

# ***Brunswick Groundwater RFI III Report***

*January 28, 2014*

*Revised September 26, 2014*

*Revised February 25, 2015*

*Former Hercules Brunswick Facility*

*Antea Group Project No. WBS2014B2*

*Prepared for:*  
**Hercules Incorporated**  
Hercules Research Center  
500 Hercules Rd  
Wilmington, DE 19808

*Prepared by:*  
**Antea@Group**  
8008 Corporate Center Drive  
Suite 100  
Charlotte, North Carolina 28226  
+1 770.409.0454



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*2801 Cook Street*

*Brunswick, Glynn County, Georgia*

*Hazardous Waste Facility Permit No.: HW-052(D&S)*

*Antea Group Project No. WBS2014B2*

*Prepared for:*



**Hercules Incorporated**  
Hercules Research Center  
500 Hercules Rd  
Wilmington, DE 19808-1599

*Prepared by:*

**Antea®Group**  
8008 Corporate Center Drive  
Charlotte, NC 28226

Reviewed by:

A handwritten signature in black ink, appearing to read "Darin Hintz", written over a horizontal line.

Darin A. Hintz, P.G.

Project Manager

Reviewed by:

A handwritten signature in black ink, appearing to read "Scott Recker", written over a horizontal line.

Scott Recker, P.G.

Senior Consultant



# Table of Contents

EXECUTIVE SUMMARY .....	1
1.0 INTRODUCTION .....	5
1.1 SITE DESCRIPTION AND BACKGROUND.....	5
1.1.1 Facility Description .....	5
1.1.2 Operational History .....	6
1.1.3 Current Manufacturing Operations .....	6
1.2 Solid Waste Management Units and Areas of Concern .....	6
1.2.1 Former Toxaphene Surface Impoundments (SWMU #10).....	8
1.2.2 Former Drum Crushing Pad (SWMU #4), Non-Hazardous Waste Storage Pad (SWMU #30) .....	8
1.2.3 Former Toxaphene Production Area (SWMU #5) and Chemical Plant (SWMU #9).....	9
1.2.4 LNAPL Area (AOC 1).....	9
1.2.5 Tank Farm (SWMU #6) .....	10
2.0 SITE DESCRIPTION AND BACKGROUND.....	11
2.1 Regional Geology.....	12
2.2 Regional Hydrology .....	13
3.0 SITE GEOLOGY AND HYDROGEOLOGY.....	15
3.1 Site Geology .....	15
3.2 Site Hydrogeology .....	16
3.2.1 Aquifer Characteristics .....	16
3.2.2 Groundwater Occurrence and Movement.....	17
3.2.3 Horizontal Hydraulic Gradients .....	17
3.2.4 Vertical Hydraulic Gradients .....	18
3.2.5 Groundwater Flow .....	18
3.2.6 Local Aquifer Recharge.....	19
4.0 TIDAL INFLUENCE .....	20
4.1 Tidal Groundwater Fluctuations .....	20
4.2 Tidal Impact - Groundwater Velocity .....	21
4.3 Tidal Influence Indicators .....	21
4.4 Lag Time .....	22
4.5 Tidal Efficiency.....	22
4.6 Estimate of Groundwater Discharge.....	22
5.0 SITE INVESTIGATION METHODOLOGY .....	24
5.1 Groundwater Investigation and Sampling Plan.....	24
5.2 Borehole Clearance .....	24
5.3 Boring Advancement Methods .....	25
5.3.1 Sonic Drilling.....	25
5.3.2 Direct Push Technology.....	26
5.4 Groundwater Sampling - Low Flow Techniques.....	27
5.5 Well Installation .....	28
5.6 Groundwater Sampling .....	29



6.0	WATER QUALITY .....	31
6.1	Potential Sources of Investigated Constituents in Groundwater.....	31
6.1.1	Source Area 1 .....	31
6.1.2	Source Area 2 .....	32
6.1.3	Source Area 3 .....	32
6.2	NAPL Evaluation .....	32
6.3	Contaminant Characteristics .....	33
6.4	Groundwater Sampling .....	35
6.5	Current Groundwater Analytical Results .....	37
6.6	Analytical Results - Point of Compliance (POC) Wells.....	37
6.7	Analytical Results – Monitoring Wells.....	38
6.8	Groundwater Screening .....	39
7.0	CONSTITUENT MIGRATION .....	41
7.1	Trend Evaluation .....	41
7.1.1	Monitoring Wells Evaluated.....	42
7.1.2	Trend Evaluation .....	43
7.1.3	Regression Analysis .....	43
7.1.4	Trend Evaluation Summary .....	44
7.2	Conceptual Site Model Summary.....	45
8.0	POTENTIAL OFF-SITE CONSTITUENT MIGRATION .....	46
9.0	SUMMARY .....	48
10.0	REMARKS.....	51
11.0	REFERENCES .....	52
12.0	CERTIFICATIONS .....	54



## Tables

Table 1	Well Construction Details
Table 2	Depths and Elevations of Confining Unit
Table 3	Hydraulic Conductivity – Surficial Aquifer
Table 4	Confining Unit Properties
Table 5	Groundwater Elevation Data – Upper Unit Monitoring Wells
Table 6	Groundwater Elevation Data – Lower Unit Monitoring Wells
Table 7	Tidal Influence
Table 8	Groundwater Phase III RFI Sampling Program
Table 9	Constituents in NAPL Source Areas
Table 10	Groundwater Field Parameters
Table 11	Groundwater Analytical Results – VOCs
Table 12	Groundwater Analytical Results – SVOCs, Pesticides and Formaldehyde
Table 13	Groundwater Analytical Results – Metals
Table 14	Groundwater Screening Results – VOCs

## Figures

Figure 1	Site Location Map
Figure 2	Topographic Map
Figure 3	Potential Groundwater Contaminant Source Areas
Figure 4	AOC-1 – NAPL Map
Figure 5	General Conceptual Site Model
Figure 6	Monitoring Well Location Map
Figure 7	Structure Map – Top of Confining Unit
Figure 8	Potentiometric Map – Surficial Aquifer – Shallow Zone of Upper Unit
Figure 9	Groundwater Elevation Map – Surficial Aquifer – Lower Zone of Upper Unit
Figure 10	Source Area Map
Figure 11	Chemicals of Concern – VOCs
Figure 12	Chemicals of Concern – SVOCs and Pesticides
Figure 13	Chemicals of Concern – Metals
Figure 14	Groundwater Screening Sample Location Map
Figure 15	Benzene Concentration Map
Figure 16	Total Chlorinated Methane Concentration Map
Figure 17	Total Xylenes Concentration Map
Figure 18	Toxaphene Concentration Map
Figure 19	Facility Production Wells
Figure 20	Water Supply Wells



## **Appendices**

Appendix A	Flood Plain Map
Appendix B	Well Construction Details and Boring Logs
Appendix C	Cross-Section Transects and Cross-Sections
Appendix D	Grain Size and Permeability Testing
Appendix E	Historic Potentiometric Maps
Appendix F	Groundwater Gradient Calculations
Appendix G	Tidal Influence Graphs
Appendix H	Core Photographs
Appendix I	Historic Analytical Results
Appendix J	Groundwater Sampling Records
Appendix K	Laboratory Analytical Reports
Appendix L	Trend Graphs and Mann Kendall Test Results
Appendix M	April 2012 and August 2012 GeoSyntec Surface Water Analytical Data



# **Brunswick Groundwater RFI III Report**

## **EXECUTIVE SUMMARY**

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A Phase III Groundwater Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) for the Former Hercules Incorporated (Hercules) facility in Brunswick, Georgia was conducted from 2010 to 2014, as part of the requirements of Hazardous Waste Facility Permit - Number HW-052 (D&S), updated on December 4, 2012 by Georgia Department of Natural Resources, Environmental Protection Division (EPD). This work was conducted in accordance with the Phase III Supplemental Groundwater RFI Work Plan dated August 2009 to address groundwater on a site wide basis and at the Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs). Field work conducted as part the Phase III RFI included the following:

- Groundwater screening was conducted in the spring of 2010 to determine the optimum locations for permanent monitoring well clusters.
- Initially, twenty-six (26) permanent groundwater monitoring wells were installed in the spring of 2010. An additional eighteen (18) permanent groundwater monitoring wells were installed in the spring of 2012.
- Non-Aqueous Phase Liquid (NAPL) was evaluated through samples collected in October 2009, April 2010, January 2012, and May 2012.
- Groundwater fluctuations were measured at key monitoring locations in the in 2010 and 2012 to evaluate tidal influences on site groundwater.
- Groundwater sampling of wells installed as part of the Phase III RFI and other previously conducted investigations was conducted in June of 2010 and June of 2012.
- Additional groundwater screening was conducted in the winter of 2013 to determine the optimum locations for permanent monitoring well clusters.
- Monitoring wells MW-55S, MW-55I, and MW-55D were installed on the far eastern edge of the Terry Creek site in December of 2013. Monitoring wells MW-11DD, MW-56D, and MW-57D were installed at on- and off-site locations in July of 2014.



- Off-site supply well sampling was conducted in March of 2014.

Subsequent to the completion of the Phase II RFI in 2008, Georgia EPD and Hercules agreed to conduct the supplemental RFI in order to delineate the groundwater at the remaining SWMUs and AOCs. The objective of the Groundwater RFI was to delineate nature and extent of releases from SWMUs/AOCs in accordance with Georgia EPD's policy and guidance. However, since many of the designated SWMUs are not well defined and, in some cases are not aligned with plant operations or operational history associated with known or suspected releases, Hercules and EPD have agreed on an approach which would view site soil and groundwater holistically instead of on a "SWMU by SWMU" basis. It was also agreed that the soil and groundwater investigations could proceed on independent investigation and corrective action paths.

The site is approximately 340 acres in size with approximately half of the acreage actively used for chemical manufacturing and support operations. The remaining acreage is primarily utilized as stump-wood storage and as a buffer zone. The Terry Creek Dredge Spoil/Hercules Outfall Channel National Priorities List (NPL) Equivalent site (Terry Creek site) and a tidal marsh are located to the east across Highway 17 from the site.

The geology of the site is underlain by the surficial aquifer and is characterized by sequences of sands, silts, clays, with tidal and fluvial depositional environments to an investigated depth of 185 feet (ft.). The surficial aquifer is underlain by dense phosphatic limestone or dolomite, and phosphatic silty clay, which forms the confining unit of up to 90 ft. thick between the surficial aquifer and the upper Brunswick aquifer. The surficial aquifer, characterized by silty sand and discontinuous clay lenses is monitored in both the upper and lower units. The upper unit of the surficial aquifer is further divided into shallow, intermediate, and deep zones. Groundwater flow in the surficial aquifer is generally from west to east, and the average groundwater velocity for the shallow zone of upper unit of the surficial aquifer is approximately 0.040 feet/day (15 feet/year) and approximately 0.019 feet/day (7 feet/year) for the deep zone of upper unit of the surficial aquifer.

Tidal influence was noted in close proximity to the outfall ditch and Dupree Creek but has been shown to have negligible influence on the water table throughout the majority of the site. Projections of the groundwater discharge zone from the lower unit of the surficial aquifer, based on tidal efficiencies, indicated that the discharge zone may be located approximately 1,200 ft. (or greater) east of the MW-39 well cluster.

Eleven Solid Waste Management Units (SWMUs) were identified at the facility in 1994, followed by the addition of 28 SWMUs in 2001 and a recently identified potential Area of Concern (AOCs). The following



SWMUs have been identified as potential source areas of groundwater impact with investigated constituents:

- Former Toxaphene Surface Impoundments (SWMU #10): the primary constituents include benzene, chlorobenzene, xylenes, chloroform, methylene chloride, ethylbenzene, and toluene.
- Xylene Storage Area, Former Drum Crushing Pad (SWMU #4), and (SWMU #30): primary constituents include petroleum volatile organic compounds (VOCs).
- Former Toxaphene Production Area (SWMU #5) and Chemical Plant (SWMU #9): primary VOCs include chloroform, methylene chloride and toluene.
- Light NAPL (LNAPL) Area (AOC-1): the primary constituents include benzene and chlorobenzene.
- Tank Farm (SWMU #6): the primary constituents include benzene and chlorobenzene.

Evaluation of Non-aqueous Phase Liquid (NAPL) at the site has been conducted at the site using monitoring wells and test pits in the past. Recently, an evaluation of the NAPL soil impact was performed during the Triad investigation of soils within AOC-1 at the site. Generally, the NAPL at the site is comprised of varying amounts of acetone, benzene, carbon tetrachloride, chlorobenzene, chloroform, methyl isobutyl ketone (MIBK), paracymene, toluene, and total xylenes. Constituents found in groundwater that have been shown to migrate within the upper unit of the surficial aquifer at the site include benzene, chlorobenzene, total xylenes, toluene, ethylbenzene, chloroform, methylene chloride, and paracymene. Of these compounds, benzene, xylenes, and total chlorinated methanes (carbon tetrachloride, chloroform, and methylene chloride) have developed well-defined plumes at the site extending to the Terry Creek site east of the facility. Of these compounds only benzene, chlorobenzene, and xylene have been shown to have migration potential that extends through the Terry Creek site. Toxaphene, alpha BHC, and gamma BHC (lindane) have also been detected sporadically in samples collected from monitoring wells during previous sampling events. It should be noted that as a result of the EPA Office of Inspector General's investigation of the Hercules 009 Landfill, and to address EPD's concerns, Hercules started quantitating toxaphene using the "Total Area Under the Curve" (TAUC) and "Technical Toxaphene" via SW-846 8081 analysis. In order to evaluate the relative stability of the groundwater plumes with respect these constituents, an overall trend analyses were conducted for several constituents, for different areas of the plume. The stability of the groundwater plume was evaluated by updating and revaluating the Mann Kendall statistical test for key monitoring wells at the site. The overall trend analyses were variable for different areas of the plume. Trends indicated that concentrations in the center of the plume were both increasing and stable. The easternmost portion of the plume showed primarily stable conditions. The northeast portion of the plume adjacent to Highway



17 (MW-26D) was stable to decreasing while the southeast portion of the plume showed increasing trends.

A commercial/industrial well survey conducted in 2001 by NewFields identified water supply wells and irrigation wells screened in the deeper Floridan Aquifer, 200 feet to 800 feet deep. There is a potential for shallow groundwater to discharge to the N Street ditch via infiltration into the existing storm water drainage system in the process areas. The N Street ditch discharges to Dupree Creek via the existing outfall at Highway 17 and the Terry Creek site. Existing control structures and absorbent booms within the N Street ditch and the downstream outfall have prevented direct discharge of impacted surface water to Dupree Creek.

The principle conclusions from the Phase III RFI are as follows:

- The three main constituents at the site that have been shown to have migration potential off-site include benzene, chlorobenzene, and xylenes. Other constituents that have migrated in the groundwater at the site and show a limited extent of migration potential include toluene, ethylbenzene, methylene chloride, chloroform, paracymene, and toxaphene. Toxaphene as quantitated as Total Area Under the Curve (TAUC) and technical toxaphene have been detected sporadically at the site and do not have a defined plume that can be contoured at the site.
- Source areas of VOCs have been identified in the area of the former toxaphene surface impoundments and the process areas. Sources areas include areas where NAPL is present (AOC-1) and where high concentrations of VOCs are present in the shallow and intermediate sands of the upper unit of the surficial aquifer. Trace concentrations of chlorobenzene and benzene detected in the intermediate sands along the eastern edge of the Terry Creek site, and a fairly consistent upward gradient measured at the MW-39 monitoring well cluster, indicate that upward migration of VOCs within the basal sands may be occurring in this area of the site.
- The NAPL data collected to date including NAPL occurrence in monitoring wells, piezometers, test pits, and the laser induced florescence (LIF) and Flute technologies used in the Triad investigation indicates that NAPL in the subsurface is primarily located within AOC-1.
- The horizontal and vertical delineation of constituents in the surficial aquifer onsite has been completed to the extent practical. The tidal marsh defines the eastern extent of the area investigated.



## **1.0 INTRODUCTION**

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Antea<sup>®</sup>Group (formerly Delta Consultants) is pleased to submit the third phase of a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) for the Former Hercules Incorporated (Hercules) facility in Brunswick, Georgia. This RFI is a requirement of Former Hercules' Hazardous Waste Facility Permit - Number HW-052 (D&S), which was re-issued on October 26, 2007 and updated on December 4, 2012 by Georgia Department of Natural Resources, Environmental Protection Division (EPD) 1. This RFI was conducted in accordance with the Phase III Supplemental Groundwater RFI Work Plan dated August 2009 to address groundwater at the remaining SWMUs and AOCs. This investigation follows the Site Investigation and Human Health/Ecological Risk Assessment processes as described in the Phase III RFI Work Plan. An interim corrective measures workplan was submitted to the EPD on August 22, 2014. The workplan was submitted in response to correspondence from the Georgia EPD, dated December 23, 2013, specifying that Hercules must develop and implement an Interim Measures Plan to perform corrective action beyond the property boundary, where necessary, to protect human health and the environment until such time that the comprehensive site-wide corrective action plan can be developed and approved. The interim corrective measures workplan is comprised of four tasks:

1. Additional field and laboratory data collection, testing, and evaluation prior to selection of potential remedies,
2. Bench and field pilot testing and data evaluation of selected remedies,
3. Design and implementation of selected remedial approach, and
4. Post implementation effectiveness evaluation.

The interim corrective measures workplan was approved on September 17, 2014. Execution of the workplan has already commenced and is moving towards the bench and field pilot testing phase.

## **1.1 SITE DESCRIPTION AND BACKGROUND**

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### **1.1.1 Facility Description**

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The site is located near U.S. Highway 17 north of the Torras Causeway in Brunswick, Georgia. A site location map is included as **Figure 1**. The site is located within the city limits of Brunswick, Glynn County, Georgia at Latitude 31° 09' 57" N and Longitude 81° 28' 15" W (**Figure 2**). The site is approximately 340 acres in size with approximately half of those acres actively used for chemical manufacturing and support operations. The remaining acreage is primarily utilized as stump-wood storage and as a buffer zone. Adjacent land to the north and west of the site consist of single and multi-



family residential properties. Commercial properties and a park are located to the south. The Terry Creek site and a tidal marsh are located to the east across Highway 17 from the site.

### **1.1.2 Operational History**

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Site operations for the manufacturing of wood rosins, turpentine and pine oils began in 1911. The facility was purchased by Hercules in 1920. Between 1948 and 1980, toxaphene was also produced in a processing area near the center of the facility. Other non-rosin products including carboxyl methyl cellulose (CMC), di-isopropyl benzene (DIB) and Kymene (wet-strength resin) were once produced at the site, but are no longer produced at the facility.

### **1.1.3 Current Manufacturing Operations**

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Wood rosin and terpene oils are produced primarily from a milling and extraction process of pine stumps that come from the Southeastern US. Following the extraction process, the spent wood chips and distillation residues are used to fuel wood-fired boilers on-site, which are equipped with water scrubbers to remove particulate emissions. The main products produced at the Brunswick plant are pale wood rosin, modified pale wood rosins (produced through disproportionation, hydrogenation and esterification processes) and polyterpenes. Products are used for a wide variety of end uses in the adhesives, printing, and building materials industries and as food additives. The facility also manufactures phosphate esters which are utilized in the manufacture of paint products within the chemical plant area. The Specialty Chemicals Plant built in 1980 currently houses non-rosin-based processes.

Stumps are transported to the facility by truck, stored on-site, then ground and treated with methyl isobutyl ketone (MIBK) to extract the rosin and oils from the wood. Dirt and debris are removed from stumps mechanically. The milling process consists of a series of two grinders that reduce the stumps into fine wood particles to prepare the wood for extraction. The current milling process was constructed in late 2002 which streamlined the previous milling operations. Subsequent separation of the extracted rosin into light and dark rosins utilizes two solvents, isooctanol and furfural. Prior to 1971, a variety of other solvents was used for extraction including benzene.

## **1.2 Solid Waste Management Units and Areas of Concern**

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A site conceptual model has been developed for the site and adjacent properties. Overall, the site conceptual model is based on surface or near surface releases of chemical compounds within the individual SWMUs and AOCs to the upper unit of the surficial aquifer. These chemical compounds, when entering the groundwater of the upper unit, behave differently due to differences in solubility,



attenuation coefficients, vapor pressure and density. Migration of these constituents were found to be controlled by the groundwater gradients (both vertical and horizontal) and their chemical characteristics. Generally, those chemical compounds with higher solubility (benzene and chlorinated VOCs) moved downward to the lower unit of the surficial aquifer and then laterally toward the estuary until the vertical gradient changes to upward. Trace to no concentrations of investigated constituents have been reported in the upper and intermediate zones of the upper unit of the surficial aquifer east of Highway 17 near Terry/Dupree Creek. Investigated constituents are volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, inorganic compounds, and miscellaneous compounds noted below as specified in the December 4, 2012 Hazardous Waste Facility Permit - Number HW-052 (D&S).

#### PERMIT INVESTIGATED CONSTITUENTS

##### **Volatile Organics**

Acetone	Benzene	2-Butanone	Chlorobenzene
Chloroform	Carbon Disulfide	Carbon Tetrachloride	1,2-Dichlorobenzene
1,4-Dichlorobenzene	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene
1,2-Dichloropropane	Ethyl Benzene	Methylene Chloride	Tetrachloroethene
Toluene	1,2,4-Trichlorobenzene	1,2,3-Trichlorobenzene	Vinyl Chloride
Xylenes			

##### **Semi-Volatile Organics**

Benzo(g,h,i)perylene	Dibenz(a,h)anthracene	3,4-Methylphenol	Naphthalene
Phenol	Indeno(1,2,3-cd)pyrene		

##### **Pesticides**

Alpha BHC	Gamma BHC (Lindane)	Toxaphene
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##### **Inorganics**

Arsenic	Barium	Chromium	Cobalt
Nickel	Selenium	Vanadium	Zinc

##### **Miscellaneous**

Formaldehyde

Additional investigated constituents include methyl isobutyl ketone (MIBK), paracymene, acetophenone and the pesticides heptachlor and delta-BHC, which have either been used at the facility in the past or have been detected in groundwater during previous sampling events.

Eleven Solid Waste Management Units (SWMUs) were identified at the facility in 1994, followed by the addition of 28 SWMUs in 2001 and a recently identified potential Area of Concern (AOC). However,



since many of the designated SWMUs are not well defined and, in some cases are not aligned with plant operations or operational history associated with known or suspected releases, Hercules and EPD have agreed on an approach which would view site soil and groundwater holistically instead of on a “SWMU by SWMU” basis. This newer approach to RCRA Corrective Action is consistent with EPA’s 1999 and 2001 RCRA Cleanup Reforms to promote faster, more focused and more flexible cleanups at RCRA sites (<http://www.epa.gov/epawaste/hazard/correctiveaction/reforms/index.htm>). This holistic approach has rendered the historical SWMU designations obsolete for considerations of corrective action. Discussion of SWMUs is limited to purposes associated with site characterization and identification of potential source areas of groundwater contamination. The locations of SWMUS that have been identified as potentials sources of groundwater contamination are discussed below and shown on **Figure 3**.

#### **1.2.1 Former Toxaphene Surface Impoundments (SWMU #10)**

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Five Impoundments, covering about eight acres on the north side of the facility, were used for the equalization and settling of wastewater from the toxaphene manufacturing process. These impoundments were used between 1971 and 1980 to contain neutralized process wastewater produced during the manufacture of toxaphene. In 1980, the production of toxaphene ceased. Hydrochloric acid in the wastewater was neutralized with limestone, producing a calcium chloride solution that was discharged into the impoundments. Sludge was settled in the impoundments, while the water was discharged to the facility outfall. Surface runoff from the toxaphene manufacturing area was directed to the impoundments. In 1984, all remaining sludge and contaminated soil in the impoundments were removed down to the groundwater table and the area was backfilled with clean soil. The unit was subsequently closed under interim status designation in the fall of 1984. In 1993, the samples of groundwater taken from the site showed evidence of contamination. Groundwater monitoring is currently performed semi-annually per the RCRA Permit and has been monitored semi-annually (twice per year) since the mid 1990’s.

#### **1.2.2 Former Drum Crushing Pad (SWMU #4), Non-Hazardous Waste Storage Pad (SWMU #30)**

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SWMU #4 is comprised of a former concrete pad next to the South Vinsol Warehouse and is used as a truck loading area and a scrap material accumulation area. Pallets of empty drums are also stored in this area awaiting return to a supplier for reuse. Empty waste drums in SWMU #4 are crushed and salvaged. A small hydraulic machine for crushing empty drums was located in this area. Soil next to the pad near the drum crusher was stained, apparently due to liquid leakage. This area was constructed and



operated as a drum crushing area during the 1980s. Observed constituent impact to the groundwater in SWMU #4 is below background concentrations. The SWMU #30 area, known as the Non-Hazardous Waste Storage Pad, consists of a raised and curbed concrete retention pad surrounded by a locked, chain-link fence. EPD required a corrective action plan for soils, which was completed in January 2010. The principal constituent in the groundwater at SWMU #30 is total xylenes.

### **1.2.3 Former Toxaphene Production Area (SWMU #5) and Chemical Plant (SWMU #9)**

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The Toxaphene Plant, SWMU #5, produced toxaphene from 1948 to 1980. The operating area of this facility was approximately 23,000 square feet. Camphene, produced in the constituent plant from alpha pinene, was reacted with chlorine in carbon tetrachloride in a stage-wise process until it reached 67-69% by weight chlorine to form toxaphene. Hydrogen chloride, a by-product of this operation, was absorbed in water and sold as hydrochloric acid. Wastewater containing weak hydrochloric acid was neutralized with limestone. The plant structure was dismantled in 1984, shortly after the plant shut down in December 1980. Soils within the plant were removed and disposed to allow for the facility to construct a process to produce Myrcene, a perfume ingredient in the 1990s. The Myrcene facility remains on the site, but is no longer in operation and was shut down in 2001. Based on toxaphene soil data collected in the RFI process, the SMWU #5 area was extended. EPD required a corrective action plan (CAP) for soils which was completed in January 2010. The principal groundwater constituents above background concentrations in SWMU #5 are toxaphene and chlorinated VOCs.

The Chemical Plant is an active manufacturing area located south of the former Toxaphene Production Plant (SWMU #5). This SWMU is approximately 90 feet (ft.) by 125-ft. in dimension. The Chemical Plant was formerly used to manufacture synthetic pine oil, synthetic solvenol, and camphene. Crude sulfate turpentine was distilled in the area next to the Chemical Plant. Additional secondary containment upgrades to the area have been installed since 1996. The Chemical Plant was modified in approximately 2007 to produce phosphate esters (Dextrol and Strodex). A new warehouse was constructed north of the Chemical Plant in 2012. Elevated concentrations above background concentrations of toxaphene and chlorinated VOCs, in addition to total xylenes, were detected in the groundwater of SWMU #9.

### **1.2.4 LNAPL Area (AOC-1)**

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Based on the results from test pits performed in October 2009, Hercules notified EPD of the LNAPL AOC. The Still House area is located southwest of the Chemical Plant (**Figure 4**). AOC-1 is considered to include the area of NAPL impact discussed in **Section 6.2**. The primary constituents associated with AOC-1 near the Still House in the groundwater include benzene, MIBK, toluene, total xylenes, and paracymene.



#### **1.2.5 Tank Farm (SWMU #6)**

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The Y Tank farm is used as a storage area for the majority of the facility's liquid products, intermediates, and raw materials. There are approximately 20 above ground tanks with capacities ranging from 25,000 to 500,000 gallons. Each tank is isolated by earthen or concrete secondary containment. The tank farm covers approximately 8.5 acres. This SWMU also includes the piping area south and southeast of the tank farm. Products stored here include turpentine; pine oil and solvenol; intermediate products including many distillation cuts; and solvents including MIBK and Soltrol 10 (petroleum distillate). Raw materials stored here include crude sulfate turpentine. Over 95% of the volume of organic liquids stored and handled at the facility is terpene-related compounds including turpentine, pine oil, and solvenol. The primary constituents, based on the May 2012 sampling results, in groundwater associated with SWMU #6 include: benzene, chlorobenzene, chloroform, paracymene, toluene, toxaphene, and xylenes.



## **2.0 SITE DESCRIPTION AND BACKGROUND**

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The following sections include descriptions of the following:

- Geographic setting of the area;
- Topography and surface drainage at the facility;
- The regional geology and hydrogeology of the site;
- Hydrogeologic factors that influence groundwater movement; and,
- The potential for constituent migration.

The City of Brunswick is located within Glynn County in the Coastal Plain Physiographic Province. The Coastal Plain Physiographic Province extends throughout Florida and northward into the Mid-Atlantic States. The site topography varies from nearly level to gently sloping with natural relief across the site of approximately 9 ft. The topographic high (16 ft. North American Vertical Datum [NAVD]) on the site is in the northwest area near the former carboxyl methyl cellulose (CMC) plant sloping to the southeast toward Dupree Creek towards the topographic low (7 ft.). Surface water generally drains through the plant's N Street Ditch east towards Dupree Creek, an intertidal saltwater creek. Several soil berms have been constructed on the north side of the site to reduce noise in residential areas.

Most of the site lies within the 100-year floodplain, with the exception of the far northwestern portion of the facility. A floodplain map is included in **Appendix A**. The flood zone is designated with a base flood zone of AE EL 11 ft. NAVD within the central portion of the site, where the tank farm and most of the process areas are located. Further eastward, including the Mill Plant area, the base flood designation is Zone AE EL 12 ft. NAVD. Zones designated AE are subject to inundation by the one-percent-annual-chance flood event. The easternmost area of the plant and across Highway 17 is designated as Zone AE EL 13 ft. NAVD. To the east of Warde Street within the marsh, the flood zone is designated as Zone VE EL 13 ft. NAVD. Zones designated VE are subject to inundation by the one-percent-annual-chance flood event with additional hazards due to storm-induced velocity wave action.

Surface drainage at the facility primarily flows into the N-Street ditch, a concrete-lined ditch that flows through the central and eastern portions of the site toward Highway 17. The western portions of the N-Street ditch are contained in stormwater culverts located along the south side of N-Street in the operations area of the facility. The stormwater culverts discharge to a square concrete basin which is used to separate trash and other floating product via a baffle. Stormwater discharging from the basin flows beneath the baffle, through a culvert into the open concrete-lined portion of the N-Street ditch.



The South ditch, which picks up non-contact cooling water from current plant operations, merges with the N-Street ditch and flows through a culvert underlying Highway 17 into an outfall ditch at the Terry Creek Site. Stormwater within the outfall ditch flows through a weir structure prior to discharging into Dupree Creek. Surface water within the south ditch and the N-Street ditch is tidally influenced.

## **2.1 Regional Geology**

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Glynn County lies in the Lower Coastal Plain geologic province. The strata in the Lower Coastal Plain geologic province is comprised of unconsolidated to semi-consolidated layers of sand and clay, and semi-consolidated to very dense layers of limestone and dolomite. The ages of these strata range from Late Cretaceous to Holocene and can reach a known maximum thickness of up to 5,500 ft. in some areas of the Georgia coast. The strata generally strike southwest-northeast and dip to the southeast (Clarke, et. al., 1990).

The upper 2,000 ft. of the Lower Coastal Plain sediments have been investigated extensively since the 1950's. Sediments that outcrop in the region are of Pliocene, Pleistocene, and Holocene age in ascending order. Since these sediments are often difficult to differentiate into separate geologic units, these are generally grouped together into a single unit known as the post-Miocene unit. The post-Miocene unit generally occurs as fluvial sand or residuum in the near surface, underlain by a series of sandy marine terrace deposits that are in turn underlain by marginal to shallow marine beds (Clarke, et. al., 1990). The post-Miocene unit reportedly extends to depths of 180 to 200 ft. below ground surface (bgs) in the region.

Pliocene sediments are generally comprised of coarse clastics, consisting of sands and gravels interbedded with coquina, sands with abundant shells, and lenticular beds of finer-grained materials (Clarke, et. al., 1990; Gregg and Zimmerman, 1974). The thickness of the Pliocene sediments has been reported to range from 40 ft. to 150 ft. in the Brunswick area (Clarke, et. al., 1990; Gregg and Zimmerman, 1974). The overlying Pleistocene and Holocene sediments are a combination of terrace, estuarial, lagoonal, fluvial, dunal, and backbarrier deposits composed of sands, clays, gravels, shells, and mud associated with shallow marine and near-shore depositional environments (Clarke, et. al., 1990; Gregg and Zimmerman, 1974; Wait, 1965).

Miocene sediments underlie the post-Miocene unit to depths exceeding 500 ft. in the Brunswick area. Three geologic units (A through C in descending order) within the Miocene that are bounded by unconformities are described in Clarke, et. al. (1990). The Miocene unit also contains sediments of the Hawthorn formation which is comprised of greenish gray, phosphatic sands, silts, and clays, phosphatic limestone beds, and silty calcareous beds (Clarke, et. al., 1990; Gregg and Zimmerman, 1974; Wait,



1965). Fuller's earth clay is also found in portions of the Hawthorn formation where it forms confining beds within portions of the Miocene unit (Wait, 1965). Clay and silt beds within the Miocene are typically considered confining beds for the Floridan aquifer. Basal carbonate beds reported within the Miocene unit are generally dolomitic, with quartz sands representative of a marine environment. Fine clastics (clay and silt) overlain by sands are often found above the basal dolomites, indicating regressive depositional environments with the Miocene, followed by transgressions (Clarke, et. al., 1990). Miocene sediments are often characterized by the relatively high phosphate content resulting from the remains of marine life, as indicated by gamma activity in geophysical logs (Clarke, et. al., 1990; Gregg and Zimmerman, 1974; Wait, 1965).

Underlying the Miocene unit are limestones of Oligocene and Eocene age. Oligocene and Eocene carbonate formations comprise the upper Floridan aquifer in Florida and southeast Georgia. Oligocene limestone beds consist of buff-colored, porous limestone characterized by the presence of foraminifera and an absence of particulate phosphate (Clarke, et. al., 1990). Underlying the Oligocene unit is the Ocala limestone of the Upper Eocene unit which is characterized as a fossiliferous, bryzoan-rich limestone with glauconite in the lower portion (Clarke, et. al., 1990).

## **2.2 Regional Hydrology**

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A total of five aquifers are used for public and industrial water supply in the Brunswick area. These are the surficial aquifer, the upper Brunswick aquifer, the lower Brunswick aquifer, the upper Floridan aquifer, and the lower Floridan aquifer in descending order (Clarke, et. al., 1990).

The surficial aquifer is comprised of post-Miocene sediments and upper Miocene sands ranging in thickness from 65 ft. to 230 ft. (Clarke, et. al., 1990). Clay layers/lenses within the aquifer range from five to 40 ft. in thickness, and where laterally extensive, create semi-confined or confined conditions in the deeper portions of the surficial aquifer (Clarke, et. al., 1990). The surficial aquifer is generally described as consisting of an upper and lower unit.

The surficial aquifer is underlain by dense phosphatic limestone or dolomite, and phosphatic silty clay, which forms the confining unit between the surficial aquifer and the upper Brunswick aquifer. The confining unit is estimated to be approximately 70 ft. to 90 ft. thick in the Brunswick area. The vertical hydraulic conductivity of the confining unit is reported to range from 5.3E-05 ft. per day to 1.3E-04 ft. per day (Clarke, et. al., 1990).

Permeable Miocene sediments comprise the upper and lower Brunswick aquifers, consisting predominantly of poorly sorted, fine to coarse phosphatic and dolomitic sands. The upper and lower



Brunswick aquifers are separated by a clay confining unit that is estimated to be approximately 50 ft. thick in the Brunswick area (Clarke, et. al., 1990).

The upper Floridan aquifer, which underlies the lower Brunswick aquifer, is highly prolific, with transmissivities exceeding 500,000 ft<sup>2</sup> per day. Reported well yields of 5,000 gallons per minute (gpm) to 10,000 gpm are common in Glynn County from this aquifer (Clarke, et. al., 1990). The top of the Floridan aquifer in the Brunswick area is approximately 500 ft. bgs. Clays and basal dolomites within the Miocene unit, and or Oligocene sediments (Lazaretto Creek Formation) form the confining unit between the lower Brunswick aquifer and the upper Floridan aquifer where present. A dense, dolomitic limestone forms the confining unit between the upper Floridan aquifer and the lower Floridan aquifer. Salt-water intrusion has been documented in the upper Floridan aquifer along the western portion of the Brunswick peninsula (Clarke, et. al., 1990), with chloride concentrations exceeding 2,000 milligrams per liter (mg/L) in some wells (Cherry and Clarke, 2008).



### 3.0 SITE GEOLOGY AND HYDROGEOLOGY

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#### 3.1 Site Geology

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A generalized conceptual site model that depicts the geology of the site in cross-section is included as **Figure 5**. During previous environmental assessments of the site, a total of 114 monitoring wells (**Figure 6**) and 36 piezometers have been installed at the facility. The investigative depth of the well installations ranged from about 13 ft. for wells installed within the shallow unit of the surficial aquifer to investigative depths of up to 130 ft. for wells screened in the lower unit of the surficial aquifer. Well construction details are shown on **Table 1** and the boring logs for the monitoring wells are included in **Appendix B**.

The geology of the site is characterized by sequences of sands, silts, clays, and cemented sediments to an investigated depth of 185 ft. A cross-section transect map and associated cross-sections illustrating the geology of the site are included in **Appendix C**. Surficial soils at the site consist of loose, mostly brown, fine to medium sands with typically minor amounts of silt that generally extend to an elevation of -5 ft. and -15 ft. mean sea level (msl). These sediments are consistent with tidal and fluvial depositional environments that allowed the deposition of the larger sand sediments while maintaining the suspension of the finer silts and clays. Beneath the surficial soils lie a series of gray, mostly clean sands representative of high energy dunal and beach deposits that are interrupted by thin layers of silts and clays that are representative of a near-shore environment. This sequence extends to an elevation of approximately -60 ft. msl in the eastern portion of the site and is thinner in the western portion of the site where it extends to a depth of approximately -30 ft. msl. This sequence is underlain by marginal to shallow marine beds. These beds consist of mostly gray very fine sands in the northwest that grade to medium to coarse sands in the southeast with varying amounts of gravel, silt, and clay dispersed throughout. Intervals containing shells are also dispersed throughout this sequence, but appear more prevalent in the northern portion of the site. This sequence is interspersed with discontinuous beds of fines that are more prevalent in the western portion of the site. A distinct interval of gravelly deposits is located primarily in the southeastern portion of the site that may represent a high energy, localized channel deposit. **Appendix D** includes the grain size analysis of select samples obtained during the RFI.

A laterally extensive bed of dry to moist clay and silt occurs throughout most of the site. The top of this bed is undulating and occurs at elevations between -66 ft. msl to -94 ft. msl and extends to known elevations between -76 ft. msl and -109 ft. msl (**Table 2**). A structure map showing the top of the



confining unit is included as **Figure 7**. Underlying this layer are olive green and gray fine sands with localized lenses of predominantly clayey and silty material.

## **3.2 Site Hydrogeology**

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### **3.2.1 Aquifer Characteristics**

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The groundwater monitoring zones for the upper unit of the surficial aquifer are the shallow, intermediate, and lower. These monitoring zones have monitoring well designations as shallow, intermediate, and lower, respectively. The shallow monitoring wells are typically screened from 10 feet to 20 feet below ground surface (bgs), the intermediate monitoring wells from 35 feet to 45 feet bgs and the deep monitoring wells from 70 feet to 90 feet bgs.

**Shallow Monitoring** - The upper unit of the surficial aquifer is undulating and generally extends to elevations of between -61 ft. msl to -97 ft. msl and is primarily unconfined with isolated areas under semi-confined conditions. Hydraulic conductivities estimated from single-well aquifer tests range from 0.8 ft. per day to 27 ft. per day (Antea Group, 2010; NewFields, 2001). The shallow zone of the surficial aquifer is characterized by an organic soil horizon (5 to 10 ft. thick) underlain by silty sands and clayey sands to depths up to 30 ft. The average hydraulic conductivity of these sands is approximately 5 ft. per day (**Table 3**). Fine to coarse sands with varying amounts of clay, shells and gravels exist within the central portions of the upper unit.

**Intermediate Monitoring** - The average hydraulic conductivity of the intermediate zone of the upper unit is approximately 27 ft. per day based on single-well permeability tests performed at monitoring wells MW-20I (screened interval 35 to 45 ft. bgs) and MW-11D (screened interval 38.5 to 55 ft. bgs).

**Semi-confining Unit** - Very dense, moist to dry silty sands or clayey sands, and thin discontinuous lenses of high plasticity clay dispersed throughout this semi-confining unit. This unit at varying depths may form localized semi-confining units that retard the downward migration of groundwater and/or contaminants in portions of the site.

**Lower Monitoring** - The lower zone of the upper unit exhibits an average hydraulic conductivity of approximately 4 ft. per day based on slug tests that were conducted in MW-36D (screened interval of 81 ft. to 91 ft. bgs) and UP-1D-R (screened interval of 85 ft. to 95 ft. bgs). Based on hydraulic conductivities estimated by tests performed in shallow, intermediate, and deep monitoring wells at the site, the



average hydraulic conductivity for the upper unit of the surficial aquifer is estimated to be approximately 6 ft. per day.

**Lower Confining Unit** - Underlying the upper unit of the surficial aquifer in the central and eastern portion of the site (including the Terry Creek site) is a confining silt/clay unit that ranges between 7 ft. and 23 ft. in thickness at locations throughout the site where it was encountered in borings. Olive green and gray fine sands with localized lenses of predominantly clayey and silty material comprise the lower unit of the surficial aquifer at the site. Based on the results of sampling collected with Shelby tubes collected during Sonic drilling activities, as measured in laboratory permeability testing the hydraulic conductivities of the confining unit range from 9.19 E-06 centimeters per second (cm/s) or 2.6E-02 ft. per day at MW-43D to 9.51 E-07 cm/s or 2.7E-03 ft. per day at MW-49D. The hydraulic properties of the confining unit are summarized on **Table 4** and the analytical reports are included in **Appendix D**.

### **3.2.2 Groundwater Occurrence and Movement**

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Within the upper surficial aquifer, groundwater occurs at depths ranging from a few feet below ground surface (bgs) in the eastern portion of the site to depths of up to 14 ft. bgs in the western portion of the site. Groundwater elevations generally range from 3 ft. msl in the eastern portion of the facility to up to 11 ft. msl in the western portion of the property. Recent groundwater elevation data from the June 2014 monitoring recorded within monitoring wells screened in the upper unit of the surficial aquifer are included in **Table 5**. Groundwater elevation data from monitoring wells screened in the lower unit of the surficial aquifer are included in **Table 6**.

### **3.2.3 Horizontal Hydraulic Gradients**

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Groundwater elevation maps developed from data collected in June 2014 from within the shallow and lower zones of the upper unit of the surficial aquifer are included as **Figure 8** and **Figure 9**, respectively. Groundwater flow within the upper unit of the surficial aquifer is generally towards the east which correlates with the historical groundwater flow direction. Groundwater elevation maps from previous groundwater sampling events are included in **Appendix E**. The groundwater horizontal gradients calculated from groundwater elevation data obtained in June 2014 (**Appendix F**) for the deep zone of the upper unit of the surficial aquifer is 0.0008 ft./ft. (based on groundwater elevations measured in deep monitoring wells MW-19D and MW-20D) and 0.0016 ft./ft. for the shallow zone of the upper unit



of the surficial aquifer (based on groundwater elevations measured in shallow monitoring wells MW-19S and MW-20S).

### **3.2.4 Vertical Hydraulic Gradients**

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Vertical hydraulic gradients calculated from groundwater elevations measured in monitoring wells screened in the shallow, intermediate, and lower portions of the upper surficial aquifer generally exhibit a vertical downward gradient throughout the majority of the site. Upward vertical gradients consistently occur along Highway 17 and towards Terry Creek and the marsh. Calculations of the upper surficial unit and the lower surficial unit vertical gradients calculated from a sampling of site-wide gauging events conducted between 2009 and 2014 are included in **Appendix F**.

#### **Vertical Gradients within the Upper Unit**

Vertical gradients of the upper unit of the surficial aquifer have been demonstrated to range widely from the upward direction to the downward direction, depending on the location. The variability in the direction and magnitude of the gradients are indicators of the heterogeneity of the upper unit of the surficial aquifer. However, vertical gradients consistently demonstrate a trend in the upward direction along Highway 17 and eastward towards Terry Creek and the marsh.

#### **Vertical Gradients between Upper and Lower Units**

Vertical hydraulic gradients were calculated for the monitoring wells tapping the upper and lower units of the surficial aquifer. Vertical gradients calculated were in both the upward and downward direction. The vertical gradients ranged from -0.008 ft. /ft. in the upward direction at both the MW-9D and MW-33 well set and the MW-44 cluster located in the eastern and central portions of the site, to 0.119 ft. /ft. in the downward direction at the MW-37 well cluster located in the western portion of the site, which is both topographically and hydraulically up-gradient with respect to the other well sets where a vertical gradient was calculated. The calculations indicate that the vertical gradient between the upper and lower unit decreases across the site from west to east, which is consistent with historical data evaluated for this site.

### **3.2.5 Groundwater Flow**

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The linear groundwater flow velocity for the upper unit of the surficial aquifer was estimated from the modified Darcy equation:

$$V = \frac{K(i)}{n}$$



V = Average Linear Flow Velocity

K = Average Hydraulic Conductivity (feet/day)

i = Horizontal hydraulic gradient:  $(h_1 - h_2 / L) = \text{feet/foot}$

n = Estimated Effective Porosity ( $0.25 \text{ cm}^3_{\text{void}}/\text{cm}^3_{\text{soil}}$  or 25%)

Based on previously mentioned horizontal hydraulic gradients of 0.0008 ft./ft. in the deep zone of the upper unit of the surficial aquifer, 0.0016 ft./ft. of the shallow zone of the upper unit of the surficial aquifer, and an average hydraulic conductivity of 6 ft. per day for the surficial aquifer, the groundwater flow velocity for the upper unit of the surficial aquifer at the site is estimated to range from 0.019 ft. per day to 0.040 ft. per day. Groundwater flow calculations are included in **Appendix F**.

Assuming an average thickness for the upper unit of the surficial aquifer of 85 ft., a Darcy velocity ( $v = ki$ ) of 0.019 ft. per day (7 ft. per year) to 0.040 ft. per day (15 ft. per year), and a site width of approximately 2,400 ft., groundwater flow through the site is estimated to be approximately 3,800 to 8,100 cubic ft. per day, or approximately 28,000 to 61,000 gallons per day.

### **3.2.6 Local Aquifer Recharge**

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According to the Georgia Automated Environmental Monitoring Network weather station located at the Coastal Georgia Community College in Brunswick, Georgia, the average annual precipitation in the Brunswick area for the years 2000 through 2009 is 44 inches per year. The rain gauge station is located within one mile of the site. Recharge estimates are reported to be approximately 12 to 16 percent of precipitation for south Georgia (McLemore 1990). Based on reported recharge estimates and an average precipitation of 44 inches per year, approximately five to seven inches of precipitation recharges the aquifer annually. This results in an estimated recharge rate of 240,000 gallons per day per square mile (gpd/mi<sup>2</sup>) to 330,000 gpd/mi<sup>2</sup>, or approximately 375 gpd/acre to 520 gpd/acre.

Infiltration of precipitation will vary throughout the site depending on the location of paved surfaces, building footprint areas, and unpaved areas where infiltration is unimpeded. Higher infiltration rates occur in unpaved areas in the northwestern portion of the site and in the tank farm area, where rainfall collects within concrete and earthen retaining walls and infiltrates into the earthen base of the tank farm. The remaining water not infiltrating into the ground is lost to overland flow to streams, evapotranspiration through plants or evaporation. Winter rainfall occurs at lower rates allowing for greater infiltration with respect to high rates of rainfall during summer storms. As a result, water level highs generally occur in early spring and water levels are generally lower in the fall.



## 4.0 TIDAL INFLUENCE

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The tidal creeks and marshes located east of the site appear to influence groundwater flow in the eastern portions of the facility and the Terry Creek site. Pressure transducers were installed in select monitoring wells on three separate occasions in order to monitor fluctuations in groundwater elevations in the upper unit of the surficial aquifer. Four monitoring well clusters including MW-19, MW-20, MW-44, and MW-54 were selected for evaluation. The tidally influenced groundwater fluctuations were recorded as listed below:

- On February 10 and 11, 2010, groundwater fluctuations were initially measured at monitoring wells MW-19 S, MW-19I, MW-19D, MW-20 S, MW-20I, and MW-20D over a 24-hour period, at 10-minute intervals.
- From July 21 through 28, 2010, groundwater fluctuations were measured at MW-44S, MW-44I, MW-44ID, MW-54S, and 54I at 30-minute intervals.
- From November 15 through November 21, 2012, groundwater fluctuations were measured in MW-20D and the MW-39 well cluster at one-minute intervals.

### 4.1 Tidal Groundwater Fluctuations

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Pressure transducers were installed in monitoring well clusters MW-19, MW-20, MW-39, MW-44, and MW-54 (**Figure 6**) in order to monitor groundwater fluctuations in response to tidal fluctuations. Graphs of all the recorded tidal fluctuations are included in **Appendix G**. Fluctuations potentially associated with tidal effects were observed in each of the monitoring well clusters measured, with the exception of MW-19. Groundwater elevations were initially measured at existing monitoring wells MW-19S, MW-19I, MW-19D, MW-20S, MW-20I, and MW-20D over a 24-hour period on February 10 and 11, 2010, at ten-minute intervals. Groundwater fluctuations were later measured at monitoring wells MW-44S, MW-44I, MW-44ID, MW-54S, and MW-54I at 30-minute intervals during the period July 21 through 28, 2010, after installation of the additional Phase III Groundwater RFI monitoring wells. From November 15 to November 21, 2012, additional groundwater elevation data were collected from MW-20D and the MW-39 well cluster at one-minute intervals to evaluate groundwater fluctuations and gradients along the tidal front beneath the Terry Creek site. As shown on the graphs included in **Appendix G**, the tidal influence within the shallow monitoring wells and piezometers at the Terry Creek site are significantly lower than those observed in intermediate and deep monitoring wells at the site, with little to no influence observed inland from surface water bodies. Tidal fluctuations evident at MW-39S, and



piezometers PZ-OD9 and PZ-OD10 were approximately 1.5 ft. adjacent to the outfall ditch and Dupree Creek, but dissipate inland from the water bodies. The average magnitude of fluctuations caused by tidal highs and lows in intermediate and deep monitoring wells ranged from 0.18 ft. in MW-44I to 2.14 ft. in MW-39I. Based on groundwater fluctuations measured in monitoring wells, it appears that tidal influence with respect to fluctuations in the groundwater elevations dissipates in the vicinity of MW-54 (Table 7).

#### **4.2 Tidal Impact - Groundwater Velocity**

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As stated **Section 3.2.5**, the groundwater velocity in the upper unit of the surficial aquifer on site is approximately 13 ft. per year. However, at the down gradient portion of the plume which includes the Terry Creek site the groundwater decreases due to tidal influences. Based on groundwater elevations measured in 2010, horizontal hydraulic gradients in the upper unit of the surficial aquifer within the tidally influenced portion of the site ranged from approximately 0.0009 ft./ft. during tidal highs to approximately 0.0014 ft./ft. during tidal lows. Based on an average hydraulic conductivity of 6 ft. per day for the upper unit and an estimated effective porosity of 25 percent, the average linear groundwater velocity was estimated to be approximately 0.022 ft. per day to 0.034 ft. per day, or approximately 8 to 12 ft. per year. Groundwater elevations at the MW-39 well cluster indicate that an upward vertical gradient exists at this location during low and rising tide, but converge during falling tide (i.e. no vertical gradient). MW-39 is the only well cluster where an upward gradient has been consistently measured. Beneath the Terry Creek site, the hydraulic gradient lessens, and even reverses for a short period during high tide, as evident in the tidal graphs for MW-20D and MW-39D. Tidal influences are minimal in upper unit of the surficial aquifer at an approximate 10 percent reduction in groundwater velocity.

In order to evaluate the effective hydraulic gradient for the site beneath Terry Creek, the average hydraulic gradient was calculated from groundwater elevation data collected from MW-20D and MW-39D during the November, 2012 period to obtain an estimated effective hydraulic gradient of 0.00037 ft./ft. Based on an average hydraulic conductivity value of 6 ft. per day for the upper unit of the surficial aquifer and an estimated effective porosity of 25 percent, the average linear groundwater velocity beneath the Terry Creek site decreases approximately 50 percent to approximately 3 ft. per year.

#### **4.3 Tidal Influence Indicators**

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Data from the transducers were charted against the Frederick River Bridge tidal prediction station, located approximately 3.9 miles east of the site, to determine lag times and tidal efficiency. Each set of



potentiometric data was compared with respect to the tidal predictions at nearby stations. The Frederick River Bridge station was found to most closely mimic the patterns in the potentiometric surface changes at the site.

#### **4.4 Lag Time**

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Lag time is a measure of elapsed time between surface water highs and lows, and potentiometric surface highs and lows (Gawne, 1997; Gilmore, et.al., 1992). Lag times could not be calculated for shallow monitoring wells MW-20S and MW-44S, as groundwater fluctuations did not correlate to tidal fluctuations. The lag time for monitoring well MW-39S was approximately 1.7 hours greater than lag times for MW-39I or MW-39D, which were 15 and 19 minutes, respectively, providing additional supporting data that the shallow water bearing zones within the upper unit are influenced differently than the intermediate and deep monitoring wells, which show much closer correlation. Lag times calculated for intermediate and deep monitoring wells were lowest at monitoring wells MW-39I and MW39D (closest to Dupree Creek), and increased to approximately 1.5 hours inland toward MW-44I and MW-44ID (Table 7).

#### **4.5 Tidal Efficiency**

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Tidal efficiency is the ratio of tidal range of highs and lows in groundwater to the tidal range in surface water. In general, the magnitude of the tidal efficiency decreases with increasing distance from the tidally influenced water body where the tidal efficiency should be approximately 100 percent (Gawne, 1997; Gilmore, et.al., 1992). Tidal efficiencies (**Table 7**) estimated at monitoring well locations were highest at MW-39I and MW-39D, which were approximately 26% to 28% of the surface water tide range. The tidal efficiencies decreased inland toward MW-44I and MW-44D which were approximately 3% of the surface water tide range. Tidal efficiencies further inland were not measurable and are expected to be close to 0%.

#### **4.6 Estimate of Groundwater Discharge**

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Since tidal efficiencies are exponentially proportional to distance (Gilmore, et.al., 1992), the distance to the point of 100% efficiency for the deep portion of the upper unit was estimated by graphing tidal efficiencies versus distance from MW-54, which is approximately the point of zero tidal influence at the site. This empirical method provides a projection for estimating a potential surface water discharge point for groundwater. Based on tidal efficiency projections, the discharge point is estimated to be



approximately 4,000 ft. from the point of zero tidal influence, or approximately 1,200 ft. east of the MW-39 well cluster. Since this is an exponential empirical relationship, the actual discharge point may be at a greater distance.

In summary, groundwater elevations and tidal fluctuations measured in shallow monitoring wells and piezometers indicate that the tidal influence of nearby surface water bodies on the shallow water table is approximately 1.5 ft. in close proximity to the outfall ditch and Dupree Creek, but have little influence on the water table throughout the majority of the site. Conversely, groundwater fluctuations in the deeper sands of the upper unit where constituents have migrated may be influenced by a discontinuity in the lower clay lens within the upper unit of the surficial aquifer observed below the Terry Creek site. Projections of the discharge zone based on tidal efficiencies indicate that the discontinuity may be located approximately 1,200 ft. (or greater) east of the MW-39 well cluster. The short-term reversal in the groundwater gradient during periods of high-tide and the associated reduction in the effective groundwater velocity beneath the Terry Creek site may decrease the potential for discharge of investigated constituents to the marsh east of the Terry Creek site.



## **5.0 SITE INVESTIGATION METHODOLOGY**

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The following sections describe the site investigative methodologies that were used during the implementation of the field activities during this Phase II RFI groundwater investigation. The site activities included groundwater sampling, groundwater screening, and installation of wells using sonic drilling technologies.

### **5.1 Groundwater Investigation and Sampling Plan**

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The Phase III Supplemental RFI groundwater investigation was intended to enhance the current site groundwater data, as needed, to: 1) assess whether releases of hazardous constituents from the SWMUs to groundwater have occurred, 2) assess whether these releases have resulted in groundwater constituent levels that exceed regulatory standards, and 3) ultimately develop appropriate risk management/remediation approaches. Where releases to groundwater were detected, the vertical and lateral extent was delineated to Practical Quantitation Limits (PQLs) and the rate of migration of constituents was determined. Consideration was given to the use of interim corrective measures during the groundwater investigation as appropriate. The groundwater investigation proceeded as follows:

1. For a SWMU or group of SWMUs, a conceptual model was developed regarding the characteristics of groundwater contaminant fate and transport and potential receptor exposure concentrations based on available information.
2. A sampling and analysis program was developed and implemented to delineate impacted groundwater.
3. Zones were identified requiring corrective measures and/or management, when an adverse impact for a potential receptor was identified.

### **5.2 Borehole Clearance**

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Before breaking the ground surface, all boring and/or excavation locations were cleared of all utilities within 25 ft. of the proposed location(s). The first procedure was to mark the proposed location with marking paint, pin flag, or stake. Once the location was marked a utility locate ticket was called in to “Georgia Utility Protection Center”, also known as “One Call” or 811.



A private utility locate service was employed to locate and mark all underground lines within 25 ft. radius of the boring location. This was accomplished using ground penetrating radar (GPR). In addition to GPR, air knifing was utilized to visually confirm the absence of underground utilities.

Air knifing is a non-intrusive method of soil removal which is vital in utility location and to the prevention of releases from unidentified product lines and other utilities. The preferred equipment for this operation is the Vac Master 4000®. This truck mounted unit utilizes high pressure air (200psi) and vacuum technology to remove soil from the subsurface. A 1.5-inch diameter metal rod, referred to as an air lance, is used to loosen the soil. As the subsurface soil is loosened by the air lance, a 4-inch diameter PVC pipe connected to a vacuum extracts the soil from the subsurface. All borings were cleared to a minimum of five feet bgs and ten feet bgs in process areas and visually inspected to confirm the absence of underground utilities.

### **5.3 Boring Advancement Methods**

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Direct push and sonic drilling were utilized as the drilling methods for this investigation. An explanation of the previously mentioned drilling methods is provided in the following sections.

#### **5.3.1 Sonic Drilling**

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A sonic drill is more precisely defined as a rotary-vibratory drill. It is capable of high drilling speeds as well as accomplishing tasks, such as continuous coring that cannot be carried out by any other equipment. The biggest difference is in the drill head, which is slightly larger than a standard rotary head. The head contains the mechanism necessary for rotary motion, as well as an oscillator, which causes a high frequency force to be superimposed on the drill string. The drill bit is physically vibrating up and down in addition to being pushed down and rotated. These three combined forces allow drilling to proceed rapidly through most geological formations including most types of rock.

In overburden, the vibratory action causes the surrounding soil particles to fluidize, thereby allowing effortless penetration. In rock, the drill bit causes fractures at the rock face, creating rock dust and small rock particles, which facilitates advancement of the drill bit. Compressed air, drill mud, or plain water can be utilized to remove the cuttings and speed up the operation further, depending on the application that the machine is used for. This is an important requirement for environmental drilling projects because there are little to no cuttings.

The oscillator is driven by a hydraulic motor and uses out-of-balance weights to generate high sinusoidal forces that are transmitted to the drill bit. An air spring is also incorporated in order to confine the alternating forces to the drill string. The frequency can be varied to suit operating conditions and is



generally between 50 and 120 hertz (cycles per second). As a comparison, ordinary household current in many countries alternates at 60 hertz (Hz). This frequency range falls within the lower range of sound vibrations that the human ear is capable of hearing. Thus the term “sonic drill” has been applied to this class of rotary-vibratory drilling machine. The sonic drill apparatus adds vibratory energy to the normal rotary motion. The drill operator can choose a sonic frequency that provides optimum penetration rate and if needed the best core recovery.

The method provides continuous core samples in a wide range of soil types, including soils with large particles that preclude sampling by many other techniques. The drill stem and sampler barrel were vibrated vertically at frequencies between about 50 Hz and 180 Hz such that the sampler barrel normally advances by slicing through the soil. Sampler barrels were provided in different sizes ranging from two-inch to 12-inch diameters. The cutting bit is located at the end of the barrel with tungsten carbide bullets. The sampler barrel is coupled with a “slough” barrel above it. This section was connected on the end of smaller diameter drill stems. An additional drill stem was connected to the drill head, prior to drilling through the next depth interval.

This hole was cased, with the casing being a larger diameter than the sampler barrel. The sampler barrel is generally kept less than 20 feet past the end of the casing. Otherwise, if the entire sampler barrel was positioned below the casing, a potential of caving soil (particularly large particles) could bind against the smaller diameter drill stem and lock the barrel in the ground. The driller continued drilling until the sampler barrel had advanced 10 feet to 20 feet below the casing, or until the barrel no longer advances with the maximum vibrator effort. The sampler barrel was then pulled from the hole with either a 10 feet or 20 feet long sample depending on tooling of the particular rig. Plastic tube bags were used to collect approximately a five-foot-long section of the sample core. The sampler can often cut through large soil particles (e.g., cobbles), with the resulting sample providing a valuable view of the soil stratigraphy that other drilling techniques cannot provide. Example photographs of cores retrieved during drilling are provided in **Appendix H**.

