Matrix: WATER

ICP InitWt/Vol: 50 mL Final Vol: 50 mL

Hg InitWt/Vol: Final Vol:

Prep Batch: 12462

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Lead	1.45	5.00	0.617	25	UG/L	6020	9/25/2008	JB

Comments

BQL = Below Quantitation Limits

DF = Dilution Factor

J = Between MDL and RL

B= Amount in Prep Blank > MDL

Samples Prepared by 3030C

Reviewed By: 

METALS.XLS

Results for Metals

Client Sample ID: USTAS4141-MW16

Client Project ID: CTO 013

Lab Sample ID: G649-68-2

Lab Project ID: G649-68

ICP InitWt/Vol: 50 mL Final Vol: 50 mL

Hg InitWt/Vol: Final Vol:

Prep Batch: 12462

Analyzed By: PSW

Date Collected: 9/22/2008 09:50

Date Received: 9/23/2008

Matrix: WATER

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Lead	1.40	5.00	0.617	25	UG/L	6020	9/25/2008	JB

Comments

BQL = Below Quantitation Limits

DF = Dilution Factor

J = Between MDL and RL

B= Amount in Prep Blank > MDL

Samples Prepared by 3030C

Reviewed By:


METALS.XLS

Results for Metals

Client Sample ID: USTAS4141-MW18

Analyzed By: PSW

Client Project ID: CTO 013

Date Collected: 9/22/2008 11:30

Lab Sample ID: G649-68-3

Date Received: 9/23/2008

Lab Project ID: G649-68

Matrix: WATER

ICP InitWt/Vol: 50 mL Final Vol: 50 mL

Hg InitWt/Vol: Final Vol:

Prep Batch: 12462

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Lead	1.45	5.00	0.617	25	UG/L	6020	9/25/2008	JB

Comments

BQL = Below Quantitation Limits

DF = Dilution Factor

J = Between MDL and RL

B= Amount in Prep Blank > MDL

Samples Prepared by 3030C

Reviewed By: 

METALS.XLS

Results for Metals

Client Sample ID: USTAS4141-Duplicate

Client Project ID: CTO 013

Lab Sample ID: G649-68-4

Lab Project ID: G649-68

ICP InitWt/Vol: 50 mL Final Vol: 50 mL

Hg InitWt/Vol: Final Vol:

Prep Batch: 12462

Analyzed By: PSW

Date Collected: 9/22/2008 00:00

Date Received: 9/23/2008

Matrix: WATER

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Lead	1.42	5.00	0.617	25	UG/L	6020	9/25/2008	JB

Comments

BQL = Below Quantitation Limits

DF = Dilution Factor

J = Between MDL and RL

B= Amount in Prep Blank > MDL

Samples Prepared by 3030C

Reviewed By: 

METALS.XLS

Results for Metals

Client Sample ID: Lab Blank

Analyzed By: PSW

Client Project ID:

Date Collected:

Lab Sample ID: pb12462

Date Received:

Lab Project ID:

Matrix: WATER

ICP InitWt/Vol: 50 mL Final Vol: 50 mL

Hg InitWt/Vol: Final Vol:

Prep Batch: 12462

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Lead	1.23	5.00	0.617	25	UG/L	6020	9/25/2008	JB

Comments

BQL = Below Quantitation Limits

DF = Dilution Factor

J = Between MDL and RL

B= Amount in Prep Blank > MDL

Samples Prepared by 3030C

Reviewed By: 

METALS.XLS

METALS Results for LCS/LCD

ICP Batch: 12462

HG Batch:

Other:

Matrix: WATER

Units: MG/L

Analyte	TRUE Value	LCS	LCS %REC		LCD	LCD %REC		Limit		RPD		RPD Limit
								Lower	Upper			
Lead	0.400	0.362	90.5		0.368	92.0		80	120	1.64		20

Comments

*=Out of Limits

NA = Not applicable, due to sample concentration greater than three times spike concentration

Reviewed By: 

MS/MSD Results for METALS

Lab ID: G649-68-1
 MS Lab ID: G649-68-1
 MSD Lab ID: G649-68-1
 ICP Batch: 12462
 HG Batch:
 Other:

Analyzed By: PSW
 Matrix: Water
 Units: MG/L

Analyte	Sample Result	SA MS	MS Result	MS %REC	SA MSD	MSD Result	MSD %REC	Limit		RPD	RPD Limit
								Lower	Upper		
Lead	0.00145	0.500	0.579	116	0.500	0.557	111	75	125	3.87	20

Comments

*=Out of Limits

NA = Not applicable, due to sample concentration greater than three times spike concentration

Reviewed By: 



Locations Nationwide

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

www.us.sgs.com

093903

☐ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301 White - Retained by Lab
☐ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557 Yellow - Returned with Report
☐ 1270 Greenbrier Street **Charleston, WV 25311** Tel: (304) 346-0725 Fax: (304) 346-0761 Pink - Retained by Sampler



Shaun Whitworth
Osage of Virginia
2618 A Colley Ave
Norfolk, VA 23517

Report Number: G649-70

Client Project: CTO 013

Dear Shaun Whitworth,

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

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

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

Sincerely,
SGS Environmental Services, Inc.