### **5.3.2 Direct Push Technology**

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Direct push technology sampling was used to delineate and characterize groundwater. Direct push technology is hydraulically-powered and uses both static force and percussion to advance sampling and logging tools into the subsurface. In the case of ground water screening, a push point screen/screen point sampler was utilized to obtain a water sample from a predetermined depth. A screen point sampler used was a 41-inch long, one-inch diameter, stainless steel screen, which was housed inside a carrier rod and sealed with a disposable metal tip.



Once the predetermined depth was reached the stainless steel screen was exposed to allow ground water to enter the screen. This was accomplished by the probe rods being pulled up approximately 4 ft., which causes the disposable metal tip to dislodge and the 41-inch long, stainless steel screen to be exposed. A groundwater sample was collected at this point using a peristaltic pump. After a sample was collected, all probe rods, including the push point screen, were removed from the ground and decontaminated.

#### **5.4 Groundwater Sampling - Low Flow Techniques**

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All groundwater sampling was performed in general accordance with EPA Region IV Science and Ecosystem Support Division (SESD) Field Branches Quality System and Technical Procedures (FBQSTP) "Groundwater Sampling". Two devices were used to collect groundwater samples. These included a peristaltic pump and a stainless steel submersible pump and Teflon<sup>®</sup> lined tubing.

Depth to groundwater was measured in each well using an electronic water-level indicator probe which was decontaminated between measurements. The measured depth was subtracted from the total depth of the well to determine the volume of groundwater to purge. The monitoring wells were purged in accordance with established methodologies for the site. New nitrile gloves were worn during sampling of each well to minimize the potential for cross-contamination during the sampling process. Field measurements of pH, electrical conductivity, dissolved oxygen, turbidity, oxidation-reduction potential and temperature were collected during sampling activities. Water quality meters were calibrated by field personnel each day of the sampling event. Groundwater samples were collected once purging was completed and field parameters stabilized.

Low flow/low volume purging was used at the site to minimize purge water volumes. For permanently installed wells, the depth of water and depth of the well was determined using a water level indicator or interface meter prior to purging. It is standard practice to mark the top of casing, providing a point of reference from which these measurements will be consistently made. Pump/tubing intakes were placed within the screened interval at the zone of sampling and flow rates did not exceed the recharge rate of the aquifer. Water level stabilization was achieved by monitoring the top of the water column with a water level indicator during the purging process. Caution was exercised during all sampling procedures to prevent cross-contamination of the wells. This is of particular concern when sampling analyses include trace organic compounds or metals. Water level indicators and interface meters were decontaminated between each well using Alconox<sup>®</sup> solution, followed by rinses with de-ionized water and analyte free water.



Shallow monitoring wells (generally less than 25 ft. from pump to groundwater surface) were purged and sampled using a peristaltic pump with ¼-inch diameter Teflon® tubing. Utilizing a peristaltic pump minimizes turbidity and preserves sample integrity. Groundwater samples submitted for analysis of volatile organic compounds (VOCs) were collected by pumping groundwater in to Teflon® tubing and then removing the tubing from the pump and monitoring well allowing groundwater to drain from the tubing in to sample vials. Groundwater samples analyzed for additional parameters were collected directly from the pump discharge tubing.

Deep monitoring wells were purged and sampled using a decontaminated, stainless-steel submersible pump with ¼-inch diameter Teflon® tubing. Pump placement was set at the midpoint of the screened interval and flow rate was adjusted to minimize the amount of drawdown in each well. Purged groundwater from monitoring wells was containerized in 55-gallon steel drums for proper disposal. New or dedicated Teflon® tubing was used for each sample location. Following sampling of each well, the Teflon® tubing was removed from the well, bagged, sealed, and clearly labeled with each well name for storage.

For all wells sampled, an adequate purge was normally achieved when three to five times the volume of all sampling equipment was removed. With respect to the ground water chemistry, an adequate purge was achieved when the pH, specific conductance, and temperature of groundwater stabilized, and turbidity either stabilized or was below 10 Nephelometric Turbidity Units (NTUs) (twice the Primary Drinking Water Standard of 5 NTUs).

## **5.5 Well Installation**

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The following monitoring wells were installed as part of the Phase III Groundwater RFI: MW-37S, MW-37I, MW-37D, MW-38S, MW-38I, MW-38D, MW-39S, MW-39I, MW-39D, MW-40S, MW-40I, MW-40D, MW-41I, MW-42S, MW-42I, MW-42D, MW-43S, MW-43I, MW-43D, MW-44S, MW-44I, MW-44ID, MW-44D, MW-45I, MW-46I, MW-48S, MW-48I, MW-48D, MW-49S, MW-49I, MW-49D, MW-50S, MW-50I, MW-50D, MW-51S, MW-51I, MW-51D, MW-52S, MW-52I, MW-52D, MW-53S, MW-54S, MW-54I, MW-54D, MW-55S, MW-55I, MW-55D, MW-11DD, MW-56D, and MW-57D. Monitoring wells MW-37S, MW-37I, MW-37D, MW-38S, MW-38I, MW-38D, MW-39S, MW-39I, MW-39D, MW-40S, MW-40I, MW-40D, MW-41I, MW-44S, MW-44I, MW-44ID, MW-44D, MW-45I, MW-46I, MW-48S, MW-48I, MW-48D, MW-53S, MW-54S, MW-54I, MW-54D were installed in Spring of 2010. Monitoring wells MW-42S, MW-42I, MW-42D, MW-43S, MW-43I, MW-43D, MW-49S, MW-49I, MW-49D, MW-50S, MW-50I, MW-50D, MW-51S, MW-51I, MW-51D, MW-52S, MW-52I, and MW-52D were installed in Spring of 2012. Monitoring wells MW-55S, MW-55I and MW-55D were installed in December of 2013. Monitoring wells MW-11DD,



MW-56D, and MW-57D were installed in July of 2014. Well construction details and Boring Logs are included in **Appendix B**.

## **5.6 Groundwater Sampling**

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Groundwater samples were collected as part of the RFI from select monitoring wells identified in the Phase III Groundwater RFI Work Plan (NewFields, 2009) Groundwater quality data was also collected during semi-annual groundwater sampling events conducted from December 2010 through June 2014.

**RFI Groundwater Sampling** – Groundwater samples were collected in June 2010 from monitoring wells MW-37S, MW-37I, MW-37D, MW-38S, MW-38I, MW-38D, MW-39S, MW-39I, MW-39D, MW-40S, MW-40I, MW-40D, MW-41I, MW-44S, MW-44I, MW-44ID, MW-44D, MW-45I, MW-46I, MW-48S, MW-48I, MW-48D, MW-53S, MW-54S, MW-54I, MW-54D. Groundwater samples were collected in June 2012 from monitoring wells MW-42S, MW-42I, MW-42D, MW-43S, MW-43I, MW-43D, MW-49S, MW-49I, MW-49D, MW-50S, MW-50I, MW-50D, MW-51S, MW-51I, MW-51D, MW-52S, MW-52I, and MW-52D. Groundwater samples were collected from monitoring wells MW-55S, MW-55I and MW-55D in December 2013. Groundwater samples were collected from monitoring wells MW-11DD, MW-56D, and MW-57D in July 2014. In each of the groundwater sampling events the wells were analyzed for parameters shown on **Table 8** which is in accordance with the Phase III Groundwater RFI Work Plan.

**Semi-Annual Groundwater Monitoring Events** – The most recent semi-annual sampling event was conducted in June 2014. Semi-annual groundwater samples were collected from monitoring wells as required by Condition IV.D. of RCRA Permit No. HW-052 (D&S), as amended through August 7, 2012 and became effective on December 4, 2012. Point of compliance (POC) and monitoring wells sampled during the June 2014 event included those listed under Condition IV.A. of the permit. Groundwater samples collected from the monitoring wells at the site during the June 2014 semi-annual sampling event were analyzed for parameters as required by Table 1 in Condition IV.B of the permit, amended through August 7, 2012. These parameters include:



Volatile Organic Compounds

- Acetone
- Benzene
- 2-Butanone
- Chlorobenzene
- Chloroform
- Carbon disulfide
- Carbon tetrachloride
- 1,2-Dichlorobenzene
- 1,4-Dichlorobenzene
- 1,1-Dichloroethane
- 1,1-Dichloroethene
- cis-1,2-Dichloroethene
- 1,2-Dichloropropane
- Ethylbenzene
- Methylene chloride
- Tetrachloroethene
- Toluene
- 1,2,4-Trichlorobenzene
- 1,2,3-Trichloropropane
- Vinyl chloride
- Xylenes

Semi-Volatile Organic Compounds, Pesticides, and Formaldehyde

- Phenol
- 3,4-Methylphenol
- Naphthalene
- Benzo(g,h,i)perylene
- Dibenzo(a,h)anthracene
- Indeno(1,2,3-cd)pyrene
- Toxaphene (technical)
- Chlorinated Camphenes (total area under the curve toxaphene)
- alpha-BHC
- gamma-BHC(Lindane)
- Formaldehyde

Inorganics

- Arsenic
- Barium
- Chromium
- Cobalt
- Nickel
- Selenium
- Vanadium
- Zinc

Groundwater samples were also analyzed for methyl isobutyl ketone (MIBK) and paracymene which have been used at the facility in the past and have been detected in groundwater during previous sampling events. Other additional compounds analyzed for included the SVOC acetophenone and the pesticides heptachlor and delta-BHC.



## 6.0 WATER QUALITY

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The following sections describe the potential sources of various constituents in groundwater at the site along with a description of the associated SWMUs. The characteristics of the investigated constituents that have shown to have migration potential in the groundwater at the site are also discussed. The most recent groundwater sampling results from the June 2014 sampling event is presented in **Section 6.5**.

### 6.1 Potential Sources of Investigated Constituents in Groundwater

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Based on the RFI III data collected and review of historic data from previous site investigations, the sources of investigated constituents in groundwater at the site are grouped into the areas listed in the following sections. These source areas are grouped based on location and the present and historic chemical constituents present in groundwater. Tables showing the historic groundwater concentrations for the site are included in **Appendix I**. The sampling records associated with the RFI III data are included in **Appendix J**. The laboratory reports, state certification and associated chain of custody documentation for the RFI III data are included in **Appendix K**.

A generalized conceptual site model is included as **Figure 5**. Source areas maps are included as **Figures 3, 4 and 10**. The following sections provide a list of source areas and constituents that have been shown to be mobile within the groundwater beneath the site.

#### 6.1.1 Source Area 1

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Former Toxaphene Surface Impoundments (SWMU #10) are located in the northern portion of the facility, between monitoring wells UP-1D and POC2S. Potential other sources in the vicinity include a two-acre equalization basin, former chemical storage tanks for the Still House and a former fuel oil tank for the powerhouse. The primary chemicals in groundwater that are associated with this source area include:

- Benzene
- Chlorobenzene
- Xylene
- Chloroform
- Methylene chloride
- Ethylbenzene
- Toluene



### **6.1.2 Source Area 2**

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Includes the Xylene Storage Area, Drum Crushing Pad (SWMU #4), and Non-Hazardous Waste Storage Area (SWMU #30). The xylene storage area, drum crushing pad, and non-hazardous waste storage area encompass the area south of MW-34 extending to the southeast adjacent to the MW-54 well cluster. The primary constituents in groundwater associated with this source area include:

- Xylene
- Ethylbenzene

### **6.1.3 Source Area 3**

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The former toxaphene plant area, SWMU #09, is located southwest of SWMU #30 and monitoring well cluster MW-54. The chemical plant area, SWMU #05, is located south of the Former Toxaphene production area in the central portion of the site. The primary constituents in groundwater associated with this source area include:

- Chloroform
- Methylene chloride
- Toluene

The Tank Farm (SWMU #6) and Still House areas are located along the east side of Dubignon Street, which is west of the former toxaphene production plant and the chemical plant. The primary constituents in groundwater associated with this source area include:

- Benzene
- Chlorobenzene

## **6.2 NAPL Evaluation**

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Based on previous NAPL investigations the NAPL at the site can be divided into two separate LNAPL areas listed below (**Figure 4**):

NAPL 1 – Has been observed in test pits excavated in the vicinity of the Rosin Storage Pad, Still House and Distillate Tank Farm and has also been observed seeping into the DuBignon Street ditch. This LNAPL comprises a low viscosity product comprised predominantly of para-cymene.

NAPL 2 – Has been observed in the area of the chemical storage warehouse. This NAPL comprises high viscosity product (250 cSt – 250 times more viscous than water) which is comprised of a mixture of wood based compounds (pinene, terpenes, rosins, etc).



Non Aqueous Phase Liquid (NAPL) at the site has been evaluated mainly in the past by installation of monitoring wells, piezometers within the process areas of the facility. There have been some test pits where NAPL samples have been collected. Recently, an evaluation of NAPL soil impact was performed during the Triad investigation of soils within areas of concern at the site. Based on the data collected to date, the extent of the NAPL occurrence at the site is shown on **Figure 4**. A brief summary of the constituents that have been found to occur within the NAPL at the site is included in **Table 9**.

On May 16, 2012, a NAPL sample was collected from MW-42S, located southeast of the tank farm. The NAPL sample from MW-42S had reported concentrations of benzene at 5,500 micrograms per kilogram ( $\mu\text{g/kg}$ ), chlorobenzene at 2,400  $\mu\text{g/kg}$ , chloroform at 36,000  $\mu\text{g/kg}$ , and technical toxaphene at 1,200  $\mu\text{g/kg}$ . In the MW-42S NAPL sample, elevated detection limits were reported for MIBK, toluene, and total xylene and these compounds were reported as non-detect.

The sample below MW-42S collected from MW-42I was an aqueous sample that had reported concentrations of acetone at 3,100 micrograms per Liter ( $\mu\text{g/L}$ ), benzene at 2,800  $\mu\text{g/L}$ , and chloroform at 4,600  $\mu\text{g/L}$ . For the MW-42I sample, the aqueous concentrations of MIBK, toluene, and total xylene were reported at 760  $\mu\text{g/L}$ , 120  $\mu\text{g/L}$ , and 190  $\mu\text{g/L}$ , respectively. Technical toxaphene was not detected in MW-42I but contained a reported detection limit of 48  $\mu\text{g/L}$ .

Adjacent to Dubignon Street, a NAPL sample was collected from Test Pit 2 on October 15, 2009. The sample had a reported concentration of benzene at 9,300,000  $\mu\text{g/kg}$ , MIBK at 95,000,000  $\mu\text{g/kg}$ , toluene at 5,700,000  $\mu\text{g/kg}$ , and para-cymene at 510,000,000  $\mu\text{g/kg}$ . Other investigated constituents were either not analyzed for in this sample or were below the reported elevated detection limits.

The Dubignon Street sluice Pit #2B sampled on April 14, 2010 had a reported aqueous concentration of benzene at 1,600  $\mu\text{g/L}$ , MIBK at 36,000  $\mu\text{g/L}$ , toluene at 500  $\mu\text{g/L}$ , and para-cymene at 19,000  $\mu\text{g/L}$ . Other investigated constituents had reported elevated detection limits and were not detected in the sample.

The NAPL sample collected from the Dubignon Street sump on January 15, 2012 had reported MIBK concentrations of MIBK and paracymene at 66,000,000  $\mu\text{g/kg}$  and 54,000,000  $\mu\text{g/kg}$ , respectively. Other investigated constituents had reported elevated detection limits and were not detected.

### **6.3 Contaminant Characteristics**

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The physical and chemical properties of investigated constituents that are most commonly measured can affect the following:

- potential to remain in the environment after release;



- potential to migrate in soil, groundwater, surface water and air; and
- potential to degrade or bioaccumulate in the environment.

The following paragraphs describe the physical properties and provide a general description of the expected fate within the environment of the most common constituents identified at the site.

**Benzene** – Benzene is subject to rapid volatilization when released in soil or water. The benzene that does not volatilize will tend to be highly to very highly mobile in the soil and may leach into the groundwater. Benzene has a specific gravity of 0.88. Benzene is subject to biodegradation in shallow, aerobic aquifers. When released in surface waters, it typically does not adsorb to sediments, but is bioaccumulates in aquatic organisms. The bioconcentration factor (BCF) for benzene is 3.5 to 4.4 in fish. When released in the atmosphere, benzene typically exists in the vapor phase, with an estimated half-life of 13.4 days (EPA Fact Sheet, 2009).

**Xylene** – Xylene in the forms of orthoxylene, metaxylene and paraxylene are moderately mobile in soil and may leach into groundwater, with low to moderate adsorption potential. Once in groundwater, xylene can persistent for several years. There is some evidence that xylene in groundwater and soil is subject to biodegradation. Bioconcentration of xylene is insignificant, with a BCF of 2.14 to 2.20 for fish. The dominant removal process for xylene from water is volatilization. When released into the atmosphere, xylene may degrade by reaction with hydroxyl radicals, with a half-life of 1 to 18 hours (EPA Fact Sheet, 2009).

**Toluene** – Toluene exhibits moderate to very high mobility in soils, with little adsorption potential. It is typically lost by evaporation in near-surface soils, but may leach to the groundwater. Toluene has a specific gravity of 0.87. Toluene does biodegrade in groundwater and soils, but is likely to biodegrade slowly at high concentrations due to its toxicity to microorganisms. When released into water, removal can be rapid or take several weeks depending on site specific conditions. When released into the atmosphere, toluene degrades via reaction with hydroxyl radicals. Toluene does not bioconcentrate in aquatic organisms (EPA Fact Sheet, 2009).

**Ethylbenzene** – Ethylbenzene exhibits moderate mobility, and is moderately adsorbed by soils. When releases do soils, there is a good probability it will leach to groundwater. Evaporation and biodegradation are significant in water, though not under anaerobic conditions. It will not hydrolyze in water or soil. Significant bioconcentration in fish is unlikely. Ethylbenzene is found primarily in the vapor phase when released to the atmosphere. Its main degradation pathway is photochemical degradation through reaction with hydroxyl radicals (EPA Fact Sheet, 2009).



**Chlorobenzene** – Chlorobenzene is relatively mobile in sandy soil and aquifer material. Biodegradation is very slow. It adsorbs moderately to soils, and leaching into groundwater can be expected.

Chlorobenzene has a specific gravity of 1.1 and has a reported half-life of 10 to 11 hours when released to surface waters. Biodegradation can occur in warm months, and is more rapid in fresh water than marine systems. Chlorobenzene has a BCF of 1 to 2 in fish, and therefore is not expected to bioaccumulate in aquatic organisms to any significant degree (EPA Fact Sheet, 2009).

**Chloroform** – Chloroform adsorbs poorly to soil and is highly mobile. Chloroform is miscible with most organic solvents and is slightly soluble in water. The specific gravity of chloroform is 1.5 and can readily leach to groundwater. Chloroform that is not volatilized in near-surface soils or taken up by plants can migrate long distances through the subsurface. Biodegradation is slow, but can occur under reducing conditions (USGS, 2004). Chloroform can be formed as a degradation product of carbon tetrachloride through reductive dechlorination, and may be found in groundwater at elevated concentrations where degradation of carbon tetrachloride is released to the subsurface.

**Methylene Chloride** – Methylene chloride tends to volatilize to the atmosphere from the water and soil at the surface, and is highly mobile in soils. In deep, saturated soils that contain no soil air and negligible soil organic carbon, as much as 96% of environmental methylene chloride may be present in the soil-water phase and transported with flowing groundwater. With a specific gravity of 1.3, methylene chloride will have a tendency to mobilize deeper in groundwater. The estimated lifetime for the chemical in the atmosphere is 130 days. In surface soil, volatilization to air is an important fate process for methylene chloride. The biodegradation of methylene chloride has been demonstrated in the laboratory and may occur in subsurface soils; however, biodegradation (except, perhaps in landfills with active microbial populations) is probably not a significant degradation pathway in the soil-groundwater system. Methylene chloride has been shown to hydrolyze slowly. The estimated fish bioconcentration factor (BCF) for methylene chloride of 2 suggests that bio magnification of the chemical in aquatic and terrestrial organisms is not likely (EPA, 1994). Methylene chloride can be formed as a degradation product of chloroform, and may be present in groundwater with chloroform in areas where reductive dechlorination is occurring.

## **6.4 Groundwater Sampling**

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Condition IV.D. of RCRA Permit No. HW-052 (D&S), as amended through August 7, 2012 and became effective on December 4, 2012 requires that groundwater samples be collected on a semi-annual basis in accordance with Condition IV of the permit. The most recent semi-annual groundwater sampling event was conducted in June 2014.



Prior to sample collection, monitoring wells were purged in accordance with established methodologies for the site. New nitrile gloves were worn during sampling of each well to minimize the potential for cross-contamination during the sampling process. Field measurements of pH, electrical conductivity, dissolved oxygen, turbidity, oxidation-reduction potential, and temperature were collected during sampling activities, and are included in **Table 10**. Water quality meters were calibrated by field personnel each day of the sampling event. Groundwater samples were collected once purging was completed, and field parameters stabilized.

Deep monitoring wells were purged and sampled using a decontaminated stainless-steel submersible pump with 3/8-inch outside diameter (OD) Teflon® tubing. The pump was lowered into the standing water column and the flow rate was adjusted to minimize the amount of drawdown in each well. Purged groundwater from monitoring wells was containerized into 55-gallon steel drums for proper disposal. New or dedicated Teflon® tubing was used for each sample location. Following sampling of each well, Teflon tubing was removed from the well, bagged, sealed, and clearly labeled with each well ID for storage.

Groundwater samples collected from the monitoring wells at the site during the June 2014 semi-annual groundwater sampling event were analyzed for parameters as required by Table 1 in Condition IV.B of the permit, amended through August 7, 2012. Groundwater samples were also analyzed for the VOCs methyl isobutyl ketone (MIBK) and paracymene, the SVOC acetophenone and the pesticides heptachlor and delta-BHC, which have been detected in groundwater during previous sampling events.

Each of the groundwater samples were collected in laboratory-supplied containers, placed in an ice-filled cooler, and transported under chain-of-custody to Test America Laboratories, Inc. (Test America). Each of the groundwater samples were analyzed for select VOCs by EPA Method 8260, select pesticides by EPA Method 8081, select SVOCs by EPA method 8270, select metals by EPA Method 6020, and formaldehyde by EPA Method 8315. Duplicate groundwater samples were collected from monitoring wells POC-1S and MW-10D.

Measurements of field parameters obtained from groundwater samples collected from groundwater monitoring wells during the June 2014 semi-annual groundwater monitoring event (**Table 10**) indicate that the groundwater in the upper unit of the surficial aquifer at the site primarily ranges from acidic to nearly neutral (pH ranging from 5.44 to 8.01). However, groundwater pH measured at monitoring well MW-19D has exceeded this range in previous monitoring events ranging from 9.73 to 12.05. The stabilized pH of the groundwater collected from monitoring well MW-19D was 12.44. Previous laboratory results for alkalinity (67 mg/l) at MW-19D indicate that the alkalinity is within a normal range for the groundwater at the site. No sources that might produce this high of a pH have been identified up-gradient of the MW-19 well cluster.



Water quality data for each of the monitoring wells sampled during the June 2014 semi-annual groundwater monitoring event are summarized in **Table 11**, **Table 12**, and **Table 13**. Water quality data that exceeded laboratory reporting limits are shown on **Figure 11**, **Figure 12**, and **Figure 13**. The results of analysis of the parameters listed in Table 1 in Condition IV.B of the permit are summarized in the following subsections.

## **6.5 Current Groundwater Analytical Results**

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Groundwater analytical results from the most recent semi-annual groundwater sampling event conducted in June 2014 were compared to background water quality as determined from monitoring wells UP-1S and UP-1D(R) as defined by Permit Condition IV.D.7 and to Groundwater Protection Standards (GWPS) listed in Table 1 under Permit Condition IV.B. Since UP-1S and UP-1D(R) are only sampled for the parameters listed in Table 1 in Condition IV.B of the permit on an annual basis, the most recent available results from the December, 2013 monitoring event were used for comparison of current results to background concentrations. No constituents with GWPS standards higher than background were detected in the up-gradient background monitoring wells at concentrations exceeding GWPS. No volatile organic compounds, semi-volatile organic compounds, or pesticides were detected in background monitoring wells UP-1S or UP-1D(R) during the December, 2013 sampling event.

Barium (17 µg/L), chromium (3.5 µg/L) cobalt (0.43 µg/L), and zinc (13 µg/L) were detected in the groundwater sample collected from UP-1S. Barium (28 µg/L), cobalt (0.15 µg/L), nickel (2.7 µg/L), and zinc (16 µg/L) were detected in the groundwater sample collected from UP-1D(R).

## **6.6 Analytical Results - Point of Compliance (POC) Wells**

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**Volatile Organic Compounds** –The VOCs outlined in Section 5.6 were sampled at each point of compliance wells during the June 2014 semi-annual groundwater monitoring event. Of these parameters, 2-butanone, carbon disulfide, carbon tetrachloride, MIBK, methylene chloride, and tetrachloroethene were not detected. Water quality data for volatile organic compounds that exceeded laboratory reporting limits are shown on **Figure 11**. **Table 11** summarizes the results of sampling for VOCs. Trends for select VOCs at select monitoring wells are discussed in detail in Section 7.0.

**Semi Volatile Organic Compounds** – The SVOCs outlined in Section 5.6 were sampled for during the June 2014 semi-annual groundwater monitoring event. Benzo[g,h,i]perylene, dibenz(a,h)anthracene, indeno[1,2,3-cd]pyrene, 3,4-methylphenol, and phenol were not detected in any of the groundwater samples collected from the point of compliance wells. Water quality data for SVOCs that exceeded



laboratory reporting limits are shown on **Figure 12**. The results of analysis of SVOCs are summarized in **Table 12**.

**Pesticides** – Each of the pesticides outlined in Section 5.6 were sampled for during the June 2014 semi-annual groundwater monitoring event. Of these, only heptachlor was non-detect. Water quality data for pesticides that exceeded laboratory reporting limits are shown on **Figure 12**. The results of analysis of pesticides are summarized in **Table 12**.

**Inorganics (metals)** – Each of the metals outlined in Section 5.6 were detected in at least one of the Point of Compliance wells. Water quality data for metals are shown on **Figure 13**. The results of analysis of metals are summarized in **Table 13**.

**Miscellaneous Compounds (formaldehyde)** – Formaldehyde was detected in wells POC-1S and POC-2S. Formaldehyde detections are shown on **Figure 12**. The formaldehyde results are summarized in **Table 12**.

## **6.7 Analytical Results – Monitoring Wells**

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**Volatile Organic Compounds** – Each of the VOCs outlined in Section 5.6 were sampled during the June 2014 semi-annual groundwater monitoring event. Of these parameters, 2-butanone, carbon disulfide, 1,2,3-trichloropropane, 1,2,4-trichlorobenzene, and tetrachloroethene were not detected. Water quality data for volatile organic compounds that exceeded laboratory reporting limits are shown on **Figure 11**. **Table 11** summarizes the results of sampling for VOCs. Trends for select VOCs at select monitoring wells are discussed in detail in **Section 7.0**.

**Semi Volatile Organic Compounds** – The SVOCs outlined in Section 5.6 were sampled for during the June 2014 semi-annual groundwater monitoring event. Indeno[1,2,3-cd]pyrene and 3,4-methylphenol were not detected in any of the groundwater samples collected from the monitoring wells. Water quality data for SVOCs that exceeded laboratory reporting limits are shown on **Figure 12**. The results of analysis of SVOCs are summarized in **Table 12**.

**Pesticides** – Each of the pesticides outlined in Section 5.6 were sampled for during the June 2014 semi-annual groundwater monitoring event. Of these, gamma-BHC, heptachlor, and technical toxaphene were not detected. Water quality data for pesticides that exceeded laboratory reporting limits are shown on **Figure 12**. The results of analysis of pesticides are summarized in **Table 12**.

**Inorganics (metals)** – The metals outlined in Section 5.6 were sampled during the June 2014 semi-annual groundwater monitoring event. Selenium and vanadium were both not detected in any of the



monitoring wells. Water quality data for metals are shown on **Figure 13**. The results of analysis of metals are summarized in **Table 13**.

**Miscellaneous Compounds (formaldehyde)** – Formaldehyde was detected in several monitoring wells during the June 2014 semi-annual groundwater monitoring event. Formaldehyde detections are shown on **Figure 12**. The formaldehyde results are summarized in **Table 12**.

## 6.8 Groundwater Screening

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During the RFI III assessment activities, groundwater screening using direct push technology was initially performed March 29, 2010 to April 1, 2010. At that time, three depth intervals were sampled using direct push technology at HP-111-50(A,B,C) through HP-111-58(A,B,C). The groundwater screening was performed to determine the optimum locations for permanent monitoring well clusters. Groundwater screening locations are shown on **Figure 14**. The results and the depth intervals sampled of the groundwater screening are shown on **Table 14**.

Based on the groundwater sampling results performed during the semi-annual monitoring and the RFI III monitoring well sampling, it was determined that additional groundwater screening was needed in the vicinity of monitoring well MW-5 and adjacent to Terry Creek down gradient of monitoring well MW-38. On January 29 and 30, 2013, additional groundwater screening samples were collected at the site using sonic drilling techniques coupled with packer groundwater sampling.

Groundwater samples collected at HP-59 located next to the MW-5 well cluster and HP-60 located adjacent to Terry Creek are shown on **Figure 14**. The groundwater samples were collected from an open borehole that was sealed off at the top using an inflatable packer apparatus. The boring performed at HP-59 was sampled from 89 to 99 ft. bgs. HP-60 was sampled from 20 to 26 ft. bgs, 50 to 56 ft. bgs, and 75 to 86 ft bgs. Prior to collection of the groundwater samples each of the screened intervals was purged until groundwater stabilization parameters (pH, conductivity, turbidity and dissolved oxygen) had stabilized.

**HP-59 Results** – The groundwater sample collected at HP-59 (**Figure 14**) from the 89 to 99 ft. depth interval had reported concentrations of benzene (230 µg/L), chlorobenzene (8.9 µg/L), ethylbenzene (6.4 µg/L), toluene (70 µg/L), and total xylene (29 µg/L). Toxaphene quantitated as TAUC had a reported at a concentration of 2.9 µg/L. Trace concentrations of dichloromethane (2.3 µg/L), bromoform (3.2 µg/L), chloroform (1.4 µg/L), chlorodibromomethane (5.2 µg/L), styrene (1.3 µg/L), cis-1,2 dichloroethene (0.30 µg/L), and MIBK (3.4 µg/L) were also detected.



**HP-60 Results** – The groundwater sample collected at HP-60 (**Figure 14**) from the 20 to 26 ft. depth interval had reported concentrations of benzene (1.4 µg/L) and toluene (19 µg/L). Trace levels of chlorobenzene (0.51 µg/L), ethylbenzene (0.36 µg/L), and total xylene (0.89 µg/L), were also reported. Toxaphene quantitated as TAUC was reported at a concentration of 2.8 µg/L from the 20 to 26 ft. depth interval.

Reported concentrations of benzene, from the 50 to 56 ft. depth interval, were benzene (2.9 µg/L), toluene (2 µg/L). Trace concentrations of chlorobenzene, (0.36 µg/L) and total xylene (0.26 µg/L) were also reported. The groundwater sample collected at HP-60 from the 75 to 86 ft. depth interval had reported concentrations of benzene (710 µg/L), chlorobenzene (280 µg/L), cis-1,2 dichloroethene (2.1 µg/L), ethylbenzene (15 µg/L), toluene (22 µg/L), and total xylene (8.3 µg/L). Toxaphene quantitated as TAUC was reported at a concentration of 4.5 µg/L.



## **7.0 CONSTITUENT MIGRATION**

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Historic water quality data obtained during previous groundwater sampling events indicate that the predominant constituents found in groundwater that have been shown to migrate within the upper unit of the surficial aquifer at the site include:

- Benzene
- Chlorobenzene
- Xylenes
- Toluene
- Ethylbenzene
- Chloroform
- Methylene Chloride

Of these compounds, benzene, xylenes, and total chlorinated methanes (carbon tetrachloride, chloroform, and methylene chloride) have developed well-defined plumes at the site extending to the Terry Creek site east of the facility. The maximum extent of the contaminant plume is best illustrated by benzene and chlorobenzene concentrations in groundwater along the central portions of the facility and northern portion of the Terry Creek site.

Chloroform and methylene chloride are breakdown products of carbon tetrachloride, which was used in the production of toxaphene. Isoconcentration maps showing source areas of benzene, xylenes and total chlorinated methanes are included as **Figures 15** through **17**, respectively.

Other volatile organic compounds that have been detected within the upper unit sporadically throughout the site and throughout the groundwater monitoring events include acetone, MIBK, carbon tetrachloride, PCE, 1,2-dichloropropane and vinyl chloride. Toxaphene, alpha BHC, and gamma BHC (lindane) have also been detected sporadically in samples collected from monitoring wells during previous sampling events. A technical toxaphene and toxaphene TAUC concentration map is included as **Figure 18**.

### **7.1 Trend Evaluation**

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This following summarizes the trend evaluation of select constituents detected historically at the site. The trend evaluation was prepared to evaluate the historical groundwater sampling results in order to better understand the relative stability of groundwater plume at the facility. Historically, commonly detected constituents, benzene, chlorobenzene, total xylenes and methylene chloride, have migrated in an easterly direction through the upper unit of the surficial aquifer from upgradient source areas at the



site. Migration of these volatile organic compounds within the upper unit have extended east of US Highway 17 beneath the Terry Creek site.

In order to evaluate the relative stability of the groundwater plume with respect these constituents, a comprehensive review of the historic data was completed for monitoring wells screened within the deeper sands of the upper unit where migration is occurring in the eastern portion of the facility and beneath Terry Creek Site. The trend analysis was performed for select wells based on the historic concentrations of volatile constituents detected, the relevance of each of each within the groundwater plume, and the location of these wells with respect to the occurrence of the groundwater plume.

### **7.1.1 Monitoring Wells Evaluated**

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For this trend evaluation Mann Kendall statistical methods were used on key monitoring wells screened in the lower unit of the surficial aquifer which were chosen along the centerline of the groundwater plume and within select areas hydraulically down gradient of the main area of the plume. The following monitoring wells (**Figure 6**) were chosen for evaluation and are listed below along with a brief summary of the relevance of each of the wells relative to evaluating the groundwater plume:

#### **Monitoring Well MW-10D**

Review of the historical groundwater data for monitoring well MW-10D, located adjacent to the west side of US Highway 17, indicates that VOCs including benzene, chlorobenzene, methylene chloride and total xylene have been consistently reported for this well. Monitoring well MW-10D is located within the centerline of the main area of plume. The primary volatile constituents detected in this well have had elevated concentrations, making MW-10D a key well in understanding how the respective constituent concentrations relate to the overall stability of the groundwater plume.

#### **Monitoring Well MW-20D**

Groundwater monitoring well MW-20D, located approximately 500 ft. east of monitoring well MW-10D, on the Terry Creek Site across US Highway 17. Monitoring well MW-20D was evaluated for benzene, chlorobenzene, and total xylenes concentrations. Methylene chloride was not detected in this monitoring well prior to December 2013, when it was identified at 23 µg/L (j-flagged value). Subsequently, 7,500 µg/L was most recently reported in MW-20D in June 2014.

#### **Monitoring Well MW-26D**

Groundwater monitoring well MW-26D is located approximately 300 ft. northeast of the site adjacent to the west side of US Highway 17 within the northeastern portion of the plume. Review of the historic sampling data indicated that benzene, chlorobenzene, and total xylene concentrations had been



reported for this well during sampling events. Recent sampling events indicate that benzene is the primary constituent that defines the northeast portion of the plume. However, the trend analysis was performed for benzene, chlorobenzene, and xylene concentrations at this location.

#### **Monitoring Well MW-29D**

Groundwater monitoring well MW-29D is located on the northwest corner of the Terry Creek Site, approximately 250 ft. north of the outfall which discharges to Dupree and Terry Creek. Benzene concentrations reported for MW-29D are greater than any other well located east of Highway 17.

#### **Monitoring well MW-38D**

Groundwater monitoring well MW-38D is located about 400 ft. east of MW-29D and is the farthest down gradient monitoring well with reported benzene, chlorobenzene, and xylene concentrations within the deeper sands of the upper unit of the surficial aquifer.

### **7.1.2 Trend Evaluation**

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The trend evaluation included reviewing data from historic sampling events, which included data from as early as 1997 for MW-10D, and from 2000 (MW-20D), 2005 (MWs 26D and 29D), and 2010 (MW-38D). All of the data sets were evaluated through mid-2014 (most recent available data). The data set spanned fewer years for those monitoring wells that were installed in recent years. To identify a linear trend, the Environmental Protection Agency (EPA) Unified Guidance (March, 2009) describes performance of the simple linear regression and the Mann Kendall evaluation. As an initial step in evaluating historic trends in the groundwater plume for this site, a regression analysis incorporated with a Mann Kendall evaluation was chosen. It should be noted that this is an initial step in the process in determining the method for evaluating the significance of variances in groundwater concentrations for this site and that other methods may be deemed more appropriate as additional data is collected and evaluated. Also worthy of note is the representation of non-detects in the data set. For results within the dataset that were non-detect, a value of one-half the reporting limit was used in the evaluation.

### **7.1.3 Regression Analysis**

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For each of the data sets, a regression analysis was performed by graphing the constituent concentrations versus time and applying a trend line through the data set to establish if there was an apparent decreasing, increasing, or stable trend with the respective concentrations. For the trend evaluation discussed below, a trend regression analysis was prepared for each of the aforementioned monitoring wells and the respective volatile compounds. Each of the trend graphs is included in **Appendix L**.



Mann Kendall Evaluation – In addition to the regression analysis describe above, a Mann Kendall evaluation was performed to further evaluate the data sets in order to further validate the existence of either a decreasing, increasing or stable trend in concentrations with respect to each of the constituents included in the analysis. The Mann Kendall evaluations and the trend evaluation results for each of the monitoring wells evaluated are included in **Appendix L**. A map showing the well locations and the Mann Kendall results is also included in **Appendix L**. A summary of the trend evaluation is included below.

#### **7.1.4 Trend Evaluation Summary**

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The following is summary of the trend evaluation provided in **Appendix L**:

**Benzene** - The Mann Kendall evaluation showed that the benzene concentrations are increasing at MW-20D and MW-29D, decreasing at MW-10D, and are stable with no discernable trend at MW-38D. The Mann Kendall test for benzene concentrations at MW-26D indicates that benzene concentrations are decreasing within the northeastern portion of the plume.

**Chlorobenzene** – Mann Kendall evaluations of chlorobenzene trends showed that concentrations are increasing in MW-20D, decreasing in MW-26D, stable in MW-10D, and without identifiable trend in MWs 29D and 38D.

**Total Xylene** – Mann Kendall evaluations of total xylene trends showed that concentrations are increasing in MW-20D, decreasing in MW-26D, and without identifiable trend in MWs 10D, 29D, and 38D.

**Methylene Chloride** – The Mann Kendall evaluation for methylene chloride at MW-10D showed a probable decreasing trend (decreasing, but with less than 95% confidence factor). Significant concentrations of methylene chloride have not been detected in other wells at the site where a statistical trend could be evaluated.

The overall trend analyses are variable for different areas of the plume. The trending indicates that concentrations in the center of the plume (MW-10D) are stable or decreasing for all constituents analyzed. The easternmost portion of the plume, on the Terry Creek site, has shown primarily stable conditions. The portion of the plume adjacent to Highway 17 (MW-26D) is decreasing for all constituents. The southeast portion of the plume on the Terry Creek site (MW-20D) shows an increasing trend for benzene, chlorobenzene, and total xylenes.



## **7.2 Conceptual Site Model Summary**

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A generalized conceptual site model is included as **Figure 5**. The following information summarizes how the model was developed:

- The maximum extent of the contaminant plume is best defined by the benzene and chlorobenzene concentrations in groundwater along the central portions of the facility and northern portion of the Terry Creek site. The areas of contribution for benzene and chlorobenzene in groundwater appear to be predominantly located within the process areas where NAPL is present, and secondarily at the former toxaphene surface impoundments.
- Migration of benzene and chlorobenzene occurs primarily within the upper unit of the surficial aquifer, where investigated constituents migrate vertically within the unit from the shallow and intermediate zones and enter the basal sands of the upper unit within approximately 500 feet from the areas of contribution through discontinuous clay lenses. In the basal sands, the investigated constituents migrate eastward at an average velocity of 13 ft. per year until reaching the tidally influenced zone beneath Dupree Creek where the flow velocity decreases to a rate of approximately 3 ft. per year. An evaluation of groundwater quality data from monitoring wells and recently collected groundwater screening points indicate that VOCs may occur within the basal sands east of the Terry Creek site.
- Trend analysis of benzene, chlorobenzene, and xylenes in down gradient monitoring wells indicate that plume stability may be occurring, but is not fully conclusive at this point in time. While most of the contaminant mass remains within the basal sands, there are indications that a minor amount of the mass is entering the intermediate zone near Dupree Creek, where the vertical hydraulic gradient is predominantly upward during tidal cycles. Tidal influence studies were conducted in 2010 and 2012. Tidal influence graphs are included in **Appendix G**.
- An evaluation of tidal data for the site indicates that groundwater within the basal sands may discharge into the marsh or other surface water bodies east of Dupree Creek between a distance of 1,200 feet east of monitoring well MW-39 (the easternmost monitoring well location) and Back River.



## 8.0 POTENTIAL OFF-SITE CONSTITUENT MIGRATION

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Off-site migration of VOC's within the upper unit of the surficial aquifer have predominantly occurred within the basal sands at depths ranging approximately 80 to 100 ft. bgs (approximately 75 to 95 ft. below the water table). VOCs consistently detected in off-site monitoring wells located near off-site structures (MW-26D, MW-28D, MW-29D, and MW-52D) were evaluated. These deep monitoring wells are screened at depths greater than 70 ft. below the water table. The primary VOCs that comprise the off-site contaminant plume include benzene, chlorinated benzenes, and xylenes. The basal sands are overlain by a large low-permeability lens in the eastern portion of the plumes, which represents an aquitard for the basal sands. Shallow off-site monitoring wells, screened to depths of approximately 25 ft. bgs, have not been impacted by VOC's emanating from the site, and therefore, have been removed from the groundwater monitoring program.

**Water Supply Wells** – Antea Group reviewed the industrial/commercial supply well survey performed by NewFields in the Phase II Groundwater RFI submitted in 2001 and identified the following groundwater usage on-site or down gradient of the former Hercules facility:

- The existing industrial wells at the facility within the area of impact withdraw groundwater from the Floridan aquifer at depths exceeding 500 ft. (**Figure 19**).
- The former Dixie Obrien company has two wells located northeast of the facility across Highway 17 that are no longer in use. The wells are located on the west and east side of the property and also draw from the Floridan aquifer, ranging in total depth of 810 ft. to 610 ft., respectively.
- A potential irrigation well was identified approximately 400 ft. south of facility adjacent to Highway 17 (**Figure 20**). Construction details were not available for this well.
- A supply well is currently in use at the Terry Creek Trailer Park (**Figure 20**). The surface casing extends to 210 feet bgs and is open hole to a total depth of 750 feet into the Floridan Aquifer. This well was sampled on March 4, 2014 for the permit required parameters routinely analyzed for on-site (select VOCs, SVOCs, formaldehyde, metals and pesticides). Results were below reporting limits for all VOCs, SVOCs and pesticides. Results from sampling are included in **Appendix K**.
- There are four (4) private water supply wells in use at residential properties on Terry Creek Road. Specifically, the wells were located at 5 Terry Creek Road, 8 Terry Creek Road (identified as Blount 8), 10 Terry Creek Road (identified as Blount 10), and 22 Terry Creek Road (identified as Roberts 22). Well completion information is not available; however, the well owners indicate the wells are quite deep and periodically artesian when the nearby Georgia Pacific and Pinova



plants shut down for maintenance or holidays. Three of the four wells were sampled in June 2014 for the permit required parameters routinely analyzed for on-site (select VOCs, SVOCs, formaldehyde, metals and pesticides). Results were below reporting limits for all VOCs, SVOCs and pesticides. Access to the well located at 5 Terry Creek Road was not granted and therefore the well was not sampled. Results from sampling are included in **Appendix K**.

**Surface Water Bodies** - There is a potential for shallow groundwater to discharge to the N Street ditch via infiltration into the existing stormwater drainage system in the process areas. Infrequent discharges of product to the stormwater drainage system have occurred in the past as a result of fluctuations in the water table. The N Street ditch has been lined with fabricform concrete lining to prevent direct infiltration of contaminated groundwater from the surrounding soils at the facility. The N Street ditch discharges to Dupree Creek via the existing outfall at Highway 17 and the Terry Creek site. Existing control structures and absorbent booms within the N Street ditch and the downstream outfall have prevented direct discharge of impacted surface water to Dupree Creek.

Groundwater at the base of the upper unit of the surficial aquifer has the potential to discharge to the marsh and surface water bodies beyond the Terry Creek site (**Appendix G**). Groundwater within this zone is impacted in the eastern portions of the facility and western portions of the Terry Creek site. Based on the review of existing hydrogeologic and water quality data, there is a potential that groundwater may be discharging to Dupree Creek, Terry Creek, or the marsh. However, during April and August 2012, Geosyntec collected 14 surface water samples during both Ebb- and Flood-tide conditions and no site groundwater investigated constituents were identified at concentrations exceeding surface water quality standards per Chapter 391-3-6-.03. According to Geosyntec, grab surface water samples were collected at the head of the N-Street Ditch outfall, upgradient of the outfall channel weir; and, at the confluence of the outfall channel and Terry Creek. A surface water sample location map and an analytical data summary table for the April and August 2012 samples are included in **Appendix M**.



## 9.0 SUMMARY

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The following summarizes groundwater conditions at the site based on the completion of the RFI III assessment activities to date and review of the historic groundwater data for the site.

### **Extent, Migration and Stability of Investigated Constituents**

The three primary constituents present at the site include benzene, chlorobenzene, and xylenes. Based on the data reviewed to date, other constituents that are present in minor concentrations and have migrated in the groundwater, but show a limited extent of migration include toluene, ethylbenzene, methylene chloride, chloroform, para-cymene, and Toxaphene quantitated as TAUC. Technical toxaphene and TAUC have been detected sporadically at the site but do not exhibit a defined, consistent plume. The groundwater plume has been delineated within the surficial aquifer on the site.

Source areas of volatile organic compounds have been identified in the area of the former toxaphene surface impoundments and the process areas. Process areas include zones where NAPL is present (AOC-1), and in former process areas where high concentrations of VOCs are present in the shallow and intermediate sands of the upper unit of the surficial aquifer. The primary constituents of the NAPL include benzene, chlorobenzene, para-cymene, and xylene.

Downward migration of VOCs from the shallow and intermediate sands of the upper unit occurs within approximately 500 ft. down gradient of the source areas. Low permeability lenses exist, within the upper unit of the surficial aquifer at depths of up to 81 ft. bgs in portions of the site which retard the downward flow of groundwater in those areas of the site. The gaps within these confining lenses are present within the central portions of the facility in the process areas and in areas down gradient of the former toxaphene surface impoundment, which allow the downward migration of investigated constituents into the basal sands of the upper unit of the surficial aquifer.

The VOCs within the basal sands of the upper unit of the surficial aquifer migrate eastward from the central and eastern portions of the facility, above the main confining unit separating the upper unit and the lower unit of the surficial aquifer. The top of the confining unit is generally found at elevations ranging from -60 to -97 ft. msl. Migration of VOCs within the basal sands of the upper unit extend to the eastern edge of the Terry Creek Site, where benzene was detected (710 µg/L) in a direct-push sample collected from the basal sands of the upper unit. Later, in December of 2013, a permanent cluster of monitoring wells (MW-55) was installed. Results of sampling in June of 2014 confirmed the presence of benzene in the basal sands (1,300 µg/L).



Trace concentrations of chlorobenzene and benzene were detected in the intermediate sands along the eastern edge of the Terry Creek site where a fairly consistent upward gradient at the MW-39 monitoring well cluster has been observed, indicating that upward migration of VOCs within the basal sands may be occurring in this area of the site.

The extent of elevated constituents is defined in both the shallow, intermediate and deep zones of the surficial aquifer to the north, west and east. Concentrations of benzene have been measured with the within the basal sands of the upper unit extend to the eastern edge of the Terry Creek Site.

The results of the trend analyses discussed in **Section 7.1** indicated that the easternmost portion of the plume, on the Terry Creek site, has shown primarily stable conditions. The portion of the plume adjacent to Highway 17 (MW-26D), is decreasing for all constituents. The southeast portion of the plume on the Terry Creek site (MW-20D) shows an increasing trend for benzene, chlorobenzene, and total xylenes.

#### **Tidal Evaluation**

Evaluation of groundwater fluctuations subject to tidal influence within the basal sands of the upper unit indicate that groundwater may be discharging within the marsh or surface water bodies east of Dupree Creek. This zone of discharge may extend east beyond the marshlands to the Back River. The effective groundwater gradient within the tidal influence zone was estimated to be approximately 0.0004 ft./ft., resulting in an average groundwater flow velocity of approximately 3 ft. per year within the tidal influence zone.

#### **Interim Corrective Measures**

An interim corrective measures workplan was submitted to the Georgia EPD on August 22, 2014. The workplan was submitted in response to correspondence from the Georgia EPD, dated December 23, 2013, specifying that Hercules must develop and implement an Interim Measures Plan to perform corrective action beyond the property boundary, where necessary, to protect human health and the environment until such time that the comprehensive site-wide corrective action plan can be developed and approved.

The interim corrective measures workplan was approved via email by the Georgia EPD on September 17, 2014. Execution of the workplan has already commenced and is moving towards the bench and field pilot testing of the remedies outlined in the interim corrective measures workplan.



### **Off-Site Supply Well Sampling**

Hercules has identified the presence of residential water supply wells on the properties that border Terry Creek Road. Hercules has already obtained property access agreements and sampled the water supply well at the Terry Creek Mobile Home Park, and two other properties. Results for VOCs, SVOCs and pesticides were below reporting limits at each of the off-site supply wells sampled thus far. Results of the supply well sampling are discussed in **Section 8.0** above.

### **Additional On-Site Delineation**

During discussions between Hercules and Georgia EPD regarding deep zone benzene and chlorobenzene groundwater impacts, concern was expressed that there may be a monitoring gap on-site midway between monitoring wells MW-29 and MW-44. Hercules has installed monitoring well MW-11DD, adjacent to existing wells MW-11S and MW-11D, in the deep zone of the upper unit of the surficial aquifer. Groundwater sampling is discussed above in **Section 5.6** above.

### **Additional Off-Site Delineation**

Hercules has successfully executed an access agreement with Mr. Ron Adams following his request that the horizontal extent of contamination on his property be refined, and Hercules has installed two (2) additional monitoring wells (MW-56D and MW-57D) in the deep zone of the upper unit of the surficial aquifer. Groundwater sampling is discussed above in **Section 5.6** above.



## **10.0 REMARKS**

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The recommendations contained in this report represent Antea Group's professional opinions based upon currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Antea Group and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea Group's client and anyone else specifically listed on this report. Antea Group will not and cannot be liable for unauthorized reliance by any third party. Other than as contained in this paragraph, Antea Group makes no expressed or implied warranty as to the contents of this report. Previous data reported by others is assumed to be accurate.



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## 12.0 CERTIFICATIONS

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### Plant Certification

*I certify under the penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with systems designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted to the best of my knowledge and belief, is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*



Timothy Hassett,  
Hercules Incorporated



### Registered Professional Certification

*I certify that I am a qualified groundwater scientist who has received a baccalaureate or postgraduate degree in natural science or engineering, and have sufficient training and experience in groundwater hydrogeology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that this report was prepared by me or by a subordinate working under my direction.*



Darin A. Hintz, P.G.

Professional Georgia Registration No. 002121





## ***Tables***



**TABLE 1**  
**WELL CONSTRUCTION DETAILS**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Well ID	Northing	Easting	Aquifer Group	TOC Elev. (famsl)	Ground Elev. (famsl)	Boring Term. (ft. bgs)	Well Term. (ft. bgs)	Screened Int. (ft. bgs)	Depth TOS (ft. bgs)	TOS Elev. (famsl)	Depth BOS (ft. bgs)
MW-1S	425325.8	871609.6	Upper	9.21	6.7	10.5	10.5	0.5 - 10.5	0.5	6.2	10.5
MW-1D	425321.9	871608.5	Upper	9.50	6.7	30.2	30.2	20.2 - 30.2	20.2	-12.0	30.2
MW-2S	425200.9	871588.9	Upper	8.99	6.8	10.8	10.8	3.8 - 10.8	3.8	3.0	10.8
MW-2D	425195.9	871588.6	Upper	9.05	6.8	34.5	34.5	24.5 - 34.5	24.5	-13.9	34.5
MW-3S	425718.1	871407.6	Upper	10.84	8.4	10.5	13.0	3.1 - 13	3.1	5.3	13.0
MW-3D	425716.7	871412.0	Upper	10.88	8.4	32.5	35.0	25.1 - 35	25.0	-16.6	35.0
MW-4	425431.1	871896.2	Upper	9.24	6.8	27.0	25.0	15 - 25	15.0	-8.2	25.0
MW-5S	425252.0	871894.8	Upper	9.31	6.7	27.0	25.5	15.5 - 25.5	15.5	-8.8	25.5
MW-5I	425247.6	871894.8	Upper	9.10	6.7	37.0	35.5	25 - 35	25.0	-18.3	35.0
MW-6	425090.9	871875.5	Upper	8.72	6.3	27.0	25.5	15.5 - 25.5	15.5	-9.2	25.5
MW-7	425478.6	871672.0	Upper	9.06	6.6	27.0	25.5	15.5 - 25.5	15.5	-8.9	25.5
MW-8	425018.4	871655.8	Upper	9.97	7.4	27.0	25.5	15.5 - 25.5	15.5	-8.1	25.5
MW-9S	423982.6	872055.0	Upper	8.42	6.0	20.5	20.5	13.2 - 20.5	13.2	-7.2	20.5
MW-9D	423987.6	872053.1	Upper	8.82	5.5	84.0	83.2	76.1 - 83.2	76.1	-70.6	83.2
MW-10S	424312.9	872320.2	Upper	8.87	6.4	20.0	18.0	10.0-18.0	9.8	-3.4	17.5
MW-10D	424316.0	872323.5	Upper	9.31	6.0	95.5	95.5	87.8 - 95.4	87.8	-81.8	95.4
MW-11S	424867.8	872437.5	Upper	7.82	5.4	20.5	20.5	13.8 - 20.5	13.8	-8.4	20.5
MW-11D	424864.6	872440.5	Upper	8.26	4.9	56.0	55.0	48.5 - 55	48.5	-43.6	55.0
MW-11DD	424866.6	872461.5	Upper	8.23	5.20	95.0	91.0	81 - 91	81.0	-75.8	91.0
MW-12S	425600.7	872109.7	Upper	10.18	7.6	20.5	20.5	11.6 - 20.5	11.6	-4.0	20.5
MW-12D	425596.4	872108.9	Upper	10.72	7.5	104.5	104.5	95.4 - 104.5	95.4	-87.9	104.5
MW-13	424302.4	872746.7	Lower	10.64	7.7	150.0	132.0	122 - 132	122.0	-114.3	132.0
MW-14S	423982.7	871201.5	Upper	7.85	7.6	15.0	15.0	5 - 15	5.0	2.6	15.0
MW-14D	423979.9	871193.7	Upper	7.64	7.3	87.0	87.0	77-87	77.0	-69.7	87.0
MW-15S	424830.1	871272.9	Upper	10.18	7.8	15.0	15.0	5 - 15	5.0	2.8	15.0
MW-15D	424927.8	871264.2	Upper	9.98	7.4	90.0	90.0	80 - 90	80.0	-72.6	90.0
MW-16S	423507.4	869672.3	Upper	13.80	10.8	20.0	15.0	5 - 15	5.0	5.8	15.0
MW-16D	423499.7	869670.8	Upper	13.60	11.1	82.0	80.0	70-80	70.0	-58.9	80.0
MW-17S	424809.7	869189.6	Upper	14.38	11.8	15.0	15.0	5 - 15	5.0	6.8	15.0
MW-17D	424803.6	869192.6	Upper	14.49	11.8	85.0	85.0	75-85	75.0	-63.2	85.0
MW-18	426528.7	868825.3	Lower	20.32	17.6	132.0	132.0	122 - 132	122.0	-104.4	132.0
MW-19S	426289.5	868932.3	Upper	20.66	18.6	15.0	15.0	5 - 15	5.0	13.6	15.0
MW-19I	426287.3	868927.3	Upper	20.95	18.4	45.0	45.0	35 - 45	35.0	-16.6	45.0
MW-19D	426291.8	868940.2	Upper	20.99	18.0	83.0	83.0	71-83	71.0	-53.0	83.0
MW-20S	424176.2	872825.8	Upper	10.57	7.9	15.3	15.3	5 - 15	5.0	2.9	15.0
MW-20I	424179.8	872823.8	Upper	10.54	8.0	45.0	45.0	35 - 45	35.0	-27.0	45.0
MW-20D	424185.0	872819.9	Upper	9.99	7.7	90.0	90.0	80 - 90	80.0	-72.3	90.0
MW-21	424317.0	870454.1	Upper	9.81	8.4	15.0	15.0	5.0 - 15.0	5.0	3.4	15.0
MW-22	424347.0	870491.1	Upper	9.66	8.3	14.7	14.7	4.67 - 14.67	4.7	3.6	14.7
MW-23	424392.1	870474.3	Upper	9.85	8.7	14.0	14.0	4.0 - 14.0	4.0	4.7	14.0
MW-24	424374.6	870415.9	Upper	9.71	7.0	15.0	15.0	4.8 - 14.8	4.8	2.2	14.8



**TABLE 1**  
**WELL CONSTRUCTION DETAILS**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Well ID	Northing	Easting	Aquifer Group	TOC Elev. (famsl)	Ground Elev. (famsl)	Boring Term. (ft. bgs)	Well Term. (ft. bgs)	Screened Int. (ft. bgs)	Depth TOS (ft. bgs)	TOS Elev. (famsl)	Depth BOS (ft. bgs)
MW-25S	423393.4	870992.3	Upper	10.40	11.5	15.0	15.0	5-15	5.0	6.5	15.0
MW-25D	423393.3	870982.2	Upper	10.30	11.2	82.0	80.0	70-80	70.0	-58.8	80.0
MW-26S	425332.2	872431.3	Upper	7.25	7.4	16.0	15.0	5 - 15	5.0	2.4	15.0
MW-26D	425330.3	872441.3	Upper	7.11	7.4	90.0	90.0	80 - 90	80.0	-72.6	90.0
MW-27D	424775.7	868899.2	Upper	14.78	12.6	90.5	90.5	80.5 - 90.5	80.5	-67.9	90.5
MW-28D	424096.6	872456.4	Upper	8.65	5.9	91.0	91.0	81 - 91	81.0	-75.1	91.0
MW-29I	424954.4	872667.9	Upper	8.74	6.1	50.5	50.5	40.5 - 50.5	40.5	-34.4	50.5
MW-29D	424964.1	872668.0	Upper	9.12	6.4	89.8	89.8	79.75 - 89.75	79.8	-73.4	89.8
MW-30S	426102.4	870791.0	Upper	12.36	10.0	16.0	15.0	5 - 15	5.0	5.0	15.0
MW-30D	426101.7	870800.9	Upper	12.38	9.9	90.5	90.5	80.5 - 90.5	80.5	-70.6	90.5
MW-31D	425661.3	869693.6	Upper	16.30	13.8	90.5	90.5	80.2 - 90.2	80.2	-66.4	90.2
MW-32D	425877.6	871596.9	Upper	12.50	10.1	90.0	90.0	79.8 - 89.8	79.8	-69.7	89.8
MW-33	424112.7	871782.1	Lower	9.17	6.6	132.0	130.0	120 - 130	120	-113.4	130.0
MW-34	425390.4	870377.0	Lower	13.95	11.4	136.0	130.2	120.2 - 130.2	120.2	-108.9	130.2
MW-35D	423542.9	871554.9	Upper	10.18	7.8	91.0	91.0	80.7 - 90.7	80.7	-72.9	90.7
MW-36D	425660.7	868489.0	Upper	15.74	13.2	91.0	91.0	81 - 91	81.0	-67.8	91.0
MW-37S	427021.4	867926.2	Upper	17.15	14.3	25.0	25.0	15-25	15.0	-0.7	25.0
MW-37I	427022.2	867920.7	Upper	16.91	14.2	80.0	75.0	60-75	60.0	-45.8	75.0
MW-37D	427022.6	867917.2	Lower	16.81	14.4	150.0	110.0	100-110	100.0	-85.6	110.0
MW-38S	424935.4	873054.8	Upper	8.64	5.8	25.0	25.0	10-25	10.0	-4.2	25.0
MW-38I	424936.7	873051.9	Upper	8.75	5.8	55.0	55.0	40-55	40.0	-34.2	55.0
MW-38D	424939.0	873047.6	Upper	8.69	5.8	100.0	85.0	75-85	75.0	-69.2	85.0
MW-39S	424321.7	873717.4	Upper	9.38	6.9	21.0	21.0	6-21	6.0	0.9	21.0
MW-39I	424316.0	873719.3	Upper	9.51	6.9	55.0	55.0	45-55	45.0	-38.1	55.0
MW-39D	424309.7	873721.5	Upper	9.79	6.9	150.0	85.0	75-85	75.0	-68.1	85.0
MW-40S	424370.1	869355.2	Upper	14.15	11.6	25.0	25.0	10-25	10.0	1.6	25.0
MW-40I	424365.4	869354.6	Upper	14.05	11.7	55.0	55.0	40-55	40.0	-28.3	55.0
MW-40D	424362.7	869354.3	Lower	14.11	11.7	150.0	110.0	100-110	100.0	-88.3	110.0
MW-41I	425872.1	871633.3	Upper	12.36	9.7	48.0	48.0	38-48	38.0	-28.3	48.0
MW-42S	424651.6	870489.3	Upper	11.52	8.8	20.0	20.0	10-20	10.0	-1.2	20.0
MW-42I	424643.9	870491.4	Upper	11.43	8.8	50.0	50.0	40-50	40.0	-31.2	50.0
MW-42D	424657.9	870487.0	Upper	11.54	8.7	105.0	98.0	88-98	88.0	-79.3	98.0
MW-43S	424639.3	871552.9	Upper	9.94	7.0	20.0	20.0	10-20	10.0	-3.0	20.0
MW-43I	424637.4	871545.2	Upper	9.93	7.1	50.0	50.0	40-50	40.0	-32.9	50.0
MW-43D	424636.8	871537.0	Upper	9.96	7.1	107.0	99.0	89-99	89.0	-81.9	99.0
MW-44S	424874.7	871756.3	Upper	11.75	9.2	21.0	21.0	11-21	11.0	-1.8	21.0
MW-44I	424877.6	871754.9	Upper	11.77	9.3	55.0	55.0	40-55	40.0	-30.7	55.0
MW-44ID	424880.1	871753.3	Upper	11.77	8.9	100.0	100.0	90-100	90.0	-81.1	100.0
MW-44D	424883.5	871751.7	Lower	11.79	9.0	150.0	130.0	120-130	120.0	-111.1	130.0
MW-45I	423892.0	870162.2	Upper	13.74	11.0	60.0	55.0	40-55	40.0	-29.0	55.0
MW-46I	423608.1	871022.7	Upper	10.92	8.3	60.0	55.0	40-55	40.0	-31.7	55.0



**TABLE 1**  
**WELL CONSTRUCTION DETAILS**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Well ID	Northing	Easting	Aquifer Group	TOC Elev. (famsl)	Ground Elev. (famsl)	Boring Term. (ft. bgs)	Well Term. (ft. bgs)	Screened Int. (ft. bgs)	Depth TOS (ft. bgs)	TOS Elev. (famsl)	Depth BOS (ft. bgs)
MW-48S	424383.3	870157.6	Upper	11.04	8.8	25.0	25.0	10-25	10.0	-1.2	25.0
MW-48I	424390.9	870164.9	Upper	10.94	8.7	55.0	55.0	40-55	40.0	-31.3	55.0
MW-48D	424392.8	870154.6	Upper	10.99	9.0	100.0	91.0	81-91	81.0	-72.0	91.0
MW-49S	424230.9	870730.9	Upper	10.00	10.1	20.0	20.0	10-20	10.0	0.0	20.0
MW-49I	424229.7	870726.5	Upper	9.85	10.1	67.0	67.0	57-67	57.0	-46.9	67.0
MW-49D	424232.1	870735.1	Upper	9.79	10.1	103.0	96.0	86-96	86.0	-75.9	96.0
MW-50S	422953.1	872360.3	Upper	7.82	7.8	20.0	20.0	10-20	10.0	-2.2	20.0
MW-50I	422952.7	872366.4	Upper	7.88	7.9	46.0	46.0	36-46	36.0	-28.1	46.0
MW-50D	422952.2	872372.5	Upper	8.01	8.1	100.0	88.0	78-88	78.0	-69.9	88.0
MW-51S	423424.6	872733.4	Upper	6.71	7.0	20.0	20.0	10-20	10.0	-3.0	20.0
MW-51I	423430.1	872734.5	Upper	6.75	7.1	50.0	50.0	40-50	40.0	-32.9	50.0
MW-51D	423435.3	872735.5	Upper	6.68	7.1	110.0	86.0	76-86	76.0	-68.9	86.0
MW-52S	425611.9	872662.5	Upper	7.26	7.6	20.0	20.0	10-20	10.0	-2.4	20.0
MW-52I	425604.1	872662.9	Upper	7.33	7.5	50.0	50.0	40-50	40.0	-32.5	50.0
MW-52D	425608.4	872668.8	Upper	7.41	7.5	110.0	89.0	79-89	79.0	-71.5	89.0
MW-53S	424165.6	871731.4	Upper	10.01	7.0	21.0	21.0	6-21	6.0	1.0	21.0
MW-54S	424965.8	870896.4	Upper	11.16	8.8	25.0	25.0	10-25	10.0	-1.2	25.0
MW-54I	424962.3	870897.8	Upper	11.09	8.8	55.0	55.0	40-55	40.0	-31.2	55.0
MW-54D	424957.9	870899.8	Upper	11.11	8.8	100.0	90.0	80-90	80.0	-71.2	90.0
MW-55S*	873353.4	424924.4	Upper	8.07	5.28	25.0	25.0	10-25	10.0	-4.7	25.0
MW-55I*	873363.2	424922.8	Upper	7.92	5.07	55.0	55.0	40-55	40.0	-34.9	55.0
MW-55D*	873358.3	424923.6	Upper	7.81	5.31	85.0	85.0	75-85	75.0	-69.7	85.0
MW-56D	425400.1	873176.7	Upper	5.58	5.90	105.0	103.0	93-103	93.0	-87.1	103.0
MW-57D	425877.6	872717.1	Upper	6.90	7.30	95.0	92.0	82-92	82.0	-74.7	92.0
POC-1S	425678.7	871047.2	Upper	15.70	13.7	22.0	20.0	10.0 - 20.0	10.0	3.7	20.0
POC-1D	425687.8	871049.2	Upper	14.74	13.1	107.0	103.0	93 - 103	93.0	-79.9	103.0
POC-2S	425519.6	871187.1	Upper	18.13	16.6	25.5	23.0	13 - 23	13.0	3.6	23.0
POC-2D	425529.0	871189.3	Upper	18.54	16.4	103.6	103.6	93.6 - 103.6	93.6	-77.3	103.6
POC-3S	425382.1	871181.3	Upper	10.75	8.8	17.0	13.5	3.0 - 13.5	3.0	5.8	13.5
POC-3D	425392.1	871180.7	Upper	11.57	9.7	97.0	91.6	81.8 - 91.6	81.8	-72.2	91.6
UP-1S	426133.2	869994.0	Upper	15.23	12.9	15.5	14.0	2.5 - 14	2.5	10.4	14.0
UP-1D-R	426123.3	869993.2	Upper	15.00	12.9	95.5	92.0	82 - 92	82.0	-69.1	92.0

Notes:

\* Wells were surveyed on 12/17/13.

ft. bgs - feet below ground surface

famsl - feet above mean sea level

TOC - top of casing

TOS - top of screen

BOS - bottom of screen



**TABLE 2**  
**DEPTHS AND ELEVATIONS OF CONFINING UNIT**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Well ID	Aquifer Group	Boring Term. (ft. bgs)	Top of Casing Elev. (famsl)	Ground Elev. (famsl)	Depth toTop of Confining Unit (ft.)	Bottom of Confining Unit (ft. bgs)	Top of Confining Unit (famsl)	Bottom of Confining Unit (famsl)	Thickness of Confining Unit (ft)
MW-9D	Deep Upper	84.0	8.82	5.5	83	NE	-78	NE	--
MW-10D	Deep Upper	95.5	9.31	6.0	95	NE	-89	NE	--
MW-11DD	Deep Upper	95.0	8.23	5.2	91	NE	-86	NE	--
MW-12D	Deep Upper	104.5	10.72	7.5	104	NE	-97	NE	--
MW-13	Lower	150.0	10.64	7.7	85	100	-77	-92	15.0
MW-14D	Deep Upper	87.0	7.64	7.3	85	NE	-78	NE	--
MW-15D	Deep Upper	90.0	9.98	7.4	NE	NE	NE (-82)	NE	--
MW-16D	Deep Upper	82.0	13.60	11.1	72	NE	-61	NE	--
MW-17D	Deep Upper	85.0	14.49	11.8	NE	NE	NE (-73)	NE	--
MW-18	Lower	132.0	20.32	17.6	100	115	-82	-97	15.0
MW-19D	Deep Upper	83.0	20.90	17.9	NE	NE	NE (-65)	NE	--
MW-20D	Deep Upper	90.0	10.30	7.7	85	NE	-77	NE	--
MW-25D	Deep Upper	82.0	10.27	11.2	85	90	-74	NE	--
MW-26D	Deep Upper	90.0	7.11	7.4	NE	NE	NE (-83)	NE	--
MW-27D	Deep Upper	90.5	14.78	12.6	NE	NE	NE (-78)	NE	--
MW-28D	Deep Upper	91.0	8.65	5.9	NE	91	NE (-85)	NE	--
MW-29D	Deep Upper	89.8	9.12	6.4	NE	NE	NE (-84)	NE	--
MW-30D	Deep Upper	90.5	12.38	9.9	72	87	-62	-77	15.0
MW-31D	Deep Upper	90.5	16.30	14.0	NE	NE	NE (-77)	NE	--
MW-32D/MW-41I	Deep Upper	100.0	12.50	10.1	80	NE	-70	NE	--
MW-33	Lower	132.0	9.17	6.6	83	109	-76	-102	26.0
MW-34	Lower	136.0	13.95	11.4	95	109	-84	-98	14.0
MW-35D	Deep Upper	91.0	10.18	7.8	87	NE	-79	NE	--
MW-36D	Deep Upper	91.0	15.74	13.2	NE	NE	NE (-78)	NE	--
MW-37D	Lower	150.0	16.81	14.4	75	100	-61	-86	25.0
MW-38D	Deep Upper	100.0	8.69	5.8	87	95	-81	-89	8.0
MW-39D	Deep Upper	150.0	9.79	6.9	87	95	-80	-88	8.0
MW-40D	Lower	150.0	14.11	11.7	80	100	-68	-88	20.0
MW-42D	Deep Upper	105.0	11.54	8.7	99	NE	-90	NE	--
MW-43D	Deep Upper	107.0	9.96	7.1	100	NE	-93	NE	--
MW-44D	Lower	150.0	11.79	9.0	100	120	-91	-111	20.0
MW-48D	Deep Upper	100.0	10.99	9.0	91	NE	-82	NE	--
MW-49D	Deep Upper	103.0	9.79	10.1	97	NE	-87	NE	--
MW-50D	Deep Upper	100.0	8.01	8.1	90	NE	-82	NE	--
MW-51D	Deep Upper	110.0	6.68	7.1	94	NE	-87	NE	--
MW-52D	Deep Upper	110.0	7.41	7.5	90	100	-83	-93	10.0
MW-54D	Deep Upper	100.0	11.11	8.8	NE	NE	NE (-91)	NE	--
MW-55D (HP-60)	Deep Upper	85.0	7.81	5.3	96	NE	-91	NE	--
MW-56D	Deep Upper	105.0	5.58	5.9	103	NE	-97	NE	--
MW-57D	Deep Upper	95.0	6.9	7.3	92	NE	-85	NE	--
POC-1D	Deep Upper	107.0	14.74	13.1	104	NE	-91	NE	--
POC-2D / EB-1	Deep Upper	103.6	18.54	16.4	111	126	-95	-110	15.0
POC-3D	Deep Upper	97.0	11.57	9.7	NE	NE	NE (-82)	NE	--
UP-1D-R	Deep Upper	95.5	15.00	12.9	74	79	-61	-66	5.0

Notes:

NE - not encountered  
NE (-82) - not encountered; elevation of bottom of boring  
ft. bgs - feet below ground surface  
famsl - feet above mean sea level  
TOC - top of casing  
-- - information not available



**TABLE 3**  
**HYDRAULIC CONDUCTIVITY DATA**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Well ID	Screened Interval (ft bgs)	Hydraulic Conductivity <sup>1</sup>		Average Hydraulic Conductivity	
		cm/sec	ft/day	cm/sec	ft/day
UP-1S <sup>2</sup>	4-10	2.3E-03	6.5	2.3E-03	6.4
POC-1S <sup>2</sup>	12-22	1.8E-03	5.1		
POC-2S <sup>2</sup>	15-25	1.5E-03	4.2		
POC-3S <sup>2</sup>	5-10	1.2E-03	3.4		
MW-20I	35-45	9.5E-03	27.0		
MW-11D	45-51	3.0E-03	8.4		
MW-36D	81-91	2.9E-04	0.8		
POC-1D <sup>2</sup>	97-107	6.1E-04	1.7		
POC-2D <sup>2</sup>	97-107	1.6E-03	4.5		
POC-3D <sup>2</sup>	87-97	1.4E-03	4.0		
UP-1D <sup>2</sup>	85-95	5.5E-04	1.6		
UP-1D-R	86-96	3.5E-03	9.8		

<sup>1</sup> Based on individual well aquifer test.

<sup>2</sup> Newfields, 2001.



**TABLE 4**  
**CONFINING UNIT PROPERTIES**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Sample ID	Sample Type	Depth (feet)	Core Recovery (feet)	Moisture Content (%)	Dry Bulk (g/cc)	Porosity Total (%)	Hydraulic Conductivity (cm/s)	Fraction Organic Carbon (g/g)
MW-43	Shelby	105 to 107	2.5	12.9	1.72	34.9	9.19E-06	NA
MW-49	Shelby	101 to 103	2.5	18.0	1.71	36.7	9.51E-07	NA
MW-51S	Composite	10 to 20	10	NA	NA	NA	NA	6.80E-03
MW-52I	Composite	36 to 46	10	NA	NA	NA	NA	2.15E-03
MW-52D	Composite	76 to 86	10	NA	NA	NA	NA	5.40E-04

**Notes:**

NA = Not Analyzed

g/g = gram per gram

cm/s = centimeters per second

g/cc = grams per cubic centimeter



**TABLE 5**  
**GROUNDWATER ELEVATION DATA - UPPER UNIT MONITORING WELLS**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

<b>Well ID</b>	<b>Date</b>	<b>Time</b>	<b>TOC Elevation (ft)</b>	<b>Depth to Water (ft)</b>	<b>Water Elevation (ft)</b>
UP-1S	6/9/2014	13:45	15.23	4.89	10.34
UP-1D-R	6/9/2014	13:45	15.00	9.11	5.89
POC-1S	6/9/2014	14:00	15.70	8.36	7.34
POC-1D	6/9/2014	13:58	14.74	9.86	4.88
POC-2S	6/9/2014	14:36	18.13	11.25	6.88
POC-2D	6/9/2014	14:34	18.54	13.95	4.59
POC-3S	6/9/2014	14:26	10.75	3.98	6.77
POC-3D	6/9/2014	14:28	11.57	7.02	4.55
MW-1S	6/9/2014	15:44	9.21	4.51	4.70
MW-1D	6/9/2014	15:42	9.50	4.65	4.85
MW-2S	6/9/2014	15:48	8.99	4.47	4.52
MW-2D	6/9/2014	15:46	9.05	4.49	4.56
MW-3S	6/9/2014	14:02	10.84	4.27	6.57
MW-3D	6/9/2014	14:04	10.88	4.35	6.53
MW-4	6/9/2014	15:38	9.24	4.15	5.09
MW-5S	6/9/2014	15:34	9.31	4.95	4.36
MW-5I	6/9/2014	15:36	9.10	4.98	4.12
MW-6	6/9/2014	15:32	8.72	4.65	4.07
MW-7	6/9/2014	15:40	9.06	3.72	5.34
MW-8	6/9/2014	15:22	9.97	5.92	4.05
MW-9S	6/9/2014	16:02	8.42	5.47	2.95
MW-9D	6/9/2014	16:04	8.82	4.98	3.84
MW-10S	6/9/2014	15:58	8.87	5.69	3.18
MW-10D	6/9/2014	16:00	9.31	6.17	3.14
MW-11S	6/9/2014	15:54	7.82	5.15	2.67
MW-11D	6/9/2014	15:56	8.26	4.69	3.57
MW-12S	6/9/2014	15:52	10.18	5.39	4.79
MW-12D	6/9/2014	15:50	10.72	7.41	3.31
MW-14S	6/9/2014	16:12	7.85	2.09	5.76
MW-14D	6/9/2014	16:10	7.64	2.81	4.83
MW-15S	6/9/2014	15:18	10.18	4.87	5.31
MW-15D	6/9/2014	15:20	9.98	5.42	4.56
MW-16S	6/9/2014	11:12	13.80	7.55	6.25
MW-16D	6/9/2014	11:14	13.60	8.23	5.37
MW-17S	6/9/2014	11:51	14.38	5.18	9.20
MW-17D	6/9/2014	11:49	14.49	8.26	6.23
MW-19S	6/9/2014	11:43	20.66	9.50	11.16
MW-19I	6/9/2014	11:41	20.95	9.87	11.08
MW-19D	6/9/2014	11:39	20.99	14.21	6.78
MW-20S	6/9/2014	17:09	10.57	6.27	4.30
MW-20I	6/9/2014	17:11	10.54	7.10	3.44
MW-20D	6/9/2014	17:13	9.99	6.55	3.44
MW-21	6/9/2014	14:51	9.81	1.73	8.08



**TABLE 5**  
**GROUNDWATER ELEVATION DATA - UPPER UNIT MONITORING WELLS**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

<b>Well ID</b>	<b>Date</b>	<b>Time</b>	<b>TOC Elevation (ft)</b>	<b>Depth to Water (ft)</b>	<b>Water Elevation (ft)</b>
MW-22	6/9/2014	14:49	9.66	1.58	8.08
MW-23	6/9/2014	14:47	9.85	1.54	8.31
MW-24	6/9/2014	14:45	9.71	1.73	7.98
MW-25S	6/9/2014	11:02	10.40	4.86	5.54
MW-25D	6/9/2014	11:00	10.30	5.91	4.39
MW-26S	6/9/2014	16:55	7.25	3.31	3.94
MW-26D	6/9/2014	16:53	7.11	3.49	3.62
MW-27D	6/9/2014	11:17	14.78	10.41	4.37
MW-28D	6/9/2014	16:42	8.65	5.09	3.56
MW-29I	6/9/2014	17:19	8.74	5.01	3.73
MW-29D	6/9/2014	17:17	9.12	5.56	3.56
MW-30S	6/9/2014	13:54	12.26	4.25	8.01
MW-30D	6/9/2014	13:52	12.38	7.05	5.33
MW-31D	6/9/2014	13:40	16.30	10.39	5.91
MW-32D	6/9/2014	14:07	12.50	8.28	4.22
MW-35D	6/9/2014	16:14	10.18	6.19	3.99
MW-36D	6/9/2014	11:20	15.74	10.14	5.60
MW-37S	6/9/2014	11:24	17.15	5.50	11.65
MW-37I	6/9/2014	11:26	16.91	9.46	7.45
MW-38S	6/9/2014	17:25	8.64	5.59	3.05
MW-38I	6/9/2014	17:23	8.75	5.15	3.60
MW-38D	6/9/2014	17:21	8.69	5.13	3.56
MW-39S	6/9/2014	17:03	9.38	8.09	1.29
MW-39I	6/9/2014	17:05	9.51	6.25	3.26
MW-39D	6/9/2014	17:07	9.79	6.72	3.07
MW-40S	6/9/2014	12:00	14.15	7.18	6.97
MW-40I	6/9/2014	11:58	14.05	7.32	6.73
MW-41I	6/9/2014	14:09	12.36	8.31	4.05
MW-42S	6/9/2014	14:38	11.52	4.15	7.37
MW-42I	6/9/2014	14:36	11.43	5.38	6.05
MW-42D	6/9/2014	14:40	11.54	6.05	5.49
MW-43S	6/9/2014	15:01	9.94	4.11	5.83
MW-43I	6/9/2014	14:59	9.93	5.51	4.42
MW-43D	6/9/2014	14:57	9.96	5.59	4.37
MW-44S	6/9/2014	15:30	11.75	7.15	4.60
MW-44I	6/9/2014	15:26	11.77	7.65	4.12
MW-44ID	6/9/2014	15:28	11.77	7.59	4.18
MW-45I	6/9/2014	11:09	13.74	7.28	6.46
MW-46I	6/9/2014	10:58	10.92	6.11	4.81
MW-48S	6/9/2014	13:31	11.04	3.72	7.32
MW-48I	6/9/2014	13:29	10.94	4.31	6.63
MW-48D	6/9/2014	13:37	10.99	5.00	5.99
MW-49S	6/9/2014	14:56	10.00	2.29	7.71
MW-49I	6/9/2014	14:54	9.85	4.35	5.50
MW-49D	6/9/2014	14:52	9.79	4.49	5.30



**TABLE 5**  
**GROUNDWATER ELEVATION DATA - UPPER UNIT MONITORING WELLS**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Well ID	Date	Time	TOC Elevation (ft)	Depth to Water (ft)	Water Elevation (ft)
MW-50S	6/9/2014	16:16	7.82	4.35	3.47
MW-50I	6/9/2014	16:18	7.88	5.19	2.69
MW-50D	6/9/2014	16:20	8.01	4.92	3.09
MW-51S	6/9/2014	16:36	6.71	3.28	3.43
MW-51I	6/9/2014	16:38	6.75	3.86	2.89
MW-51D	6/9/2014	16:40	6.68	3.75	2.93
MW-52S	6/9/2014	16:49	7.26	3.00	4.26
MW-52I	6/9/2014	16:47	7.33	3.67	3.66
MW-52D	6/9/2014	16:45	7.41	3.75	3.66
MW-53S	6/9/2014	16:06	10.01	5.36	4.65
MW-54S	6/9/2014	14:35	11.16	5.72	5.44
MW-54I	6/9/2014	14:37	11.09	5.85	5.24
MW-54D	6/9/2014	14:39	11.11	6.12	4.99
MW-55S	6/9/2014	17:31	8.07	6.26	1.81
MW-55I	6/9/2014	17:29	7.92	4.34	3.58
MW-55D	6/9/2014	17:27	7.81	4.42	3.39

Notes:

TOC: Top of Casing

ft: Feet

Tides: Frederick River Bridge, GA StationId: 8677045 (+31.1683 -81.4133)

Date	Low	High
6/9/2014	0:19	5:59
	12:23	18:39



**TABLE 6**  
**GROUNDWATER ELEVATION DATA - LOWER UNIT MONITORING WELLS**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

<b>Well ID</b>	<b>Date</b>	<b>Time</b>	<b>TOC Elevation (ft)</b>	<b>Depth to Water (ft)</b>	<b>Water Elevation (ft)</b>
MW-13	6/9/2014	17:15	10.64	7.02	3.62
MW-18	6/9/2014	11:34	20.32	17.52	2.80
MW-33	6/9/2014	16:08	9.17	5.06	4.11
MW-34	6/9/2014	14:23	13.95	9.45	4.50
MW-37D	6/9/2014	11:28	16.81	12.32	4.49
MW-40D	6/9/2014	11:56	14.11	9.74	4.37
MW-44D	6/9/2014	15:24	11.79	7.46	4.33

Notes:

TOC: Top of Casing

ft: Feet

Tides: Frederick River Bridge, GA StationId: 8677045 (+31.1683 -81.4133)

<b>Date</b>	<b>Low</b>	<b>High</b>
6/9/2014	0:19	5:59
	12:23	18:39



**TABLE 7**  
**TIDAL INFLUENCE**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

<b>Tidal Metric and Reference Point</b>	<b>MW-20I 2/10-11/10</b>	<b>MW-20D 2/10-11/10</b>	<b>MW-44I 7/21-28/10</b>	<b>MW-44ID 7/21-28/10</b>	<b>MW-20D 11/15-21/12</b>	<b>MW-39S 11/15-21/12</b>	<b>MW-39I 11/15-21/12</b>	<b>MW-39D 11/15-21/12</b>
Tidal Efficiency, Frederick River Bridge	10.0%	10.5%	2.8%	2.8%	11.9%	22.4%	27.8%	26.1%
Lag Time, Frederick River Bridge	0:48	0:39	1:33	1:25	1:05	2:04	0:15	0:19
Fluctuation Magnitude (ft)	0.59	0.63	0.18	0.19	0.94	1.68	2.14	2.00
Distance from MW-54 (ft)*	2020	2020	850	850	220	2800	2800	2800

**Notes:**

-Tides were referenced from Frederick River Bridge, GA - Station Id: 8677045 (+31.1683 -81.4133)

-The tidal data used in these estimates was obtained from [www.tidesandcurrents.noaa.gov](http://www.tidesandcurrents.noaa.gov).

\* MW-54D is approximately the point of zero tidal influence at the site and is used as the reference point for tidal influence projections.



**TABLE 8**  
**GROUNDWATER PHASE III RFI SAMPLING PROGRAM**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Well ID	Parameters Analyzed
MW-1S	VOCs
MW-1D	VOCs
MW-2S	VOCs
MW-2D	VOCs
MW-3S	VOCs, toxaphene
MW-3D	VOCs, toxaphene
MW-4	VOCs
MW-5S	VOCs
MW-5I	VOCs, toxaphene
MW-6	VOCs
MW-7	VOCs
MW-8	VOCs
MW-9S	VOCs, toxaphene
MW-9D	VOCs, toxaphene
MW-10S	VOCs, toxaphene
MW-10D	VOCs, toxaphene
MW-11S	VOCs, toxaphene
MW-11D	VOCs, toxaphene
MW-11DD	VOCs, SVOCs, metals, toxaphene
MW-12S	VOCs, toxaphene
MW-12D	VOCs, toxaphene
MW-13	VOCs
MW-14S	VOCs
MW-14D	VOCs
MW-15S	VOCs
MW-15D	VOCs
MW-16S	VOCs
MW-16D	VOCs
MW-17S	VOCs
MW-17D	VOCs
MW-18	VOCs
MW-19S	VOCs
MW-19I	VOCs
MW-19D	VOCs
MW-20S	VOCs, toxaphene
MW-20I	VOCs, toxaphene
MW-20D	VOCs, toxaphene
MW-21	VOCs, toxaphene
MW-22	VOCs, toxaphene
MW-23	VOCs, toxaphene
MW-24	VOCs, toxaphene
MW-25S	VOCs, toxaphene
MW-25D	VOCs, toxaphene
MW-26S	VOCs, toxaphene
MW-26D	VOCs, toxaphene
MW-27D	VOCs, toxaphene
MW-28D	VOCs
MW-29I	VOCs, toxaphene
MW-29D	VOCs, toxaphene
MW-30S	VOCs
MW-30D	VOCs
MW-31D	VOCs
MW-32D	VOCs, toxaphene
MW-33	VOCs, toxaphene
MW-34	VOCs, toxaphene
MW-35D	VOCs, toxaphene
MW-36D	VOCs, toxaphene
MW-37S	VOCs, metals, toxaphene
MW-37I	VOCs, metals, toxaphene
MW-37D	VOCs
MW-38S	VOCs, metals, toxaphene
MW-38I	VOCs, metals, toxaphene
MW-38D	VOCs, metals, toxaphene
MW-39S	VOCs, metals
MW-39I	VOCs, metals
MW-39D	VOCs, metals
MW-40S	VOCs, metals, toxaphene
MW-40I	VOCs, metals, toxaphene
MW-40D	VOCs, metals, toxaphene
MW-41I	Metals



**TABLE 8**  
**GROUNDWATER PHASE III RFI SAMPLING PROGRAM**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Well ID	Parameters Analyzed
MW-42I	VOCs, metals, toxaphene
MW-42D	VOCs, metals, toxaphene
MW-43S	VOCs, metals, toxaphene
MW-43I	VOCs, metals, toxaphene
MW-43D	VOCs, metals, toxaphene
MW-44S	VOCs, metals, toxaphene
MW-44I	VOCs, metals, toxaphene
MW-44-ID	VOCs, metals, toxaphene
MW-44D	VOCs, metals, toxaphene
MW-45I	VOCs, toxaphene
MW-46I	VOCs, toxaphene
MW-48D	VOCs
MW-49S	VOCs
MW-49I	VOCs
MW-49D	VOCs
MW-50S	VOCs, metals
MW-50I	VOCs, metals
MW-50D	VOCs, metals
MW-51S	VOCs, metals
MW-51I	VOCs, metals
MW-51D	VOCs, metals
MW-52S	VOCs, metals, toxaphene
MW-52I	VOCs, metals, toxaphene
MW-52D	VOCs, metals, toxaphene
MW-53S	VOCs, toxaphene
MW-54S	VOCs, toxaphene
MW-54I	VOCs, toxaphene
MW-54D	VOCs, toxaphene
MW-55S	VOCs, SVOCs, metals, toxaphene
MW-55I	VOCs, SVOCs, metals, toxaphene
MW-55D	VOCs, SVOCs, metals, toxaphene
MW-56D	VOCs, SVOCs, metals, toxaphene
MW-57D	VOCs, SVOCs, metals, toxaphene
HP-111-50A	VOCs, metals, toxaphene
HP-111-50B	VOCs, metals, toxaphene
HP-111-50C	VOCs, metals, toxaphene
HP-111-51A	VOCs, metals, toxaphene
HP-111-52A	VOCs, metals, toxaphene
HP-111-52B	VOCs, metals, toxaphene
HP-111-53A	VOCs, metals, toxaphene
HP-111-53B	VOCs, metals, toxaphene
HP-111-54A	VOCs, metals
HP-111-54B	VOCs, metals
HP-111-54C	VOCs, metals
HP-111-55A	VOCs
HP-111-55B	VOCs
HP-111-55C	VOCs
HP-111-56A	VOCs
HP-111-57A	VOCs, metals, toxaphene
HP-111-57B	VOCs, metals, toxaphene
HP-111-57C	VOCs, metals, toxaphene
HP-111-57-TW	VOCs
HP-111-58A	VOCs
HP-111-58B	VOCs
HP-111-58C	VOCs
HP-111-59C	VOCs, toxaphene
HP-111-60A	VOCs, toxaphene
HP-111-60B	VOCs, toxaphene
HP-111-60C	VOCs, toxaphene

Notes:

- Monitoring wells MW-42S, MW-48S and MW-48I contain product; therefore, groundwater samples were not obtained from these wells.



**TABLE 9**  
**CONSTITUENTS IN NAPL SOURCE AREAS**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Sample Name/Sample Date	MW-42S (5/16/2012)	MW-42I (5/16/2012)	Test Pit 2 LNAPL (Dubignon St.)* (10/15/2009)	Dubignon St. Sluice Pit #2B (4/14/2010)	Dubignon St. Sump (1/15/2012)
Sample Type	NAPL	Aqueous	NAPL	Aqueous	NAPL
Chemical Name	ug/kg	ug/l	ug/kg	ug/l	ug/kg
Acetone	<21,000	<b>3,100</b>	<50,000,000	<5,000	<44,000,000
Benzene	5,500	<b>2,800</b>	9,300,000	<b>1,600</b>	<4,400,000
Chlorobenzene	2,400	<50	<5,000,000	<200	<4,400,000
Carbon Disulfide	<2,100	<b>520</b>	<5,000,000	<400	<4,400,000
Carbon Tetrachloride	<2,100	<b>8,400</b>	<5,000,000	<200	<4,400,000
Chloroform	36,000	<b>4,600</b>	<5,000,000	<200	<4,400,000
MIBK	<11,000	<b>760</b>	95,000,000	<b>36,000</b>	66,000,000
Toluene	<2,100	<b>120</b>	5,700,000	<b>500</b>	<4,400,000
Xylenes	<4,200	<b>190</b>	<10,000,000	<400	<8,800,000
Toxaphene, Technical	1,200	<48	--	--	--
p-Cymene	--	--	510,000,000	19,000	54,000,000

**Notes:**

NAPL - Non-Aqueous Phase Liquid

Highlighted values indicated detections in NAPL samples

Bolded values exceed groundwater protection standards established for the facility

\* Tentatively identified compounds (TICs) also included:

- 1) alpha-pinene (60,000 mg/kg, or 6%)
- 2) beta-pinene (20,000 mg/kg, or 2%)
- 3) camphene (19,000 mg/kg, or 1.9 %)
- 4) camphor (22,000 mg/kg, or 2.2%)
- 5) 4-propylphenol (37,000 mg/kg, or 3.7%)

< - Not detected at or above indicated laboratory detection limit

-- Not analyzed



**TABLE 10**  
**GROUNDWATER FIELD PARAMETERS**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Well ID	Sampling Date	pH (standard units)	Temperature (Deg C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)
POC-1S	6/10/2014	5.88	28.41	1.99	0.89	6.9	-48
POC-1D	6/10/2014	7.07	28.62	8.24	0.96	5.1	-90
POC-2S	6/12/2014	5.44	28.24	2.03	0.03	6.9	-2
POC-2D	6/10/2014	6.91	29.59	10.1	1.3	15.2	5
POC-3S	6/12/2014	6.54	24.94	0.446	1.16	14.2	-103
POC-3S	7/16/2014	6.38	27.41	1.38	2.5	0.5	-113
POC-3D	6/12/2014	6.67	25.16	9.36	0.09	12.7	-61
POC-3D	7/16/2014	6.98	25.46	9.77	0.81	6.4	-47
MW-1S	5/28/2014	6.58	24.79	3.28	0.7	5.4	-87
MW-1D	5/28/2014	6.51	25.92	7.28	0.58	2.6	-67
MW-2S	5/28/2014	6.48	26.32	4.94	1.1	2.7	-71
MW-2D	6/17/2014	6.99	24.81	21.2	0.02	51.1	-76
MW-3S	5/28/2014	6.42	23.83	0.35	1.65	16.7	-67
MW-3D	5/28/2014	6.57	23.92	6.34	1.17	0.9	-101
MW-5I	5/28/2014	7.17	27.29	5.34	0.85	6.6	-120
MW-7	5/27/2014	6.87	24.26	3.23	0.91	20.2	-151
MW-9D	6/10/2014	7.43	27.08	2.57	1.3	1.3	-113
MW-10D	6/12/2014	6.14	25.25	16.2	1.42	5.2	-74
MW-11D	6/11/2014	7.50	22.39	2.07	7.2	9	-115
MW-11DD	7/16/2014	6.57	25.84	15.3	0.69	3.1	-171
MW-12D	6/11/2014	6.89	25.85	16.9	6.42	38.7	-13
MW-19D	6/17/2014	12.44	25.24	1.56	2.88	3.4	-62
MW-20D	6/10/2014	6.11	24.34	7.56	0.82	13	-49
MW-26D	6/11/2014	7.36	24.80	7.94	0.31	20.2	-114
MW-28D	6/12/2014	6.16	24.70	5.01	0.39	7.4	-69
MW-29D	6/11/2014	6.91	22.39	6.36	2.42	17.3	-97
MW-32D	5/27/2014	7.02	24.15	10.4	1.57	0.4	-124
MW-34	5/28/2014	8.01	76.08	0.491	1.65	0.2	-151
MW-38D	6/11/2014	6.54	22.37	6.18	0.4	35.2	-64
MW-41I	5/28/2014	6.66	25.34	31.8	0.59	37.2	-113
MW-44I	5/28/2014	6.64	26.14	2.16	0.57	45	-94
MW-52D	6/11/2014	7.43	23.84	8.71	6.19	12.2	-112
MW-55S	6/17/2014	7.42	24.47	33.5	3.4	56.6	-336
MW-55I	6/17/2014	7.31	27.81	0.601	0	234	-130
MW-55D	6/10/2014	6.27	23.49	8	0.82	1.75	-48
MW-56D	7/16/2014	7.08	24.07	14.6	0.83	1.4	-152
MW-57D	7/16/2014	7.82	24.30	8.36	1.09	5.9	-209

**Notes:**

The field measurements reported above are from the final volume of sample removed from the well.

Deg C - degrees Celsius

mg/L - milligrams per liter

mS/cm - millisiemens (uS) per centimeter

NTU - nephelometric turbidity units

mV - millivolts



TABLE 11  
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA

Chemical Name:		Acetone (µg/L)	Benzene (µg/L)	2-Butanone (MEK) (µg/L)	Carbon disulfide (µg/L)	Carbon tetrachloride (µg/L)	Chloro- benzene (µg/L)	Chloroform (µg/L)	cis-1,2- Dichloro- ethene (µg/L)	1,1- Dichloro- ethane (µg/L)	1,1-Dichloro- ethylene (µg/L)	1,2,3- Trichloro- propane (µg/L)	1,2,4-Trichloro- benzene (µg/L)	1,2-Dichloro- benzene (µg/L)	1,2-Dichloro- propane (µg/L)	1,4-Dichloro- benzene (µg/L)	Ethylbenzene (µg/L)	Methyl Isobutyl Ketone (MIBK) (µg/L)	Methylene chloride (µg/L)	p-Cymene (p-Isopropyl- toluene) (µg/L)	Tetra- chloroethene (µg/L)	Toluene (µg/L)	Vinyl chloride (µg/L)	Xylene (Total) (µg/L)	
Well I.D.	Date																								
POC-1S	6/10/2014	64	48	<2.0	<1.2	<1.0	120	<0.28	4.0	<0.50	0.33 J	<0.82	1.1 J	13	0.83 J	13	16	<2.0	<2.0	4.4	<0.30	28	14	51	
POC-1S (DUP-1)	6/10/2014	49 J	53	<2.0	<1.2	<1.0	140	<0.28	3.3	<0.50	0.31 J	0.83 J	0.91 J	14	0.86 J	14	18	<2.0	<2.0	4.9	<0.30	30	15	56	
POC-1D	6/10/2014	<5.0	<0.25	<1.0	<0.60	<0.50	1.3	<0.14	<0.15	<0.25	<0.11	<0.41	<0.25	<0.21	<0.13	<0.28	0.34 J	<1.0	<1.0	0.15 J	<0.15	<0.33	<0.18	1.7 J	
POC-2S	6/12/2014	<1,300	<63	<250	<150	<130	300	620	<38	<63	<28	<100	<63	<53	<33	<70	6,300	<250	<250	58 J	<38	180 J	<45	26,000	
POC-2D	6/10/2014	8.1 J	2.9	<1.0	<0.60	<0.50	1.9	<0.14	<0.15	0.40 J	0.11 J	<0.41	<0.25	<0.21	<0.13	<0.28	0.14 J	<1.0	<1.0	<0.13	<0.15	<0.33	<0.18	0.22 J	
POC-3S	6/12/2014	<5	0.71 J	<1	<0.6	<0.5	6.5	0.44 J	0.23 J	<0.25	0.23 J	<0.41	<0.55	<0.52	<0.13	<0.53	22	<1	<1	<0.13	<0.15	1.1	0.2 J	160	
POC-3D	6/12/2014	5.8 J	44	<1	<0.6	<0.5	34	<0.14	<0.15	<0.25	<0.11	<0.41	<0.56	<0.53	0.46 J	<0.54	0.24 J	<1	<1	<0.13	<0.15	0.87 J	2	1.7 J	
MW-1S	5/28/2014	13 J	22	<1.0	<0.60	<0.50	89	<0.14	<0.15	<0.25	<0.11	<0.41	<0.25	2.5	0.45 J	3.0	0.66 J	<1.0	<1.0	1.5	<0.15	3.0	<0.18	6.3	
MW-1D	5/28/2014	<10	200	<2.0	<1.2	1.0 J	390	0.43 J	0.32 J	0.62 J	0.29 J	<0.82	<0.50	10	2.7	12	28	<2.0	<2.0	14	<0.30	7.6	8.3	34	
MW-2S	5/28/2014	6.1 J	65	<1.0	<0.60	<0.50	170	<0.14	<0.15	0.26 J	<0.11	<0.41	<0.25	3.1	0.48 J	6.9	0.76 J	<1.0	<1.0	1.8	<0.15	0.85 J	<0.18	1.7 J	
MW-3S	5/28/2014	<5.0	<0.25	<1.0	<0.60	<0.50	0.32 J	<0.14	<0.15	<0.25	<0.11	<0.41	<0.25	<0.21	<0.13	<0.28	<0.11	<1.0	<1.0	<0.13	<0.15	<0.33	<0.18	<0.20	
MW-3D	5/28/2014	<5.0	61	<1.0	<0.60	<0.50	180	<0.14	0.49 J	<0.25	0.66 J	<0.41	<0.25	6.9	0.84 J	7.2	6.0	<1.0	<1.0	12	<0.15	12	4.9	17	
MW-5I	5/28/2014	<5.0	<0.25	<1.0	<0.60	<0.50	0.34 J	<0.14	<0.15	<0.25	<0.11	<0.41	<0.25	<0.21	<0.13	<0.28	<0.11	<1.0	<1.0	<0.13	<0.15	<0.33	<0.18	<0.20	
MW-7	5/27/2014	<5.0	8.2	<1.0	<0.60	<0.50	43	<0.14	<0.15	<0.25	<0.11	<0.41	<0.25	1.4	0.23 J	0.65 J	<0.11	<1.0	<1.0	0.32 J	<0.15	0.81 J	1.0	20	
MW-9D	6/10/2014	<25	310	<5.0	<3.0	<2.5	170	<0.70	<0.75	<1.3	<0.55	<2.1	<1.3	1.6 J	<0.65	3.0 J	0.96 J	<5.0	<5.0	<0.65	<0.75	1.7 J	<0.90	<1.0	
MW-10D	6/12/2014	<2,500	860	<500	<300	<250	2,200	53,000	<75	<130	<55	<210	<130	<110	<65	<140	<55	<500	6,900	570	<75	<170	<90	150 J	
MW-10D (DUP-2)	6/12/2014	<2,500	900	<500	<300	<250	2,300	57,000	<75	<130	<55	<210	<130	<110	<65	<140	<55	<500	7,100	620	<75	<170	<90	150 J	
MW-11D	6/11/2014	9.0 J	<0.25	<1.0	<0.60	<0.50	2.4	<0.14	<0.15	<0.25	<0.11	<0.41	<0.25	<0.21	<0.13	<0.28	<0.11	<1.0	<1.0	<0.13	<0.15	<0.33	0.30 J	<0.20	
MW-11DD	7/16/2014	<25	120	<5	<3	<2.5	180	540	1.1 J	<1.3	<0.55	<2.1	<1.3	2.6 J	<0.65	3.9 J	8.1	<5	200	7.9	<0.75	2.2 J	<0.9	32	
MW-12D	6/11/2014	<5.0	18	<1.0	<0.60	<0.50	6.2	<0.14	<0.15	<0.25	<0.11	<0.41	<0.25	<0.21	0.59 J	<0.28	0.29 J	<1.0	<1.0	<0.13	<0.15	0.87 J	1.1	1.1 J	
MW-20D	6/10/2014	<500	1,800	<100	<60	<50	2,600	<14	24 J	<25	<11	<41	<25	27 J	<13	48 J	30 J	<100	7,500	150	<15	110	31 J	59 J	
MW-26D	6/11/2014	<5.0	4.7	<1.0	<0.60	<0.50	1.9	<0.14	0.24 J	<0.25	<0.11	<0.41	<0.25	<0.21	0.25 J	<0.28	0.12 J	<1.0	<1.0	<0.13	<0.15	<0.33	<0.18	3.3	
MW-28D	6/12/2014	<50	540	<10	<6	<5	750	<1.4	<1.5	<2.5	<1.1	<4.1	<2.5	4.6 J	<1.3	8 J	3.6 J	<10	<10	<1.3	<1.5	4.8 J	4.5 J	16 J	
MW-29D	6/11/2014	<100	1,400	<20	<12	<10	690	<2.8	<3.0	<5.0	<2.2	<8.2	<5.0	7.8 J	<2.6	11 J	9.1 J	<20	<20	<2.6	<3.0	<6.6	<3.6	82	
MW-32D	5/27/2014	<5.0	4.7	<1.0	<0.60	<0.50	0.62 J	<0.14	0.22 J	<0.25	<0.11	<0.41	<0.25	<0.21	0.14 J	<0.28	<0.11	<1.0	<1.0	0.14 J	<0.15	<0.33	<0.18	<0.20	
MW-38D	6/11/2014	<50	850	<10	<6.0	<5.0	530	<1.4	2.1 J	<2.5	1.3 J	<4.1	<2.5	6.1 J	<1.3	10	41	<10	<10	3.5 J	<1.5	3.9 J	5.9 J	84	
MW-41I	5/28/2014	6.2 J	39	<1.0	<0.60	<0.50	6.7	<0.14	1.2	<0.25	<0.11	<0.41	<0.25	<0.21	1.4	<0.28	0.46 J	1.4 J	<1.0	<1.0	10	<0.15	2.0	<0.18	3.1
MW-52D	6/11/2014	<5.0	5.6	<1.0	<0.60	<0.50	1.5	<0.14	0.37 J	<0.25	<0.11	<0.41	<0.25	<0.21	0.34 J	<0.28	0.37 J	<1.0	<1.0	<0.13	<0.15	<0.33	<0.18	0.78 J	
MW-55D	6/10/2014	<100	1,300	<20	<12	<10	650	<2.8	8.6 J	<5.0	4.0 J	<8.2	<5.0	11 J	<2.6	16 J	95	<20	<20	20	<3.0	8.8 J	6.4 J	150	
MW-56D	7/16/2014	<5	41	<1	<0.6	<0.5	86	<0.14	0.93 J	<0.25	<0.11	<0.41	<0.25	0.75 J	1.2	0.99 J	2.9	<1	<1	0.42 J	<0.15	0.61 J	0.79 J	3.5	
MW-57D	7/16/2014	<5	3.1	<1	<0.6	<0.5	0.58 J	<0.14	0.37 J	<0.25	<0.11	<0.41	<0.25	<0.21	<0.13	<0.28	<0.11	<1	<1	<0.13	<0.15	<0.33	<0.18	<0.2	

Analytical Notes:

Results in bold exceed laboratory detection limits

ug/L - micrograms/liter

< - Not detected at or above indicated laboratory detection limit

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Groundwater Protection Standards are background for all volatile organic compounds.



TABLE 12  
GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS, PESTICIDES AND FORMALDEHYDE  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA

Chemical Name:		Acetophenone (µg/L)	Benzo(g,h,i) perylene (µg/L)	bis(2-Ethylhexyl) phthalate (µg/L)	Dibenzo(a,h) anthracene (µg/L)	Indeno (1,2,3- cd) pyrene (µg/L)	3 & 4 Methylphenol (m-p-Cresol) (µg/L)	Naphthalene (µg/L)	Phenol (µg/L)	Aldrin (µg/L)	alpha-BHC (µg/L)	delta-BHC (µg/L)	gamma-BHC (Lindane) (µg/L)	Heptachlor (µg/L)	Technical Toxaphene (µg/L)	Total Toxaphene (Chlorinated Camphenes) (µg/L)	Formaldehyde (µg/L)
Well I.D.	Date																
POC-1S	6/10/2014	<1.9	<2.2*	NS	<1.8*	<1.9*	<1.4	<1.3	<1.6	NS	<0.021	<0.021	<0.018	<0.022	<0.49	26	21 J
POC-1S (DUP-1)	6/10/2014	<1.9	<2.1*	NS	<1.8*	<1.9*	<1.4	<1.3	<1.6	NS	<0.024	<0.024	<0.021	<0.025	<0.56	20	23 J
POC-1D	6/10/2014	<1.9	<2.1*	NS	<1.8*	<1.9*	<1.4	<1.2	<1.6	NS	<0.023	<0.023	<0.020	<0.024	<0.54	0.67 Jp	<5.0
POC-2S	6/12/2014	<2	<2.2	NS	<1.9	<2	<1.4	<1.3	<1.7	NS	14 E	3.8 Ep	7.2 E	<0.025	420 Ep	810 E	7.5 J
POC-2D	6/10/2014	<1.9	<2.1*	NS	<1.8*	<1.9*	<1.3	<1.2	<1.6	NS	<0.024	<0.024	<0.020	<0.025	<0.55	0.89 J	<5.0
POC-3S	6/12/2014	0.89 J	<0.86	<1.6	<0.99	<0.99	<1.3	<0.69	<0.82	0.15 p	0.099	<0.023	<0.02	<0.024	9.7	14	<5
POC-3S	7/16/2014	6.4 J*	<1.9*	<2.3	<1.6*	<1.7*	<1.3*	1.8 J*	<1.5*	<0.019	4.0 E	<0.021	1.3 p	<0.022	<0.49	210 Ep	NS
POC-3S (DUP)	7/16/2014	11 *	<2.1*	<2.5	<1.8*	<1.9*	<1.4*	<1.3*	<1.6*	<0.021	3.7 E	<0.023	1.2 p	<0.024	<0.53	270 Ep	NS
POC-3D	6/12/2014	<0.57	<0.87	1.8 JB	<1	<1	<1.3	<0.7	<0.83	<0.019	<0.021	<0.021	<0.018	<0.022	<0.49	1.4 J	<5
POC-3D	7/16/2014	<1.8*	<2.0*	3.2 JB	<1.7*	<1.8*	<1.3*	<1.2*	<1.5*	<0.019	<0.021	<0.021	<0.018	<0.022	<0.50	2.4 J	NS
MW-9D	6/10/2014	2.0 J	<2.1*	NS	<1.8*	<1.9*	<1.4	<1.3	<1.6	NS	0.15 p	0.54 p	<0.019	<0.023	<0.52	7.8	6.6 J
MW-10D	6/12/2014	<2	<2.2	NS	<1.9	<2	<1.4	<1.3	<1.6	NS	<0.024	<0.024	<0.021	<0.025	<0.56	94	<5
MW-10D (DUP-2)	6/12/2014	3.2 J	<2.1	NS	<1.8	<1.9	<1.3	<1.2	<1.5	NS	<0.024	<0.024	<0.021	<0.025	<0.56	47 p	<5
MW-11D	6/11/2014	<1.9	<2.2	NS	<1.8	<1.9	<1.4	<1.3	<1.6	NS	<0.024	<0.024	<0.021	<0.025	<0.56	2.0 J	<5.0
MW-11DD	7/16/2014	<1.8*	<2*	NS	<1.7*	<1.8*	<1.3*	<1.2*	<1.5*	NS	<0.021	<0.021	<0.018	<0.022	<0.48	3.4 Jp	17 J
MW-12D	6/11/2014	<1.8	<2.0	NS	<1.7	<1.8	<1.3	<1.2	<1.5	NS	<0.026	<0.026	<0.023	<0.028	<0.61	1.9 J	<5.0
MW-20D	6/10/2014	<1.9	<2.1*	NS	<1.8*	<1.9*	<1.3	<1.2	<1.6	NS	0.37 p	<0.023	<0.020	<0.024	<0.54	38	7.2 J
MW-26D	6/11/2014	<1.9	<2.1	NS	<1.8	<1.9	<1.4	<1.3	<1.6	NS	<0.022	<0.022	<0.019	<0.023	<0.51	<0.51	<5.0
MW-28D	6/12/2014	<2	<2.2	NS	<1.9	<2	<1.4	1.7 J	<1.7	NS	<0.024	<0.024	<0.021	<0.025	<0.55	16	<5
MW-29D	6/11/2014	2.6 J	<2.0	NS	<1.7	<1.8	<1.3	<1.2	23	NS	0.28 p	<0.023	<0.020	<0.024	<0.52	9.6 p	<5.0
MW-38D	6/11/2014	2.3 J	<2.0	NS	<1.7	<1.8	<1.3	<1.2	19	NS	0.16 p	<0.023	<0.020	<0.024	<0.53	6.4 p	7.7 J
MW-52D	6/11/2014	<1.9	<2.1	NS	<1.8	<1.9	<1.4	<1.3	<1.6	NS	<0.023	<0.023	<0.019	<0.024	<0.52	0.73 J	<5.0
MW-55D	6/10/2014	3.6 J	<2.1*	NS	<1.8*	<1.9*	<1.4	<1.3	9.3 J	NS	0.21 p	<0.022	<0.019	<0.023	<0.51	9.1 p	7.1 J
MW-56D	7/16/2014	<1.8*	<2*	NS	<1.7*	<1.8*	<1.3*	<1.2*	<1.5*	NS	<0.021	<0.021	<0.018	<0.022	<0.5	2.1 J	24 J
MW-57D	7/16/2014	<1.9*	4.9 J*	NS	2.8 J*	<1.9*	<1.4*	<1.3*	<1.6*	NS	<0.021	<0.021	<0.018	<0.022	<0.49	<0.49	23 J

**Analytical Notes:**  
Results in bold exceed laboratory detection limits  
< - Not detected at or above indicated laboratory detection limit  
UG/L - micrograms/liter  
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.  
E - Result exceeded instrument calibration range.  
p - The % RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.  
B - Compound was found in the blank and sample.  
\* - Relative percent difference of the lab control sample and lab control sample duplicate exceeds the control limits.  
Groundwater Protection Standards are background for all compounds except for gamma-BHC (4 ug/l) and toxaphene (5 ug/l).



**TABLE 13**  
**GROUNDWATER ANALYTICAL RESULTS - METALS**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Chemical Name:		Arsenic (µg/L)	Barium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
<b>Groundwater Protection Standard:</b>		50	1000	50	Background	Background	10	Background	Background
Well I.D.	Date								
POC-1S	6/10/2014	<b>3.2</b>	<b>12</b>	<b>8.6</b>	<b>0.53</b>	<b>3.5 J</b>	<b>4.1</b>	<b>34</b>	<8.3
POC-1S (DUP-1)	6/10/2014	<b>3.3</b>	<b>13</b>	<b>8.8</b>	<b>0.57</b>	<b>3.1 J</b>	<b>4.2</b>	<b>35</b>	<8.3
POC-1D	6/10/2014	<b>2.7</b>	<b>620</b>	<2.5	<b>1.8</b>	<b>5.1</b>	<1.0	<3.8	<8.3
POC-2S	6/12/2014	<b>3.7</b>	<b>22</b>	<b>4.1 J</b>	<b>0.5</b>	<b>2.2 J</b>	<b>5.4</b>	<b>20</b>	<8.3
POC-2D	6/10/2014	<b>3.1</b>	<b>790</b>	<b>21</b>	<b>8.7</b>	<b>250</b>	<1.0	<3.8	<8.3
POC-3S	6/12/2014	<b>3.7</b>	<b>36</b>	<2.5	<b>0.24 J</b>	<b>2.7 J</b>	<1.1	<b>4.1 J</b>	<b>530</b>
POC-3D	6/12/2014	<b>2.5</b>	<b>630</b>	<b>6.4</b>	<b>2.2</b>	<b>4.9 J</b>	<1.1	<3.2	<8.4
MW-9D	6/10/2014	<1.3	<b>170</b>	<2.5	<b>0.48 J</b>	<b>2.4 J</b>	<1.0	<3.8	<8.3
MW-10D	6/12/2014	<b>5.6</b>	<b>2,000</b>	<b>51</b>	<b>4.9</b>	<b>33</b>	<1	<3.8	<b>9.8 J</b>
MW-10D (DUP-2)	6/12/2014	<b>5.4</b>	<b>1,900</b>	<b>26</b>	<b>4.5</b>	<b>17</b>	<1	<3.8	<8.3
MW-11D	6/11/2014	<1.3	<b>100</b>	<2.5	<b>0.45 J</b>	<2.0	<1.0	<3.8	<8.3
MW-11DD	7/16/2014	<b>3.1</b>	<b>2,000</b>	<2.5	<b>4.6</b>	<2	<1	<3.8	<b>11 J</b>
MW-12D	6/11/2014	<b>7.9</b>	<b>1,500</b>	<2.5	<b>5.4</b>	<b>3.7 J</b>	<1.0	<3.8	<8.3
MW-20D	6/10/2014	<b>2.6</b>	<b>420</b>	<2.5	<b>1.8</b>	<2.0	<1.0	<3.8	<8.3
MW-26D	6/11/2014	<b>2.9</b>	<b>410</b>	<2.5	<b>1.9</b>	<2.0	<1.0	<3.8	<8.3
MW-28D	6/12/2014	<b>1.3 J</b>	<b>280</b>	<b>21</b>	<b>1.2</b>	<b>15</b>	<1	<3.8	<8.3
MW-29D	6/11/2014	<b>2.6</b>	<b>580</b>	<2.5	<b>1.5</b>	<2.0	<1.0	<3.8	<8.3
MW-38D	6/11/2014	<b>2.2 J</b>	<b>560</b>	<2.5	<b>1.4</b>	<2.0	<1.0	<3.8	<8.3
MW-52D	6/11/2014	<b>3.6</b>	<b>480</b>	<2.5	<b>2.2</b>	<2.0	<1.0	<3.8	<8.3
MW-55D	6/10/2014	<b>3.3</b>	<b>720</b>	<b>3.9 J</b>	<b>1.9</b>	<b>2.3 J</b>	<1.0	<3.8	<8.3
MW-56D	7/16/2014	<b>2.8</b>	<b>1,100</b>	<2.5	<b>4.2</b>	<b>3 J</b>	<1	<3.8	<8.3
MW-57D	7/16/2014	<b>1.7 J</b>	<b>310</b>	<2.5	<b>2</b>	<2	<1	<3.8	<8.3

**Analytical Notes:**

Results in bold exceed laboratory detection limits

< - Not detected at or above indicated laboratory detection limit

ug/L - micrograms/liter

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.