Project Manager
Ashley Nifong

Date

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

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

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

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

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

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

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

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

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



Print Date: 10/6/2008

Client Sample ID: **USTAS4141-OBG06**
Client Project ID: CTO 013
Lab Sample ID: G649-70-1
Lab Project ID: G649-70

Collection Date: 25-Sep-08 13:20
Received Date: 26-Sep-08
Matrix: WATER

Results by 6020

<u>Parameter</u>	<u>Result</u>	<u>RL/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	5.10	5.00	UG/L	25	29-Sep-08 0:00

Batch Information

Analytical Batch: 092908b.txt
Analytical Method: 6020
Instrument: ICPMS
Analyst: PSW

Prep Batch: 12482
Prep Method: 3030C
Prep Date/Time: 26-Sep-08 10:00
Initial Prep Wt./Vol.: 50.00
Prep Extract Vol: 50



Print Date: 10/6/2008

Client Sample ID: **USTAS4141-MW02**
Client Project ID: CTO 013
Lab Sample ID: G649-70-2
Lab Project ID: G649-70

Collection Date: 25-Sep-08 14:10
Received Date: 26-Sep-08
Matrix: WATER

Results by 6020

<u>Parameter</u>	<u>Result</u>	<u>RL/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	BQL	5.00	UG/L	25	29-Sep-08 0:00

Batch Information

Analytical Batch: 092908b.txt
Analytical Method: 6020
Instrument: ICPMS
Analyst: PSW

Prep Batch: 12482
Prep Method: 3030C
Prep Date/Time: 26-Sep-08 10:00
Initial Prep Wt./Vol.: 50.00
Prep Extract Vol: 50



Print Date: 10/6/2008

Client Sample ID: **USTAS4141-MW07**
Client Project ID: CTO 013
Lab Sample ID: G649-70-3
Lab Project ID: G649-70

Collection Date: 25-Sep-08 14:30
Received Date: 26-Sep-08
Matrix: WATER

Results by 6020

<u>Parameter</u>	<u>Result</u>	<u>RL/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	BQL	5.00	UG/L	25	29-Sep-08 0:00

Batch Information

Analytical Batch: 092908b.txt
Analytical Method: 6020
Instrument: ICPMS
Analyst: PSW

Prep Batch: 12482
Prep Method: 3030C
Prep Date/Time: 26-Sep-08 10:00
Initial Prep Wt./Vol.: 50.00
Prep Extract Vol: 50



Print Date: 10/6/2008

Client Sample ID: **USTAS4141-MW14**
Client Project ID: CTO 013
Lab Sample ID: G649-70-4
Lab Project ID: G649-70

Collection Date: 25-Sep-08 13:44
Received Date: 26-Sep-08
Matrix: WATER

Results by 6020

<u>Parameter</u>	<u>Result</u>	<u>RL/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	BQL	5.00	UG/L	25	29-Sep-08 0:00

Batch Information

Analytical Batch: 092908b.txt
Analytical Method: 6020
Instrument: ICPMS
Analyst: PSW

Prep Batch: 12482
Prep Method: 3030C
Prep Date/Time: 26-Sep-08 10:00
Initial Prep Wt./Vol.: 50.00
Prep Extract Vol: 50



Print Date: 10/6/2008

Client Sample ID: **USTAS4141-MW15**
Client Project ID: CTO 013
Lab Sample ID: G649-70-5
Lab Project ID: G649-70

Collection Date: 25-Sep-08 12:30
Received Date: 26-Sep-08
Matrix: WATER

Results by 6020

<u>Parameter</u>	<u>Result</u>	<u>RL/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	BQL	5.00	UG/L	25	29-Sep-08 0:00

Batch Information

Analytical Batch: 092908b.txt
Analytical Method: 6020
Instrument: ICPMS
Analyst: PSW

Prep Batch: 12482
Prep Method: 3030C
Prep Date/Time: 26-Sep-08 10:00
Initial Prep Wt./Vol.: 50.00
Prep Extract Vol: 50



Print Date: 10/6/2008

Client Sample ID: **USTAS4141-MW19**
Client Project ID: CTO 013
Lab Sample ID: G649-70-6
Lab Project ID: G649-70

Collection Date: 25-Sep-08 12:58
Received Date: 26-Sep-08
Matrix: WATER

Results by 6020

<u>Parameter</u>	<u>Result</u>	<u>RL/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	BQL	5.00	UG/L	25	29-Sep-08 0:00

Batch Information

Analytical Batch: 092908b.txt
Analytical Method: 6020
Instrument: ICPMS
Analyst: PSW

Prep Batch: 12482
Prep Method: 3030C
Prep Date/Time: 26-Sep-08 10:00
Initial Prep Wt./Vol.: 50.00
Prep Extract Vol: 50



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1 CLIENT: OSAGE of VIRGINIA		SGS Reference:		PAGE 1 OF 1	
CONTACT: THOMAS STEWART		PHONE NO.: 757 274-4949		C649-70	
PROJECT: CTO 013		SITE/PWSID#: AS4411			
REPORTS TO:		E-MAIL: whitworth@osageva.com			
Brown Whitworth		FAX NO.: 757 440-0411			
INVOICE TO:		QUOTE #			
Mike Cree		P.O. NUMBER CTO 013			
LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	REMARKS
	USTAS4141-08606	9/25/08	1320	W	
	USTAS4141-MWD2	↑	1410	W	
	USTAS4141-MW07		1430	W	
	USTAS4141-MW14		1344	W	
	USTAS4141-MW15	↓	1230	W	
	USTAS4141-MW19	9/25/08	1258	W	
5 Collected/Relinquished By: (1) <i>[Signature]</i> Date: 9/25/08 Time: 1330					Shipping Carrier: FEDEX Shipping Ticker No: 3673 6074 Temperature (C): 4.2°C Chain of Custody Seal: (Circle) YES NO Special Deliverable Requirements: EDD Format Special Instructions: Email results to whitworth@osageva.com hbailey@catlinusa.com → tellerman@osageva.com
Relinquished By: (2) <i>[Signature]</i> Date: Time:					
Relinquished By: (3) Date: Time:					
Relinquished By: (4) Date: Time:					
Requested Turnaround Time: ☐ RUSH ☒ STD Date Needed: 9/25/08					