TABLE 14  
GROUNDWATER SCREENING RESULTS - VOLATILE ORGANIC COMPOUNDS  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA

Chemical Name:			1,1-Dichloroethene	1,2,3-Trichloropropane	1,2-Dichloropropane	2-Butanone (MEK)	Methyl Isobutyl Ketone (MIBK)	Acetone	Benzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroform	*1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	Tetrachloroethene	Toluene	Vinyl chloride	Xylenes, Total
Report Result Unit:			UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Well ID	Sampling Date	Sample Depth (ft bgs)																		
HP-111-50A	03/30/2010	21-25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.2	<0.11	<1	<0.15	<0.33	<0.18	<2
HP-111-50B	03/30/2010	41-45	<1.1	<4.1	<1.3	<10	<10	<50	1700	7.5	<5	<2.5	<1.4	<2	1.8J	<10	<1.5	<3.3	<0.18	2.9J
HP-111-50C	03/30/2010	68-72	<0.11	<0.41	<0.13	4J	2J	34	17	<0.6	<0.5	<0.25	<0.14	<0.2	0.39J	<1	<0.15	0.56J	<0.18	2.1
HP-111-51A	03/29/2010	21-25	<0.11	<0.41	<0.13	<1	<1	7.6J	16	2.1	<0.5	<0.25	<0.14	<0.2	0.25J	<1	<0.15	<0.33	<0.18	1.1J
HP-111-52A	03/29/2010	21-25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	3.2	<0.5	0.28J	<0.14	<0.2	0.85	<1	<0.15	<0.33	<0.18	1.4J
HP-111-52B	03/29/2010	39-43	<0.11	<0.41	<0.13	<1	<1	7.9J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.2	0.2J	<1	<0.15	<0.33	<0.18	1.1J
HP-111-53A	03/29/2010	21-25	<0.11	<0.41	<0.13	<1	<1	7.6J	<0.25	1.1J	<0.5	<0.25	<0.14	<0.2	0.23J	<1	<0.15	<0.33	<0.18	1.2J
HP-111-53B	03/29/2010	39-43	<0.11	<0.41	<0.13	<1	<1	9.2J	<0.25	<6	<0.5	<0.25	<0.14	<0.2	0.15J	<1	<0.15	<0.33	<0.18	0.81J
HP-111-54A	03/30/2010	21-25	<0.11	<0.41	<0.13	<1	<1	8.1J	29	2.7	<0.5	2.3	<0.14	<0.2	0.53J	<1	<0.15	<0.33	<0.18	0.91J
HP-111-54B	03/30/2010	51-45	2.9J	<4.1	<1.3	14J	67J	270JD	8400D	<6	<5	690	420	<2	270	71JD	2.5J	470	8.8J	54JD
HP-111-54C	04/01/2010	98-102	<11	<41	<13	<100	470J	6900	4800	92J	<50	4500	20000	<20	110	19000	<15	790	<18	<20
HP-111-55A	04/01/2010	21-25	<0.11	<0.41	<0.13	<1	<1	<5	0.31J	<0.6	<0.5	<0.25	<0.14	<0.2	<0.11	<1	<0.15	<0.33	<0.18	0.38J
HP-111-55B	03/30/2010	41-45	<0.11	<0.41	<0.13	1.1J	<1	8.8J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.2	0.16J	<1	<0.15	<0.33	<0.18	0.56J
HP-111-55C	03/30/2010	91-95	<0.11	<0.41	<0.13	2.4J	<1	20J	99	<0.6	<0.5	83	<0.14	<0.2	46	<1	<0.15	7	<0.18	67
HP-111-56A	03/30/2010	21-25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	1.8J	<0.5	<0.25	<0.14	<0.2	<0.11	<1	<0.15	<0.33	<0.18	<0.2
HP-111-57A	04/01/2010	21-25	<5.5	<20	<6.5	180J	1400	1500JD	570D	35J	<25	20J	<7	<10	560D	<50	<7.5	17000D	<9	200JD
HP-111-57B	03/30/2010	41-45	27J	<41	<13	270J	4300	10000	7000	<60	<50	1300	82000D	<20	150JD	9600	<15	780JD	<18	52J
HP-111-57C	04/01/2010	78-82	<11	<41	<13	180J	840JD	6100	4000D	<60	<50	4800D	51000D	<20	<11	31000D	<15	260JD	<18	<20
HP-111-57-TW	04/01/2010	0-12	<55	<200	<65	<500	<500	<2500	3600	<300	<250	<120	<70	<100	640	<500	230J	530	<90	130J
HP-111-58A	04/01/2010	21-25	<.22	<0.82	<0.26	<2	<2	17J	1J	6.1	<1	0.57J	0.63J	<0.22	0.29J	<2	<0.3	0.73J	<0.36	<0.4
HP-111-58B	04/01/2010	41-45	<.55	<2	<0.65	<5	<5	33J	<1.2	3.8J	<2.5	<1.2	3.3J	<1	<0.55	<5	<0.75	<1.6	<0.9	8.6J
HP-111-58C	04/01/2010	71-75	<0.11	<0.41	<0.13	<1	<1	7J	25	4	<0.5	1.7	<0.14	<0.2	1.1	<1	<0.15	0.55J	<0.18	2.5
HP-111-59C	01/29/2013	89-99	<0.22	<0.82	<0.26	<2	3.4J	<10	230	<1.2	<1	8.9	1.4J	0.3J	6.4	<2	<0.3	70	<0.36	29
HP-111-60A	01/30/2013	20-26	<0.11	<0.41	<0.13	<1	<1	<5	<1	<0.6	<0.5	0.51J	<0.14	<0.15	0.36J	<1	<0.15	19	<0.18	0.89J
HP-111-60B	01/30/2013	50-56	<0.11	<0.41	<0.13	<1	<1	<5	2.9	<0.6	<0.5	0.36J	<0.14	<0.15	<0.11	<1	<0.15	2	<0.18	0.26J
HP-111-60C	01/30/2013	75-86	<0.55	<2.1	<0.65	<5	<5	<25	710	<3	<2.5	280	<0.7	2.1J	15	<5	<0.75	22	<0.9	8.3J

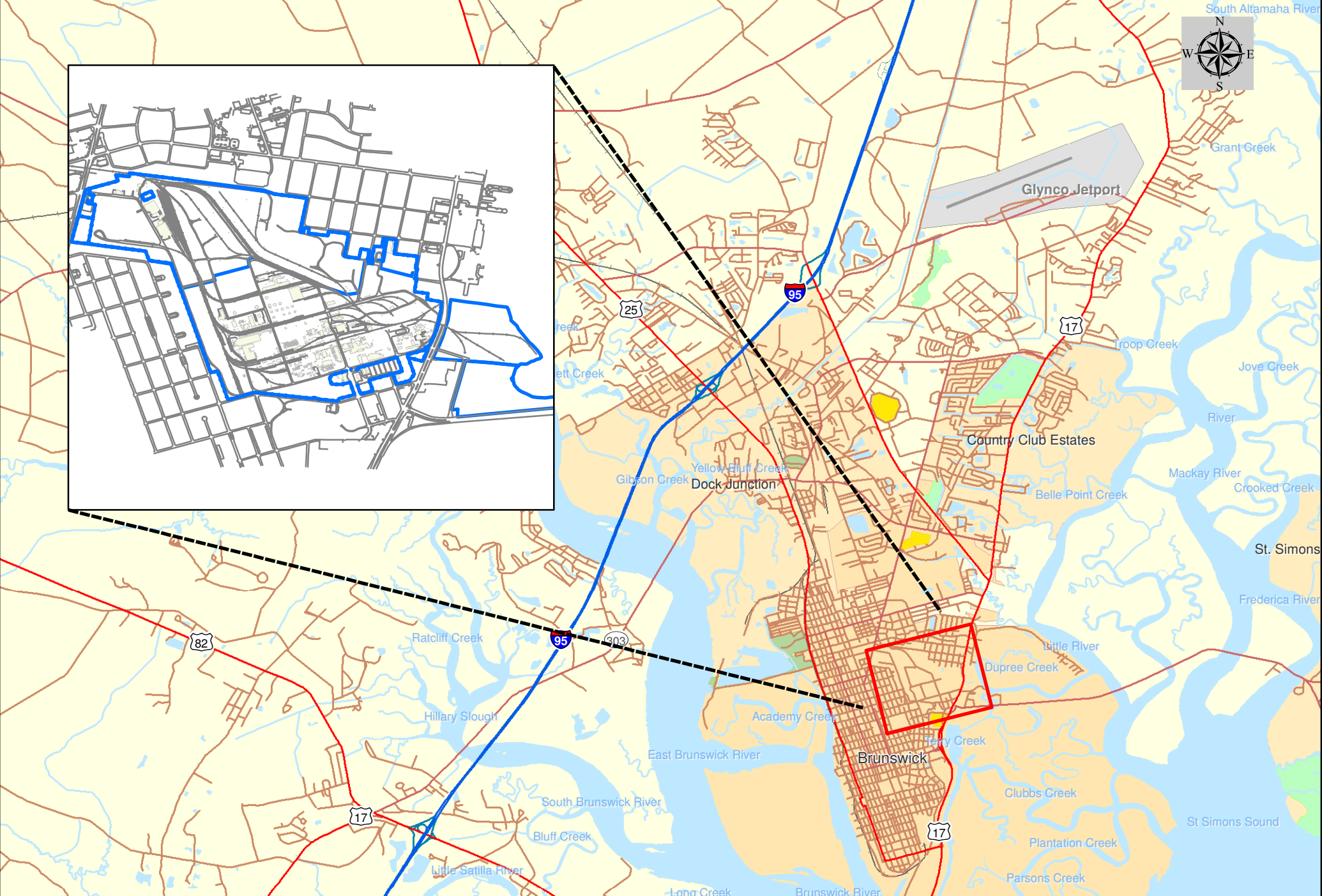
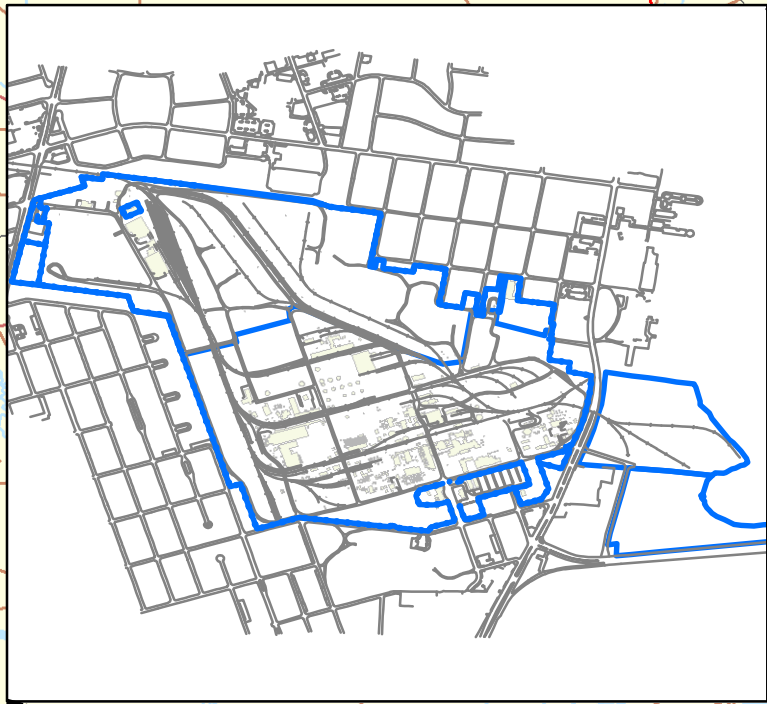
**Analytical Notes:**  
< - Not detected at or above indicated laboratory reporting limit  
UG/L - micrograms per liter  
-- - No information available  
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value  
D - Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D  
ft bgs - feet below ground surface  
- Diluted (D) value used unless out of hold time, then non-dilute (E) value reported.  
- Analyses out of hold times were not included in the table.  
\* The results reported for 1,2-dichloroethene in 2010 are for the trans-1,2-dichloroethene isomer. The results reported for 1,2-Dichloroethene in 2013 are for the cis-1,2-dichloroethene isomer.



## ***Figures***





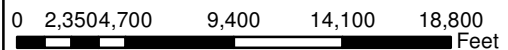


Map Location



**Former Hercules Brunswick Facility  
Site Location Map**

Source: Thematic Layer provided by ESRI  
Shapfiles of Site Provided by Newfields

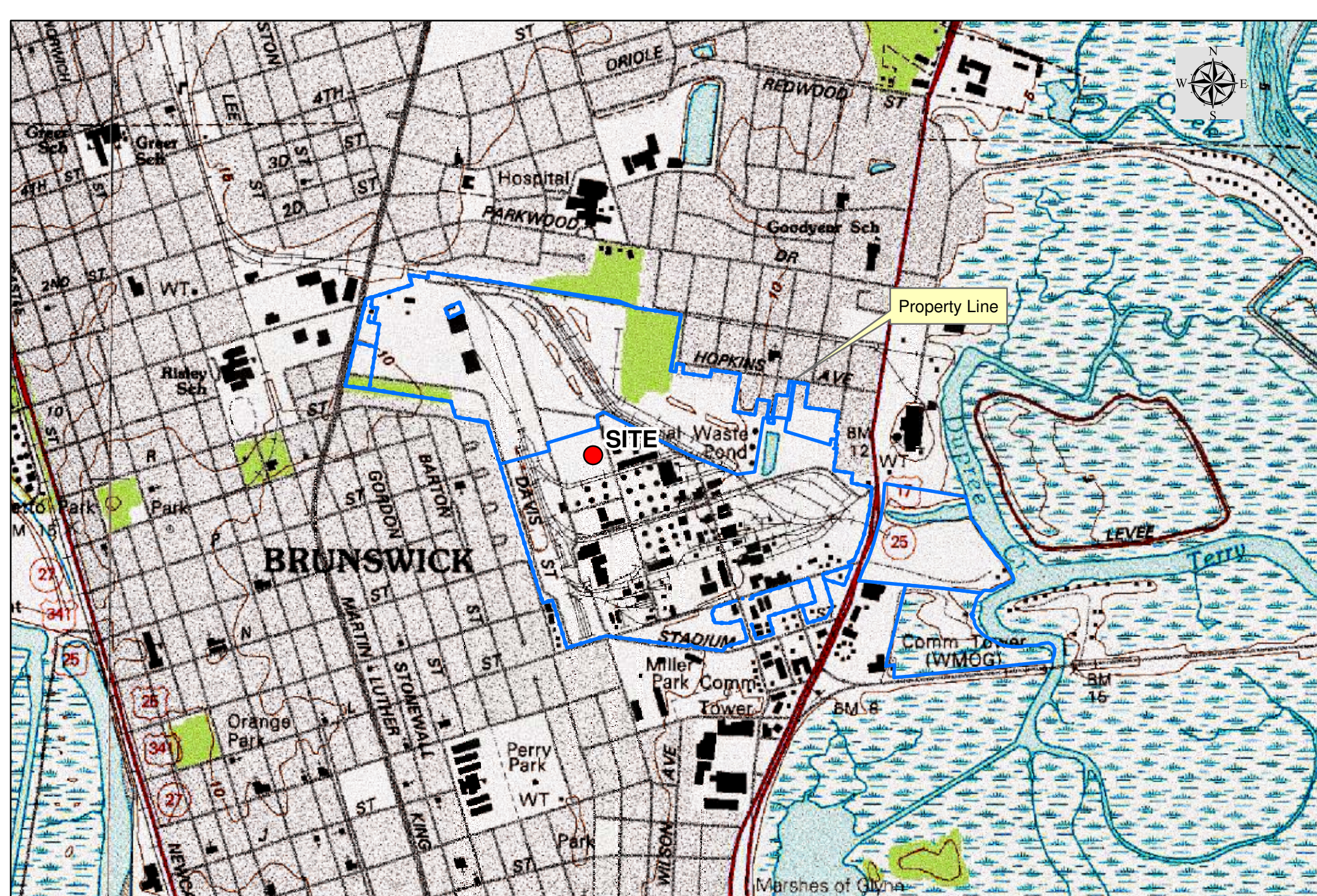


Created By: Amy Uebele



**Figure:1**  
**Date: June 2014**  
**Project Number: WBS2014B1**





Map Location



### Former Hercules Brunswick Facility

Topographic Map

Source: Topographic Map provided by USDA

0 250 500 1,000 1,500 2,000  
Feet



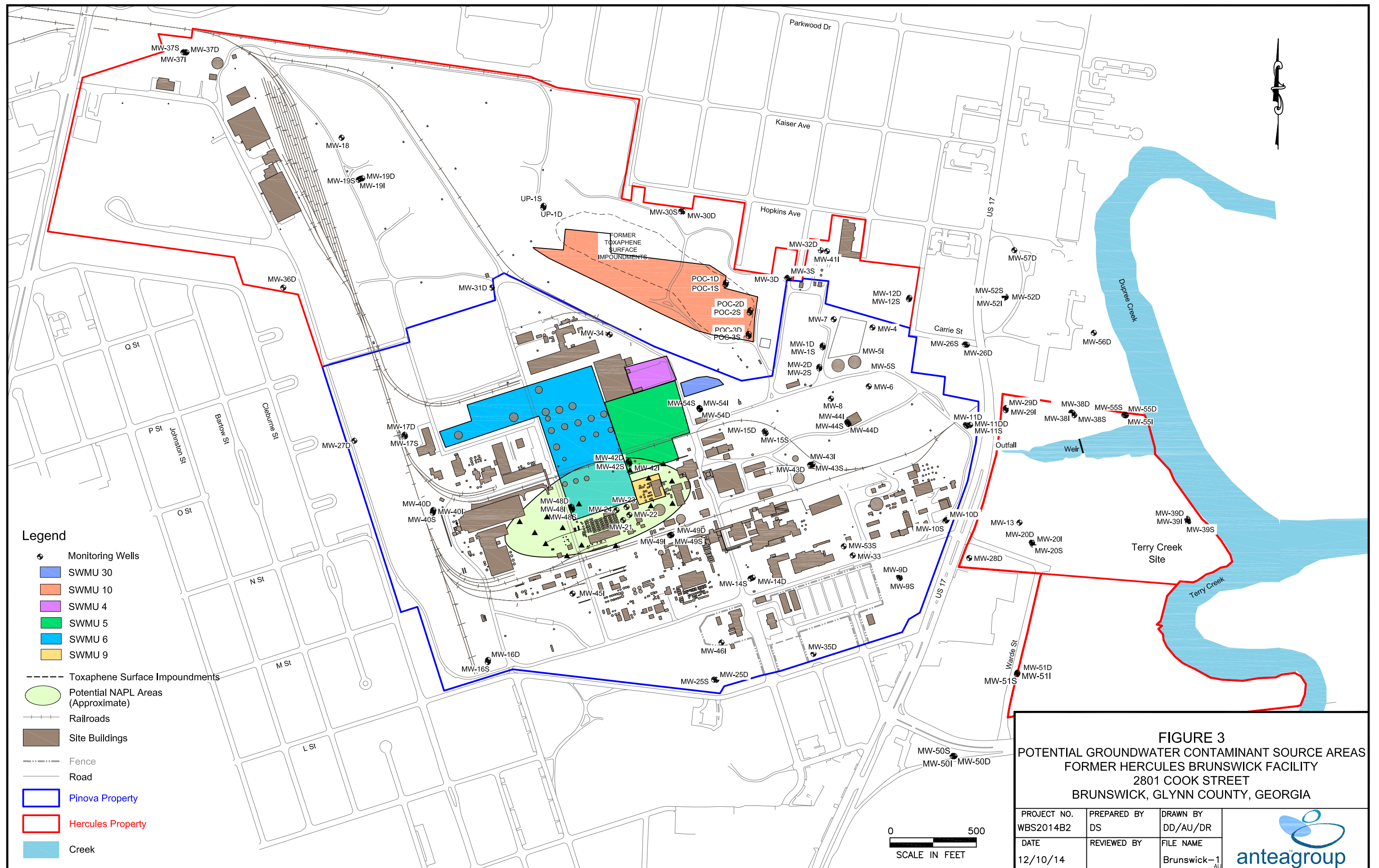
Figure:2

Date: June 2014

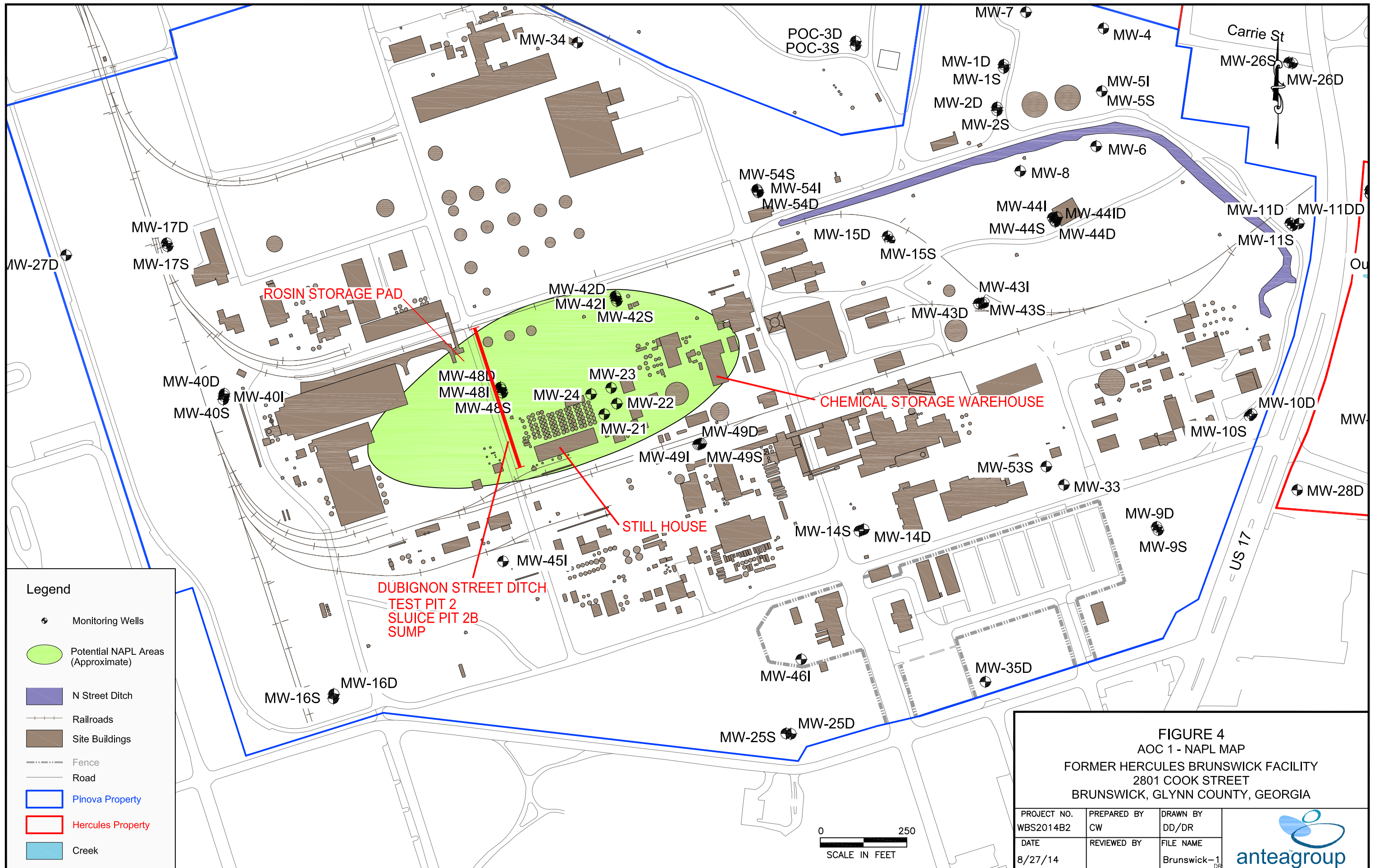
Project Number: WBS2014B1

Created By: Amy Uebele











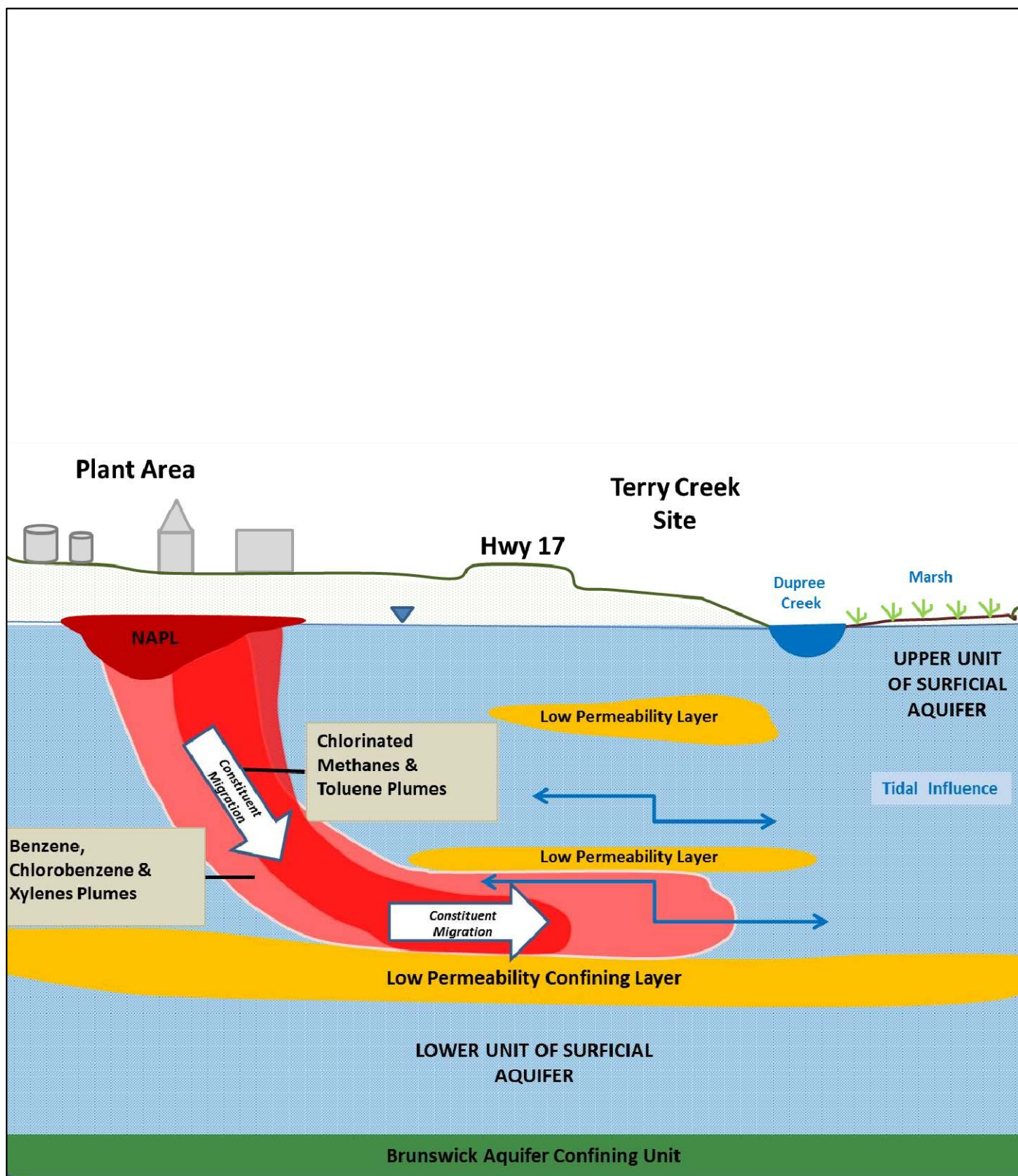


FIGURE 5  
GENERAL CONCEPTUAL SITE MODEL  
FORMER HERCULES BRUNSWICK FACILITY  
2801 COOK STREET  
BRUNSWICK, GLYNN COUNTY, GEORGIA

PROJECT NO.  
WBS2014B3

PREPARED BY  
CW

DRAWN BY  
DR

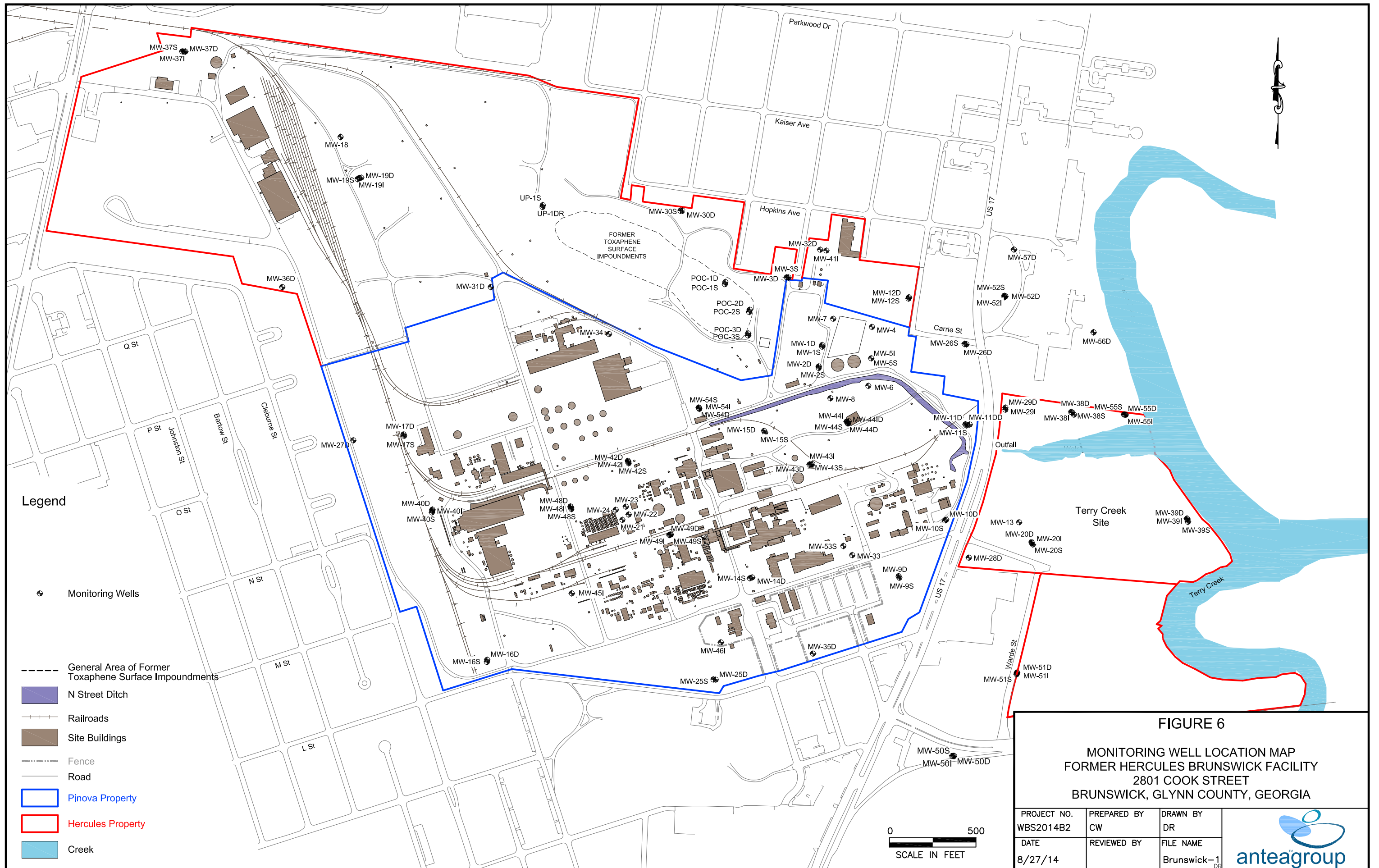
DATE  
9/19/14

REVIEWED BY

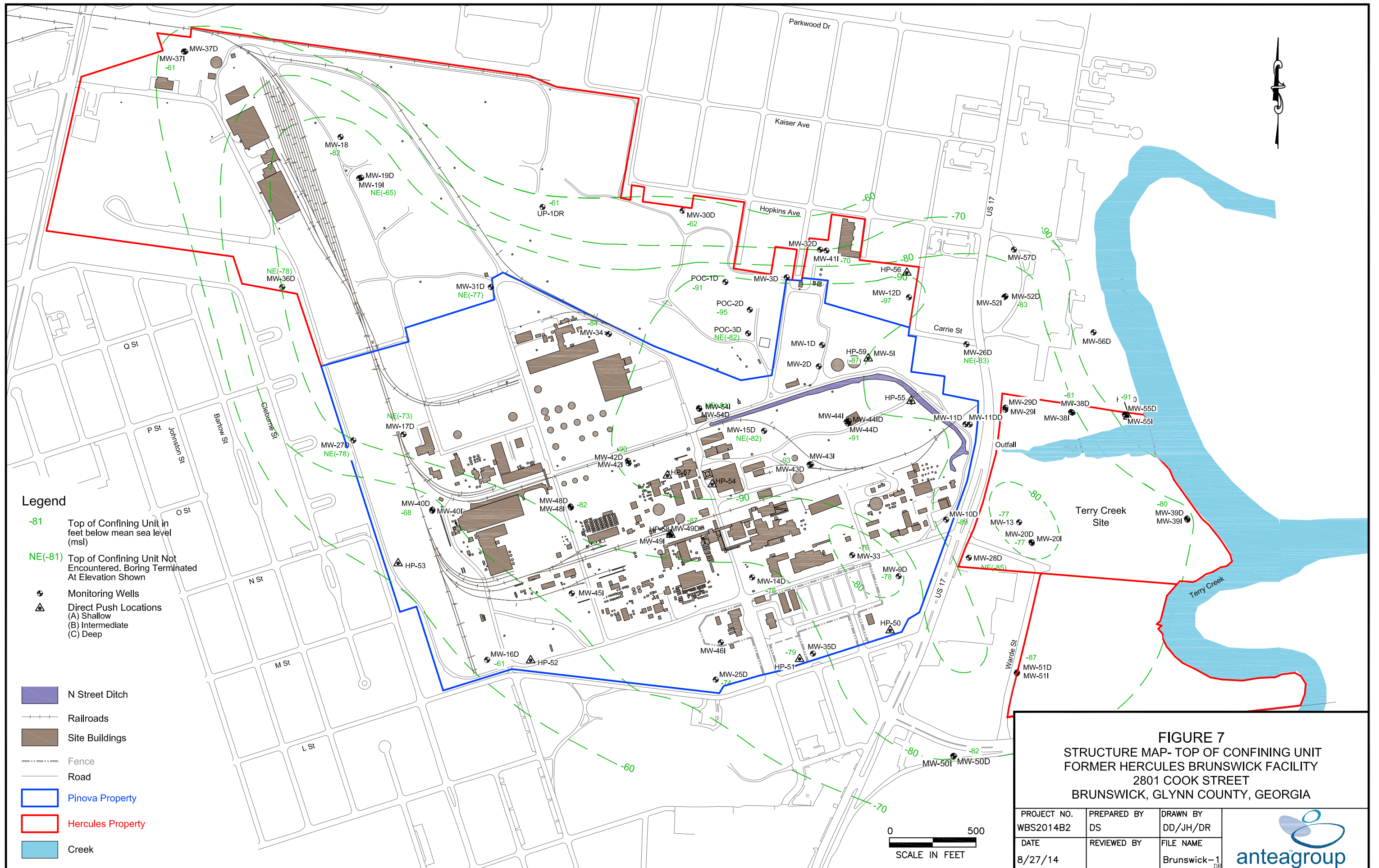
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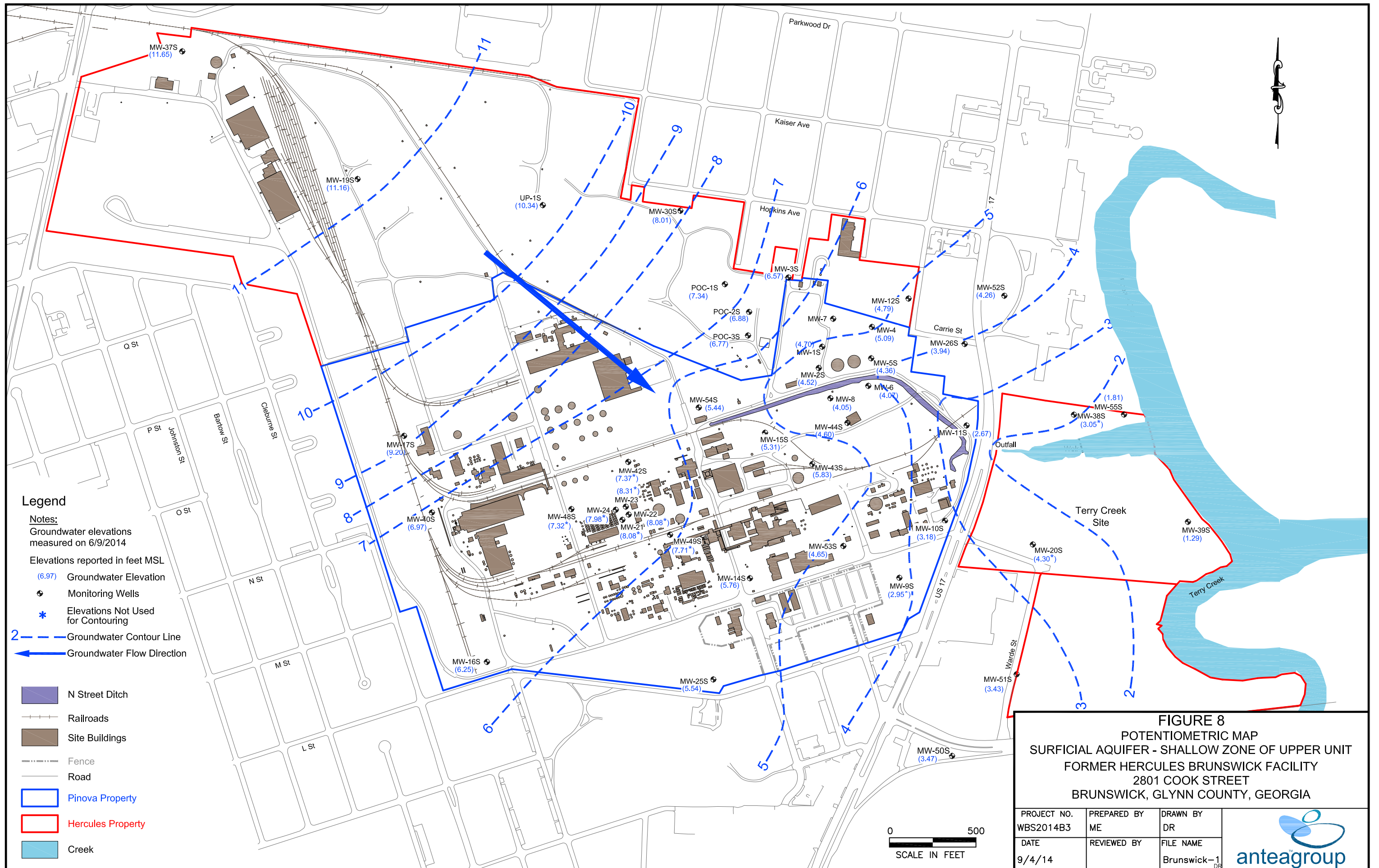




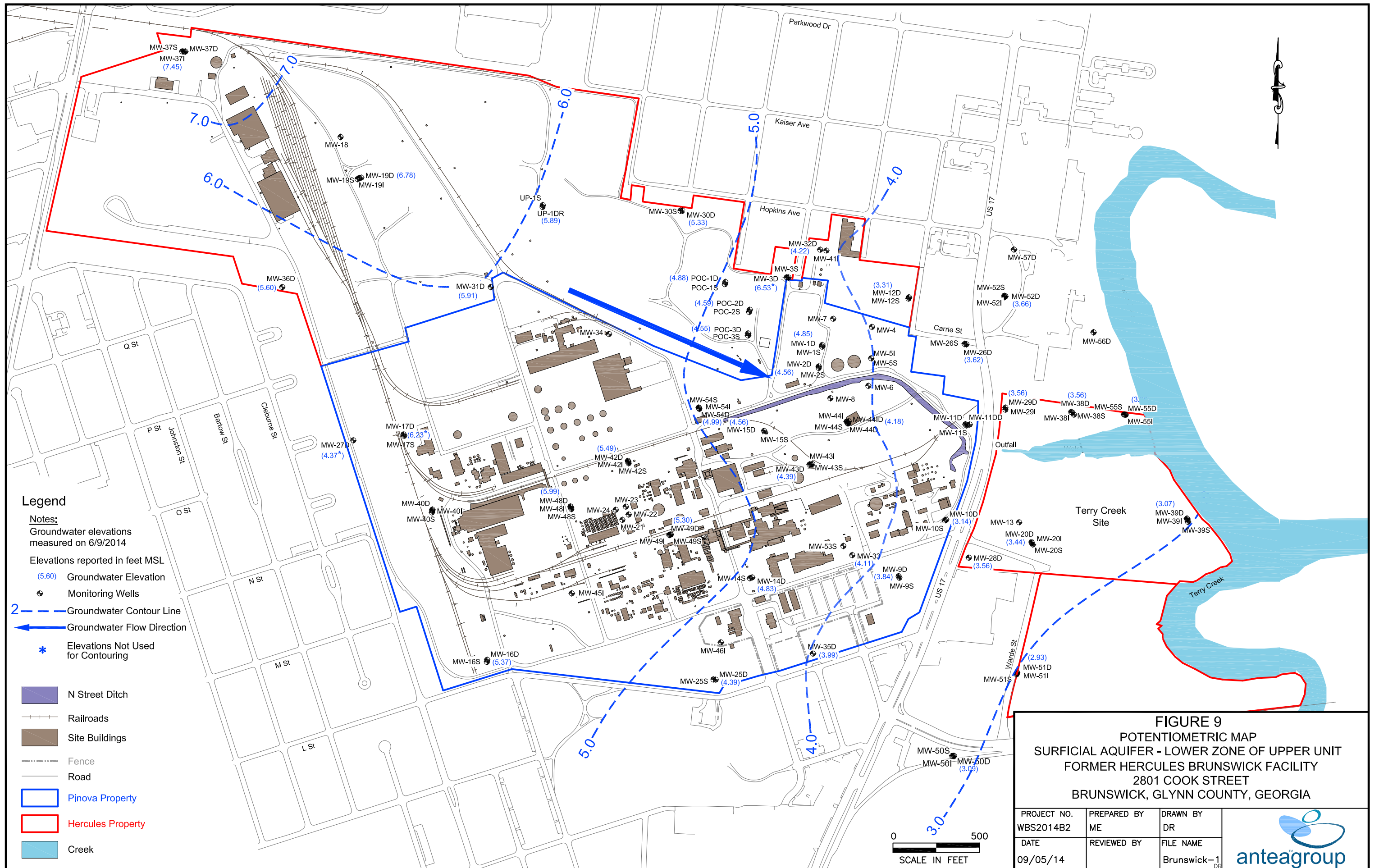




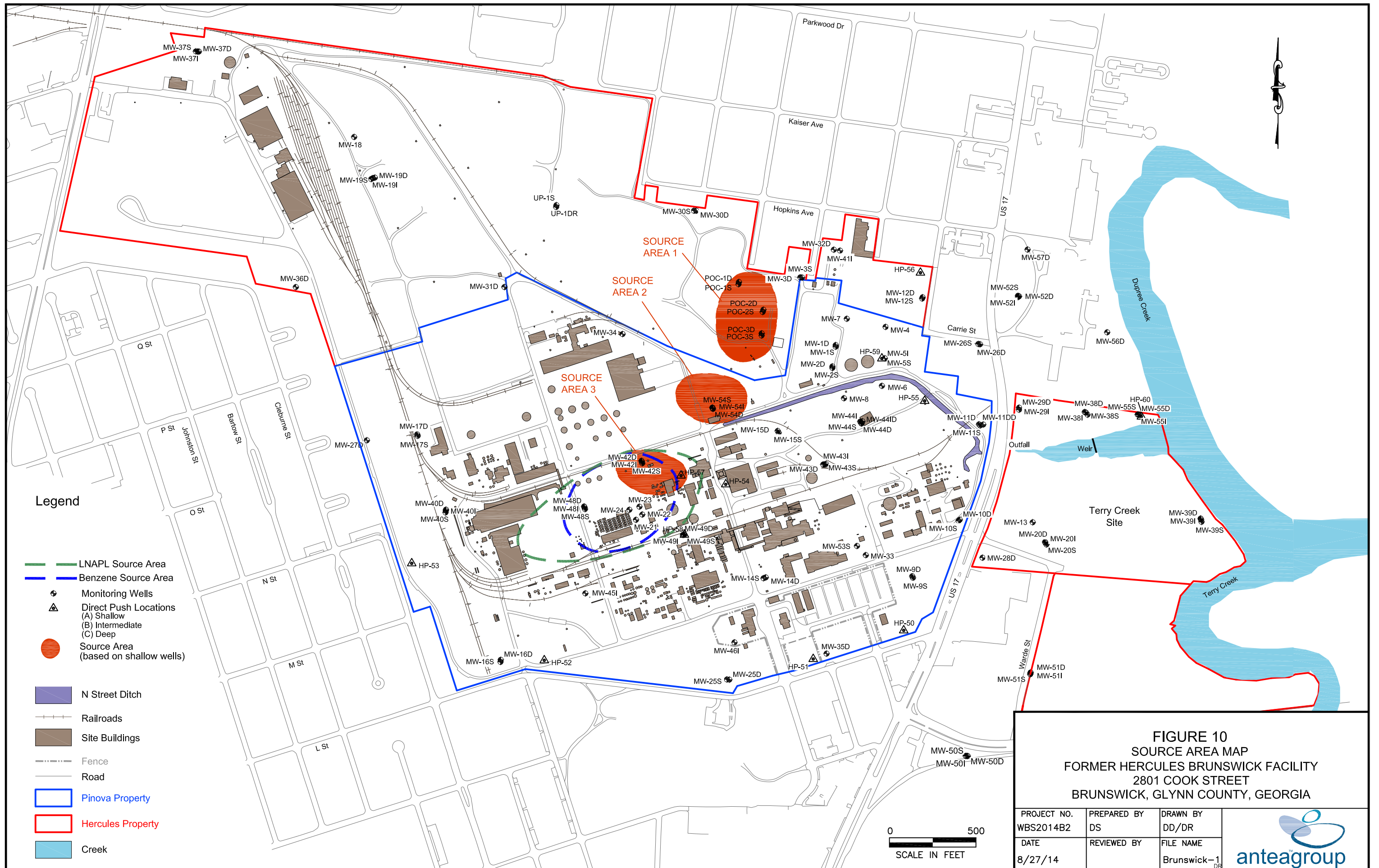




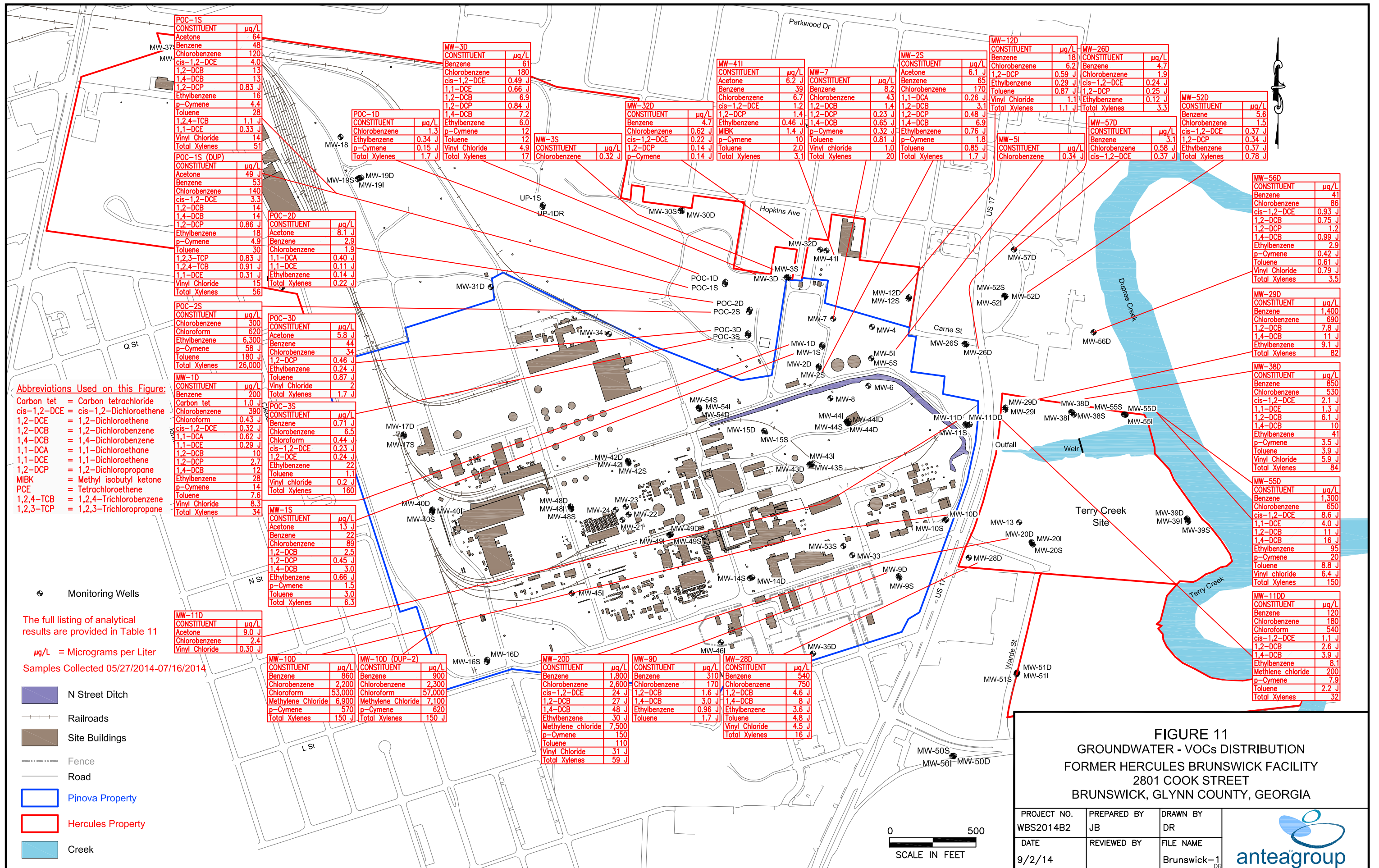




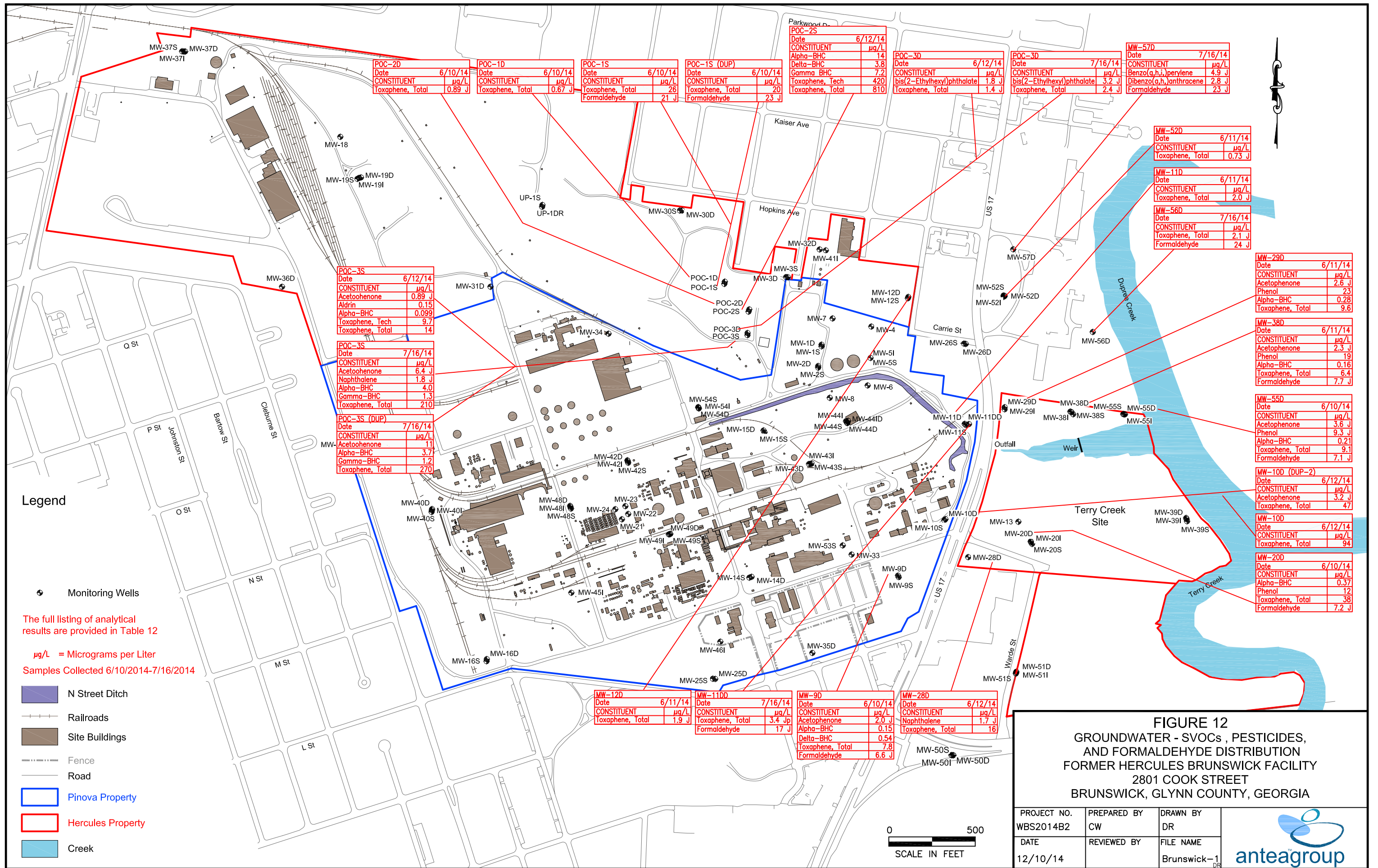




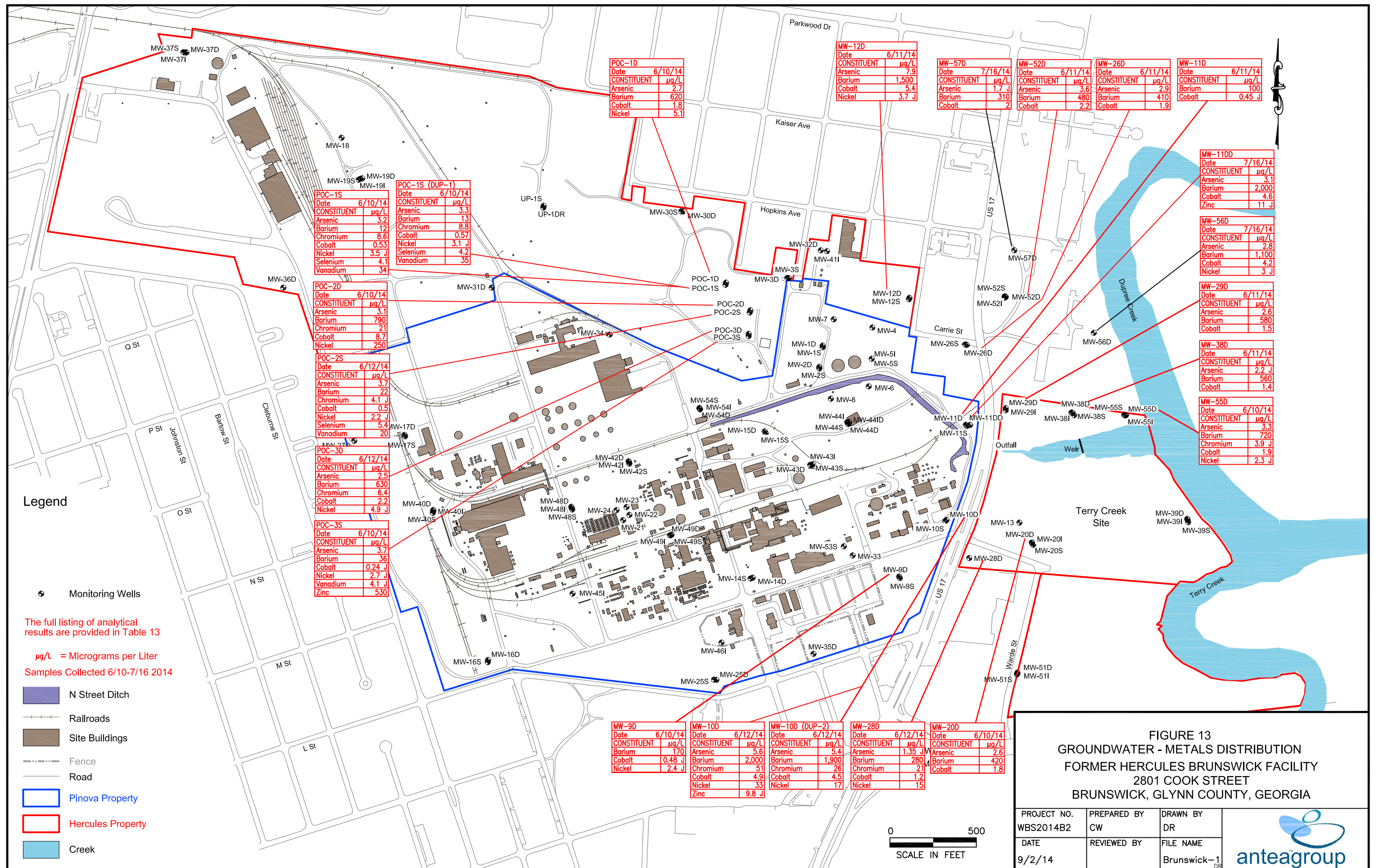




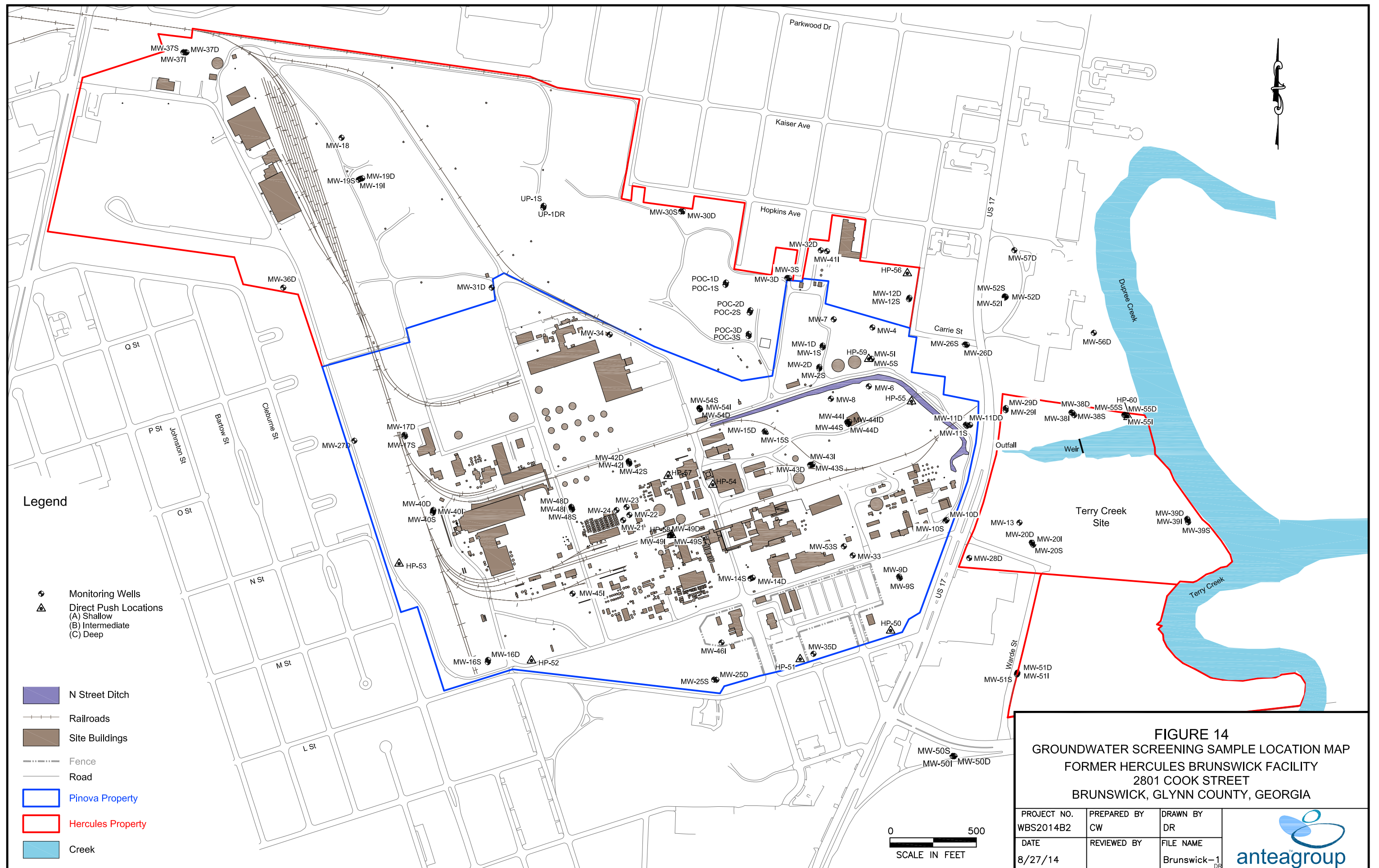




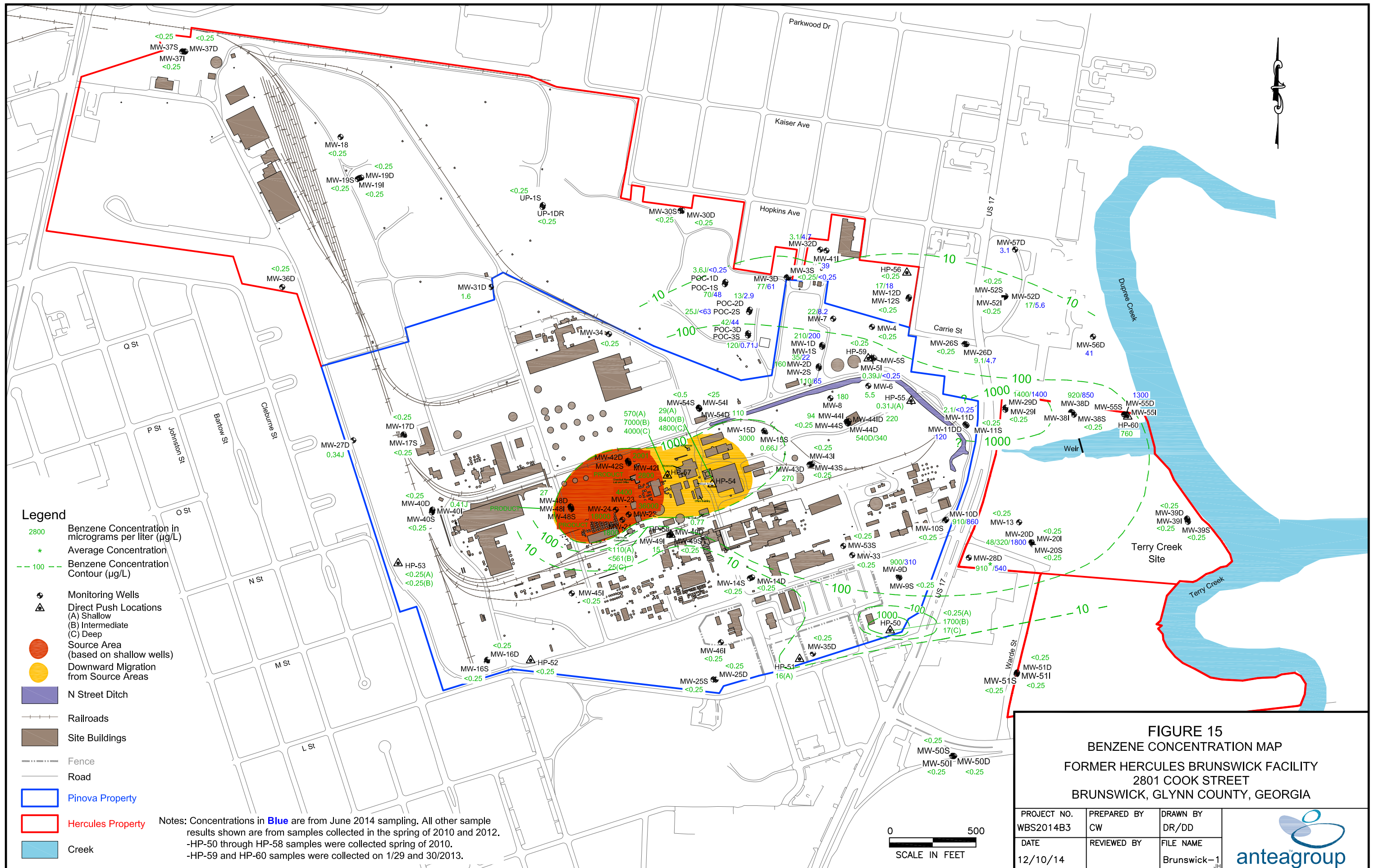




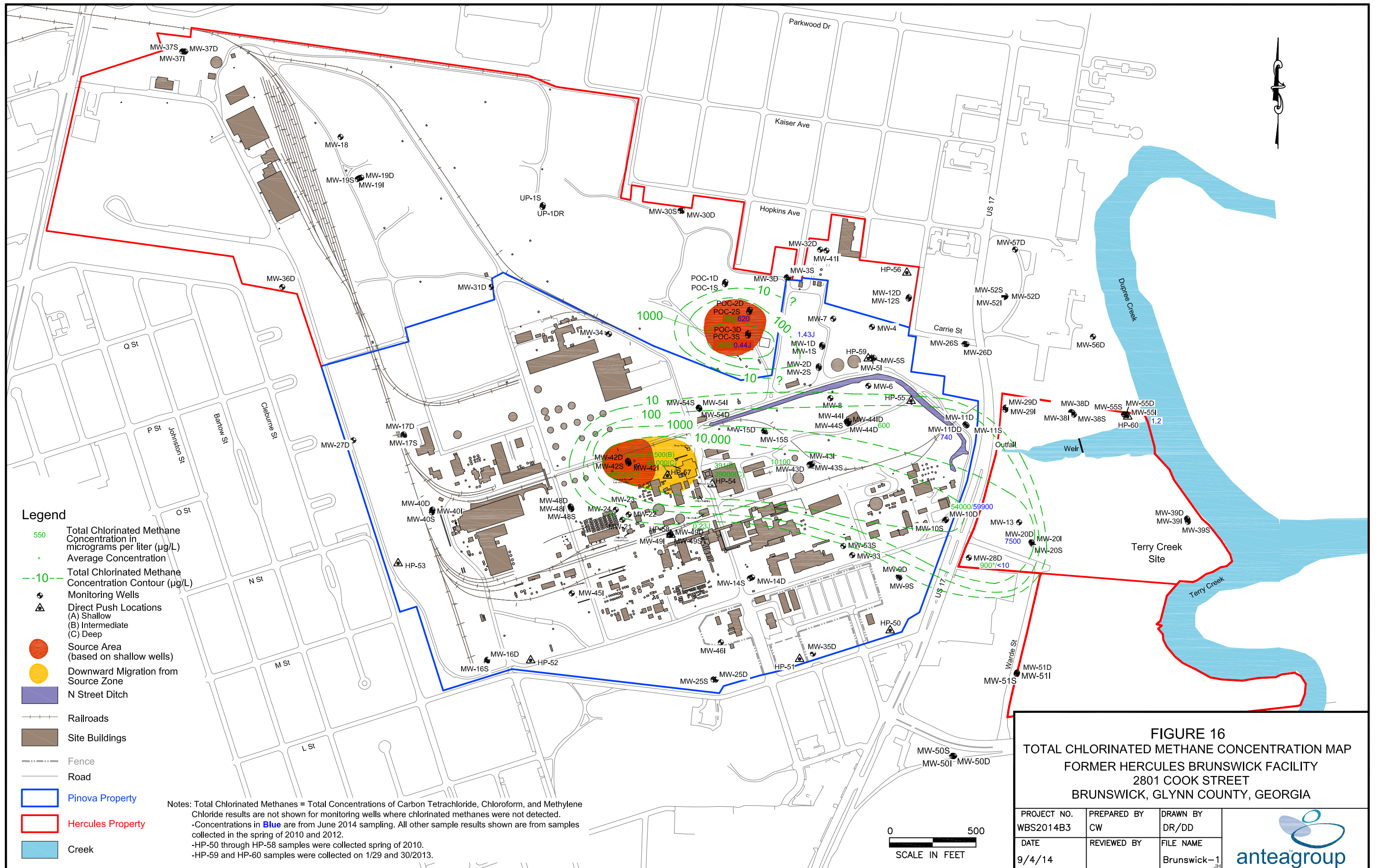




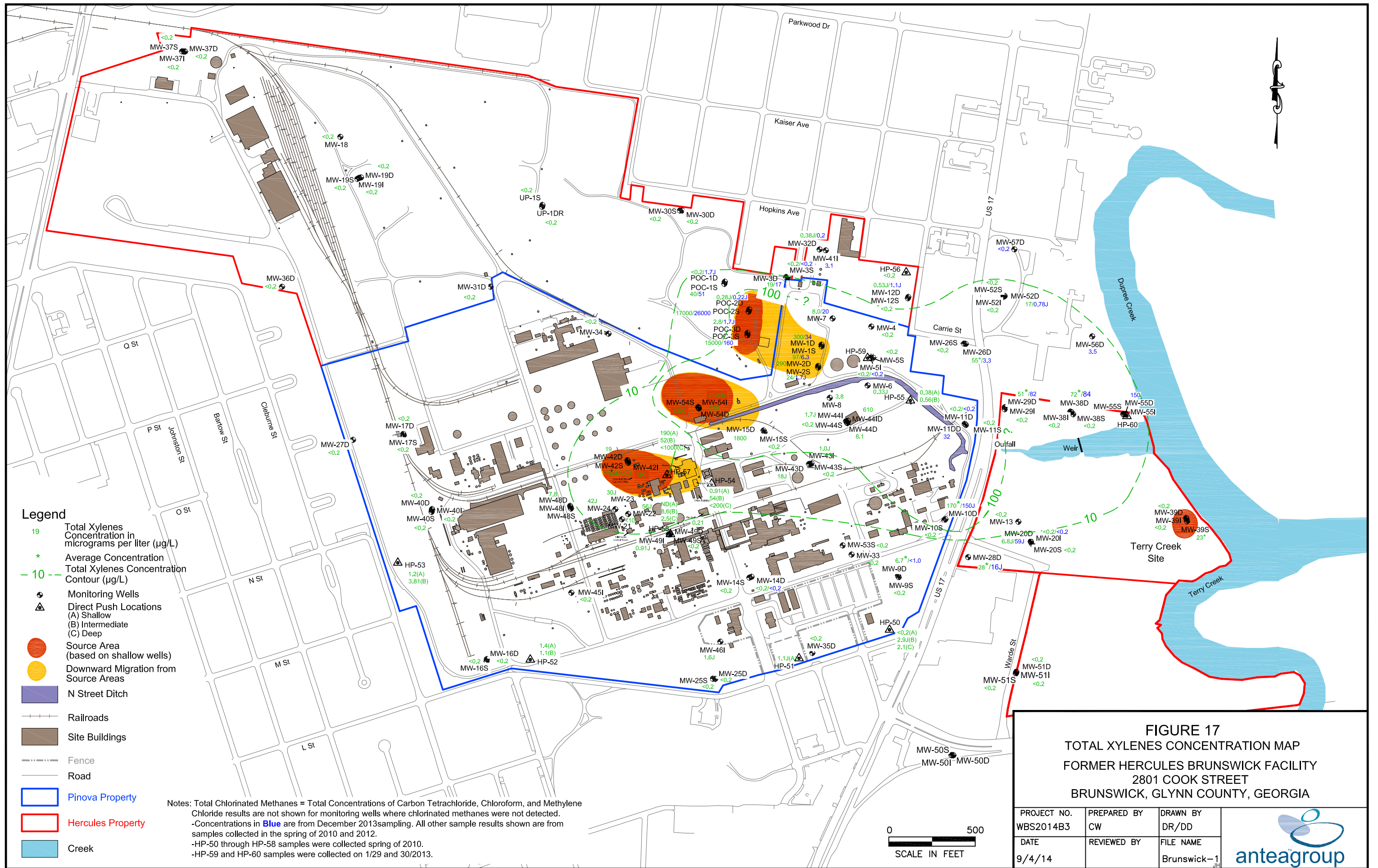




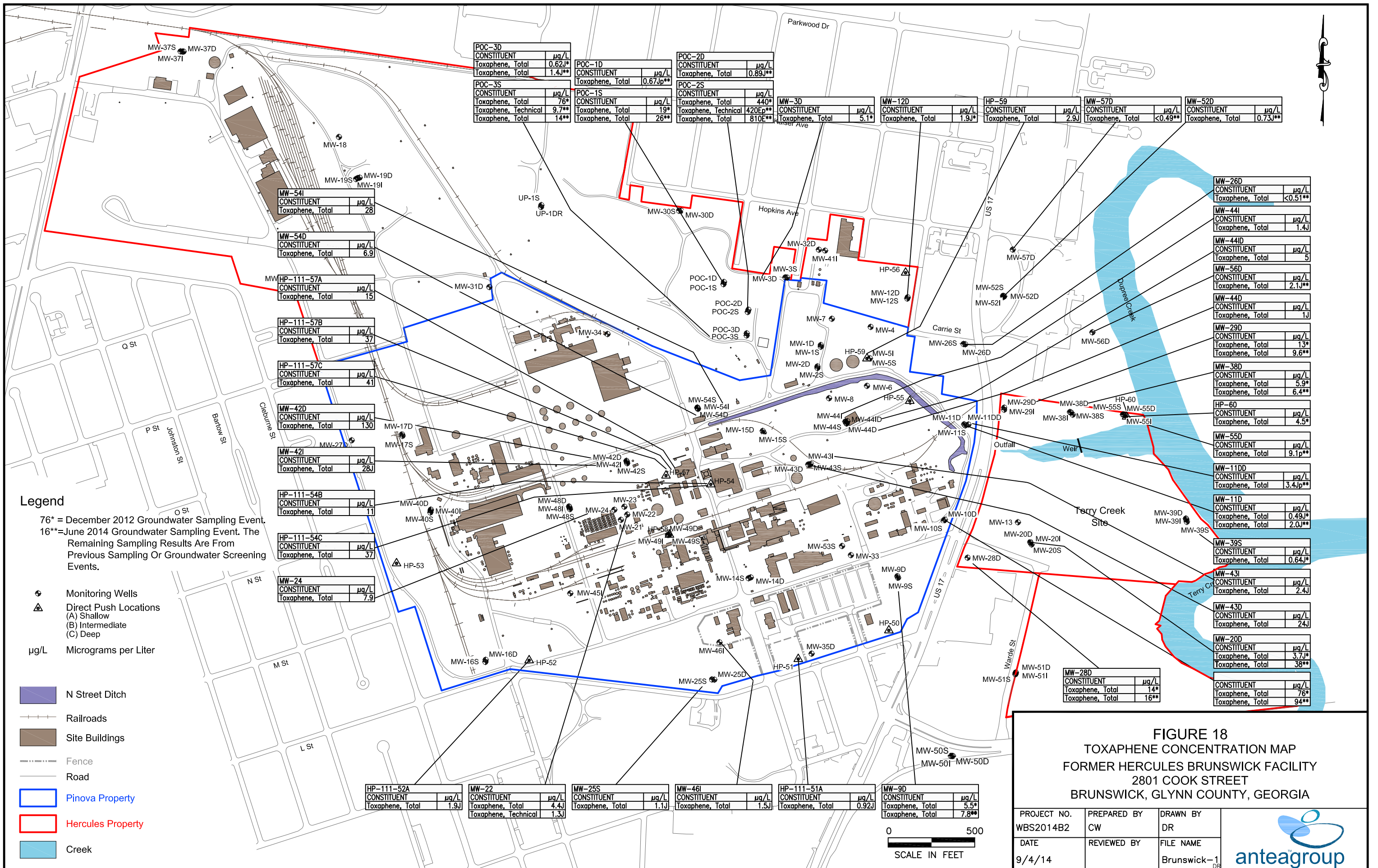
















## FIGURE 19 - Facility Production Wells

Former Hercules - Brunswick Facility  
2801 Cook St  
Brunswick GA

PROJECT NO: WBS2014B2

DATE: 9/19/2014

SCALE: NTS

DRAWN BY: CW



8008 Corporate Center Dr., Ste. 100  
Charlotte, North Carolina 28226



Document Path: \\gis-s3\GIS\_Data\Sandbox\Projects\A-E\Ashland\_Brunswick\GAI\WBS2014B2\Layout\20141210\_WaterSupplyWells.Fig20\_WaterSupplyWells.mxd



**Figure 20**  
Water Supply Wells  
Former Hercules - Brunswick Facility  
2801 Cook Street  
Brunswick, GA

PROJECT NO. WBS2015B2	PREPARED BY ACS	REF SCALE 1:5,400
DATE 12/16/2014	REVIEWED BY CW	MAP SCALE 1 inch = 450 feet

**Legend**

Commercial Well

Irrigation Well

Residential Well

Industrial Well

Public Supply Well

Pinova Property

Ashland Property

0

250

500

1,000

1,500

2,000

Feet

N



## ***Appendix A***

### ***Flood Plain Map***







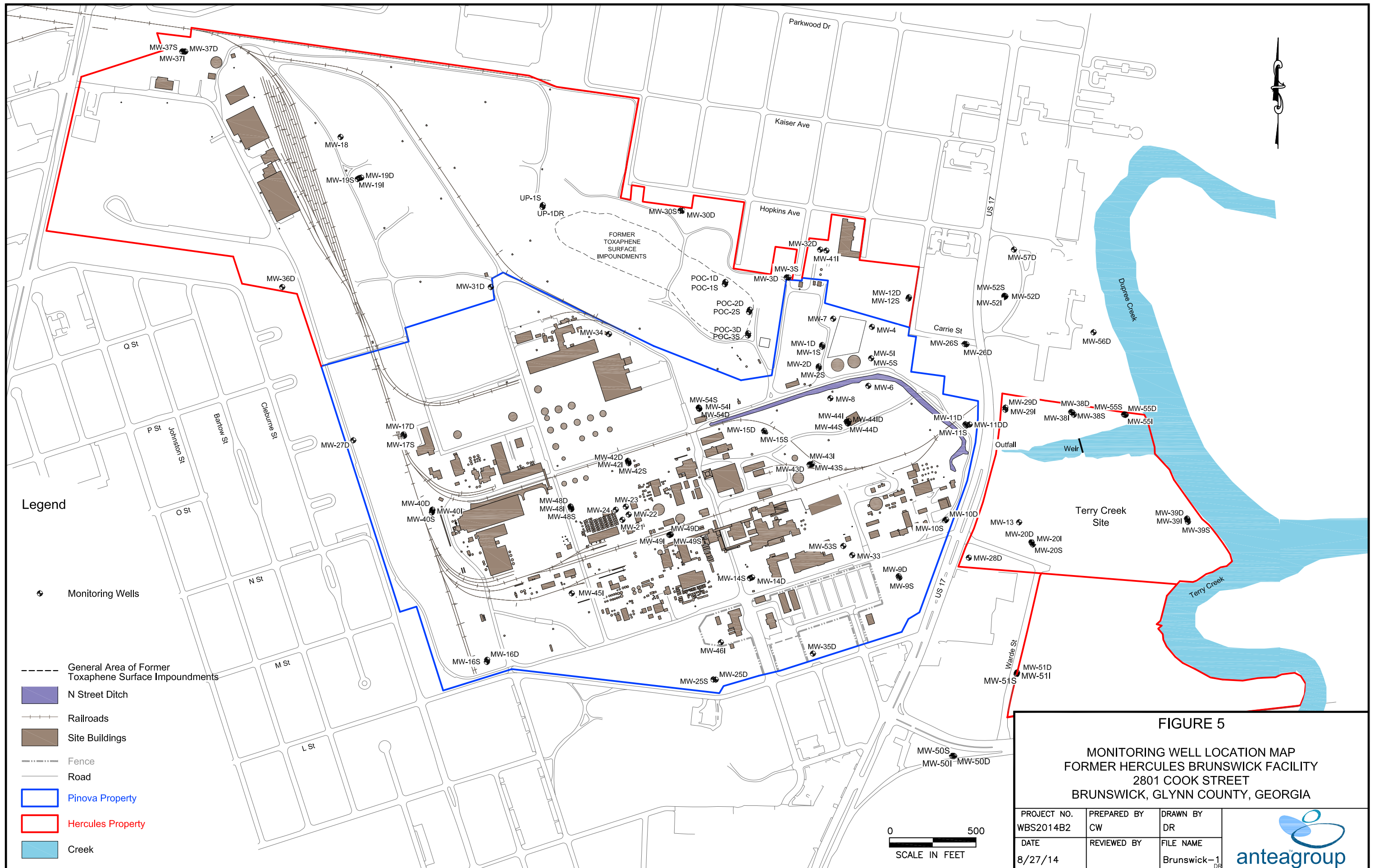


## ***Appendix B***

### ***Well Construction Details and Boring Logs***







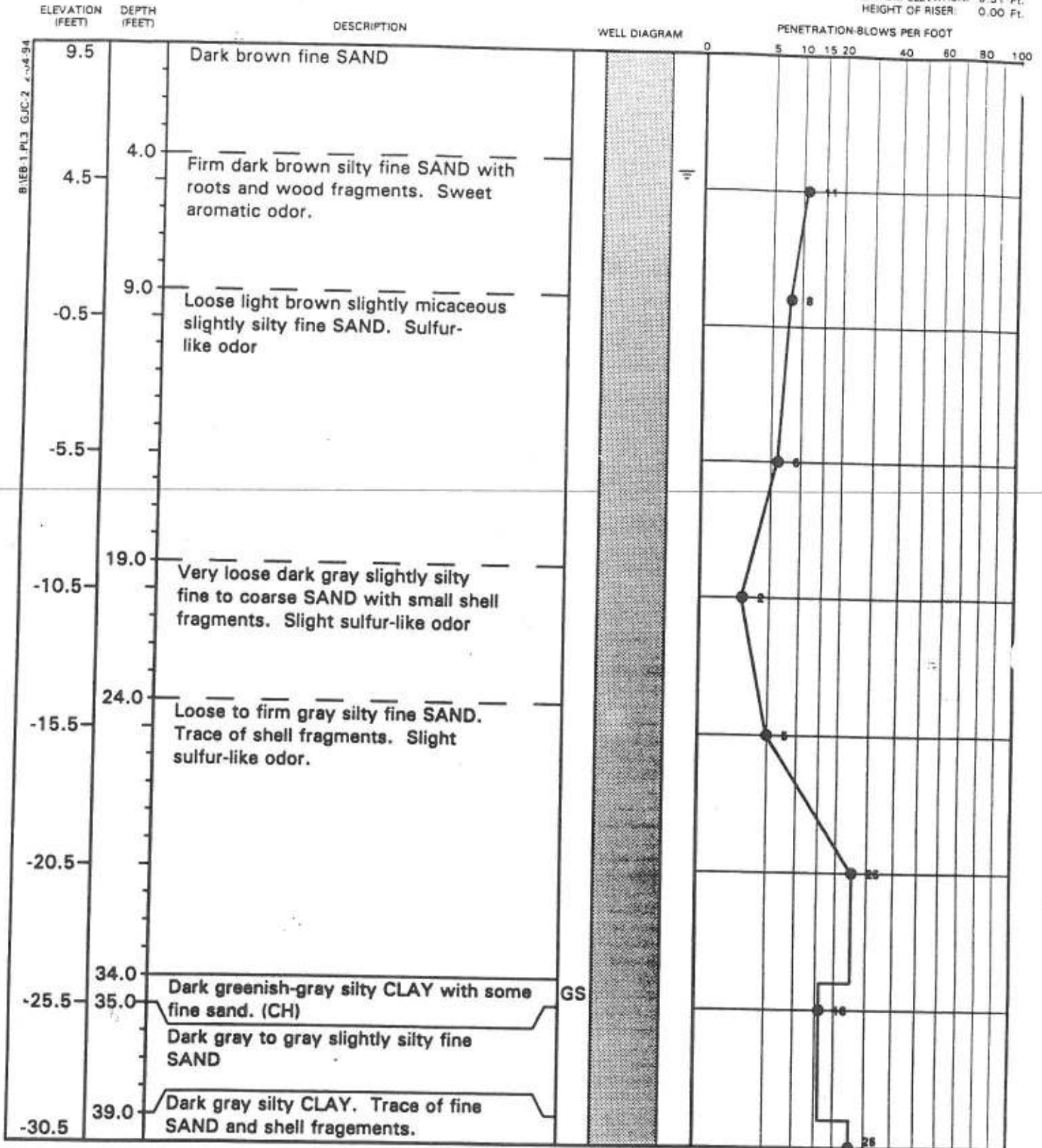


## **Previous Geologic Logs**



# TEST BORING RECORD

DATUM ELEVATION: 9.51 Ft.  
HEIGHT OF RISER: 0.00 Ft.



## REMARKS:

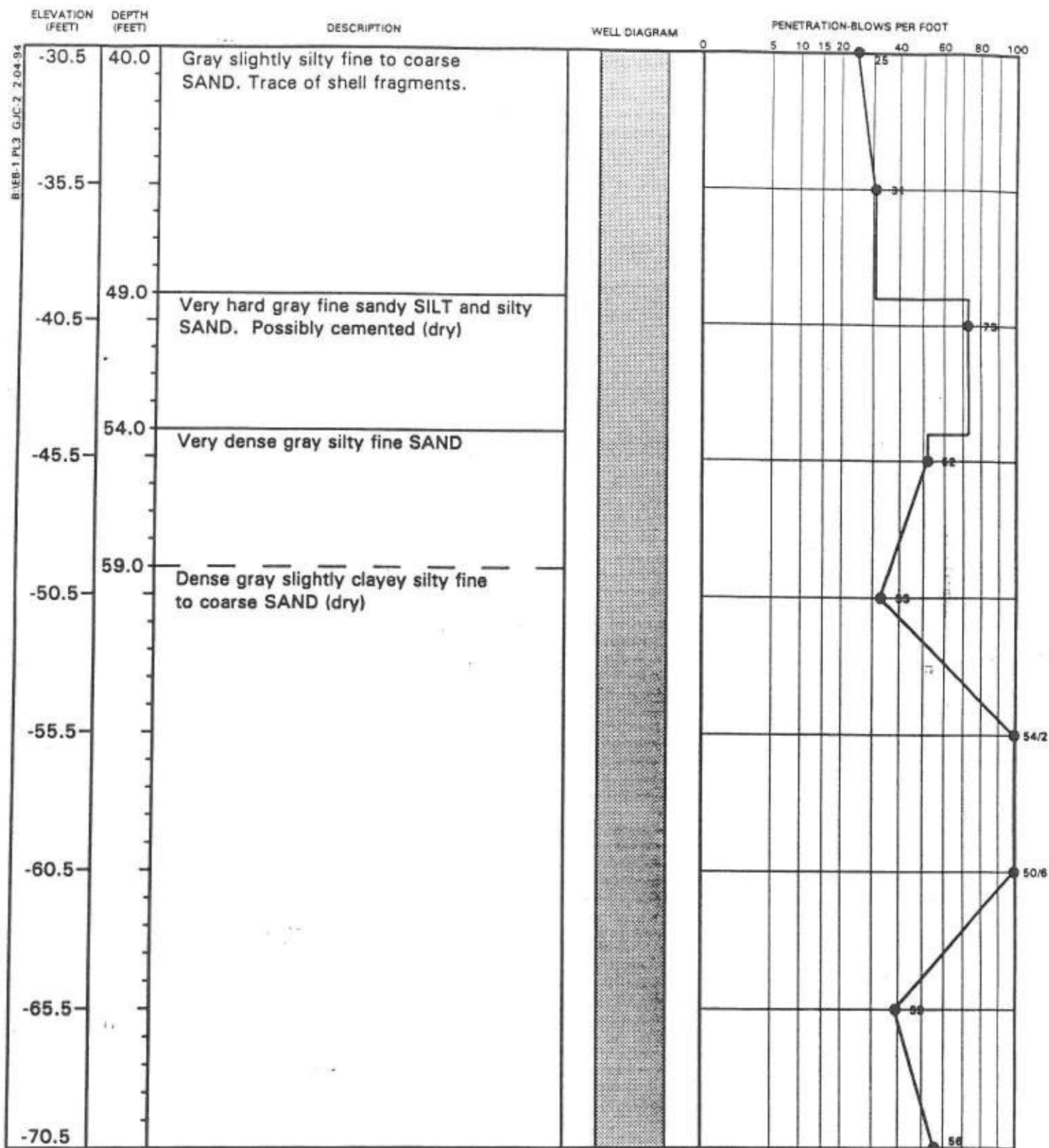
- 1) Drilling Technique: Wash rotary utilizing a 5 7/8-inch rotary drill bit.
- 2) Boring grouted with Portland cement - bentonite slurry.
- 3) Water level during drilling.
- 4) CH - Unified Soil Classification

DRILLED BY	LAW-ATL	BORING NUMBER	EB-1
LOGGED BY	D.Allen	DATE STARTED	9-14-93
CHECKED BY	K.Davis	DATE COMPLETED	9-17-93
		JOB NUMBER	55-3553





# TEST BORING RECORD



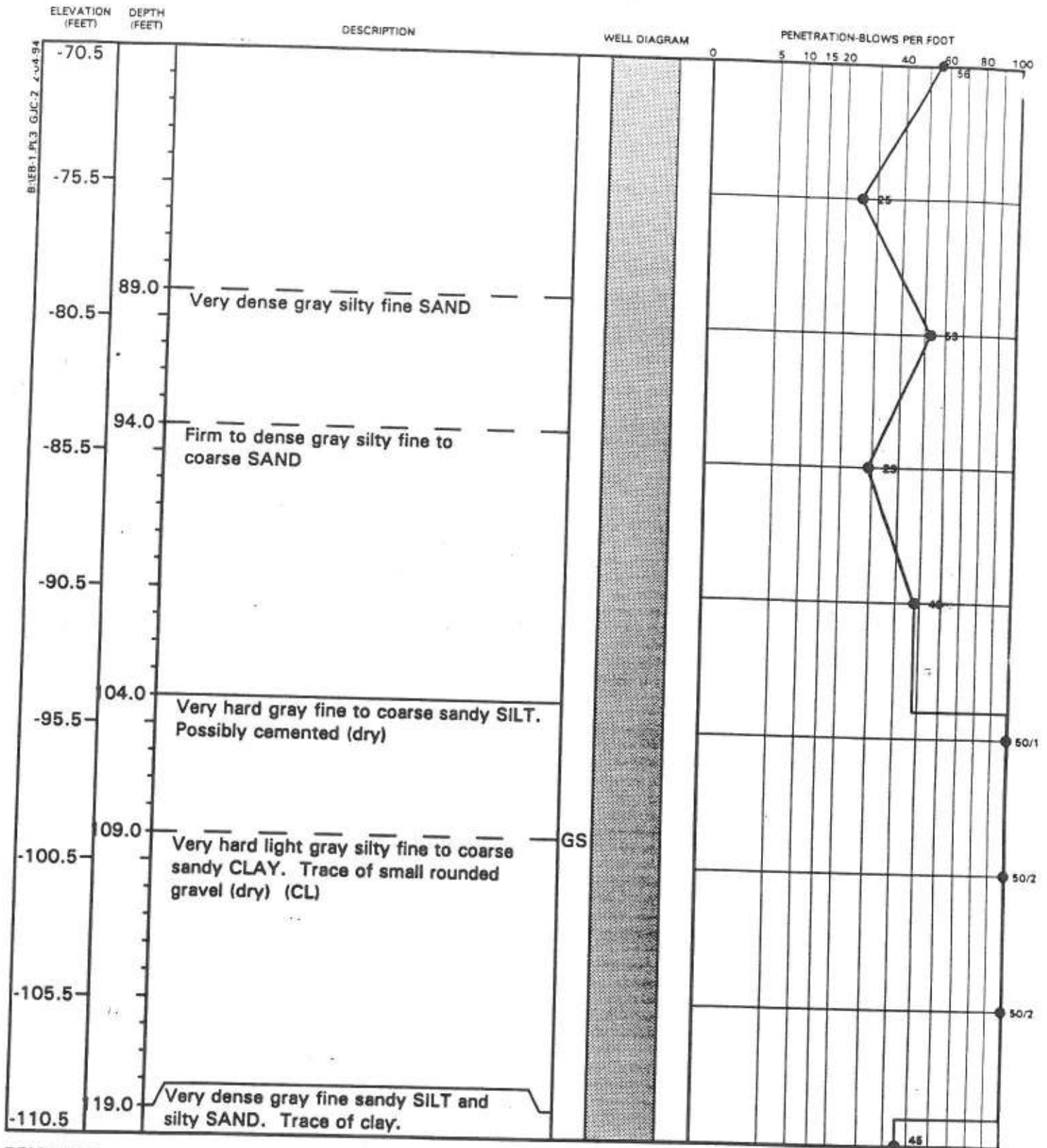
REMARKS:

DRILLED BY	LAW-ATL	BORING NUMBER	EB-1
LOGGED BY	D.Allen	DATE STARTED	9-14-93
CHECKED BY	K.Davis	DATE COMPLETED	9-17-93
		JOB NUMBER	55-355310





# TEST BORING RECORD



## REMARKS:

CL - Unified Soil Classification

DRILLED BY  
LOGGED BY  
CHECKED BY

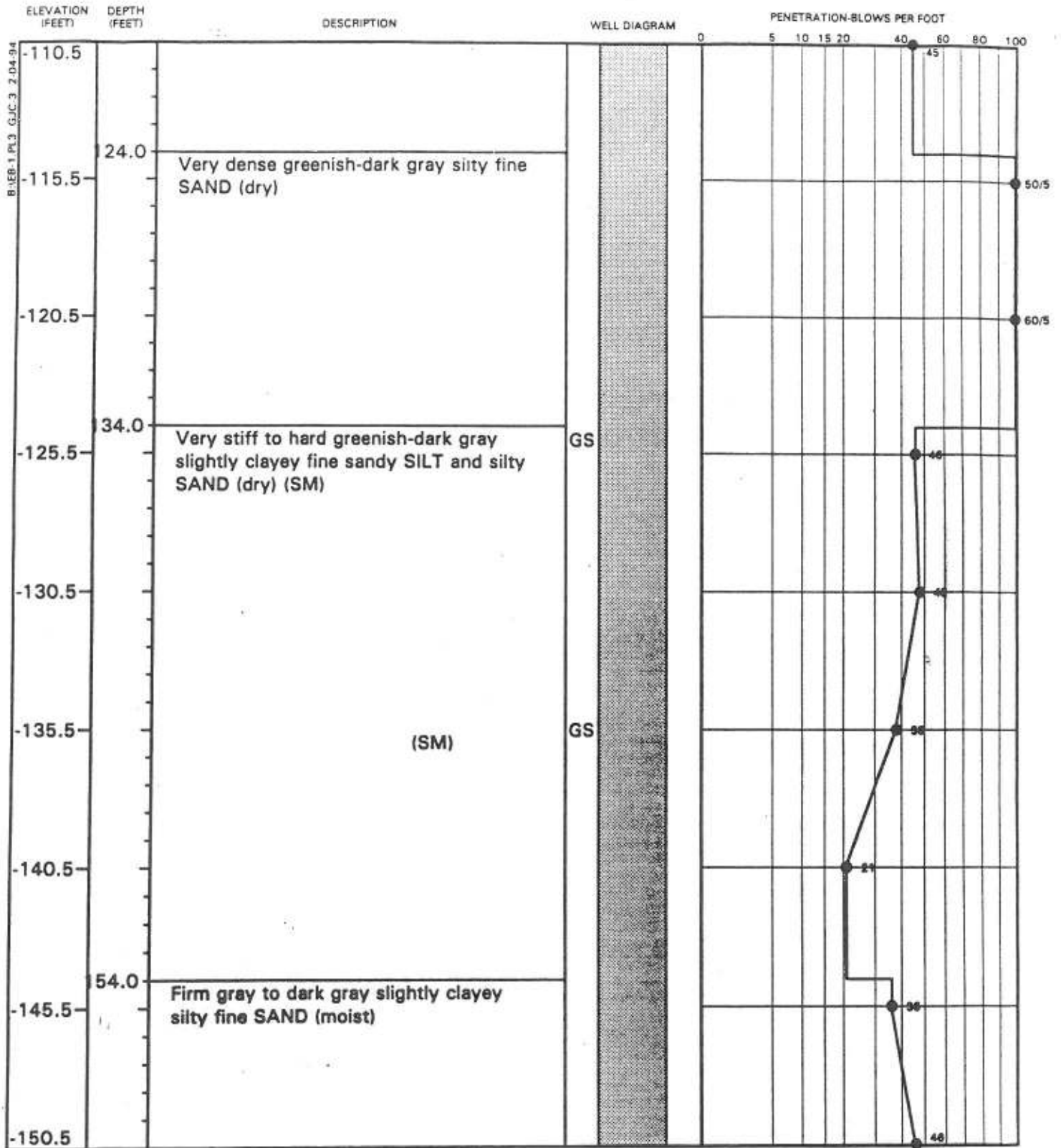
LAW-ATL BORING NUMBER  
D.Allen DATE STARTED  
K.Davis DATE COMPLETED  
JOB NUMBER

EB-1  
9-14-93  
9-17-93  
55-3553





# TEST BORING RECORD




REMARKS:  
SM - Unified Soil Classification

DRILLED BY	LAW-ATL	BORING NUMBER	EB-1
LOGGED BY	D.Allen	DATE STARTED	9-14-93
CHECKED BY	K.Davis	DATE COMPLETED	9-17-93
		JOB NUMBER	55-355310





# TEST BORING RECORD

ELEVATION (FEET)		DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PENETRATION-BLOWS PER FOOT									
-150.5		60.5	Boring terminated at 160.5 feet		0	5	10	15	20	40	60	80	100	
-155.5														
-160.5														
-165.5														
-170.5														
-175.5														
-180.5														
-185.5														
-190.5														

REMARKS:

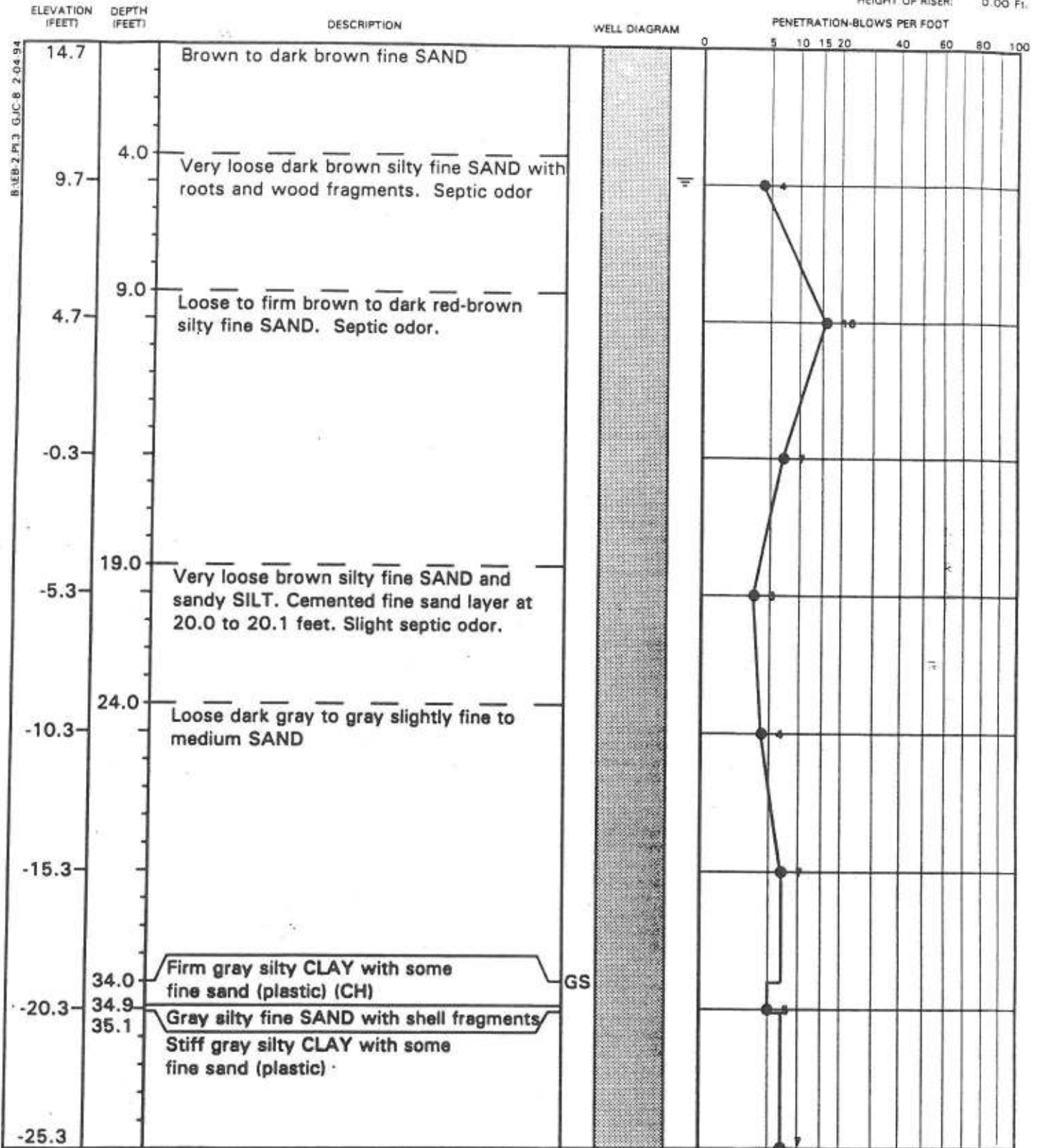
DRILLED BY	LAW-ATL	BORING NUMBER	EB-1
LOGGED BY	D.Allen	DATE STARTED	9-14-93
CHECKED BY	K.Davis	DATE COMPLETED	9-17-93
		JOB NUMBER	55-3553





# TEST BORING RECORD

DATUM ELEVATION: 14.67 Ft.  
HEIGHT OF RISER: 0.00 Ft.



## REMARKS:

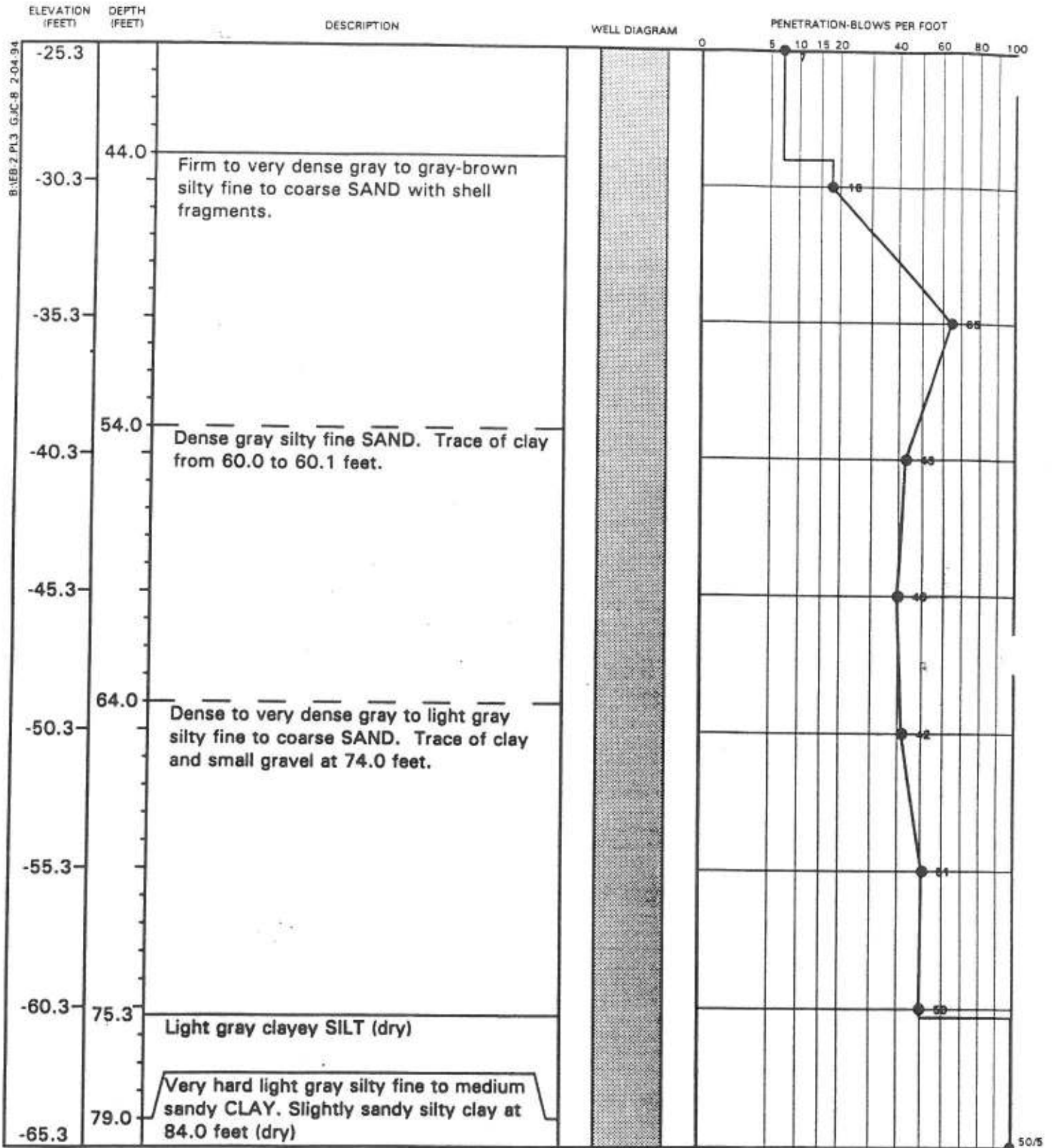
- 1) Drilling Technique: Mud rotary utilizing 5 7/8-inch rotary drill bit.
- 2) Boring grouted with Portland cement bentonite slurry.
- 3) = Water level during drilling
- 4) CH - Unified Soil Classification

DRILLED BY	LAW-ATL	BORING NUMBER	EB-2
LOGGED BY	D.Allen	DATE STARTED	9-17-93
CHECKED BY	K.Davis	DATE COMPLETED	9-18-93
		JOB NUMBER	55-355310





# TEST BORING RECORD



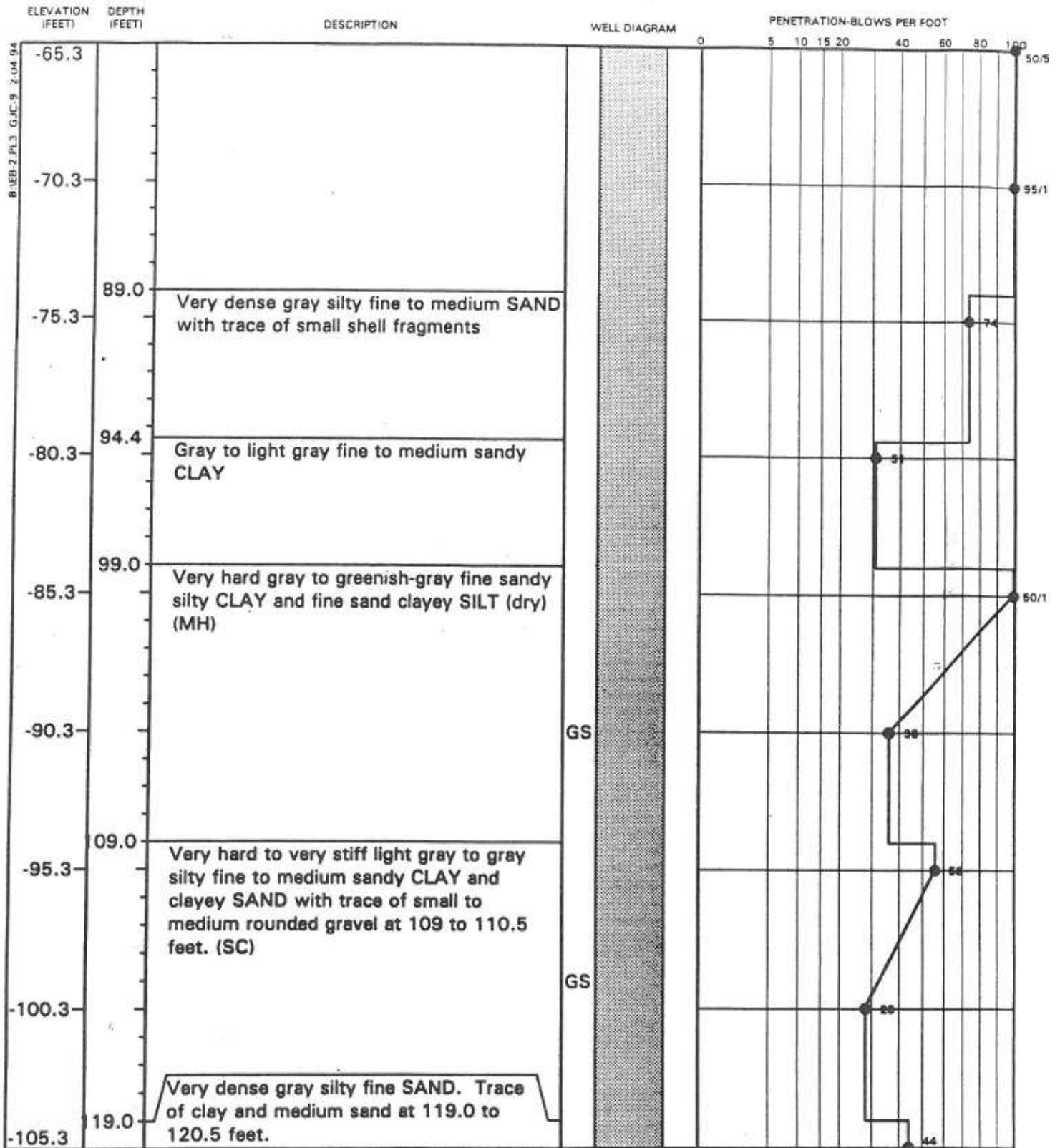
REMARKS:

DRILLED BY	LAW-ATL	BORING NUMBER	EB-2
LOGGED BY	D.Allen	DATE STARTED	9-17-93
CHECKED BY	K.Davis	DATE COMPLETED	9-18-93
		JOB NUMBER	55-355





# TEST BORING RECORD



## REMARKS:

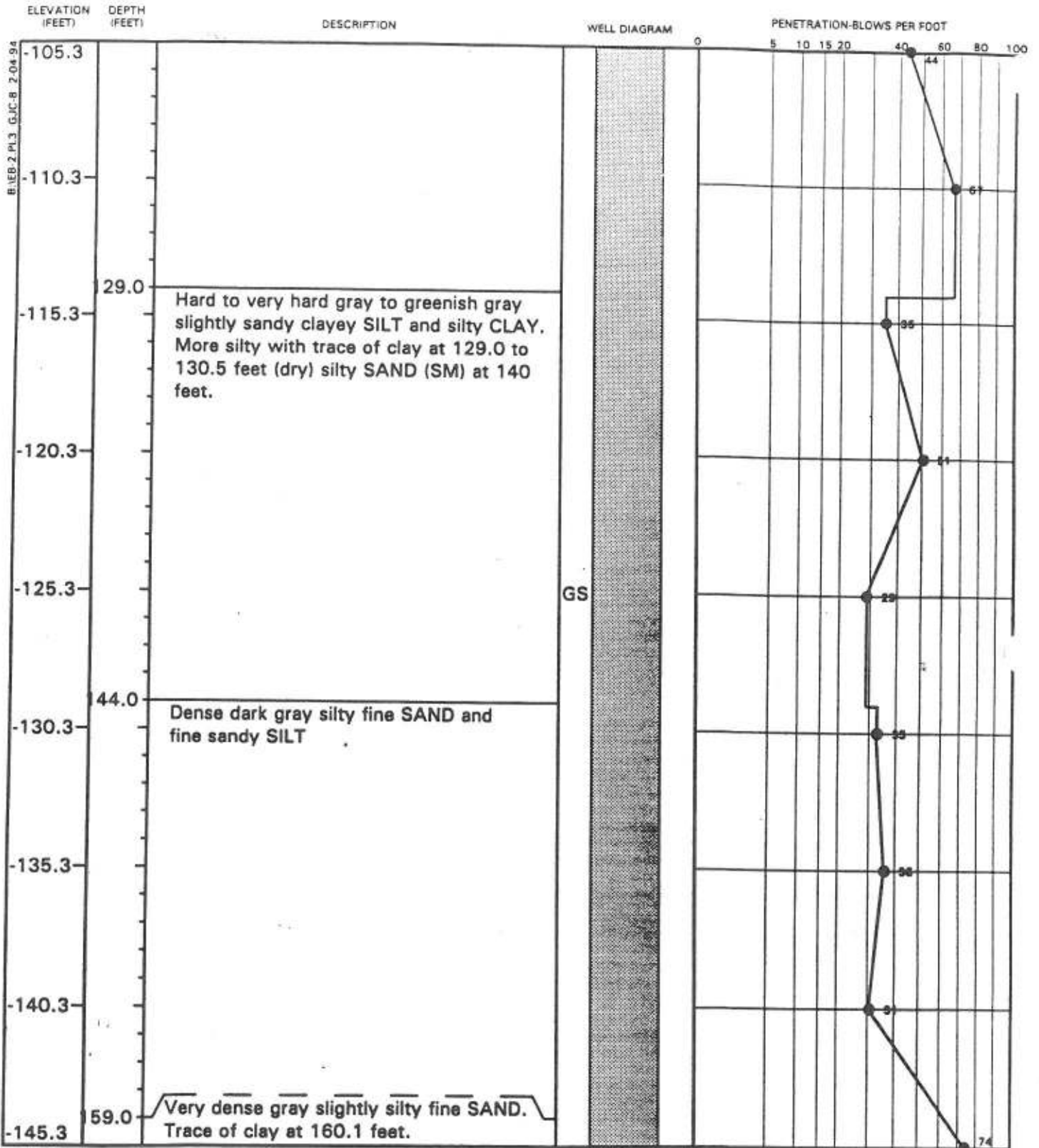
MH, SC - Unified Soil Classification

DRILLED BY	LAW-ATL	BORING NUMBER	EB-2
LOGGED BY	D.Allen	DATE STARTED	9-17-93
CHECKED BY	K.Davis	DATE COMPLETED	9-18-93
		JOB NUMBER	55-355310





# TEST BORING RECORD



## REMARKS:

SM - Unified Soil Classification

DRILLED BY	LAW-ATL	BORING NUMBER	EB-2
LOGGED BY	D.Allen	DATE STARTED	9-17-93
CHECKED BY	K.Davis	DATE COMPLETED	9-18-93
		JOB NUMBER	55-3553





# TEST BORING RECORD

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PENETRATION-BLOWS PER FOOT									
-145.3	60.5	Boring terminated at 160.5 feet		0	5	10	15	20	40	60	80	100	74
-150.3													
-155.3													
-160.3													
-165.3													
-170.3													
-175.3													
-180.3													
-185.3													

REMARKS:

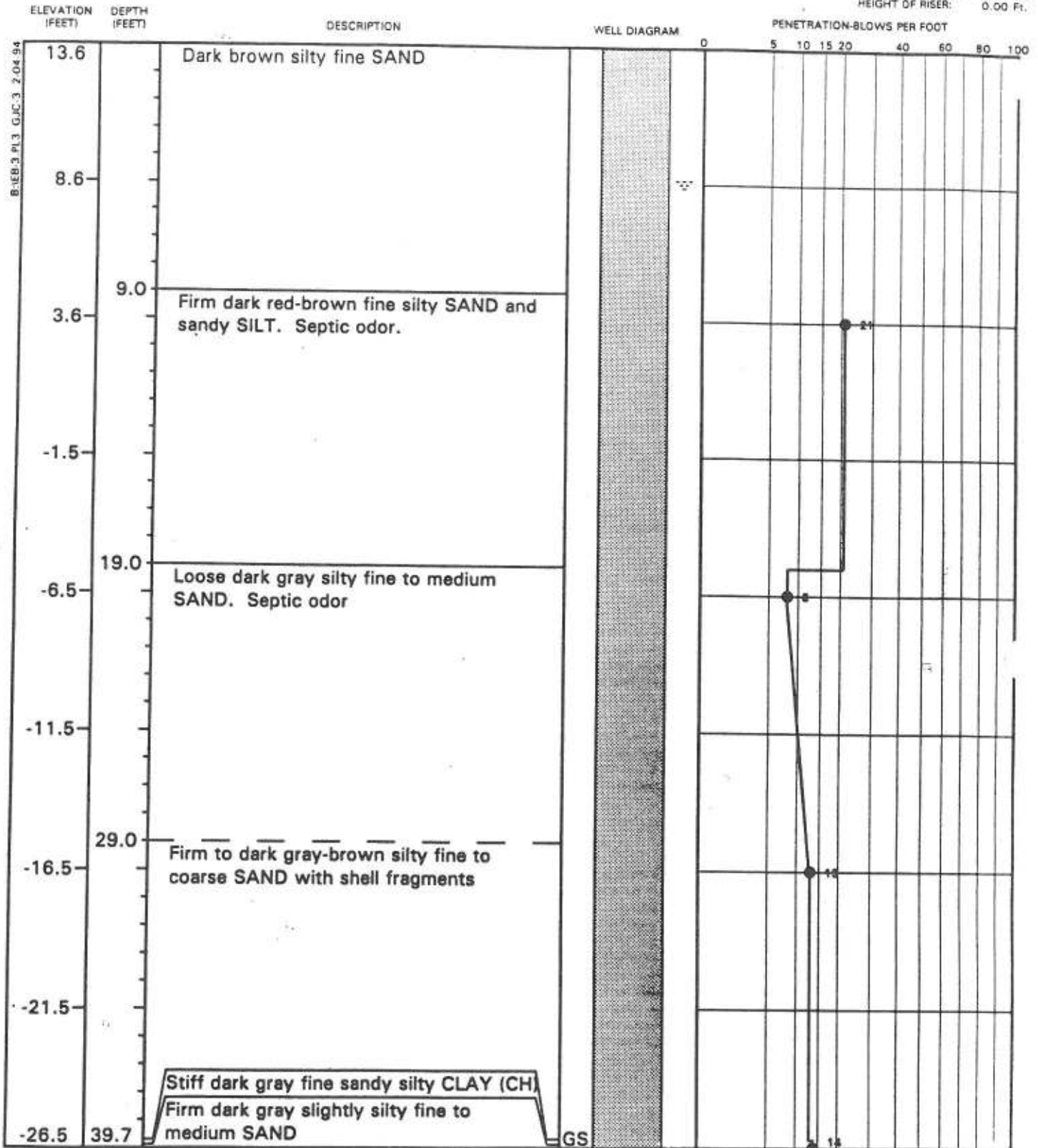
DRILLED BY	LAW-ATL	BORING NUMBER	EB-2
LOGGED BY	D.Allen	DATE STARTED	9-17-93
CHECKED BY	K.Davis	DATE COMPLETED	9-18-93
		JOB NUMBER	55-355310





# TEST BORING RECORD

DATUM ELEVATION: 13.55 Ft.  
HEIGHT OF RISER: 0.00 Ft.



## REMARKS:

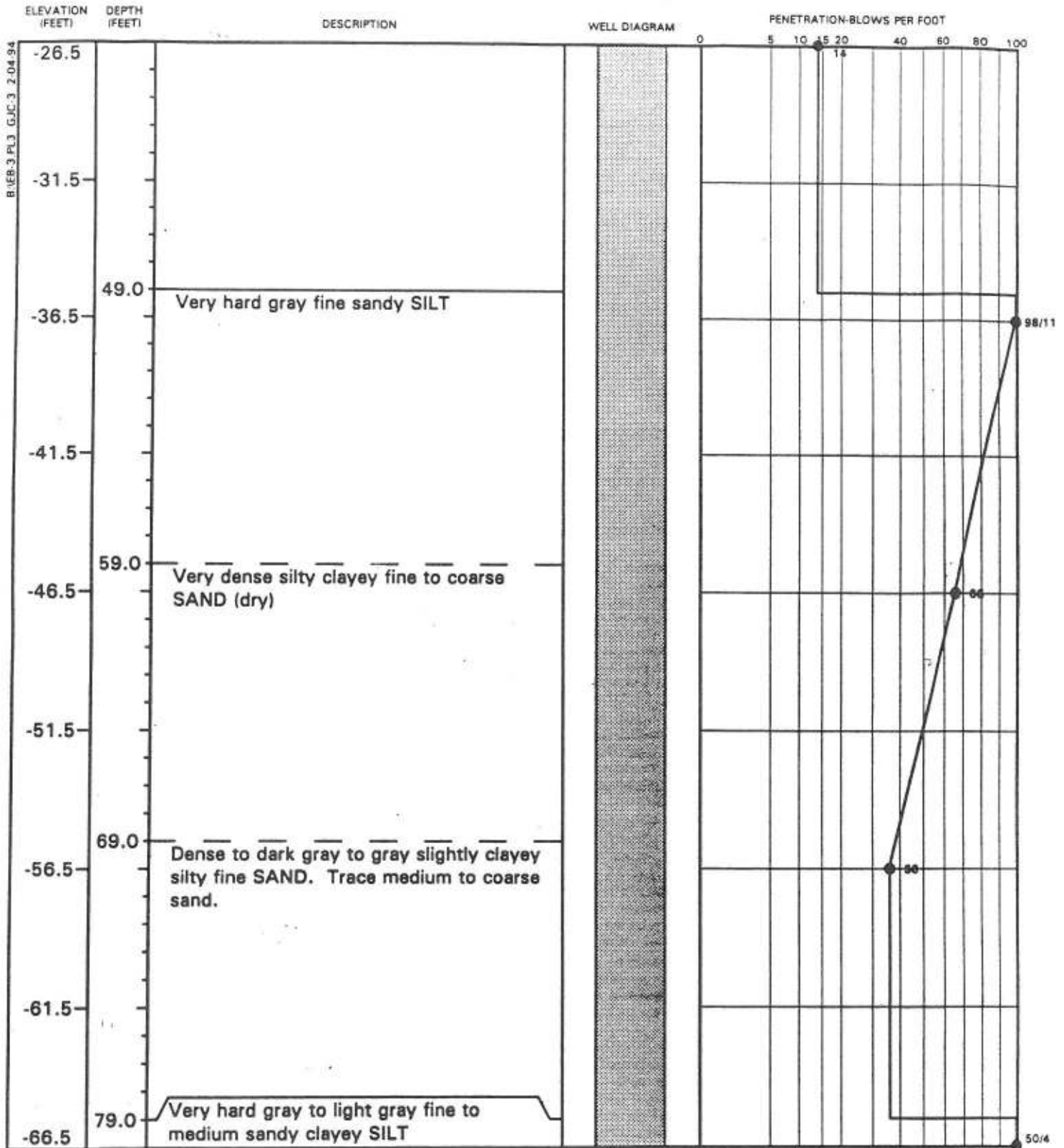
- 1) Drilling Technique: Mud rotary utilizing a 5 7/8-inch tricone rotary drill bit.
- 2) Boring grouted to ground surface with a Portland cement - bentonite slurry.
- 3) Water level during drilling.
- 4) CH - Unified Soil Classification

DRILLED BY	LAW-ATL	BORING NUMBER	EB-3
LOGGED BY	D.Allen	DATE STARTED	9-19-93
CHECKED BY	K.Davis	DATE COMPLETED	9-20-93
		JOB NUMBER	55-355





# TEST BORING RECORD



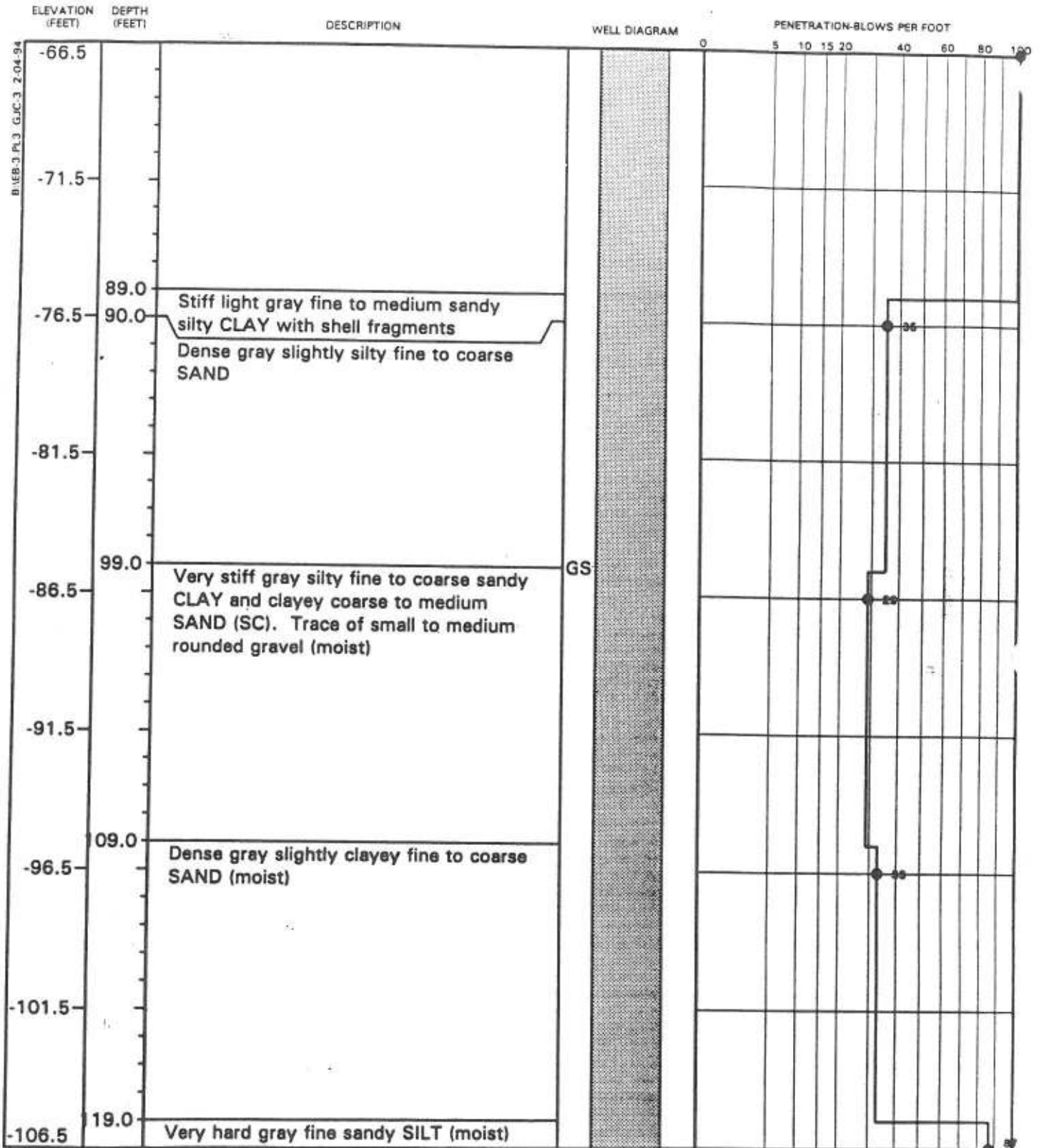
REMARKS:

DRILLED BY	LAW-ATL	BORING NUMBER	EB-3
LOGGED BY	D.Allen	DATE STARTED	9-19-93
CHECKED BY	K.Davis	DATE COMPLETED	9-20-93
		JOB NUMBER	55-355310





# TEST BORING RECORD



## REMARKS:

SC - Unified Soil Classification

DRILLED BY

LOGGED BY

CHECKED BY

LAW-ATL

D.Allen

K.Davis

BORING NUMBER

DATE STARTED

DATE COMPLETED

JOB NUMBER

EB-3

9-19-93

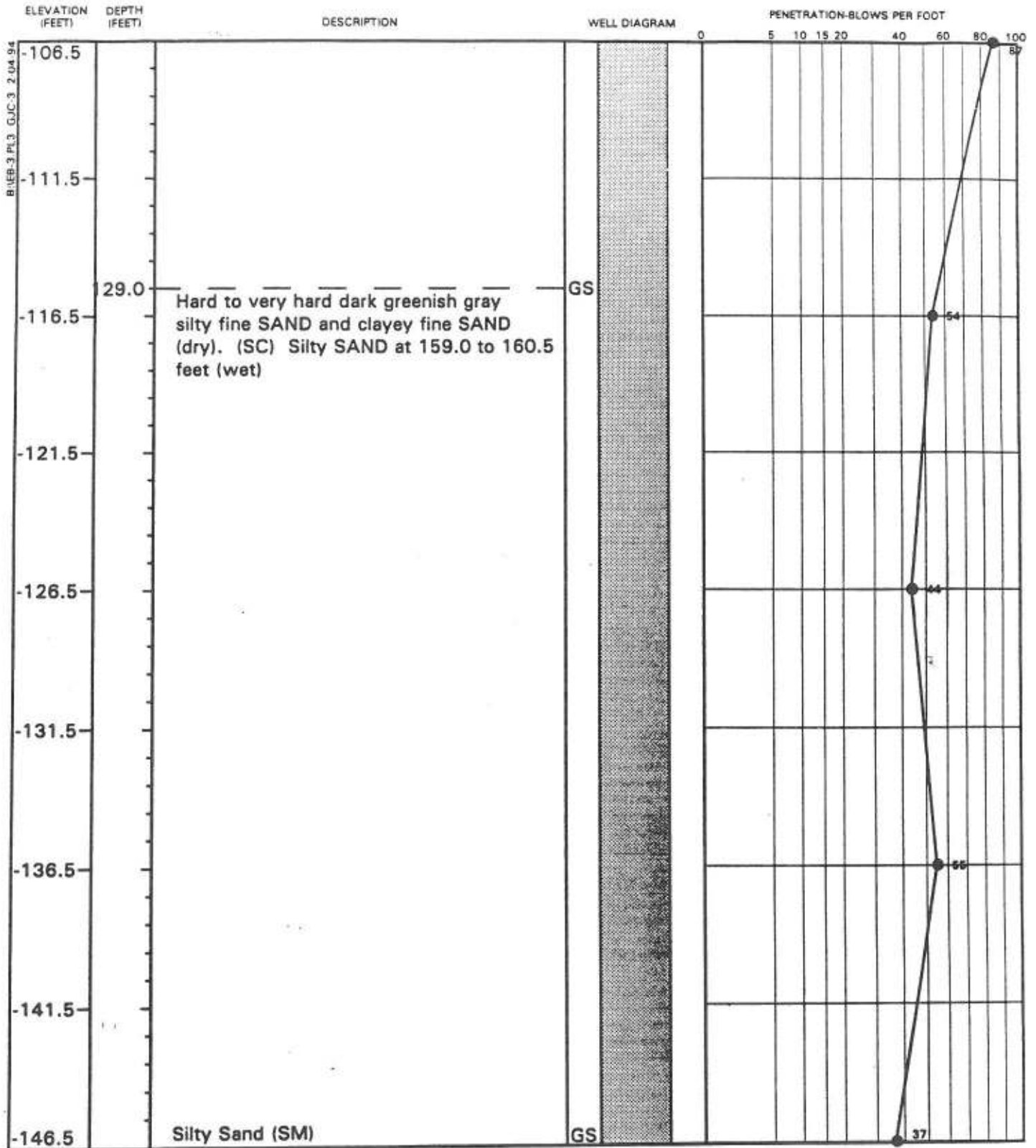
9-20-93

55-3553





# TEST BORING RECORD



REMARKS:  
SC, SM - Unified Soil Classification

DRILLED BY	LAW-ATL	BORING NUMBER	EB-3
LOGGED BY	D.Allen	DATE STARTED	9-19-93
CHECKED BY	K.Davis	DATE COMPLETED	9-20-93
		JOB NUMBER	55-355310





# TEST BORING RECORD

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PENETRATION-BLOWS PER FOOT
-146.5	60.5	Boring terminated at 160.5 feet		0 5 10 15 20 30 37 40 50 60 80 100
-151.5				
-156.5				
-161.5				
-166.5				
-171.5				
-176.5				
-181.5				
-186.5				

REMARKS:

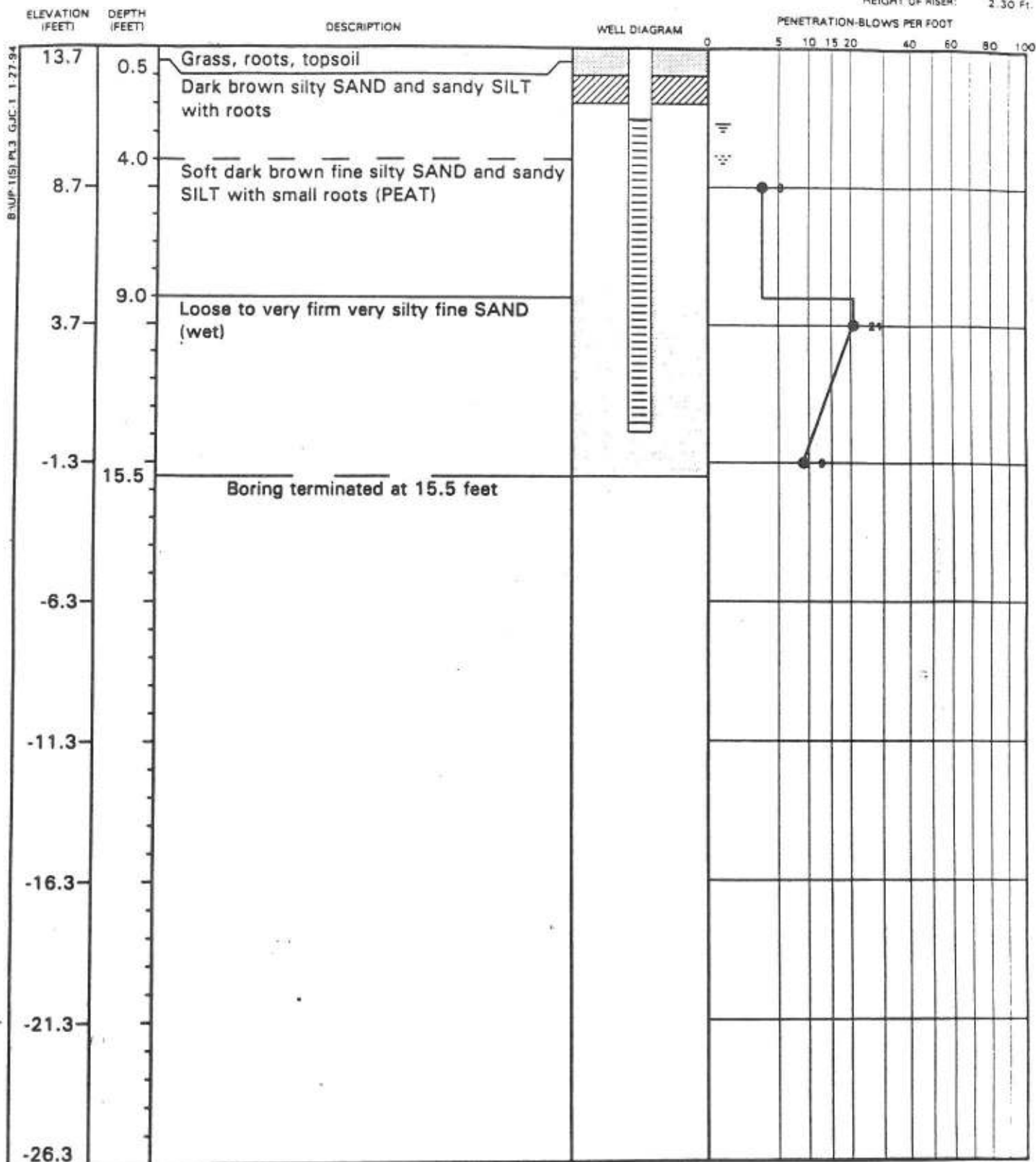
DRILLED BY	LAW-ATL	BORING NUMBER	EB-3
LOGGED BY	D.Allen	DATE STARTED	9-19-93
CHECKED BY	K.Davis	DATE COMPLETED	9-20-93
		JOB NUMBER	55-3553





# TEST BORING RECORD

DATUM ELEVATION: 16.04 Ft.  
HEIGHT OF RISER: 2.30 Ft.



## REMARKS:

- 1) Drilling Technique: 0 to 14 feet using 8-inch O.D. hollow stem auger.
- 2) Well Materials: 2-inch stainless steel 0.010-inch slot screen.
- 3) Water level during drilling.
- 4) Water level measured on 10-7-93.

DRILLED BY	LAW-ATL	BORING NUMBER	UP-1(S)
LOGGED BY	D.Allen	DATE STARTED	9-28-93
CHECKED BY	K.Davis	DATE COMPLETED	9-29-93
		JOB NUMBER	55-255310





# TYPE II MONITORING WELL INSTALLATION DIAGRAM



LAW ENVIRONMENTAL, INC.

KENNESAW, GEORGIA

JOB NAME HERCULES - BRUNSWICK

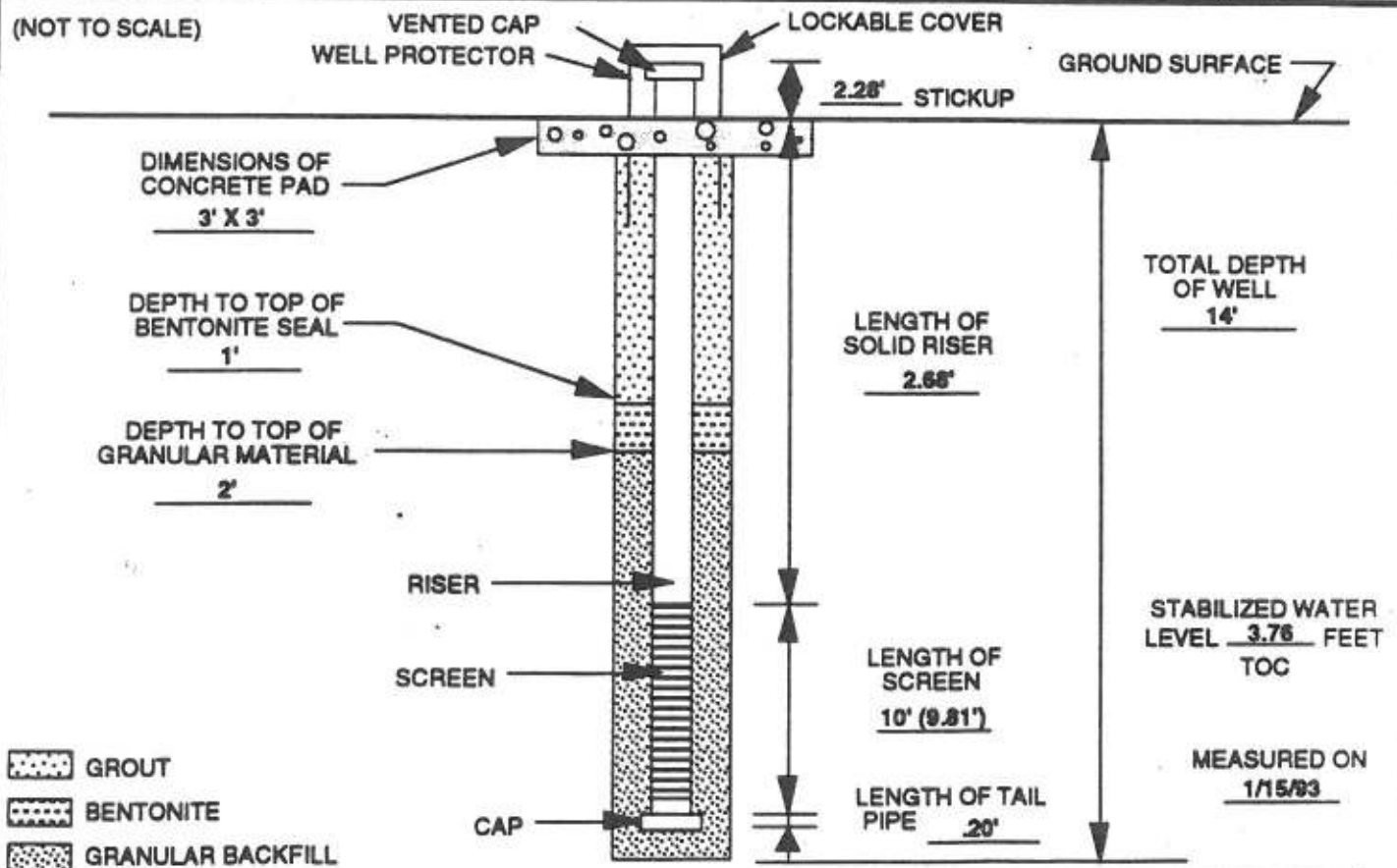
WELL NO. UP-1 (S)

JOB NO. 55-355310

DATE 9/29/93

GROUND SURFACE ELEVATION <u>14.2 NGVD</u>	BENTONITE TYPE <u>PURE GOLD® BENTONITE TABLETS</u>
TOP OF PAD ELEVATION <u>14.25 NGVD</u>	CEMENT TYPE <u>PORTLAND TYPE I</u>
TOP OF CASING ELEVATION <u>16.48 NGVD</u>	BOREHOLE DIAMETER <u>8-INCH</u>
TYPE SAND PACK <u>GRANULAR</u> GRADATION <u>20/30</u>	SCREEN DIAMETER <u>2-INCH</u> SLOT SIZE <u>0.010 INCH</u>
SCREEN MATERIAL <u>TYPE 304 WIRE WRAP STAINLESS STEEL</u>	LAW ENVIRONMENTAL, INC.
MANUFACTURER <u>DRILLERS SERVICE, INC.</u>	FIELD REPRESENTATIVE <u>DAVID ALLEN</u>
RISER MATERIAL <u>TYPE 304 STAINLESS STEEL</u>	DRILLING CONTRACTOR <u>LAW ENGINEERING - ATLANTA</u>
MANUFACTURER <u>DRILLERS SERVICE, INC.</u>	AMOUNT BENTONITE USED <u>0.16 FT³</u>
RISER DIAMETER <u>2-INCH</u>	AMOUNT CEMENT USED <u>0.16 FT³</u>
DRILLING TECHNIQUE <u>CONVENTIONAL AUGER</u>	AMOUNT SAND USED <u>1.9 FT³</u>
BIT SIZE AND TYPE <u>8-INCH O.D. HOLLOW STEM</u>	STATIC WATER DEPTH (after dev.) <u>5.2 FT</u>

(NOT TO SCALE)



INSTALLED BY: DAVID ALLEN

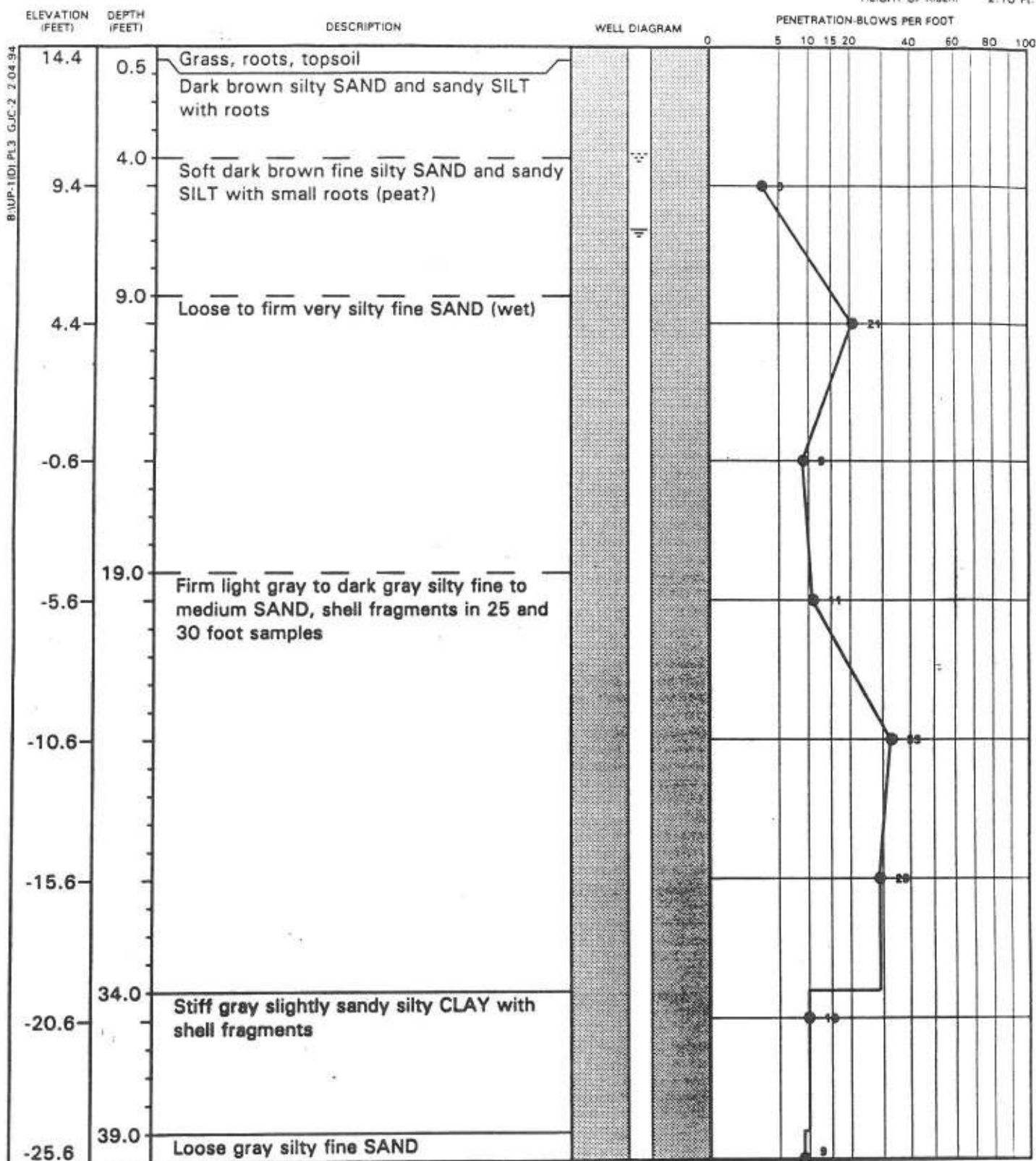
CHECKED BY: GREG MONNETT

DATE: 1/26/94



# TEST BORING RECORD

DATUM ELEVATION: 16.48 Ft.  
HEIGHT OF RISER: 2.10 Ft.



## REMARKS:

- 1) Drilling Technique: 0-95 feet using 5 7/8-inch tricone roller bit.
- 2) Well Materials: 2-inch stainless steel 0.010-inch slot screen.
- 3) ∇ Water level during drilling.
- 4) = Water level on 10-7-93.
- 5) Soil descriptions: 0-15 feet from UP-1(S).

DRILLED BY  
LOGGED BY  
CHECKED BY

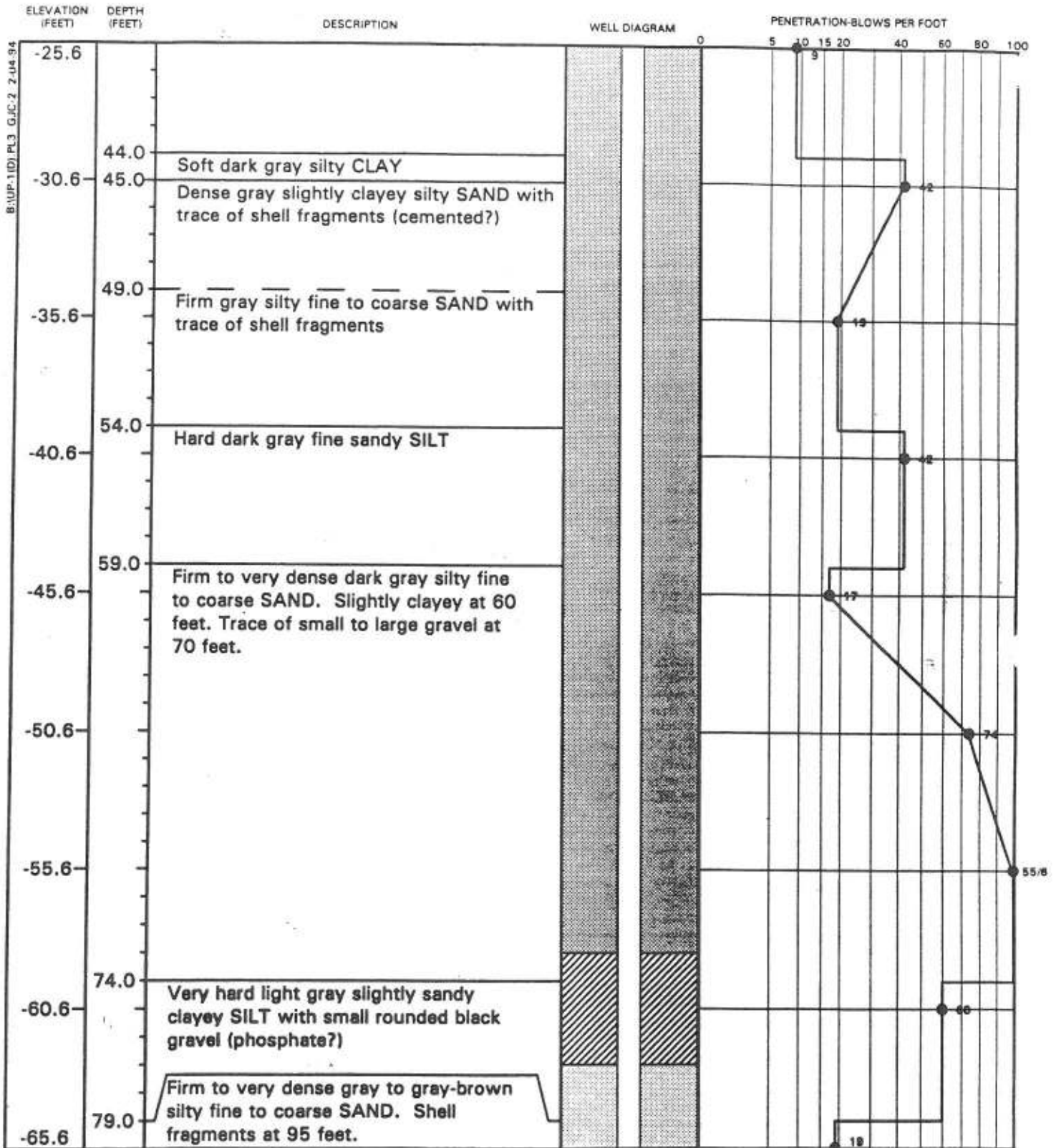
LAW-ATL BORING NUMBER  
D.Allen DATE STARTED  
K.Davis DATE COMPLETED  
JOB NUMBER

UP-1(D)  
9-29-93  
9-30-93  
55-355310





# TEST BORING RECORD



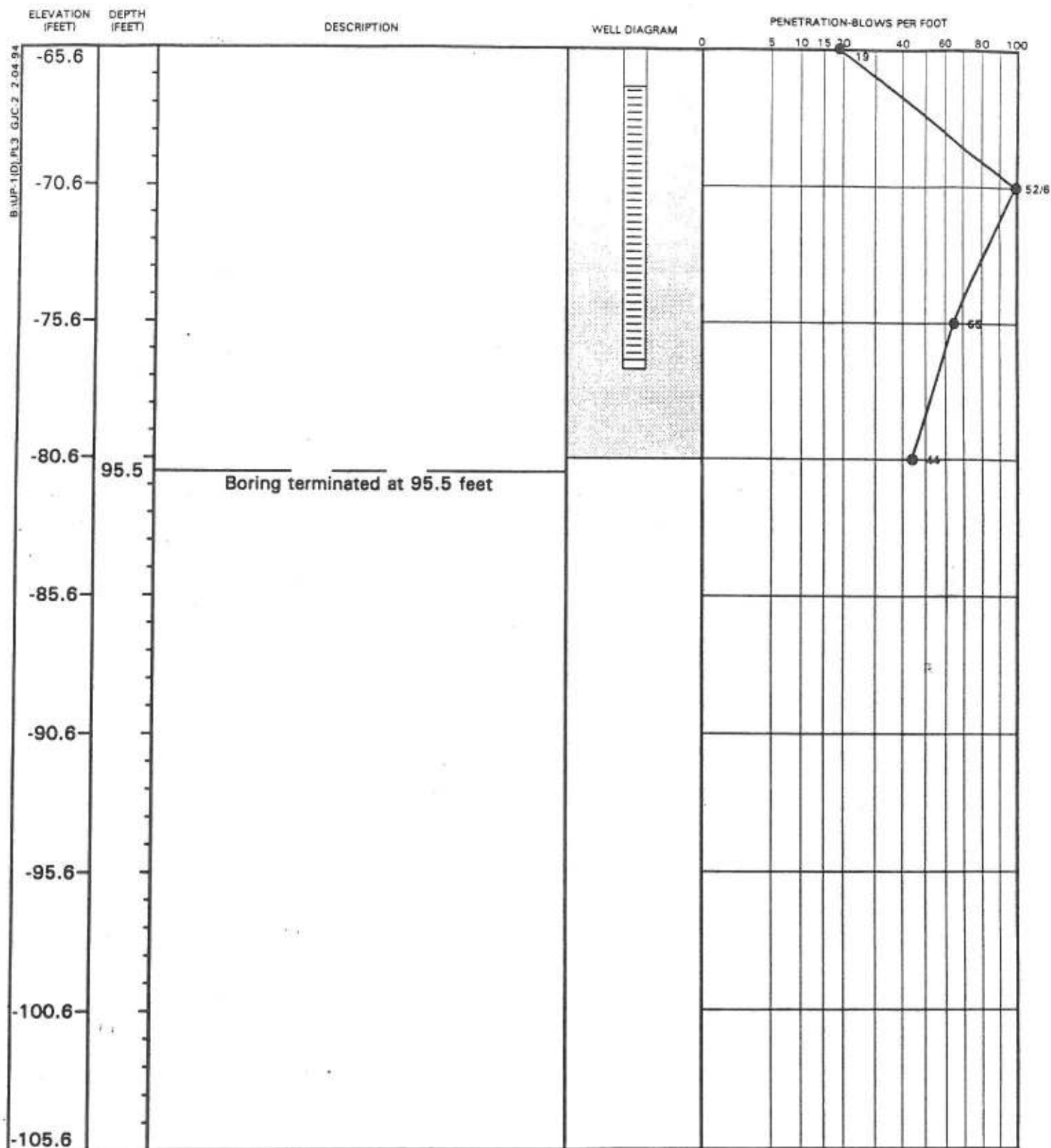
REMARKS:

DRILLED BY	LAW-ATL	BORING NUMBER	UP-1(D)
LOGGED BY	D.Allen	DATE STARTED	9-29-93
CHECKED BY	K.Davis	DATE COMPLETED	9-30-93
		JOB NUMBER	55-3553





# TEST BORING RECORD



REMARKS:

DRILLED BY	LAW-ATL	BORING NUMBER	UP-1(D)
LOGGED BY	D.Allen	DATE STARTED	9-29-93
CHECKED BY	K.Davis	DATE COMPLETED	9-30-93
		JOB NUMBER	55-355310





# TYPE II MONITORING WELL INSTALLATION DIAGRAM



LAW ENVIRONMENTAL, INC.

KENNESAW, GEORGIA

JOB NAME HERCULES - BRUNSWICK

WELL NO. UP-1 (D)

JOB NO. 55-355310

DATE 9/30/93

GROUND SURFACE ELEVATION 13.9 NGVD

BENTONITE TYPE PURE GOLD® BENTONITE TABLETS

TOP OF PAD ELEVATION 13.99 NGVD

CEMENT TYPE PORTLAND TYPE I

TOP OF CASING ELEVATION 16.04 NGVD

BOREHOLE DIAMETER 5 7/8-INCH

TYPE SAND PACK GRANULAR GRADATION 20/30

SCREEN DIAMETER 2-INCH SLOT SIZE 0.010 INCH

LAW ENVIRONMENTAL, INC.

FIELD REPRESENTATIVE DAVID ALLEN

SCREEN MATERIAL TYPE 304 WIRE WRAP STAINLESS STEEL

MANUFACTURER DRILLERS SERVICE, INC.

DRILLING CONTRACTOR LAW ENGINEERING - ATLANTA

RISER MATERIAL TYPE 304 STAINLESS STEEL

MANUFACTURER DRILLERS SERVICE, INC.

AMOUNT BENTONITE USED 0.6 FT³

AMOUNT CEMENT USED 12.1 FT³

AMOUNT SAND USED 2.4 FT³

STATIC WATER DEPTH (after dev.) 8.8 FT

RISER DIAMETER 2-INCH

DRILLING TECHNIQUE (below casing) WASH ROTARY

BIT SIZE AND TYPE 8-INCH O.D. HOLLOW STEM

(NOT TO SCALE)

VENTED CAP  
WELL PROTECTOR

LOCKABLE COVER

2.1' STICKUP

GROUND SURFACE

DIMENSIONS OF  
CONCRETE PAD  
3' X 3'

DEPTH TO TOP OF  
BENTONITE SEAL  
73'

DEPTH TO TOP OF  
GRANULAR MATERIAL  
77'

LENGTH OF  
SOLID RISER  
81.4'

TOTAL DEPTH  
OF WELL  
95'

RISER

SCREEN

LENGTH OF  
SCREEN  
10' (9.73')

STABILIZED WATER  
LEVEL 8.02 FEET  
TOC

CAP

LENGTH OF TAIL  
PIPE 21'

MEASURED ON  
11/15/93

GROUT  
 BENTONITE  
 GRANULAR BACKFILL

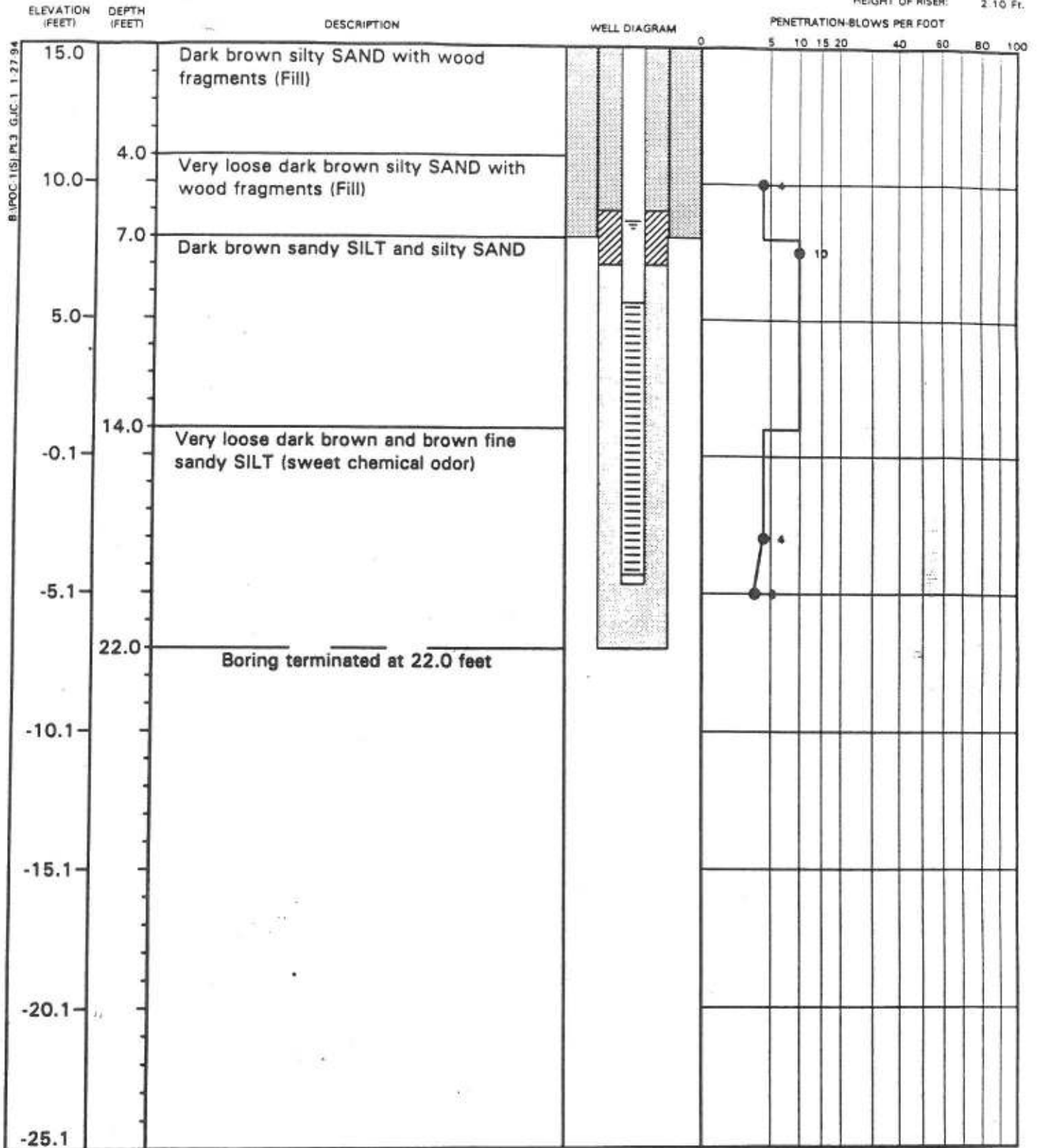
INSTALLED BY: DAVID ALLEN

CHECKED BY: GREG MONNETT DATE: 1/26/94



# TEST BORING RECORD

DATUM ELEVATION: 17.05 Ft.  
HEIGHT OF RISER: 2.10 Ft.



## REMARKS:

- 1) Drilling Technique: 0-7 feet using 8-inch O.D. hollow stem augers. 7 to 22 feet using 5 7/8-inch tricone roller bit.
- 2) Well materials: 2-inch stainless steel 0.010-inch slot screen.
- 3) = Water level on 10-7-93.
- 4) Soil descriptions 0-22 feet from POC-1(D)

DRILLED BY  
LOGGED BY  
CHECKED BY

LAW-ATL  
D.Allen  
K.Davis

BORING NUMBER  
DATE STARTED  
DATE COMPLETED  
JOB NUMBER

POC-1(S)  
9-30-93  
10-02-93  
55-355310





# TYPE III MONITORING WELL INSTALLATION DIAGRAM



LAW ENVIRONMENTAL, INC.

KENNESAW, GEORGIA

JOB NAME HERCULES - BRUNSWICK

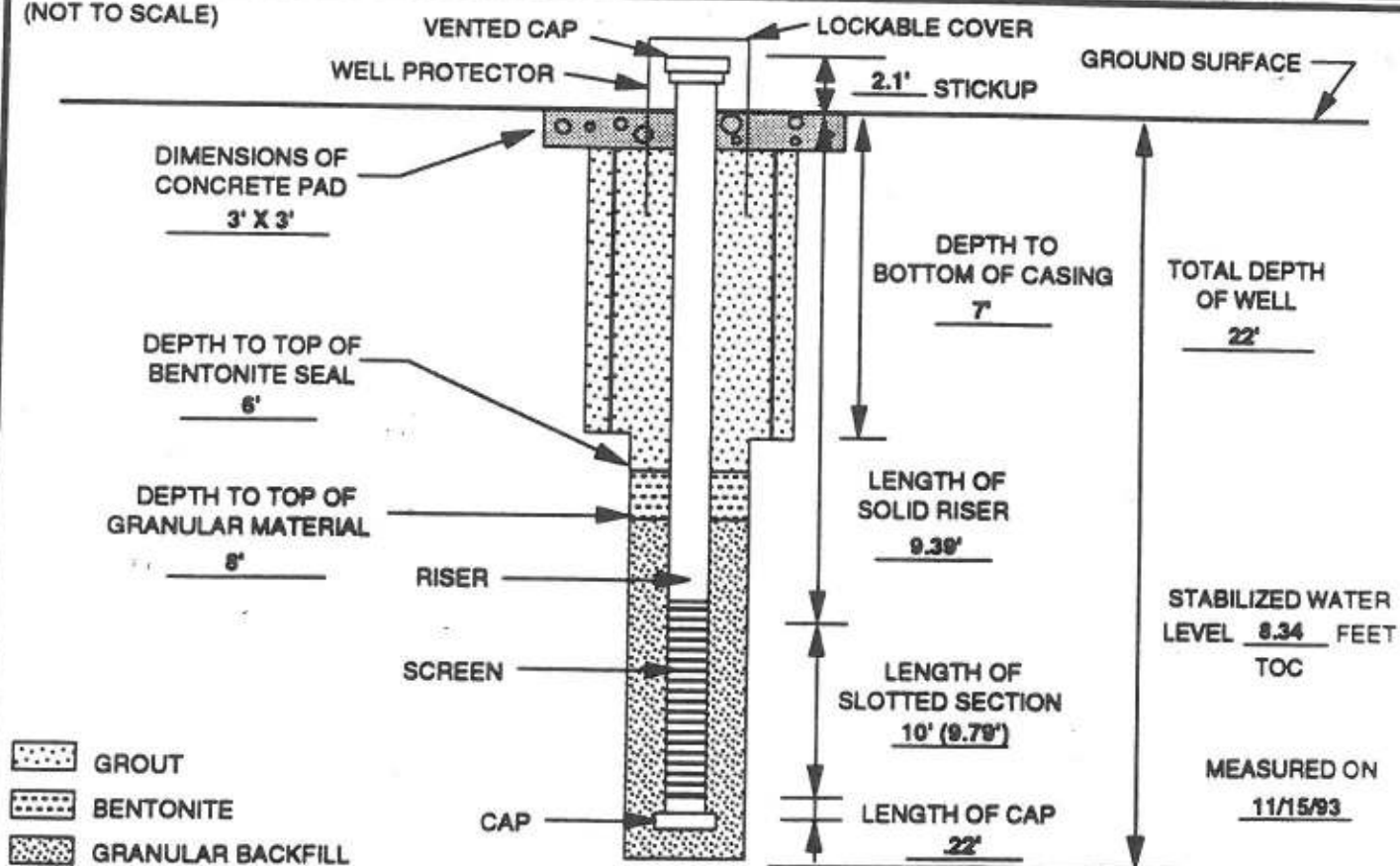
WELL NO. POC-1 (S)

JOB NO. 55-355310

DATE 10/2/93

GROUND SURFACE ELEVATION 15.0 NGVD BENTONITE TYPE PURE GOLD® BENTONITE TABLETS  
 TOP OF PAD ELEVATION 15.11 NGVD CEMENT TYPE PORTLAND TYPE I  
 TOP OF CASING ELEVATION 17.04 NGVD BOREHOLE DIAMETER 5 7/8 INCH  
 TYPE SAND PACK GRANULAR GRADATION 20/30 SCREEN DIAMETER 2-INCH SLOT SIZE 0.010 INCH  
 SCREEN MATERIAL TYPE 304 WIRE WRAP STAINLESS STEEL LAW ENVIRONMENTAL, INC.  
 MANUFACTURER DRILLERS SERVICE, INC. FIELD REPRESENTATIVE DAVID ALLEN  
 RISER MATERIAL TYPE 304 STAINLESS STEEL DRILLING CONTRACTOR LAW ENGINEERING - ATLANTA  
 MANUFACTURER DRILLERS SERVICE, INC. AMOUNT BENTONITE USED 0.33 FT³  
 RISER DIAMETER 2-INCH AMOUNT CEMENT USED 0.99 FT³  
 DRILLING TECHNIQUE (above casing) CONVENTIONAL AUGER AMOUNT SAND USED 1.9 FT³  
 BIT SIZE AND TYPE 8-INCH O.D. HOLLOW STEM STATIC WATER DEPTH (after dev.) 8.62 FT  
 DRILLING TECHNIQUE (below casing) WASH ROTARY TYPE OF CASING 6" SCHEDULE 40 PVC  
 BIT SIZE AND TYPE 5 7/8 INCH TRI-CONE ROLLER BIT

(NOT TO SCALE)



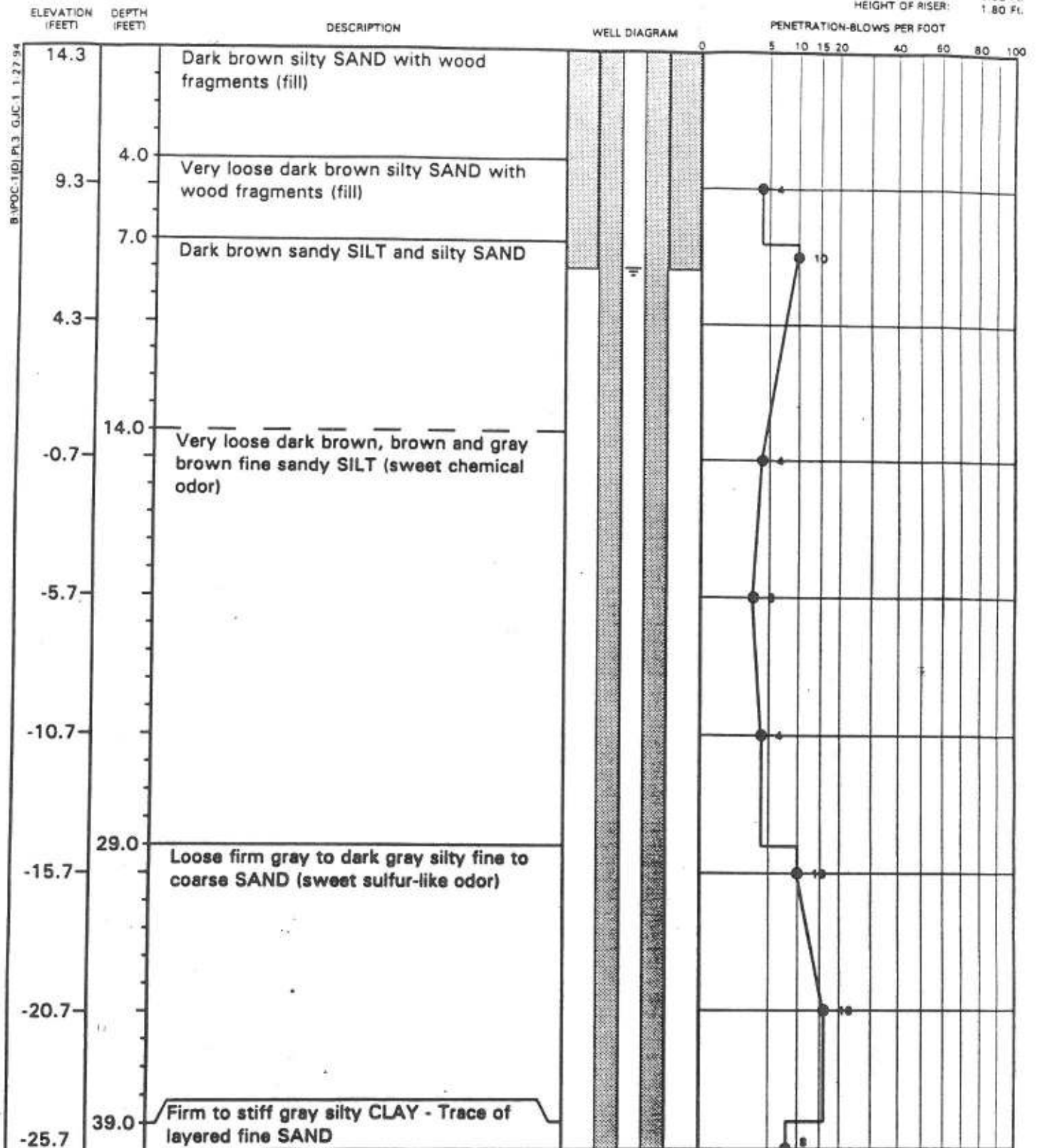
INSTALLED BY: DAVID ALLEN

CHECKED BY: GREG MONNETT DATE: 1-28-94



# TEST BORING RECORD

DATUM ELEVATION: 16.08 Ft.  
HEIGHT OF RISER: 1.80 Ft.



## REMARKS:

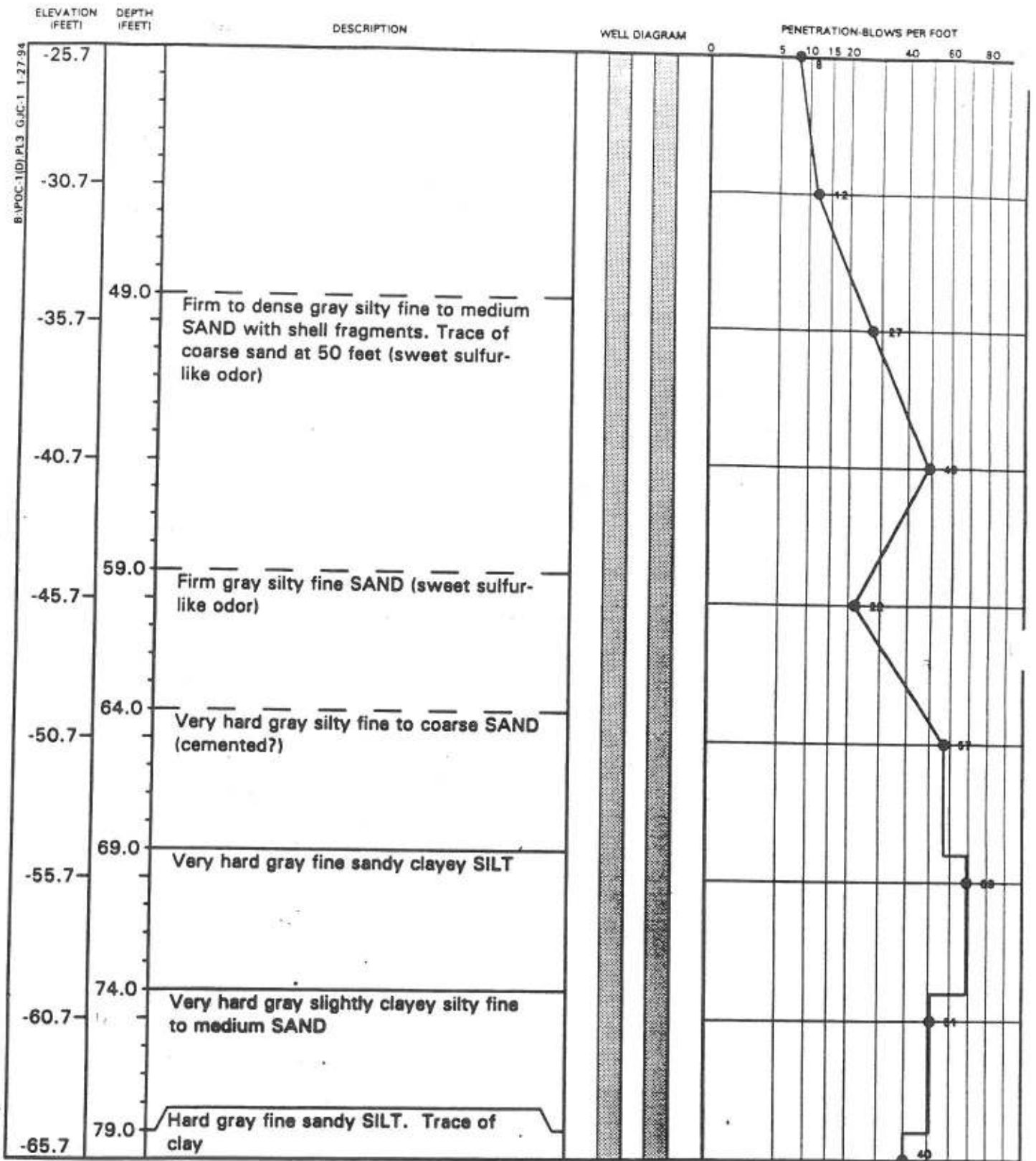
- 1) Drilling Technique: 0-8 feet using 8-inch hollow stem augers. 8-107 feet using 5 7/8-inch tricone roller bit.
- 2) Well Materials: 2-inch stainless steel 0.010-inch slot screen.
- 3) = Water level on 10-7-93.

DRILLED BY	LAW-ATL BORING NUMBER	POC-1(D)
LOGGED BY	D.Allen	DATE STARTED 9-30-93
CHECKED BY	K.Davis	DATE COMPLETED 10-1-93
	JOB NUMBER	55-355310





# TEST BORING RECORD



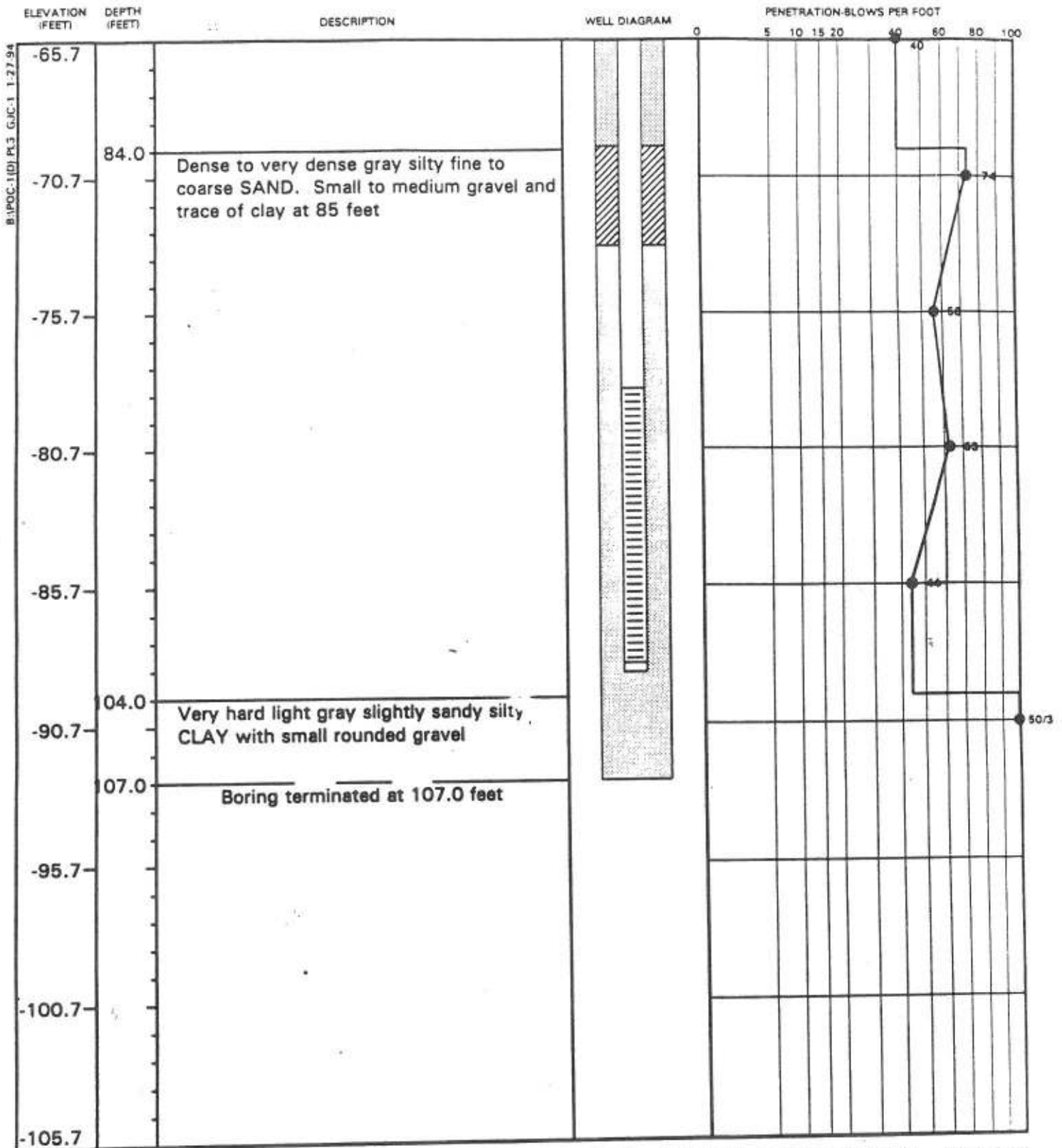
REMARKS:

DRILLED BY	LAW-ATL	BORING NUMBER	POC-1(D)
LOGGED BY	D.Allen	DATE STARTED	9-30-93
CHECKED BY	K.Davis	DATE COMPLETED	10-1-93
		JOB NUMBER	55-3553.0





# TEST BORING RECORD



REMARKS:

DRILLED BY	LAW-ATL	BORING NUMBER	POC-1(D)
LOGGED BY	D.Allen	DATE STARTED	9-30-93
CHECKED BY	K.Davis	DATE COMPLETED	10-1-93
		JOB NUMBER	55-355310





# TYPE III MONITORING WELL INSTALLATION DIAGRAM



LAW ENVIRONMENTAL, INC.

KENNESAW, GEORGIA

JOB NAME HERCULES - BRUNSWICK

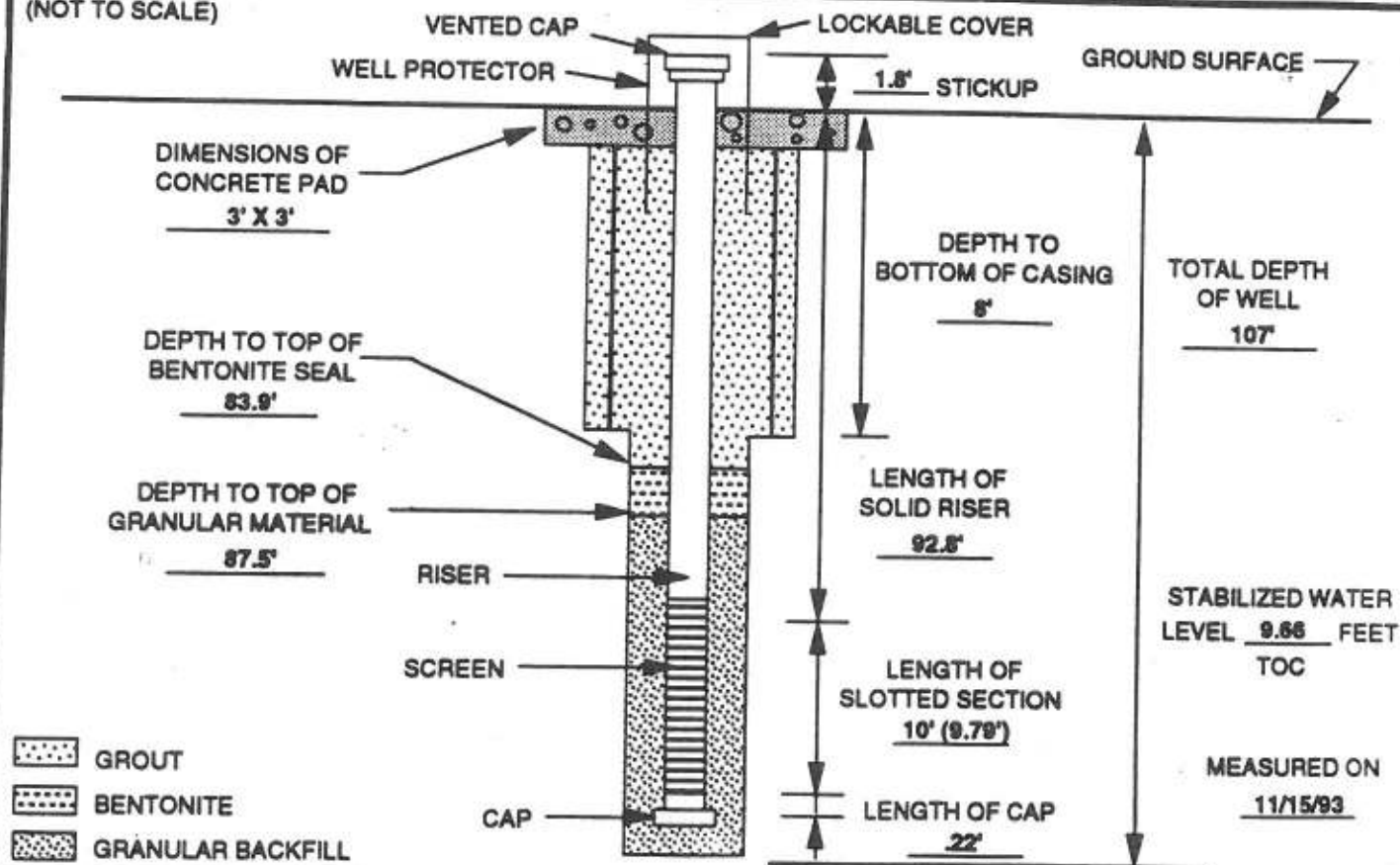
WELL NO. POC-1 (D)

JOB NO. 55-355310

DATE 10/4/93

GROUND SURFACE ELEVATION <u>14.4 NGVD</u>	BENTONITE TYPE <u>PURE GOLD® BENTONITE TABLETS</u>
TOP OF PAD ELEVATION <u>14.59 NGVD</u>	CEMENT TYPE <u>PORTLAND TYPE I</u>
TOP OF CASING ELEVATION <u>16.08 NGVD</u>	BOREHOLE DIAMETER <u>8-INCH</u>
TYPE SAND PACK <u>GRANULAR</u> GRADATION <u>20/30</u>	SCREEN DIAMETER <u>2-INCH</u> SLOT SIZE <u>0.010 INCH</u>
SCREEN MATERIAL <u>TYPE 304 WIRE WRAP STAINLESS STEEL</u>	LAW ENVIRONMENTAL, INC.
MANUFACTURER <u>DRILLERS SERVICE, INC.</u>	FIELD REPRESENTATIVE <u>DAVID ALLEN</u>
RISER MATERIAL <u>TYPE 304 STAINLESS STEEL</u>	DRILLING CONTRACTOR <u>LAW ENGINEERING - ATLANTA</u>
MANUFACTURER <u>DRILLERS SERVICE, INC.</u>	AMOUNT BENTONITE USED <u>0.6 FT³</u>
RISER DIAMETER <u>2-INCH</u>	AMOUNT CEMENT USED <u>14 FT³</u>
DRILLING TECHNIQUE (above casing) <u>CONVENTIONAL AUGER</u>	AMOUNT SAND USED <u>2.6 FT³</u>
BIT SIZE AND TYPE <u>8-INCH O.D. CONTINUOUS FLIGHT</u>	STATIC WATER DEPTH (after dev.) <u>9.88 FT</u>
DRILLING TECHNIQUE (below casing) <u>WASH ROTARY</u>	TYPE OF CASING <u>6" SCHEDULE 40 PVC</u>
BIT SIZE AND TYPE <u>5 7/8 INCH TRI-CONE ROLLER BIT</u>	

(NOT TO SCALE)

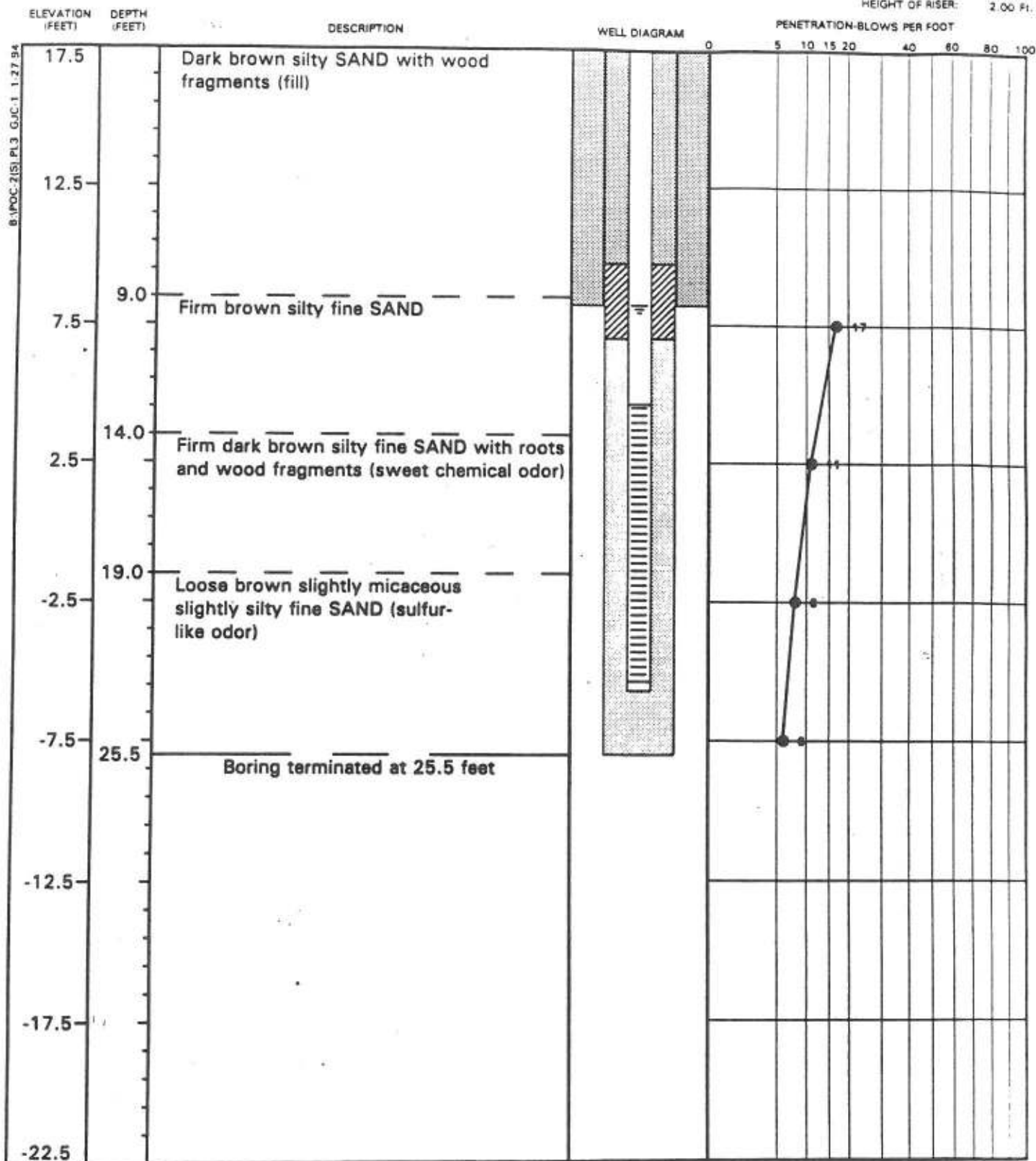


INSTALLED BY: DAVID ALLEN CHECKED BY: GREG MONNETT DATE: 1-26-94



# TEST BORING RECORD

DATUM ELEVATION: 19.48 Ft.  
HEIGHT OF RISER: 2.00 Ft.



## REMARKS:

- 1) Drilling Technique: 0-9 feet using 8-inch O.D. hollow stem augers. 9-25 feet using 5 7/8-inch tricone roller bit.
- 2) Well Materials: 2-inch stainless steel 0.010-inch slot screen.
- 3) = Water level on 10-25-93.
- 4) Soil descriptions 10-25 from EB-1

DRILLED BY	LAAB-ATBORING NUMBER	POC-2(S)
LOGGED BY	D.Allen	DATE STARTED 10-1-93
CHECKED BY	K.Davis	DATE COMPLETED 10-3-93
	JOB NUMBER	55-355310





# TYPE III MONITORING WELL INSTALLATION DIAGRAM



LAW ENVIRONMENTAL, INC.

KENNESAW, GEORGIA

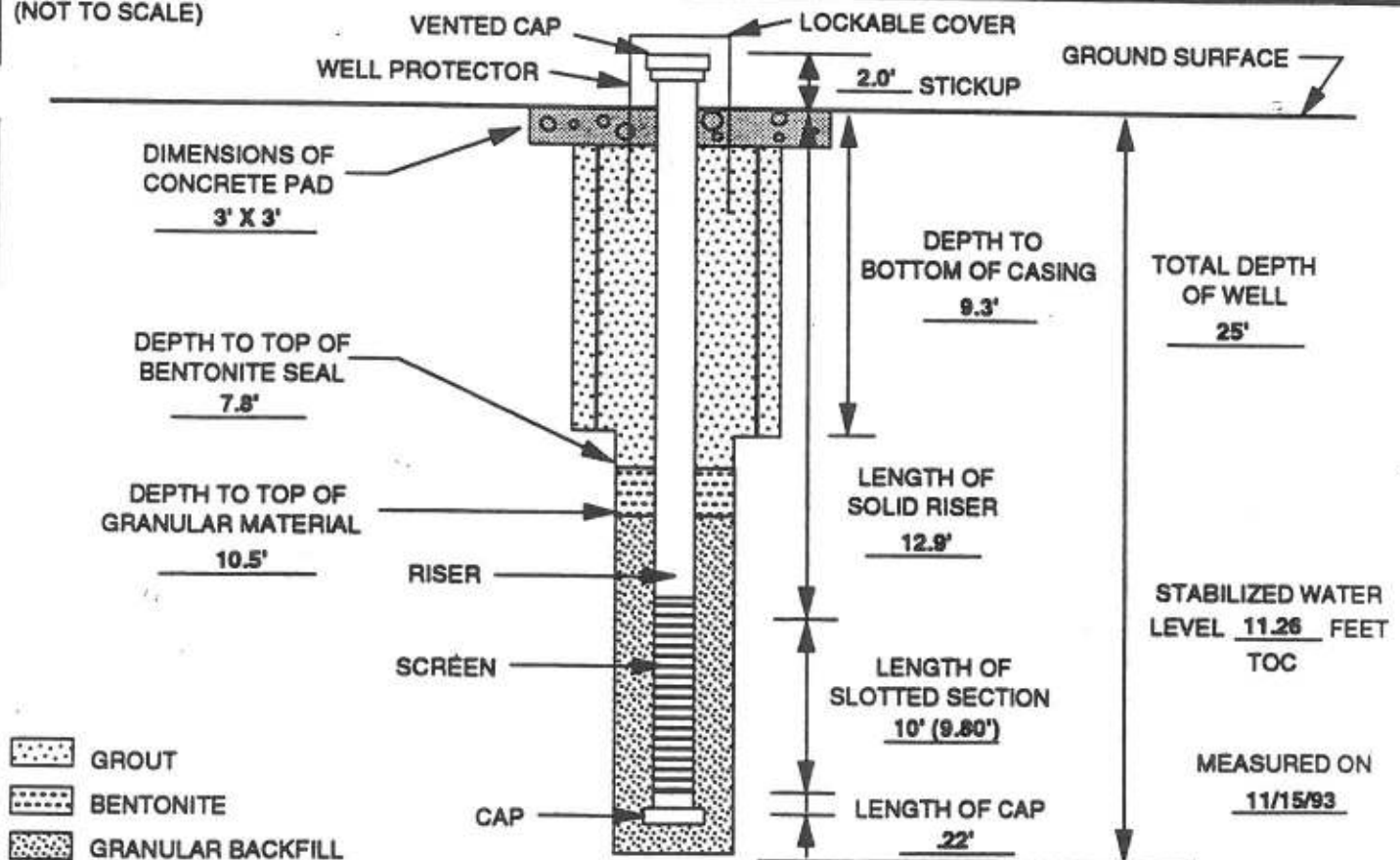
JOB NAME HERCULES - BRUNSWICK

WELL NO. POC-2 (S) JOB NO. 55-355310

DATE 10/2/93

GROUND SURFACE ELEVATION <u>17.9 NGVD</u>	BENTONITE TYPE <u>PURE GOLD® BENTONITE TABLETS</u>
TOP OF PAD ELEVATION <u>17.96 NGVD</u>	CEMENT TYPE <u>PORTLAND TYPE I</u>
TOP OF CASING ELEVATION <u>19.48 NGVD</u>	BOREHOLE DIAMETER <u>5 7/8 INCH</u>
TYPE SAND PACK <u>GRANULAR</u> GRADATION <u>20/30</u>	SCREEN DIAMETER <u>2-INCH</u> SLOT SIZE <u>0.010 INCH</u>
SCREEN MATERIAL <u>TYPE 304 WIRE WRAP STAINLESS STEEL</u>	LAW ENVIRONMENTAL, INC.
MANUFACTURER <u>DRILLERS SERVICE, INC.</u>	FIELD REPRESENTATIVE <u>DAVID ALLEN</u>
RISER MATERIAL <u>TYPE 304 STAINLESS STEEL</u>	DRILLING CONTRACTOR <u>LAW ENGINEERING - ATLANTA</u>
MANUFACTURER <u>DRILLERS SERVICE, INC.</u>	AMOUNT BENTONITE USED <u>.44 FT³</u>
RISER DIAMETER <u>2-INCH</u>	AMOUNT CEMENT USED <u>1.2 FT³</u>
DRILLING TECHNIQUE (above casing) <u>CONVENTIONAL AUGER</u>	AMOUNT SAND USED <u>2.1 FT³</u>
BIT SIZE AND TYPE <u>8-INCH O.D. HOLLOW STEM</u>	STATIC WATER DEPTH (after dev.) <u>11.43 FT</u>
DRILLING TECHNIQUE (below casing) <u>WASH ROTARY</u>	TYPE OF CASING <u>6" SCHEDULE 40 PVC</u>
BIT SIZE AND TYPE <u>5 7/8 INCH TRI-CONE ROLLER BIT</u>	

(NOT TO SCALE)

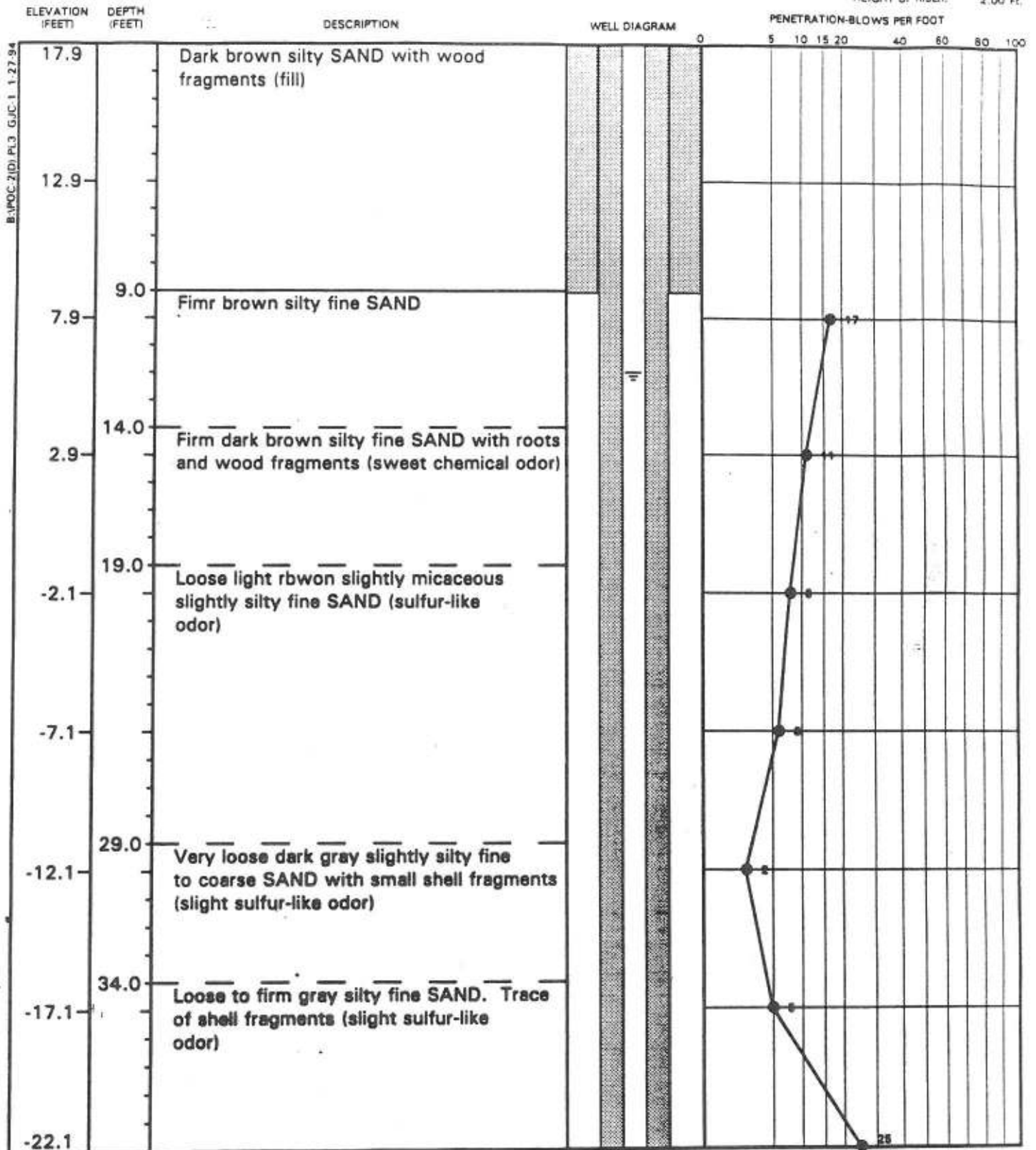


INSTALLED BY: DAVID ALLEN CHECKED BY: GREG MONNETT DATE: 1-26-94



# TEST BORING RECORD

DATUM ELEVATION: 19.89 Ft.  
HEIGHT OF RISER: 2.00 Ft.



## REMARKS:

- 1) Drilling Technique: 0-9 feet using 8-inch O.D. hollow stem augers. 9-107 feet using 5 7/8-inch tricone roller bit.
- 2) Well Materials: 2-inch stainless steel 0.010-inch slot screen
- 3) = Water level on 10-7-93.
- 4) Soil descriptions from 10-100 from EB-1PAGE 1 OF 3

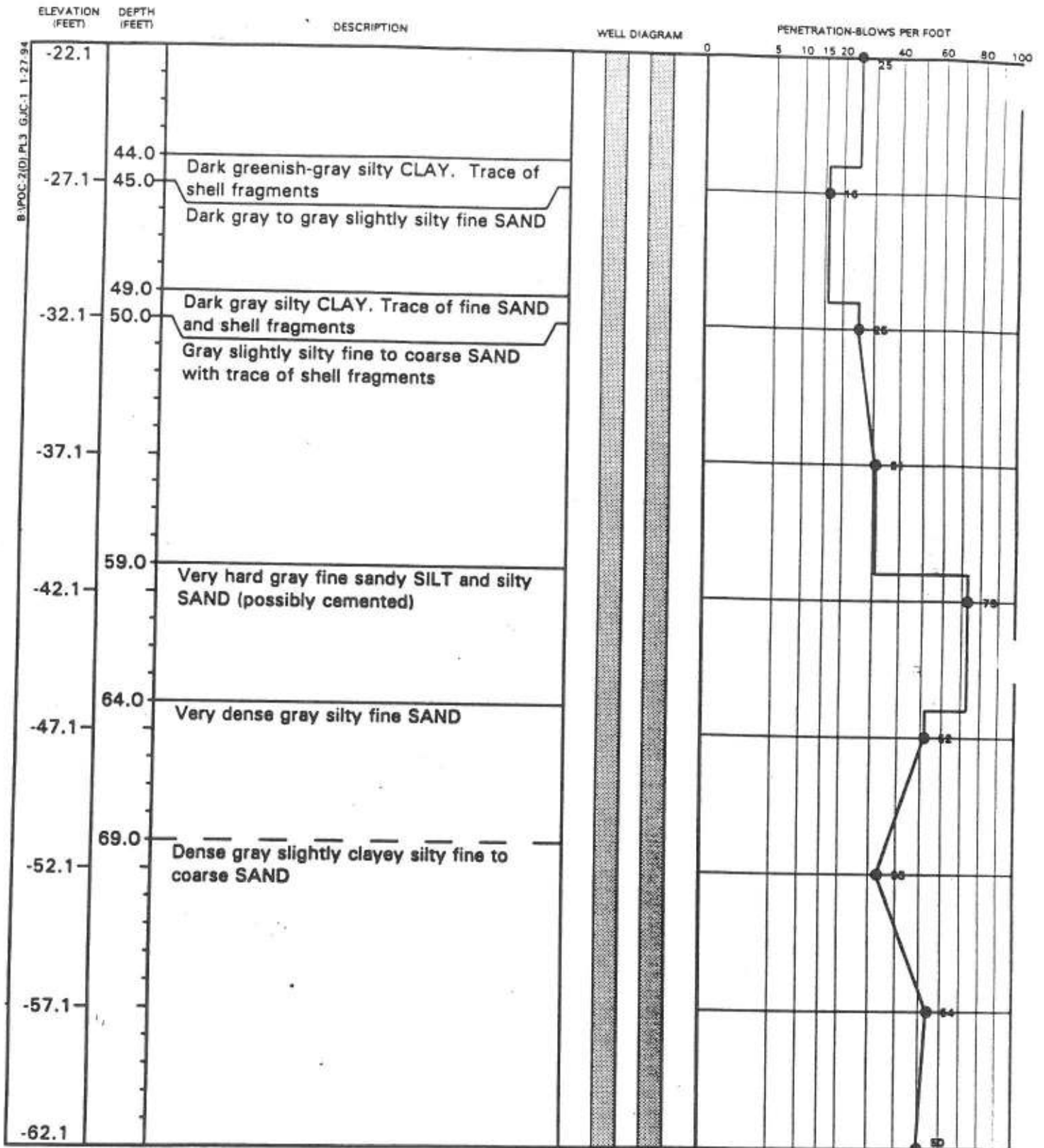
DRILLED BY	LAW-ATL	BORING NUMBER	POC-2(D)
LOGGED BY	D.Allen	DATE STARTED	10-1-93
CHECKED BY	K.Davis	DATE COMPLETED	10-2-93
		JOB NUMBER	55-355310



Law Environmental



# TEST BORING RECORD



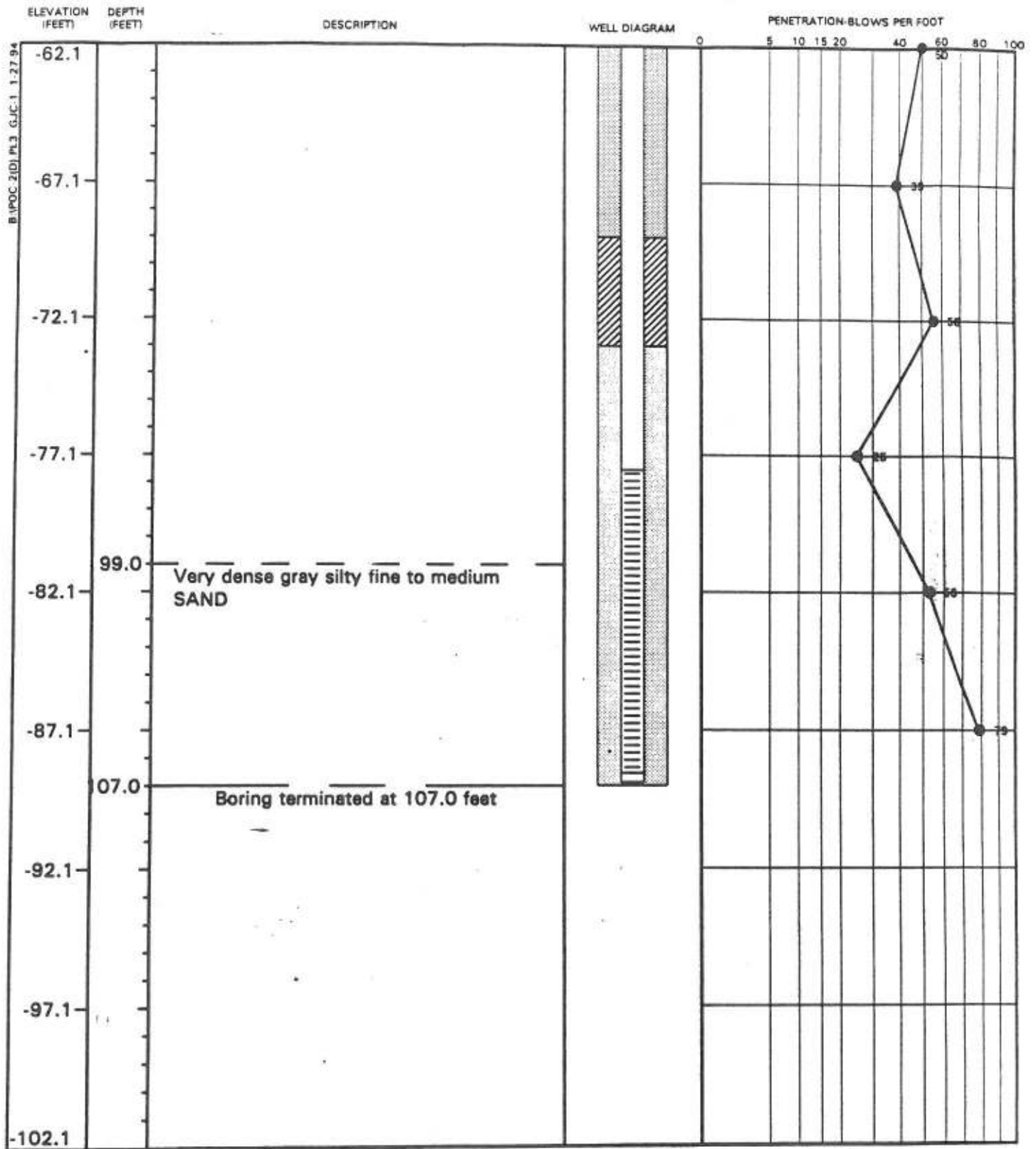
REMARKS:

DRILLED BY	LAW-ATL	BORING NUMBER	POC-2(D)
LOGGED BY	D.Allen	DATE STARTED	10-1-93
CHECKED BY	K.Davis	DATE COMPLETED	10-2-93
		JOB NUMBER	55-355





# TEST BORING RECORD



REMARKS:

DRILLED BY	LAW-ATL	BORING NUMBER	POC-2(D)
LOGGED BY	D.Allen	DATE STARTED	10-1-93
CHECKED BY	K.Davis	DATE COMPLETED	10-2-93
		JOB NUMBER	55-355310





# TYPE III MONITORING WELL INSTALLATION DIAGRAM



LAW ENVIRONMENTAL, INC.

KENNESAW, GEORGIA

JOB NAME HERCULES - BRUNSWICK

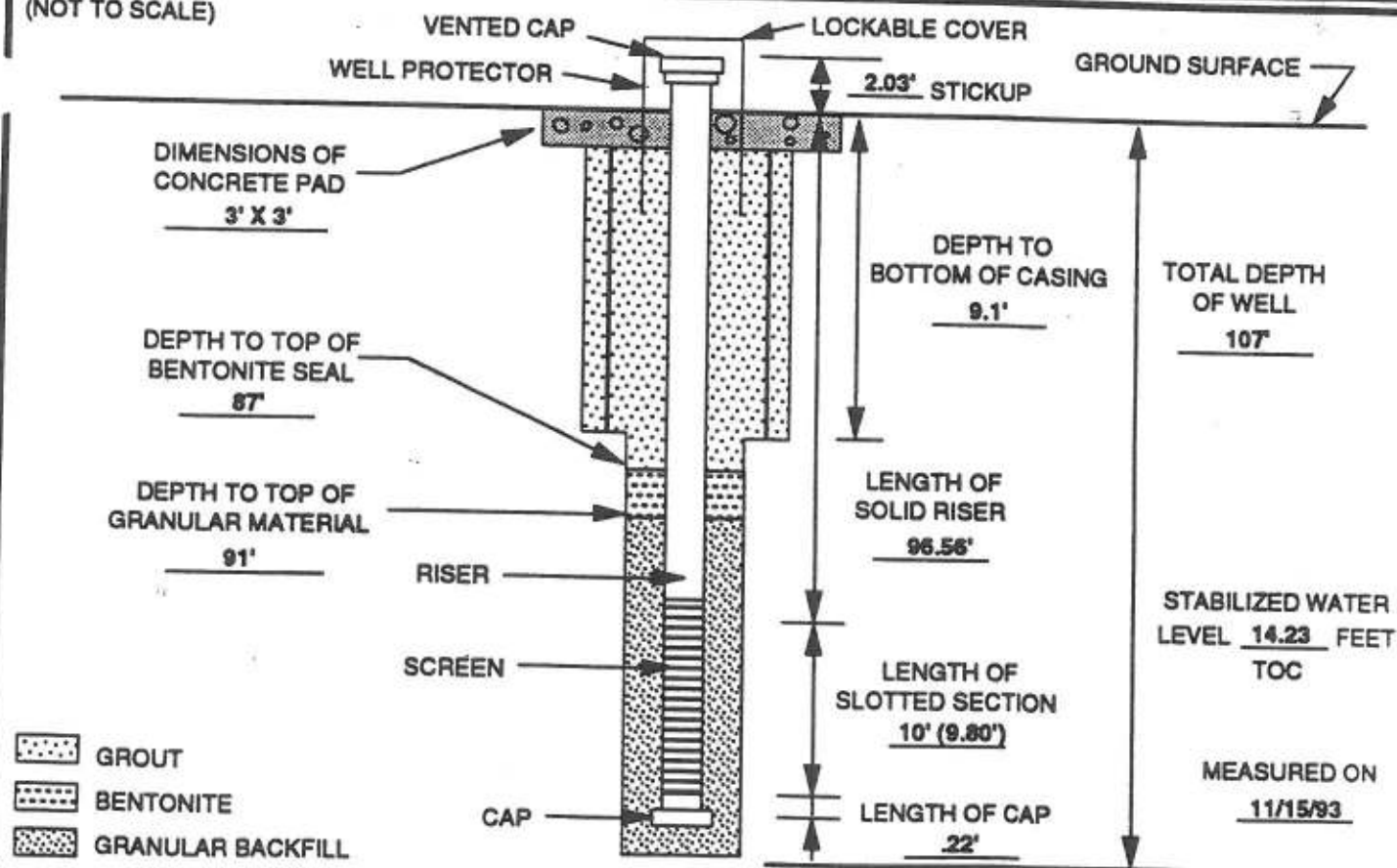
WELL NO. POC-2 (D)

JOB NO. 55-355310

DATE 10/2/93

GROUND SURFACE ELEVATION <u>17.7 NGVD</u>	BENTONITE TYPE <u>PURE GOLD® BENTONITE TABLETS</u>
TOP OF PAD ELEVATION <u>17.72 NGVD</u>	CEMENT TYPE <u>PORTLAND TYPE I</u>
TOP OF CASING ELEVATION <u>19.89 NGVD</u>	BOREHOLE DIAMETER <u>5 7/8 INCH</u>
TYPE SAND PACK <u>GRANULAR</u> GRADATION <u>20/30</u>	SCREEN DIAMETER <u>2-INCH</u> SLOT SIZE <u>0.010 INCH</u>
SCREEN MATERIAL <u>TYPE 304 WIRE WRAP STAINLESS STEEL</u>	LAW ENVIRONMENTAL, INC.
MANUFACTURER <u>DRILLERS SERVICE, INC.</u>	FIELD REPRESENTATIVE <u>DAVID ALLEN</u>
RISER MATERIAL <u>TYPE 304 STAINLESS STEEL</u>	DRILLING CONTRACTOR <u>LAW ENGINEERING - ATLANTA</u>
MANUFACTURER <u>DRILLERS SERVICE, INC.</u>	AMOUNT BENTONITE USED <u>0.66 FT³</u>
RISER DIAMETER <u>2-INCH</u>	AMOUNT CEMENT USED <u>16.1 FT³</u>
DRILLING TECHNIQUE (above casing) <u>CONVENTIONAL AUGER</u>	AMOUNT SAND USED <u>2.6 FT³</u>
BIT SIZE AND TYPE <u>8-INCH O.D. HOLLOW STEM</u>	STATIC WATER DEPTH (after dev.) <u>14.13 FT</u>
DRILLING TECHNIQUE (below casing) <u>WASH ROTARY</u>	TYPE OF CASING <u>6" SCHEDULE 40 PVC</u>
BIT SIZE AND TYPE <u>5 7/8 INCH TRI-CONE ROLLER BIT</u>	

(NOT TO SCALE)



INSTALLED BY: DAVID ALLEN CHECKED BY: GREG MONNETT DATE: 1-26-94



# TEST BORING RECORD

DATUM ELEVATION: 12.29 Ft.  
HEIGHT OF RISER: 2.00 Ft.

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PENETRATION-BLOWS PER FOOT
10.3		Dark brown silty SAND (stump dirt)		
	2.0	Dark brown fine silty SAND and sandy SILT		
	4.0	Loose dark brown silty fine SAND (solvent odor)		
5.3				
	9.0	Loose tan silty fine SAND (sweet sulfur-like odor)		
0.3				
	14.0	Firm tan slightly fine SAND (sweet chemical odor)		
-4.7				
	17.0	Boring terminated at 17.0 feet		
-9.7				
-14.7				
-19.7				
-24.7				
-29.7				

## REMARKS:

- 1) Drilling Technique: 0-17 feet using 8-inch O.D. hollow stem auger.
- 2) Well Materials: 2-inch stainless steel 0.010-inch slot screen.
- 3) ☹ Water level during drilling.
- 4) ☹ Water level measured on 10-7-93.
- 5) Soil descriptions 0-9 feet and 15 feet from POC-3(D)

DRILLED BY LAW-ATL BORING NUMBER POC-3(S)  
 LOGGED BY D.Allen DATE STARTED 10-4-93  
 CHECKED BY K.Davis DATE COMPLETED 10-4-93  
 JOB NUMBER 55-355310





# TYPE II MONITORING WELL INSTALLATION DIAGRAM



LAW ENVIRONMENTAL, INC.

KENNESAW, GEORGIA

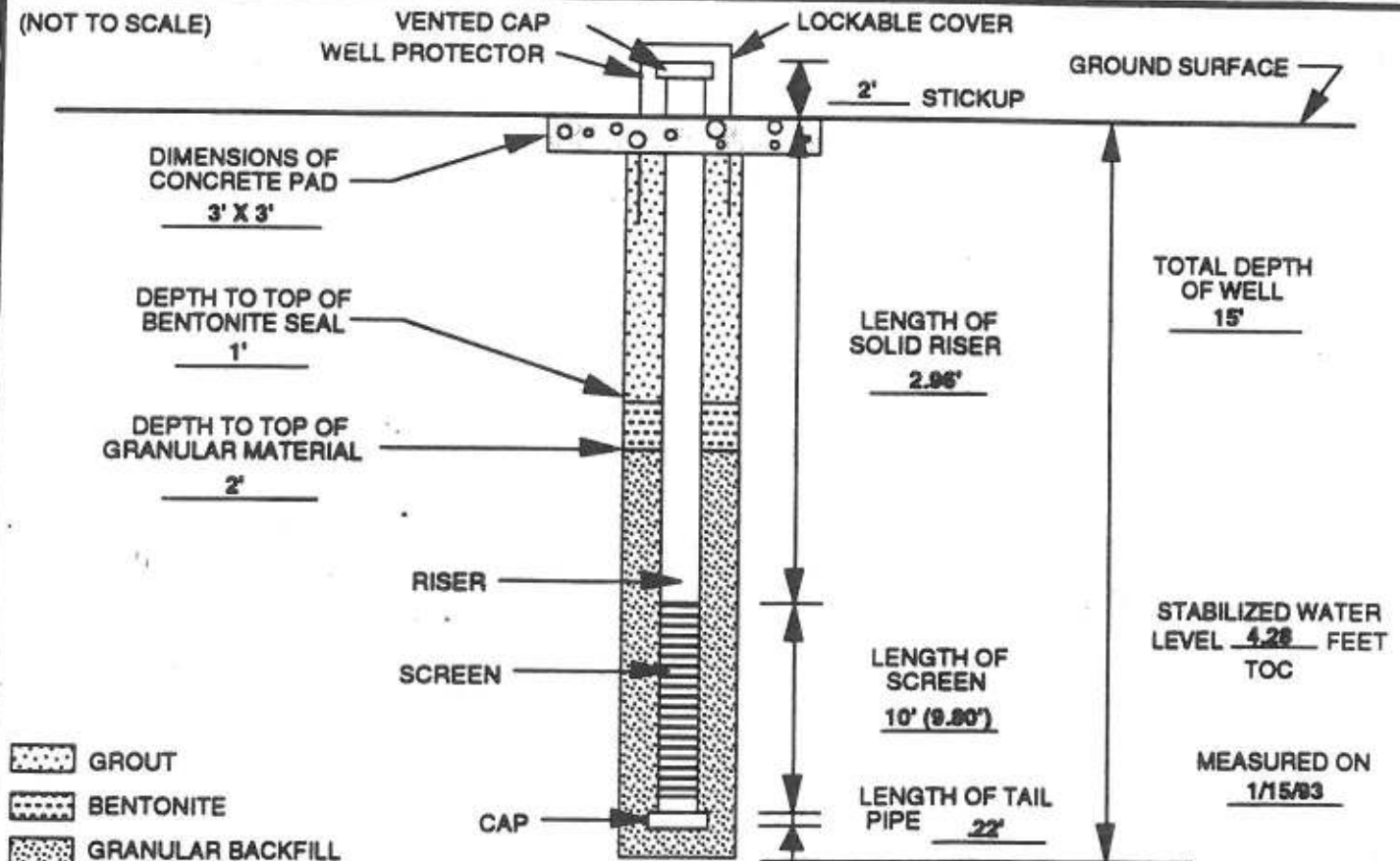
JOB NAME HERCULES - BRUNSWICK

WELL NO. POC-3 (S) JOB NO. 55-355310

DATE 10/4/93

GROUND SURFACE ELEVATION <u>10.6 NGVD</u>	BENTONITE TYPE <u>PURE GOLD BENTONITE TABLETS</u>
TOP OF PAD ELEVATION <u>10.69 NGVD</u>	CEMENT TYPE <u>PORTLAND TYPE I</u>
TOP OF CASING ELEVATION <u>12.29 NGVD</u>	BOREHOLE DIAMETER <u>8-INCH</u>
TYPE SAND PACK <u>GRANULAR</u> GRADATION <u>20/30</u>	SCREEN DIAMETER <u>2-INCH</u> SLOT SIZE <u>0.010 INCH</u>
SCREEN MATERIAL <u>TYPE 304 WIRE WRAP STAINLESS STEEL</u>	LAW ENVIRONMENTAL, INC.
MANUFACTURER <u>DRILLERS SERVICE, INC.</u>	FIELD REPRESENTATIVE <u>DAVID ALLEN</u>
RISER MATERIAL <u>TYPE 304 STAINLESS STEEL</u>	DRILLING CONTRACTOR <u>LAW ENGINEERING - ATLANTA</u>
MANUFACTURER <u>DRILLERS SERVICE, INC.</u>	AMOUNT BENTONITE USED <u>0.16 FT<sup>3</sup></u>
RISER DIAMETER <u>2-INCH</u>	AMOUNT CEMENT USED <u>0.16 FT<sup>3</sup></u>
DRILLING TECHNIQUE <u>CONVENTIONAL AUGER</u>	AMOUNT SAND USED <u>1.8 FT<sup>3</sup></u>
BIT SIZE AND TYPE <u>8-INCH O.D. HOLLOW STEM</u>	STATIC WATER DEPTH (after dev.) <u>4.16 FT</u>

(NOT TO SCALE)

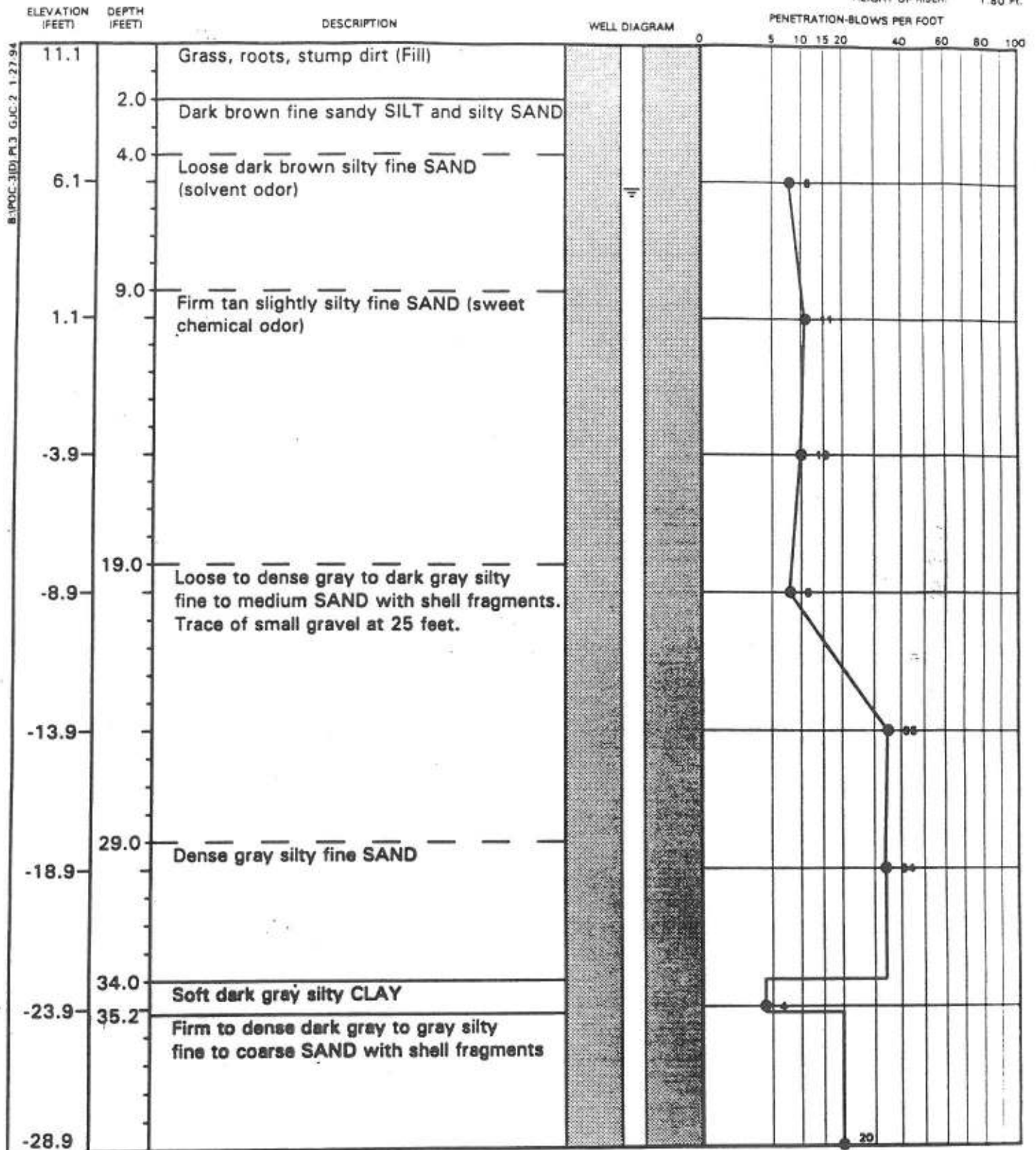


INSTALLED BY: DAVID ALLEN CHECKED BY: GREG MONNETT DATE: 1/26/94



# TEST BORING RECORD

DATUM ELEVATION: 12.92 Ft.  
HEIGHT OF RISER: 1.80 Ft.



## REMARKS:

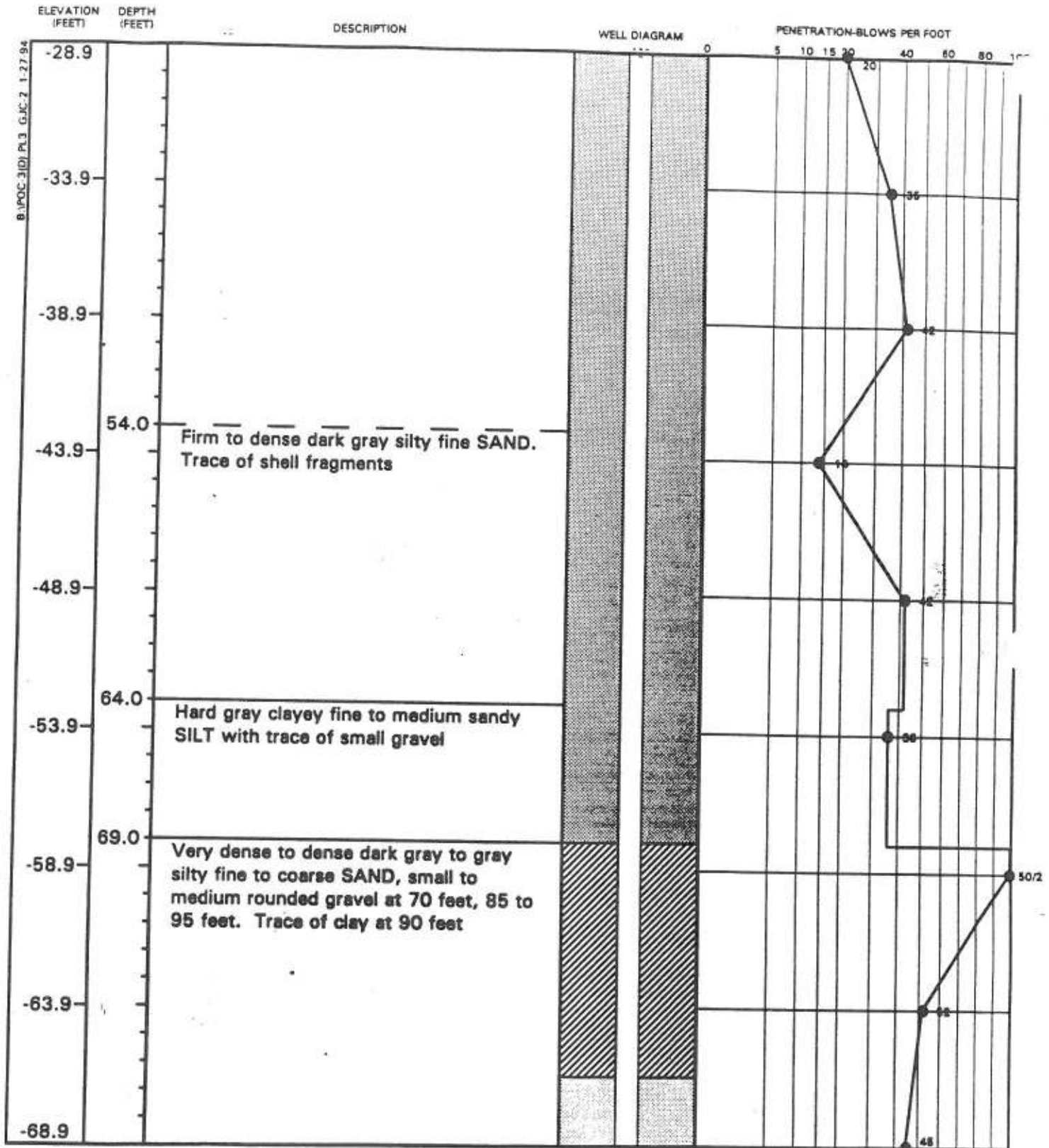
- 1) Drilling Technique: 0-97 feet using 5 7/8-inch tricone roller bit.
- 2) Well materials: 2-inch stainless steel 0.010-inch slot screen.
- 3) Water level during drilling.
- 4) Water level on 10-7-93.

DRILLED BY	LAW-ATL BORING NUMBER	POC-3(D)
LOGGED BY	DATE STARTED	10-03-93
CHECKED BY	DATE COMPLETED	10-04-93
	JOB NUMBER	55-355310





# TEST BORING RECORD



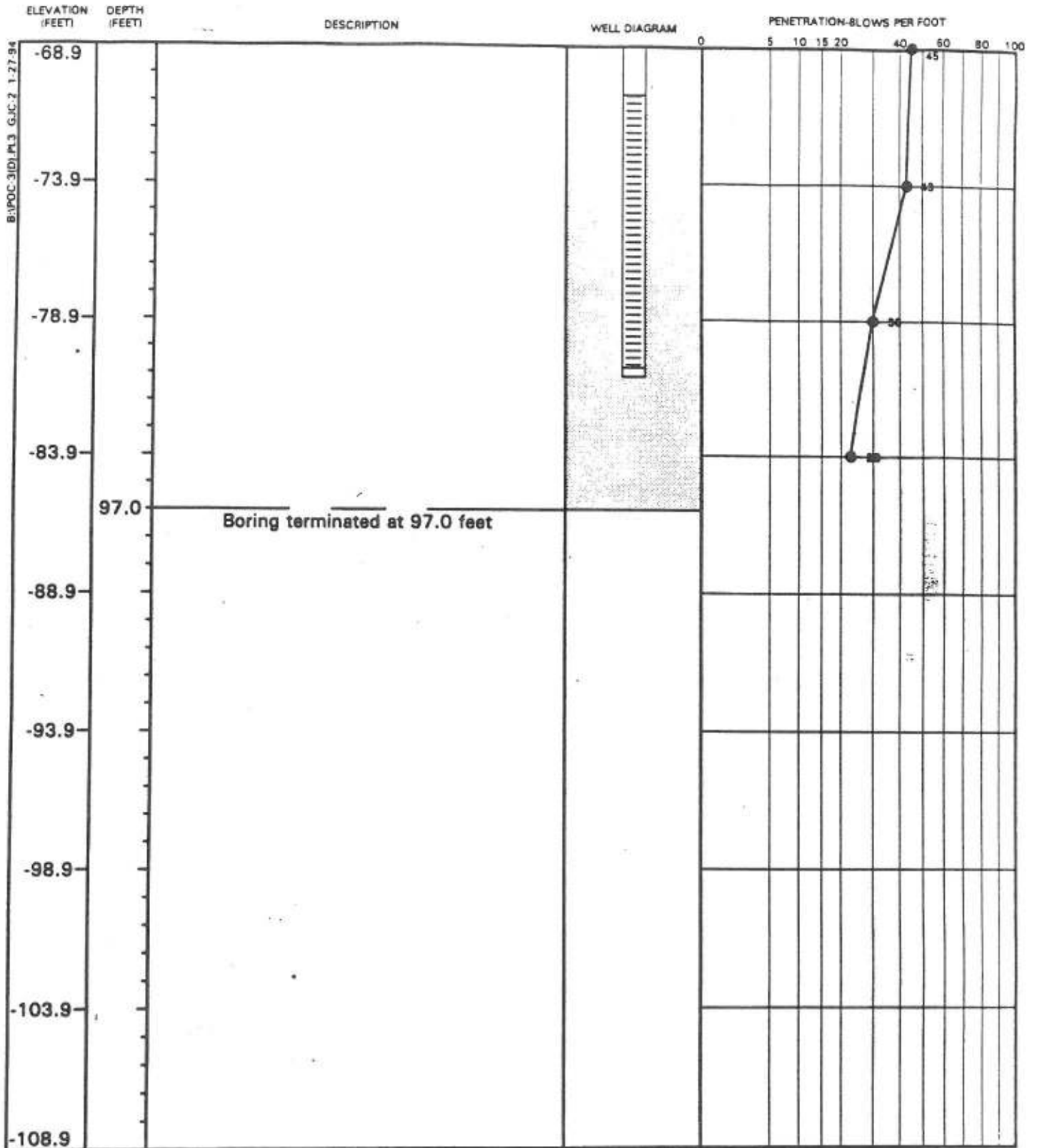
REMARKS:

DRILLED BY	LAW-ATL	BORING NUMBER	POC-3(D)
LOGGED BY	D.Allen	DATE STARTED	10-03-93
CHECKED BY	K.Davis	DATE COMPLETED	10-04-9
		JOB NUMBER	55-3553





# TEST BORING RECORD



REMARKS:

DRILLED BY	LAW-ATL	BORING NUMBER	POC-3(D)
LOGGED BY	D.Allen	DATE STARTED	10-03-93
CHECKED BY	K.Davis	DATE COMPLETED	10-04-93
		JOB NUMBER	55-355310





# TYPE II MONITORING WELL INSTALLATION DIAGRAM



LAW ENVIRONMENTAL, INC.

KENNESAW, GEORGIA

JOB NAME HERCULES - BRUNSWICK

WELL NO. POC-3 (D)

JOB NO. 55-355310

DATE 10/4/93

GROUND SURFACE ELEVATION 11.0 NGVD

TOP OF PAD ELEVATION 11.02 NGVD

TOP OF CASING ELEVATION 12.92 NGVD

TYPE SAND PACK GRANULAR GRADATION 20/30

SCREEN MATERIAL TYPE 304 WIRE WRAP STAINLESS STEEL

MANUFACTURER DRILLERS SERVICE, INC.

RISER MATERIAL TYPE 304 STAINLESS STEEL

MANUFACTURER DRILLERS SERVICE, INC.

RISER DIAMETER 2-INCH

DRILLING TECHNIQUE WASH ROTARY

BIT SIZE AND TYPE 5 7/8 INCH TRI-CONE ROLLER BIT

BENTONITE TYPE PURE GOLD® BENTONITE TABLETS

CEMENT TYPE PORTLAND TYPE I

BOREHOLE DIAMETER 5 7/8-INCH

SCREEN DIAMETER 2-INCH SLOT SIZE 0.010 INCH

LAW ENVIRONMENTAL, INC.

FIELD REPRESENTATIVE DAVID ALLEN

DRILLING CONTRACTOR LAW ENGINEERING - ATLANTA

AMOUNT BENTONITE USED 1.4 FT³

AMOUNT CEMENT USED 11.5 FT³

AMOUNT SAND USED 2.8 FT³

STATIC WATER DEPTH (after dev.) 7.2 FT

(NOT TO SCALE)

VENTED CAP  
WELL PROTECTOR

LOCKABLE COVER

1.8" STICKUP

GROUND SURFACE

DIMENSIONS OF  
CONCRETE PAD  
3' X 3'

DEPTH TO TOP OF  
BENTONITE SEAL  
69'

DEPTH TO TOP OF  
GRANULAR MATERIAL  
77.5'

LENGTH OF  
SOLID RISER  
81.8'

TOTAL DEPTH  
OF WELL  
97'

RISER

SCREEN

LENGTH OF  
SCREEN  
10' (9.81')

STABILIZED WATER  
LEVEL 7.09 FEET  
TOC

MEASURED ON  
1/15/93

LENGTH OF TAIL  
PIPE  
22'

CAP

GROUT

BENTONITE

GRANULAR BACKFILL

INSTALLED BY: DAVID ALLEN

CHECKED BY: GREG MONNETT DATE: 1/26/94



**GEOSYNTEC CONSULTANTS**

1255 Roberts Blvd., NW  
Suite 200  
Kennesaw, GA 30144-3694

**BORING LOG**

BORING NO.: **MW-25D**  
DATE: **9-7-05**

**PROJECT INFORMATION**

PROJECT: Hercules  
LOCATION: Brunswick, GA  
PROJECT NO. GR 3666  
LOGGED BY: T. Keller  
CHECKED BY: G. Roush

**DRILLING INFORMATION**

DRILLING CO.: Prosonic  
DRILLING METHOD: Rotasonic  
TOTAL DEPTH: 90.5 ft.  
TOP OF CASING ELEV.: 10.27 ft.  
HEIGHT OF CASING ABOVE  
GROUND SURFACE: 2.6 ft.

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0	3		SM	SILTY SAND: fine, gray brown			
3	6		SP	SAND: fine, gray brown			
6	4		SP	SAND: fine, tan	0		
9	2		SP		0		
12	0		SP		0		
15	-2		SP		0		
18	-4		SP		0		
21	-6		SP		0		
24	-8		SP		0		
27	-10		SP		0		
30	-12		SP		0		
33	-14		SP		0		
36	-16		SP-SM	SAND: fine, slightly silty, gray, with trace medium to coarse sand and trace clay with depth	0		

**NOTES:**

Water Level during  
drilling



Water level in completed  
monitoring well on  
9/9-05



PROJECT: Hercules

BORING NO.: MW-25D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-18					0		
-20				SAND: fine to medium, medium gray			
-22			SP		0		
-24							
-26					0		
-28							
-30					0		
-32							
-34					0		
-36				SAND: very fine, light gray, trace silt			
-38					0		
-40							
-42				SAND: fine to medium with trace coarse sand/fine gravel and 0.1 to 0.25 ft beds of highly plastic clay			
-44					0		
-46							
-48				SAND: medium, light gray			
-50				SILTY SAND: fine to medium sand, hard, light to medium gray			
-52					0		
-54			SC	CLAYEY SAND: light to medium gray, trace coarse sand			
-56			SP	SILTY SAND: medium sand, light to medium gray			
-58				SAND: fine to coarse sand some weakly	0		

NOTES:

Water Level during  
drillingWater level in completed  
monitoring well on  
9/9/05

Page 2 of 3



PROJECT: Hercules

BORING NO.: MW-25D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-58				cemented, medium gray, slightly clayey from 71 to 73 ft.			
-60							
-70					0		
-62							
-64							
-66			GP	SAND AND GRAVEL: medium to coarse sand with well rounded gravel up to 30mm, light gray	0		
-68							
-70				CLAY: very stiff, mottled olive gray and medium gray			
-72			CL		0		
-74			SP	SAND: medium to coarse, medium gray with trace of clay from 84.5 to 85 ft.			
-76							
-78			SM	SANDY SILT: hard, clayey, tan	0		
-80							
-82							
-84							
-86							
-88							
-90			SC	CLAYEY SAND: silty, medium sand, olive gray	0		Boring Terminated at 90.5 ft.

NOTES:



Water Level during drilling


 Water level in completed  
monitoring well on  
9/9/05

Page 3 of 3



**GEOSYNTEC CONSULTANTS**

1255 Roberts Blvd., NW  
Suite 200  
Kennesaw, GA 30144-3694

**BORING LOG**BORING NO.: **MW-25S**DATE: **9-7-05****PROJECT INFORMATION**

PROJECT: Hercules  
LOCATION.: Brunswick, GA  
PROJECT NO. GR 3666  
LOGGED BY: T. Keller  
CHECKED BY: G.Roush

**DRILLING INFORMATION**

DRILLING CO.: Prosonic  
DRILLING METHOD: Rotasonic  
TOTAL DEPTH: 16.0 ft.  
TOP OF CASING ELEV.: 10.37 ft.  
HEIGHT OF CASING ABOVE  
GROUND SURFACE: 2.6 ft.

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0							
6			SM	SILTY SAND: fine, gray brown			
4			SP	SAND: fine, gray brow	0		
2				SAND: fine, with trace of silt, tan	0		
0							
-2			SP		0		
-4							
-6							
-8					0		
-10							
-12							
-14							
-16							Boring Terminated at 16 ft.

**NOTES:**

Water Level during  
drilling



Water level in completed  
monitoring well on  
9/9/05



**GEOSYNTEC CONSULTANTS**

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Kennesaw, GA 30144-3694

**BORING LOG**

BORING NO.: **MW-26D**  
DATE: **9-19-05**

**PROJECT INFORMATION**

PROJECT: Hercules  
LOCATION: Brunswick, GA  
PROJECT NO. GR 3666  
LOGGED BY: T. Keller  
CHECKED BY: G. Roush

**DRILLING INFORMATION**

DRILLING CO.: Prosonic  
DRILLING METHOD: Rotasonic  
TOTAL DEPTH: 90.0 ft  
TOP OF CASING ELEV.: 6.97 ft.  
HEIGHT OF CASING ABOVE  
GROUND SURFACE: -0.24 ft.

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0							
6			SM	SILTY SAND: dark brown, with organic material (roots, humus)			
4			SM-SP	SAND: slightly silty, light brown			
-5				SAND: fine to medium sand, tan	0		
0			SP				
-2					0		
-4			SP	SAND: fine, medium gray with marine shells from 15 to 15.3 ft.			
-6					0		
-8			SC	CLAYEY SAND: soft, medium gray, with 25% marine shells up to 12mm			
-10					0		
-12			SM	SILTY SAND: loose, medium sand, slightly clayey, with 10% marine shells			
-14					0		
-16				SAND: loose, fine sand, slightly clayey, with 5% marine shells, and interbeds 0.1 to 0.25 ft thick of greenish gray soft			
-25							

**NOTES:**

Water Level during  
drilling



Water level in completed  
monitoring well on  
9/20/05



PROJECT: Hercules

BORING NO.: MW-26D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-18				plastic CLAY	0		
-20			SP-SC		0		
-22					0		
-24			SP	SAND: fine to medium sand, light gray, with clay from 24.8 to 25 ft.	0		
-26					0		
-28					0		
-30			SC	CLAYEY SAND: loose, greenish gray with 15% marine shells	0		
-32					0		
-34					0		
-36					0		
-38			GP	SAND AND GRAVEL: medium sand with gravel consisting of cemented sand, light to medium gray	0		
-40				SAND: fine to medium sand, medium dense, slightly clayey, trace marine shells	0		
-42			SP	SAND: fine to medium sand, light gray	0		
-44			SP		0		
-46			SC	CLAYEY SAND: dense, medium to coarse sand, light gray	0		
-48					0		
-50			GC	CLAYEY GRAVEL: hard, light gray, gravel well rounded up to 20mm. 57-57.4ft gravel lithified to Conglomerate	0		
-52					0		
-54				SAND: fine to medium sand, light gray, trace marine shells	0		
-56					0		
-58					0		

NOTES:



Water Level during drilling



Water level in completed monitoring well on 9/20/05

Page 2 of 3



PROJECT: Hercules

BORING NO.: MW-26D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-60							
-62							
-70			SP		0		
-64							
-66							
-75					0		
-68							
-70							
-72							
-80				SAND: loose, fine to coarse, light gray, with some gravel sized fragments of cemented sand, trace well rounded gravel up to 10mm	0		
-74			SP				
-76							
-85					0		
-78							
-80							
-82							
-90							Boring Terminated at 90.05 ft.

NOTES:



Water Level during drilling



Water level in completed monitoring well on 9/20/05

Page 3 of 3



**GEOSYNTEC CONSULTANTS**

1255 Roberts Blvd., NW  
Suite 200  
Kennesaw, GA 30144-3694

**BORING LOG****BORING NO.: MW-26S****DATE: 9-19-05****PROJECT INFORMATION**

PROJECT: Hercules  
LOCATION.: Brunswick, GA  
PROJECT NO. GR 3666  
LOGGED BY: T. Keller  
CHECKED BY: G. Roush

**DRILLING INFORMATION**

DRILLING CO.: Prosonic  
DRILLING METHOD: Rotasonic  
TOTAL DEPTH: 16.0 ft  
TOP OF CASING ELEV.: 6.83 ft  
HEIGHT OF CASING ABOVE  
GROUND SURFACE: -0.36

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0							
-6			SM	SILTY SAND: dark brown, with organic material (roots, humus)			
-4			SP	SAND: slightly silty, light brown			
-5				SAND: fine to medium sand, tan	0		
-2			SP				
-10					0		
-4				SAND: fine to medium, slightly clayey to clayey, greenish gray			
-6			SP-SC				
-15					0		Boring Terminated at 16.0 ft

**NOTES:**

Water Level during  
drilling



Water level in completed  
monitoring well on  
9/20/05



**GEOSYNTEC CONSULTANTS**

1255 Roberts Blvd., NW  
Suite 200  
Kennesaw, GA 30144-3694

**BORING LOG****BORING NO.:** MW-27D**DATE:** 9-12-05**PROJECT INFORMATION**

**PROJECT:** Hercules  
**LOCATION:** Brunswick, GA  
**PROJECT NO.** GR 3666  
**LOGGED BY:** T. Keller  
**CHECKED BY:** G. Roush

**DRILLING INFORMATION**

**DRILLING CO.:** Prosonic  
**DRILLING METHOD:** Rotasonic  
**TOTAL DEPTH:** 90.5 ft  
**TOP OF CASING ELEV.:** 14.98 ft.  
**HEIGHT OF CASING ABOVE  
GROUND SURFACE:** 2.6 ft

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0	12		SM	SILTY SAND: dark brown, with organic material (roots, humus)			
10	8		SP	SAND: loose, fine to medium, brown changing to tan below 9 ft.	0		
-5	6				0		
-10	4				0		
-15	-2				0		
-20	-8			SILTY SAND: fine to medium, greenish gray, with interbed of coarse sand at 21 to 21.5 ft.	0		
-25	-12						

**NOTES:**

Water Level during  
drilling



Water level in completed  
monitoring well on  
9-20/05



PROJECT: Hercules				BORING NO.: MW-27D			
DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-14			SM		0		
-16			SP	SAND: loose, medium to coarse, light to medium gray	0		
-18			SP		0		
-20			SP		0		
-22			SP	SAND: fine to medium, light to medium gray, with several 5-50mm interbeds of soft highly plastic olive gray CLAY (CH)	0		
-24			SP		0		
-26			SP		0		
-28			SC	CLAYEY SAND: hard dense, very clayey, medium to coarse sand, gray to medium gray, crumbles, moist Sand seams at 46, 46.8 and 48 ft.	0		
-30			SC		0		
-32			SC		0		
-34			SC		0		
-36			SC		0		
-38			SC		0		
-40			SP	SAND: fine to coarse sand, slightly clayey, light gray	0		
-42			SP		0		
-44			GC	CLAYEY GRAVEL: with lumps of cemented sand up to 25mm and several interbeds of hard lithified gravels (conglomerate)	0		
-46			GC		0		
-48			GC		0		
-50			GF	GRAVEL AND SAND: loose, coarse sand and fine gravel, light gray, trace clay	0		
-52			GF		0		

NOTES:



Water Level during drilling



Water level in completed monitoring well on 9/20/05



PROJECT: Hercules

BORING NO.: MW-27D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-54			SP-SC	SAND: slightly clayey, fine to medium sand, light gray, with marine shells up to 1 inch			
-56			SP	SAND: slightly clayey, fine to coarse sand, dark gray, with interbeds of clayey gravel from 70 to 70.5, light gray, dry, muddy SANDSTONE from 70.5 to 71 ft and dense gray clayey, fine to medium SAND (SC) from 71-72 ft.	0		
-58							
-60							
-62					0		
-64			SP				
-66							
-68			GC	CLAYEY GRAVEL: with sand, light gray	0		
-70			SC	CLAYEY SAND: dense, fine sand, light gray			
-72				SAND: very dense, slightly clayey, very fine sand, light to medium gray	0		
-74			SP				
-76							
-90					0		Boring Terminated at 90.5 ft.

NOTES:



Water Level during drilling



Water level in completed monitoring well on 9/20/05

Page 3 of 3



**GEOSYNTEC CONSULTANTS**

1255 Roberts Blvd., NW  
Suite 200  
Kennesaw, GA 30144-3694

**BORING LOG****BORING NO.: MW-28D****DATE: 9-15-05****PROJECT INFORMATION**

PROJECT: Hercules  
LOCATION: Brunswick, GA  
PROJECT NO. GR 3666  
LOGGED BY: T. Keller  
CHECKED BY: G. Roush

**DRILLING INFORMATION**

DRILLING CO.: Prosonic  
DRILLING METHOD: Rotasonic  
TOTAL DEPTH: 91.0 ft  
TOP OF CASING ELEV.: 8.37 ft.  
HEIGHT OF CASING ABOVE  
GROUND SURFACE: 2.7 ft

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0							
4			SM	SILTY SAND: very loose, dark brown, with organic material (roots, humus)			
2							
0			SP	SAND: loose, fine sand, trace fines (silt clays)	0		
-2							
-4					0		
-6							
-8			SM	SILTY SAND: loose, slightly clayey, fine sand, olive gray.	0		
-10							
-12				CLAY: soft, greenish gray, high plasticity, trace sand	0		
-14			CH				
-16					0		
-18				SAND: loose, medium sand, medium gray, with trace to 5% marine shells. 0.2 ft interbed of greenish gray high			
-20							
-22							
-24							
-25							

**NOTES:**

Water Level during  
drilling



Water level in completed  
monitoring well on

9/19/05



PROJECT: Hercules

BORING NO.: MW-28D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-20				plasticity CLAY (CH) at 25 ft.	0		
-22							
-24							
-30			SP		0		
-26							
-28							
-35					0		
-30							
-32							
-40					2		
-36							
-38							
-45				SAND: loose, medium to coarse sand, medium gray, with up to 15% marine shells	13		
-40							
-42			SP				
-44							
-50			SP	CLAYEY GRAVEL: sandy, bluish gray, well rounded gravel up to 70mm	74		
-46							
-48							
-43				SILTY SAND: loose, medium sand, olive gray			
-55			SM		0		
-50							
-52				SAND: loose, slightly silty, medium sand, medium gray.			
-60					6		
-54							
-56							
-53			SP				
-65					10		
-60							

NOTES:



Water Level during drilling



Water level in completed monitoring well on

9/19/05

Page 2 of 3



PROJECT: Hercules

BORING NO.: MW-28D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-62			GP	GRAVEL: loose, slightly silty, medium sand, medium gray, with fragments up to 80mm of SANDSTONE			
-64			GC	CLAYEY GRAVEL: dense to hard, sandy, slightly moist to dry at 70 ft.	0		
-66				SAND: medium to coarse, medium gray, wet, with trace fines			
-68							
-70					79		
-72			SP				
-74					36		
-76				CLAYEY SAND: dense to hard, medium to coarse sand, tan to light gray			
-78							
-80			SC		9		
-82							
-84					3		
-90							Boring Terminated at 91 ft.

NOTES:



Water Level during drilling


 Water level in completed monitoring well on  
 9/19/05

Page 3 of 3



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**BORING LOG****BORING NO.: MW-29D****DATE: 9-16-05****PROJECT INFORMATION**

PROJECT: Hercules  
LOCATION: Brunswick, GA  
PROJECT NO. GR 3666  
LOGGED BY: T. Keller  
CHECKED BY: G. Roush

**DRILLING INFORMATION**

DRILLING CO.: Prosonic  
DRILLING METHOD: Rotasonic  
TOTAL DEPTH: 89.75 ft  
TOP OF CASING ELEV.: 8.47 ft.  
HEIGHT OF CASING ABOVE  
GROUND SURFACE: 2.75 ft

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0							
4							
2			SM	SILTY SAND: very loose, dark brown, with organic material (roots, humus)	0		
0							
2				SAND: loose, fine to medium sand, tan	0		
4			SP				
6							
8			CL	CLAY: slightly sandy, medium gray			
10					0		
12			SP	SAND: slightly clayey, fine to medium sand, medium gray with marine shells from 17 to 20 ft.			
14							
16					2		
18			CH	CLAY: medium gray, high plasticity with several thin sand interbeds			
20							
22							
24							
25							

**NOTES:**

Water Level during  
drilling



Water level in completed  
monitoring well on  
9/20/05



PROJECT: Hercules				BORING NO.: MW-29D			
DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-20					0		
-22							
-30	-24		SP	SAND: fine, light gray, with 3 interbeds of gray highly plastic clay from 33 to 34ft	0		
-26							
-28							
-35	-30			SAND: fine to medium sand, light gray, with 10% marine shells and interbeds of gray highly plastic CLAY (CH)	0		
-32							
-40	-34		SP		0		
-36							
-38							
-45	-40			SAND: dense, slightly silty, fine to medium sand, with trace of clay	0		
-42			SP				
-50	-44				3		
-46							
-48							
-55	-50						
-52							
-60	-54		SP	SAND: fine to medium sand, medium gray			
-56				CLAYEY SAND: very dense, fine to medium sand, medium gray			
-58							
-65	-60						

NOTES:





Water Level during drilling



Water level in completed monitoring well on  
9/20/05



PROJECT: Hercules					BORING NO.: MW-29D		
DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-60			SC	SANDSTONE: muddy, light gray, with thin lenses of clayey sand  SAND: loose, medium to coarse, medium gray			
-62							
-64							
-66							
-68							
-70							
-72							
-74							
-76							
-78							
-80			SP				
-82							
-84							
-86							
-88							
-90							
							Boring Terminated at 89.75 ft.
NOTES:  Water Level during drilling					 Water level in completed monitoring well on 9/20/05		Page 3 of 3



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**BORING LOG****BORING NO.: MW-29I****DATE: 9-16-05****PROJECT INFORMATION**

PROJECT: Hercules  
LOCATION: Brunswick, GA  
PROJECT NO. GR 3666  
LOGGED BY: T. Keller  
CHECKED BY: G. Roush

**DRILLING INFORMATION**

DRILLING CO.: Prosonic  
DRILLING METHOD: Rotasonic  
TOTAL DEPTH: 50.5 ft  
TOP OF CASING ELEV.: 8.85 ft.  
HEIGHT OF CASING ABOVE  
GROUND SURFACE: 2.6 ft

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0			SM	SILTY SAND: very loose, dark brown, with organic material (roots, humus)	0		
4			SP	SAND: loose, fine to medium sand, tan	0		
10			CL	CLAY: slightly sandy, medium gray	0		
15			SP	SAND: slightly clayey, fine to medium sand, medium gray with marine shells from 17 to 20 ft	0		
20			CH	CLAY: medium gray, high plasticity with several thin sand interbeds	2		
25							

**NOTES:**

Water Level during  
drilling



Water level in completed  
monitoring well on  
9/20/05



PROJECT: Hercules					BORING NO.: MW-29I		
DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-20					0		
-22							
-30	-24		SP	SAND: fine, light gray, with 3 interbeds of gray highly plastic clay from 33 to 34ft	0		
-26							
-23							
-35	-30			SAND: fine to medium sand, light gray, with 10% marine shells and interbeds of gray highly plastic CLAY (CH)	0		
-32							
-40	-34		SP		0		
-36							
-33							
-45	-40			SAND: dense, slightly silty, fine to medium sand, with trace of clay	0		
-42			SP				
-50	-44				3		Boring Terminated at 60.5ft.

NOTES:



Water Level during drilling



Water level in completed monitoring well on 9/20/05



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**BORING LOG****BORING NO.:** MW-30D**DATE:** 9-8-05**PROJECT INFORMATION**

**PROJECT:** Hercules  
**LOCATION.:** Brunswick, GA  
**PROJECT NO.** GR 3666  
**LOGGED BY:** T. Keller  
**CHECKED BY:** G.Roush

**DRILLING INFORMATION**

**DRILLING CO.:** Prosonic  
**DRILLING METHOD:** Rotosonic  
**TOTAL DEPTH:** 90.5 ft.  
**TOP OF CASING ELEV.:** 12.18 ft  
**HEIGHT OF CASING ABOVE  
GROUND SURFACE:** 2.4 ft.

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0							
3							
6							
9			SM	SILTY SAND: very loose, dark brown, with organic material (roots, humus)	0		
12							
15							
18			SP	SAND: loose, fine to medium sand, light brown	0		
21							
24							
27			SM	SILTY SAND: loose, fine to medium sand, grayish brown	0		
30							
33							
36							
39							
42							
45							
48							
51							
54							
57							
60							
63							
66							
69							
72							
75							
78							
81							
84							
87							
90							

**NOTES:**

Water Level during  
drilling



Water level in completed  
monitoring well on  
9/9/05



PROJECT: Hercules

BORING NO.: MW-30D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-16			SP		0		
-18							
-20				SAND: fine, light gray, slightly silty, with few 0.3 to 0.5 ft interbeds of olive gray highly plastic CLAY (CH)	0		
-22							
-24							
-26			SP		0		
-28							
-30					0		
-32							
-34				SAND: medium to coarse, with 20% marine shells up to 1/2 inch, and lenses of olive gray highly plastic CLAY (CH) at 45-46 ft.	0		
-36							
-38			SP		0		
-40							
-42				SAND: loose, medium, light gray with some zones of weakly cemented sand	0		
-44							
-46			SP		0		
-48				SILTY SAND: very hard, fine sand, light gray	0		
-50				SAND: loose, medium to coarse, medium gray, with interbed of light gray sandy CLAY (CH)	0		
-52			SP		0		
-54				CLAYEY SAND: fine to coarse sand, medium gray, with 10% shell fragments up to 10mm	0		
-56			SC	CLAYEY GRAVEL: sandy, medium gray with well rounded gravel up to 20mm	0		

NOTES:



Water Level during drilling



Water level in completed monitoring well on 9/9/05

Page 2 of 3



PROJECT: Hercules

BORING NO.: MW-30D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-58							
-60			SP	SAND: medium to coarse sand, dark gray, with trace of gravel	0		
-62							
-64			CH	CLAY: stiff, sandy, medium gray, with high plasticity			
-66					0		
-68			ML	SANDY SILT: very hard, clayey, light gray			
-70					0		
-72				SANDSTONE: light gray, fine grained, some calcareous cement.			
-74					0		
-76			SM	SILTY SAND: very hard, slightly clayey, light gray			
-78					0		
-80			SP	SAND: slightly clayey, fine to medium sand, with less fines at 90 ft.			
-90					0		Boring Terminated at 90.5ft.

NOTES:



Water Level during drilling



Water level in completed monitoring well on 9/9/05

Page 3 of 3



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**BORING LOG****BORING NO.: MW-30S****DATE: 9-8-05****PROJECT INFORMATION**

PROJECT: Hercules  
LOCATION: Brunswick, GA  
PROJECT NO. GR 3666  
LOGGED BY: T. Keller  
CHECKED BY: G. Roush

**DRILLING INFORMATION**

DRILLING CO.: Prosonic  
DRILLING METHOD: Rotasonic  
TOTAL DEPTH: 16 FT.  
TOP OF CASING ELEV.: 12.16 ft  
HEIGHT OF CASING ABOVE  
GROUND SURFACE: 2.4 ft.

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0							
8							
6							
4			SM	SILTY SAND: very loose, fine sand, dark brown, with organic material (roots, humus)	0		
2				SAND: loose, fine to medium sand, light brown	0		
-10	0				0		
-2							
-4							
-15					0		
-6							Boring Terminated at 16 ft.

**NOTES:**

Water Level during  
drilling



Water level in completed  
monitoring well on  
9/9/05



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**BORING LOG**BORING NO.: **MW-31D**DATE: **9-9-05****PROJECT INFORMATION**

PROJECT: Hercules  
LOCATION: Brunswick, GA  
PROJECT NO. GR 3666  
LOGGED BY: T. Keller  
CHECKED BY: G. Roush

**DRILLING INFORMATION**

DRILLING CO.: Prosonic  
DRILLING METHOD: Rotasonic  
TOTAL DEPTH: 90.5 ft.  
TOP OF CASING ELEV.: 16.44 ft.  
HEIGHT OF CASING ABOVE  
GROUND SURFACE: 2.5 ft.

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0							
12							
10			SM	SILTY SAND: very loose, dark brown, with organic material (roots, humus) with some concrete debris on surface	0		
8							
6				SAND: loose, fine to medium sand, light brown	0		
-10			SP		0		
4							
2							
0					0		
-2							
-4			SM	SILTY SAND: loose, slightly clayey, medium sand, gray	0		
-6							
-20			SM	SILTY SAND: loose, medium sand, with some coarse, medium gray	0		
-8							
-10			SM				
-25				SAND: loose, fine to medium, light gray			

**NOTES:**

Water Level during  
drilling



Water level in completed  
monitoring well on  
9/9/05



PROJECT: Hercules

BORING NO.: MW-31D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
	-12		SP		0		
	-14		SC	CLAYEY SAND: medium to coarse sand, light gray with 30% marine shells	0		
-30	-16		SP	SAND: fine, light gray, with interbedded gray CLAY (CH)	0		
	-18		SP		0		
	-20		SP		0		
-35	-22		SP	CLAY: soft, highly plastic, olive gray	0		
	-24		CH		0		
-40	-26		SP	SAND: loose, medium to coarse, slightly silty with 5% marine shells	0		
	-28		SP		0		
-45	-30		SP		0		
	-32		SC	CLAYEY SAND: dense, silty, light gray	0		
	-34		SC		0		
-50	-36		SP	SAND: loose, coarse sand, medium gray	0		
	-38		CH	CLAY: firm, high plasticity, olive gray, with 0.5 ft interbedded sand.	0		
	-40		SC	CLAYEY SAND: dense, fine to medium sand, dark to medium gray	0		
-55	-42		SC		0		
	-44		SC		0		
-60	-46		SP	SAND: medium sand, light gray	0		
	-48		SP		0		
-65	-50		SP	CLAYEY SAND: grayish tan	0		

NOTES:

Water Level during  
drillingWater level in completed  
monitoring well on  
9/9/05

Page 2 of 3



PROJECT: Hercules

BORING NO.: MW-31D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-52							
-54			SC				
-56			SP	SAND: loose, medium to coarse, light gray	0		
-58							
-60				CLAYEY SAND: very hard to dense, light gray, with few interbeds of muddy SANDSTONE, and one lense of light gray highly plastic CLAY (CH) at 84.8 to 85 ft.	0		
-62							
-64							
-66			SC		0		
-68							
-70							
-72					0		
-74			SP	SAND: slightly clayey, medium sand, light gray with trace marine shells	0		
-76					0		
-90							Boring Terminated at 90.5ft.

NOTES:

Water Level during  
drillingWater level in completed  
monitoring well on  
9/9/05

Page 3 of 3



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**BORING LOG****BORING NO.: MW-32D****DATE: 9-8-05****PROJECT INFORMATION**

PROJECT: Hercules  
LOCATION: Brunswick, GA  
PROJECT NO. GR 3666  
LOGGED BY: T. Keller  
CHECKED BY: G. Roush

**DRILLING INFORMATION**

DRILLING CO.: Prosonic  
DRILLING METHOD: Rotasonic  
TOTAL DEPTH: 90 ft.  
TOP OF CASING ELEV.: 12.24 FT.  
HEIGHT OF CASING ABOVE  
GROUND SURFACE: 2.4 ft.

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0							
8							
6							
4			SM	SILTY SAND: loose, fine to medium sand, black to dark gray, with organic material (roots, humus)	N/A		PID not working due to rain
2				SAND: loose, fine sand, light brown to light gray			
0			SP				
-2							
-4							
-6							
-8			SM	SILTY SAND: loose, fine sand, olive gray, trace clay			
-10							
-12							
-14			SC	CLAYEY SAND: olive gray, with 30% marine shell fragments			
-16							
-18							
-20							
-22							
-24							
-25				SAND: fine to coarse sand, olive gray,			

**NOTES:**

Water Level during  
drilling



Water level in completed  
monitoring well on  
9/9/05



DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-16			SP	with 30% marine shell fragments			
-18				SAND: fine, light gray			
-20			SP				
-22			CH	CLAY: fine sandy, olive gray, high plasticity			
-24				SILTY SAND: slightly clayey, fine sand, olive gray			
-26			SM				
-28				CLAY: slightly silty, light gray to olive, highly plastic, with 0.1 ft sand interbed			
-30			CH				
-32				SAND: slightly silty, fine to coarse sand, light to medium gray, with up to 20% shell fragments, and weakly cemented sand in zones			
-34							
-36							
-38							
-40			SP				
-42							
-44							
-46			ML	SILT: hard, slightly clayey, light to medium gray			
-48			CL	CLAY: hard, sandy, medium gray			
-50				SILTY SAND: dark gray			
-52			SM				
-54				SAND: fine to medium sand, medium gray, well sorted			
-56							
-58							
-60							
-62							
-64							
-65							

## NOTES:



Water Level during drilling



Water level in completed monitoring well on 9/9/05



PROJECT: Hercules

BORING NO.: MW-32D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-56 -58 -60 -62 -64 -66 -68 -70 -72 -74 -76 -78 -80			SP				Boring Terminated at 90 ft.

NOTES:

Water Level during  
drillingWater level in completed  
monitoring well on  
9/9/05

Page 3 of 3





# GEOSYNTEC CONSULTANTS

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## BORING LOG

BORING NO.: **MW-33**  
DATE: **9-14-05**

### PROJECT INFORMATION

PROJECT: Hercules  
LOCATION.: Brunswick, GA  
PROJECT NO.: GR 3666  
LOGGED BY: T. Keller  
CHECKED BY: G. Roush

### DRILLING INFORMATION

DRILLING CO.: Prosonic  
DRILLING METHOD: Rotasonic  
TOTAL DEPTH: 132 ft.  
TOP OF CASING ELEV.: 9.12 ft.  
HEIGHT OF CASING ABOVE  
GROUND SURFACE: 2.6 ft.

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0	6		SM	SILTY SAND: loose, dark brown			
2	0		SP	SAND: loose, fine to medium sand, brown	0		
4	-2		SP	SAND: fine, gray with olive gray clay seams	1		
6	-6		SP		6		
8	-10		SC	CLAYEY SAND: medium grained sand, dark gray			
10	-12			SAND: fine to medium grained, well sorted, light gray, with thin interbedded olive gray highly plastic CLAY (CH)	20		
12	-14						
14	-16						
16	-18						
18	-20						
20	-22						
22	-24						
24	-26						

#### NOTES:



Water Level during  
drilling



Water level in completed  
monitoring well on  
9/20/05



PROJECT: Hercules

BORING NO.: MW-33

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-20					5		
-22							
-30			SP		2		
-24							
-26							
-28					41		
-35							
-30							
-32							
-40					174		
-34							
-36							
-38					110		
-45							
-40							
-42							
-50				CLAYEY SAND: medium grain sand, clayey to slightly clayey, dark gray with trace of well rounded gravel at 60ft.	84		
-44							
-46							
-55			SC		36		
-43							
-50							
-52							
-60				CLAYEY SAND: loose, light gray	28		
-54							
-56							
-65			SC		19		
-53							

NOTES:



Water Level during drilling


 Water level in completed monitoring well on  
 9/20/05

Page 2 of 4



DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-60				CLAYEY SAND: dense, light gray			
-62			SC				
-64					40		
-66			SC	CLAYEY SAND: medium grained sand, light gray with fragments of sandstone up to 50mm			
-68							
-70				SAND AND GRAVEL: slightly silty, fine to coarse sand, light to medium gray, with up to 20% shell fragments, and weakly cemented sand in zones	11		
-72			GP				
-74					4		
-76							
-78				CLAY: hard, slightly sandy, silty, light gray	5		
-80			CL				
-82				CLAY: stiff to dense, very clayey sand to sandy clay, light gray			
-84					0		
-86							
-88							
-90			CL		0		
-92				CLAY: hard, fine to medium sandy, light gray, slightly moist			
-94			CL		0		
-96							
-98			SC	CLAYEY SAND: dense, light gray, wet			
-100					0		

Temporary Outer 8-inch steel casing, set to 100ft.

## NOTES:



Water Level during drilling



Water level in completed monitoring well on 9/20/05



PROJECT: Hercules

BORING NO.: MW-33

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
			CL	CLAY: hard, light gray, dry			
-110	-102						
	-104		SP	SAND: firm, slightly silty, fine grained sand	0		
-115	-106						
	-108						
	-110		SC	CLAYEY SAND: dense, fine to medium sand, medium gray	0		
	-112			CLAYEY SAND: dense, fine, medium gray			
-120	-114		SC		0		
	-116						
	-118			SAND: fine, medium gray with interbedded clay at 125 ft and 128 ft.	0		
-125	-120						
	-122						
-130	-124		SP		0		Boring Terminated at 132 ft.

NOTES:



Water Level during drilling



Water level in completed monitoring well on 9/20/05

Page 4 of 4



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**BORING LOG**BORING NO.: **MW-34**DATE: **9-15-05****PROJECT INFORMATION**

PROJECT: Hercules  
LOCATION.: Brunswick, GA  
PROJECT NO. GR 3666  
LOGGED BY: T. Keller  
CHECKED BY: G.Roush

**DRILLING INFORMATION**

DRILLING CO.: Prosonic  
DRILLING METHOD: Rotasonic  
TOTAL DEPTH: 136 ft..  
TOP OF CASING ELEV.: 14.11 ft.  
HEIGHT OF CASING ABOVE  
GROUND SURFACE: 2.6 ft.

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0							
10			SM	SILTY SAND: loose, dark brown			
6			SP	SAND: loose, fine to medium sand, light brown	0		
4			SP	SAND: fine, dark brown with organics			
2					8		
0				SAND: fine, light brown			
-2					0		
-4			SP				
-6					0		
-8				SAND: fine to coarse grained sand, medium gray with 20mm seam of clay at 22 ft and 10mm seam at 31 ft.	0		
-10							
-12							
-25							

**NOTES:**

Water Level during  
drilling



Water level in completed  
monitoring well on  
9/20/05



PROJECT: Hercules

BORING NO.: MW-34

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-14			SP		0		
-16							
-18							
-20			SP	SAND: fine grained sand, medium gray	0		
-22							
-24			SP	SAND: fine to coarse grained sand, light gray, with the beds of olive highly plastic CLAY (CH) at 41, 42.5, and 49 ft.	0		
-26							
-28							
-30			SP		8		
-32							
-34			SP		0		
-36							
-38			SP		0		
-40							
-42							
-44			SC	CLAYEY SAND: dense, fine to medium grained sand, dark brownish gray	0		
-46							
-48			SP	SAND: slightly silty, fine to medium grained sand, light to medium gray	0		
-50							
-52							
-54			SP	SAND: slightly clayey, medium to coarse grained sand, medium to dark	0		

NOTES:



Water Level during drilling



Water level in completed monitoring well on 9/20/05

Page 2 of 4



PROJECT: Hercules

BORING NO.: MW-34

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
				gray			
-56			SC-SP				
-70	-58				0		
-60							
-62			GC	CLAYEY GRAVEL: hard, with well rounded gravel up to 20mm, light gray, dry	0		
-75	-64						
-66				SAND: fine to coarse grained sand, medium gray, with trace gravel			
-80	-68				0		
-70			SP				
-85	-72				0		
-74							
-76			SC	CLAYEY SAND: light to medium gray, with 25% marine shells	0		
-90	-78			SAND: fine to coarse sand, medium gray with trace clay	0		
-80			SP				
-95	-82				0		
-84			CL	CLAY: hard, sandy, light gray, dry	0		
-86			CL-CH	CLAY: stiff, medium gray to olive gray			
-88				CLAY: sandy, medium gray to olive	0		
-100	-90						
-92			CL	SANDSTONE: muddy, light gray	0		
-94			SC-CL	CLAY: very sandy clay to very clayey sand, light grayish tan, slightly moist	0		

Temporary Outer 8-inch steel casing, set to 105 ft.

NOTES:



Water Level during drilling

Water level in completed monitoring well on  
9/20/05

Page 3 of 4



PROJECT: Hercules

BORING NO.: MW-34

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-96							
-110	-98		SP	SAND: medium sand, with trace of clay, light gray	0		
-100	-100			CLAYEY SAND: dense, light grayish tan			
-102	-102						
-115	-104		SC		0		
-106	-106						
-120	-108			SAND: fine, light to medium gray, interbedded with 10 to 30mm beds of olive CLAY (CH) at 124, 124.5, 129, and 130.5ft	0		
-110	-110						
-112	-112						
-125	-114		SP		0		
-116	-116						
-118	-118						
-130	-120				0		
-122	-122		SP	SAND: dense, fine grained, slightly silty, light to medium gray.	0		
-135	-124				0		

Boring backfilled with bentonite from 132-136ft

Boring Terminated at 136 ft.

NOTES:



Water Level during drilling


 Water level in completed  
 monitoring well on  
 9/20/05

Page 4 of 4



**GEOSYNTEC CONSULTANTS**

1255 Roberts Blvd., NW  
Suite 200  
Kennesaw, GA 30144-3694

**BORING LOG**BORING NO.: **MW-35D**DATE: **9-12-05****PROJECT INFORMATION**

PROJECT: Hercules  
LOCATION: Brunswick, GA  
PROJECT NO. GR 3666  
LOGGED BY: T. Keller  
CHECKED BY: G. Roush

**DRILLING INFORMATION**

DRILLING CO.: Prosonic  
DRILLING METHOD: Rotasonic  
TOTAL DEPTH: 91 ft.  
TOP OF CASING ELEV.: 10.13 FT.  
HEIGHT OF CASING ABOVE  
GROUND SURFACE: 2.5 ft.

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0							
6							
4			SM	SILTY SAND: loose, fine to medium sand, dark brown, with organic material (roots, humus)	0		
2							
0				SAND: loose, slightly silty, fine to medium sand, tan	0		
-2			SP		0		
-4				SILTY SAND: loose, fine to coarse sand, gray	0		
-6							
-8			SM		0		
-10			CL	CLAY: olive gray, high plasticity			
-12			SC	CLAYEY SAND: medium sand, olive gray	0		
-14				SILTY SAND: fine, olive gray, with several 10 to 20mm interbeds of olive gray clay			
-16							
-25							

**NOTES:**Water Level during  
drillingWater level in completed  
monitoring well on  
9/21/05



PROJECT: Hercules

BORING NO.: MW-35D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-18			SM		0		
-20							
-22							
-30				SAND: coarse to medium sand, gray, with interbedded 5-10mm clay seams	0		
-24			SP				
-26				SAND: medium sand, light gray			
-35					0		
-28							
-30							
-40					0		
-32							
-34							
-36							
-45			SP		0		
-38							
-40							
-50					3		
-42							
-44							
-46							
-55			SP	SAND: slightly clayey, medium to coarse sand, dark gray, with several thin interbedded clay seams	5		
-48							
-50				SAND: medium sand, light gray, with 0.3 ft SANDSTONE bed at 62.5 ft.			
-60					1		
-52							
-54			SP				
-56				SAND: medium to coarse, light gray			
-65					0		
-58							

NOTES:






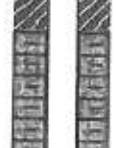

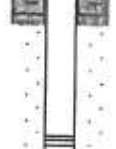

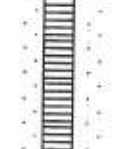
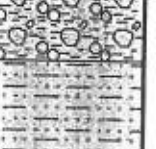
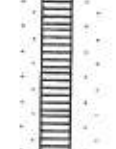

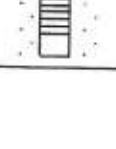






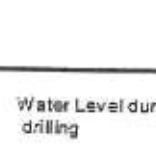
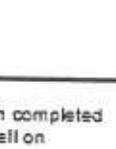




Water Level during  
drillingWater level in completed  
monitoring well on  
9/21/05

Page 2 of 3



PROJECT: Hercules

BORING NO.: MW-35D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-60	-62		SP				
-70	-62		CL	CLAY: hard, sandy tan	0		
-64	-66		CL	CLAY: soft, silty olive gray	0		
-66	-68		CL		0		
-70	-72		CL		0		
-72	-74		CL		0		
-74	-76		GC	CLAYEY GRAVEL: hard, gravel well rounded up to 30mm	0		
-76	-78		GC		0		
-78	-80		SC	CLAYEY SAND: medium sand, medium gray	0		
-80	-82		SC		0		
-82	-84		SC		0		
-84	-86		SC		0		
-86	-88		SC		0		
-88	-90		SC		0		

Boring Terminated at 91 ft.

NOTES:



Water Level during drilling



Water level in completed monitoring well on 9/21/05

Page 3 of 3



**GEOSYNTEC CONSULTANTS**

1255 Roberts Blvd., NW  
Suite 200  
Kennesaw, GA 30144-3694

**BORING LOG****BORING NO.:** MW-36D**DATE:** 9-9-05**PROJECT INFORMATION**

**PROJECT:** Hercules  
**LOCATION.:** Brunswick, GA  
**PROJECT NO.** GR 3666  
**LOGGED BY:** T. Keller  
**CHECKED BY:** G. Roush

**DRILLING INFORMATION**

**DRILLING CO.:** Prosonic  
**DRILLING METHOD:** Rotasonic  
**TOTAL DEPTH:** 91 ft.  
**TOP OF CASING ELEV.:** 15.74 FT.  
**HEIGHT OF CASING ABOVE GROUND SURFACE:** 2.5 ft.

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
0							
12			SM	SILTY SAND: loose, fine to medium sand, dark brown, with organic material (roots, humus)			
10			SP	SAND: loose, fine to medium sand, light grayish tan			
8			SP	SAND: loose, slightly silty, fine to medium sand, dark brown, with organic material (roots, humus)	0		
6			SP				
4							
-10				SAND: fine to medium sand, light brown	0		
2							
0							
-15			SP		0		
-2							
-4			SP	SAND: slightly clayey, fine to medium sand, medium gray			
-6			SP				
-20				SAND: loose, slightly silty, fine to coarse sand, with 5% marine shells	0		
-3							
-10			SP				
-25							

**NOTES:**

Water Level during  
drilling



Water level in completed  
monitoring well on  
unstable



PROJECT: Hercules

BORING NO.: MW-36D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-12					0		
-14							
-16			SP	SAND: loose, medium to coarse sand, with 5% marine shells	0		
-30					0		
-18							
-20			SP	SAND: loose, fine medium sand, medium gray, interbedded with olive gray CLAY (CH)			
-35					0		
-22				CLAYEY SAND: fine sand, greenish gray			
-24			SC	SAND: loose, fine to medium sand, trace silt			
-26			SP				
-40					0		
-28				CLAYEY SAND: hard, light gray			
-30							
-45			SC		0		
-32				SANDSTONE: light gray, medium to coarse grained.			
-34			SP	SAND: loose, coarse grained, medium gray			
-36				CLAYEY SAND: dense to very dense, fine to coarse sand, medium gray, with 10% marine shells up to 10mm	3		
-50							
-38							
-40			SC				
-55					5		
-42				SAND: medium to coarse sand, light gray			
-44			SP				
-46			SC	CLAYEY SAND: light gray			
-60				MUDSTONE: tan gray very muddy sandstone	1		
-48				CLAYEY SAND: very hard, medium to coarse grained, light gray			
-50			SC				
-65					0		
-52				SAND: loose, medium grained, dark			

NOTES:



Water Level during drilling



Water level in completed monitoring well on unstable

Page 2 of 3



PROJECT: Hercules

BORING NO.: MW-36D

DEPTH	ELEV.	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	PID (ppm)	BORING COMPLETION	NOTES
-54				gray, well sorted			
-56			SP		0		
-58							
-60				CLAYEY SAND: dense, light grayish tan			
-62			SC		0		
-64				CLAYEY SAND: dense, medium grained, medium gray			
-66							
-68			SC		0		
-70				CLAY: very stiff, dark greenish gray			
-72				CLAYEY SAND: dense, fine to coarse grained, dark gray	0		
-74			SC				
-76				CLAYEY GRAVEL: up to 75mm fragments of cemented clay-sand-shells with light gray plastic clay			
-90			GC		0		Boring Terminated at 91 ft.

NOTES:



Water Level during drilling



Water level in completed monitoring well on unstable

Page 3 of 3

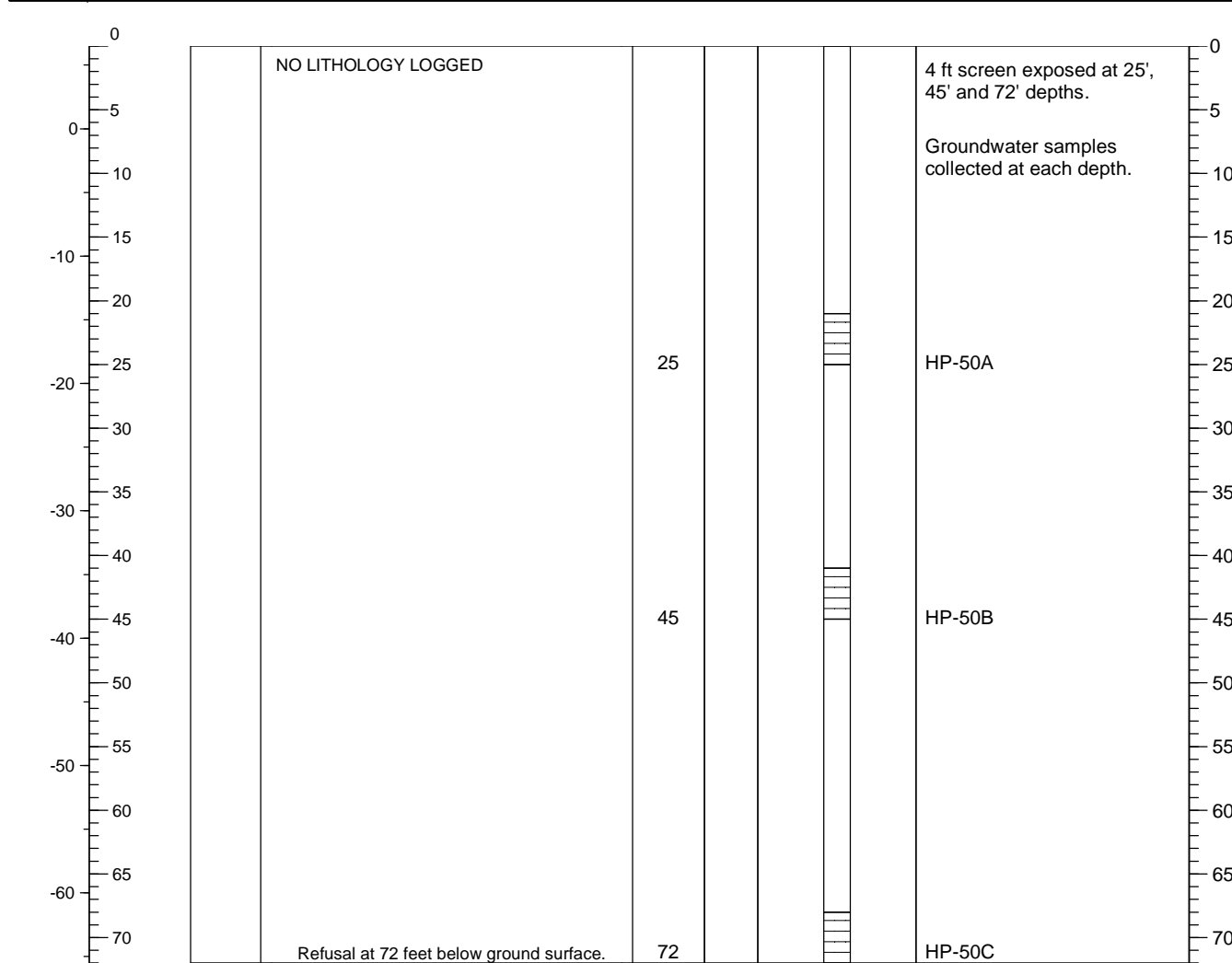


## **Phase III Groundwater RFI Geologic Logs**



<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> HP-50
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>SAEDACCO</b>	Northing Easting <b>423678.126</b> <b>872002.362</b>	Ground Surface Elevation <b>6.49</b>	
	Drilling Equipment <b>Geoprobe</b>	Sampling Method <b>Grab Sample</b>	Top of Well Casing Elevation <b>NA</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Geoprobe</b>	Sampling Equipment <b>Screen Point Sampler</b>	Well Casing Diameter <b>2 in.</b>	
Logged By <b>C. Weaver</b> Approved By <b>R. Cate</b>	Date Drilling Started <b>3/30/10</b>	Headspace Monitoring Device <b>NA</b>	Well Screen Interval <b>NA</b>	
Driller Name <b>R. Hoffman</b> Project Number <b>WBS30012B1</b>	Date Drilling Completed <b>3/30/10</b>	Boring Depth <b>72</b>	Boring Dia. <b>6 in.</b>	Well Depth <b>NA</b>

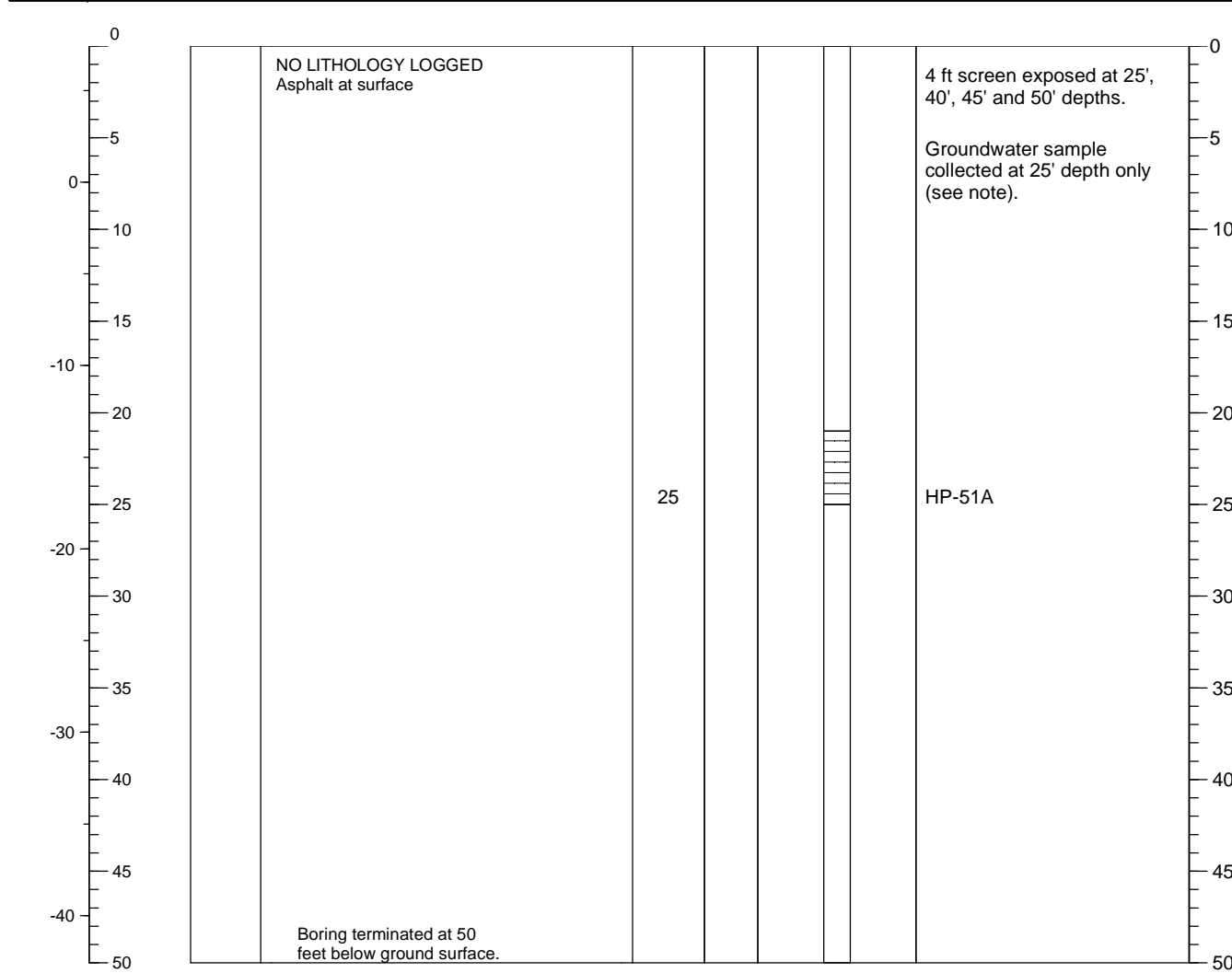
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Depth (ft)	Headspace (ppm)	Well Diagram	Well Details





<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> HP-51
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>SAEDACCO</b>	Northing Easting <b>423512.685</b> <b>871479.326</b>	Ground Surface Elevation <b>7.42</b>	
	Drilling Equipment <b>Geoprobe</b>	Sampling Method <b>Grab Sample</b>	Top of Well Casing Elevation <b>NA</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Geoprobe</b>	Sampling Equipment <b>Screen Point Sampler</b>	Well Casing Diameter <b>2 in.</b>	
Logged By <b>C. Weaver</b> Approved By <b>R. Cate</b>	Date Drilling Started <b>3/29/10</b>	Headspace Monitoring Device <b>NA</b>	Well Screen Interval <b>NA</b>	
Driller Name <b>R. Hoffman</b> Project Number <b>WBS30012B1</b>	Date Drilling Completed <b>3/30/10</b>	Boring Depth <b>50 ft.</b>	Boring Dia. <b>6 in.</b>	Well Depth <b>NA</b>

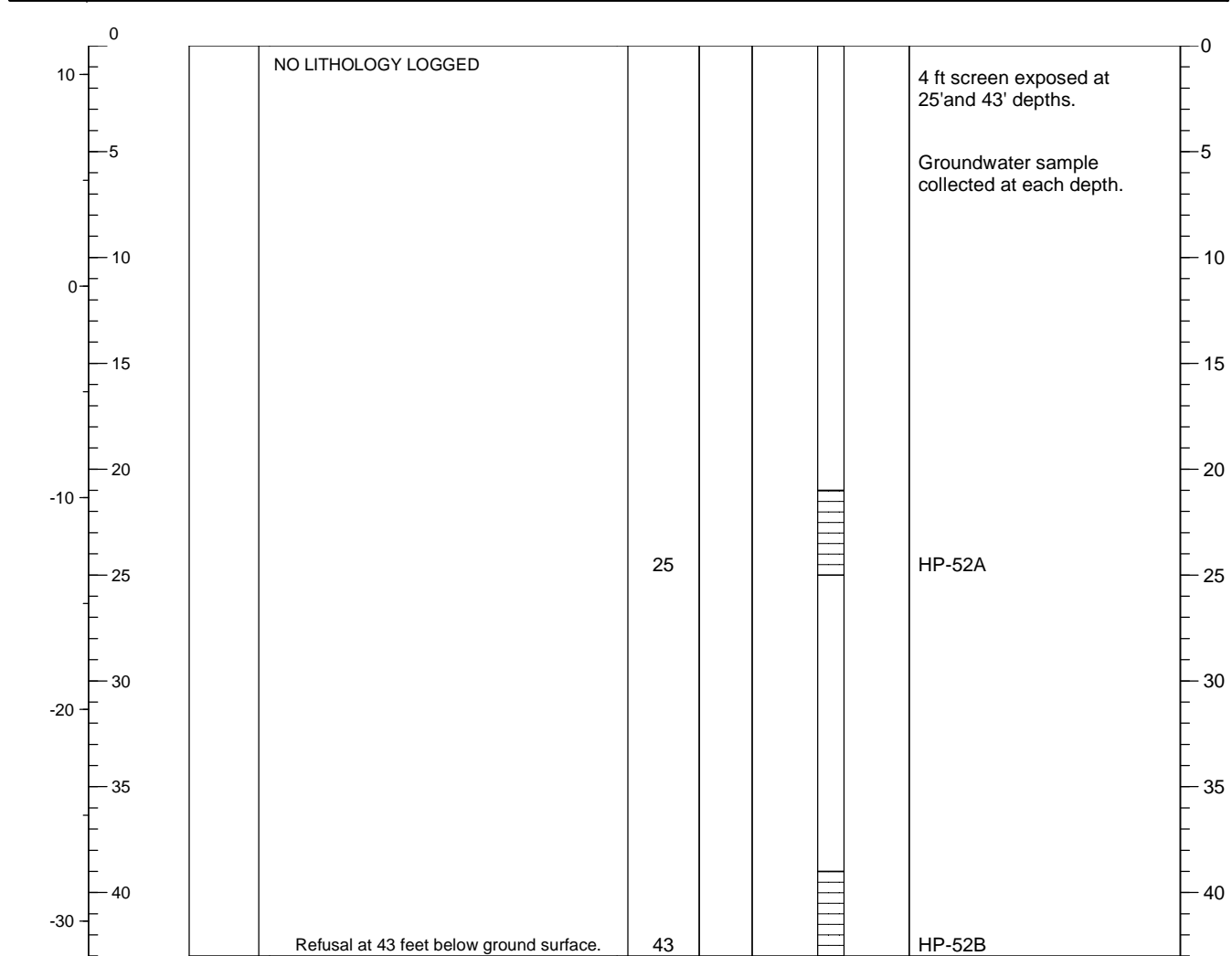
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Depth (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name Ashland Brunswick Georgia		Monitoring Well Construction Log		Well Number HP-52
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License SAEDACCO	Northing 423505.108	Ground Surface Elevation 11.35	
	Drilling Equipment Geoprobe	Easting 869925.147	Top of Well Casing Elevation NA	
GA EPD Number GAD004065520	Drilling Method Geoprobe	Sampling Method Grab Sample		Well Casing Diameter 2 in.
Logged By C. Weaver Approved By R. Cate	Date Drilling Started 3/29/10	Headspace Monitoring Device NA		Well Screen Interval NA
Driller Name R. Hoffman Project Number WBS30012B1	Date Drilling Completed 3/29/10	Boring Depth 43 ft.	Boring Dia. 6 in.	Well Depth NA

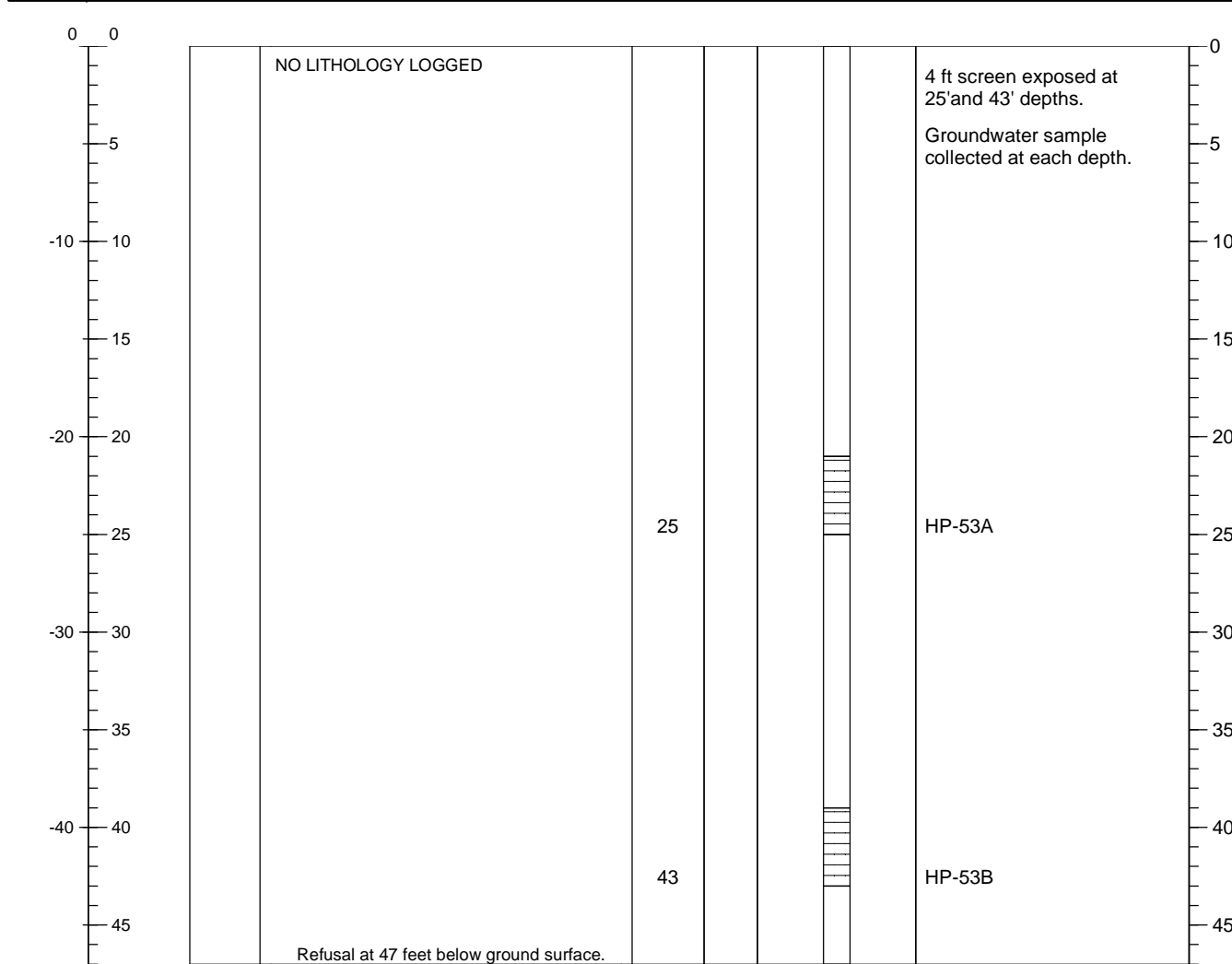
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Depth (ft)	Headspace (ppm)	Well Diagram	Well Details





<b>Project Name</b> <b>Ashland Brunswick Georgia</b>		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> <b>HP-53</b>
<b>Address</b> <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	<b>Drilling Contractor/License</b> <b>SAEDACCO</b>	<b>Northing</b> <b>NA</b> <b>Easting</b> <b>NA</b>	<b>Ground Surface Elevation</b> <b>NA</b>	
	<b>Drilling Equipment</b> <b>Geoprobe</b>	<b>Sampling Method</b> <b>Grab Sample</b>		<b>Top of Well Casing Elevation</b> <b>NA</b>
<b>GA EPD Number</b> <b>GAD004065520</b>	<b>Drilling Method</b> <b>Geoprobe</b>	<b>Sampling Equipment</b> <b>Screen Point Sampler</b>		<b>Well Casing Diameter</b> <b>2 in.</b>
<b>Logged By</b> <b>C. Weaver</b> <b>Approved By</b> <b>R. Cate</b>	<b>Date Drilling Started</b> <b>3/29/10</b>	<b>Headspace Monitoring Device</b> <b>NA</b>		<b>Well Screen Interval</b> <b>NA</b>
<b>Driller Name</b> <b>R. Hoffman</b> <b>Project Number</b> <b>WBS30012B1</b>	<b>Date Drilling Completed</b> <b>3/29/10</b>	<b>Boring Depth</b> <b>47 ft.</b>	<b>Boring Dia.</b> <b>6 in.</b>	<b>Well Depth</b> <b>NA</b>

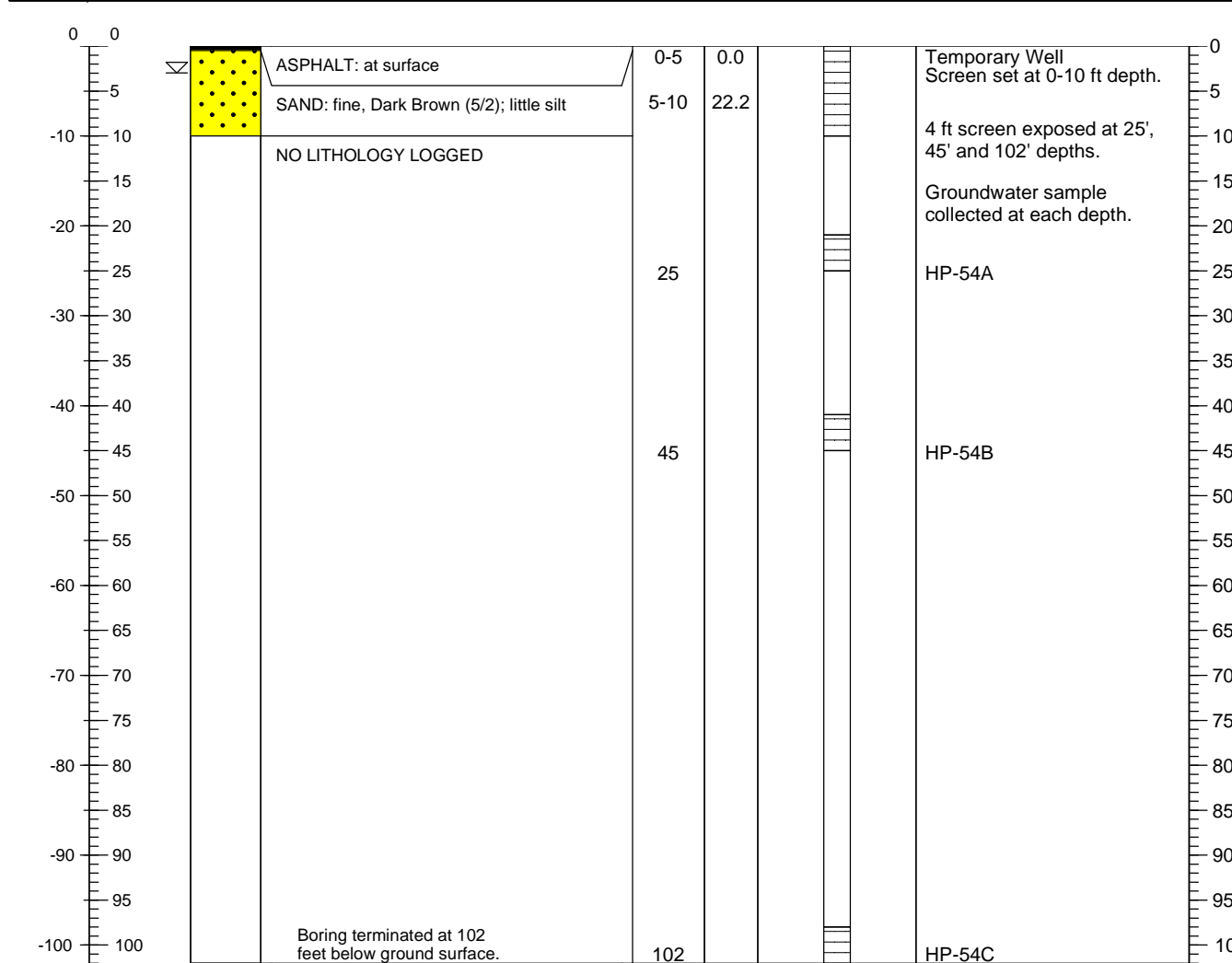
LITHOLOGY				SAMPLING DATA				
Elevation	Depth	Graphic Log	Visual Description	Sample Depth (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth





<b>Project Name</b> <b>Ashland Brunswick Georgia</b>		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> <b>HP-54</b>	
<b>Address</b> <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	<b>Drilling Contractor/License</b> <b>SAEDACCO</b>	<b>Northing</b> <b>NA</b>	<b>Ground Surface Elevation</b> <b>NA</b>		
	<b>Drilling Equipment</b> <b>Geoprobe</b>	<b>Sampling Method</b> <b>Grab Sample</b>		<b>Top of Well Casing Elevation</b> <b>NA</b>	
<b>GA EPD Number</b> <b>GAD004065520</b>	<b>Drilling Method</b> <b>Geoprobe</b>	<b>Sampling Equipment</b> <b>Screen Point Sampler</b>		<b>Well Casing Diameter</b> <b>2 in.</b>	
<b>Logged By</b> <b>C. Weaver</b> <b>Approved By</b> <b>R. Cate</b>	<b>Date Drilling Started</b> <b>3/31/10</b>	<b>Headspace Monitoring Device</b> <b>NA</b>		<b>Well Screen Interval</b> <b>0-10 ft.</b>	
<b>Driller Name</b> <b>R. Hoffman</b> <b>Project Number</b> <b>WBS30012B1</b>	<b>Date Drilling Completed</b> <b>3/31/10</b>	<b>Boring Depth</b> <b>102 ft.</b>	<b>Boring Dia.</b> <b>6 in.</b>	<b>Well Depth</b> <b>NA</b>	

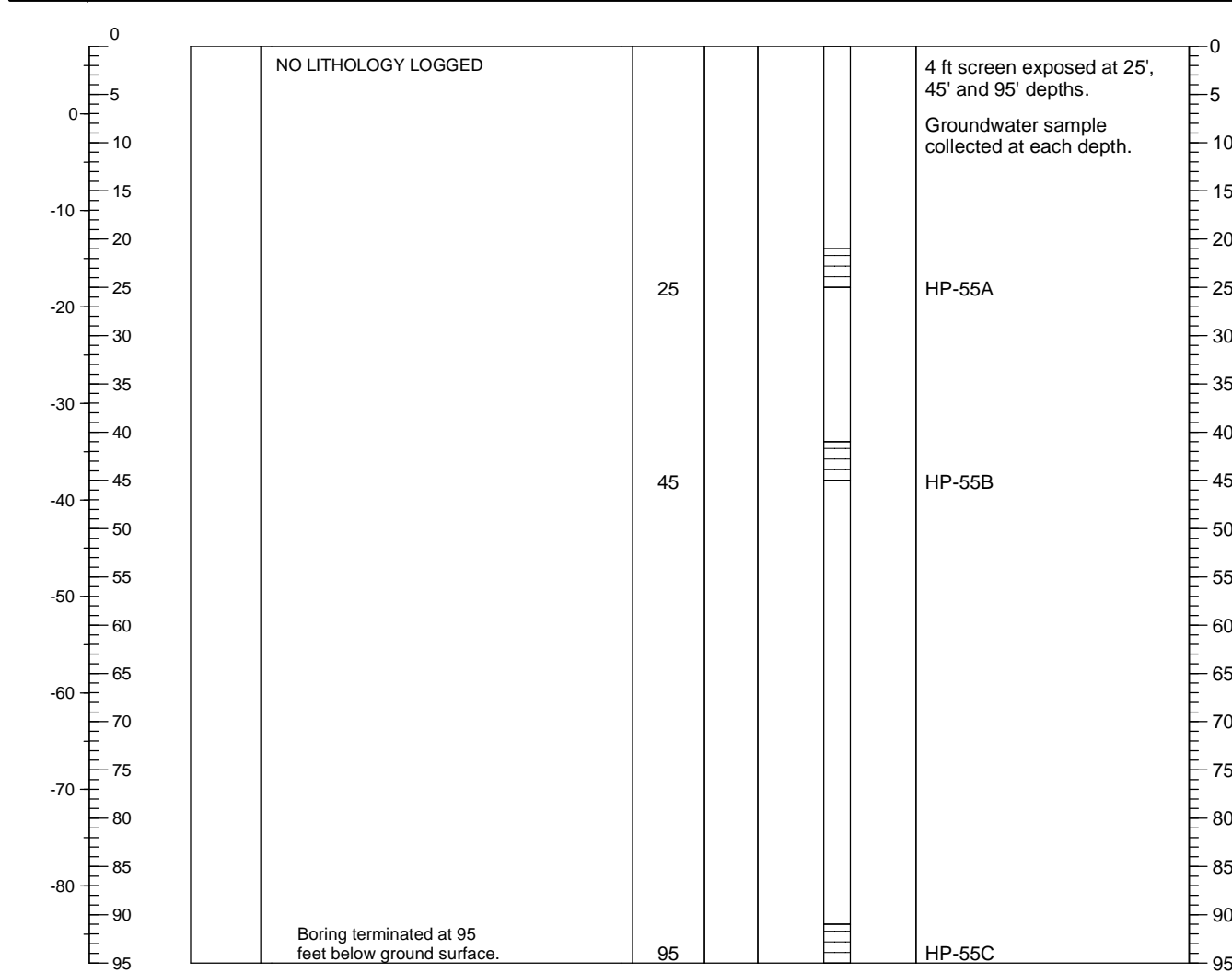
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Depth (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name Ashland Brunswick Georgia		Monitoring Well Construction Log		Well Number HP-55
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License SAEDACCO	Northing 425003.638 Easting 872123.277	Ground Surface Elevation 7.02	
	Drilling Equipment Geoprobe	Sampling Method Grab Sample	Top of Well Casing Elevation NA	
GA EPD Number GAD004065520	Drilling Method Geoprobe	Sampling Equipment Screen Point Sampler	Well Casing Diameter 2 in.	
Logged By C. Weaver Approved By R. Cate	Date Drilling Started 3/30/10	Headspace Monitoring Device NA	Well Screen Interval	
Driller Name R. Hoffman Project Number WBS30012B1	Date Drilling Completed 3/31/10	Boring Depth 95 ft.	Boring Dia. 6 in.	Well Depth NA

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Depth (ft)	Headspace (ppm)	Well Diagram	Well Details



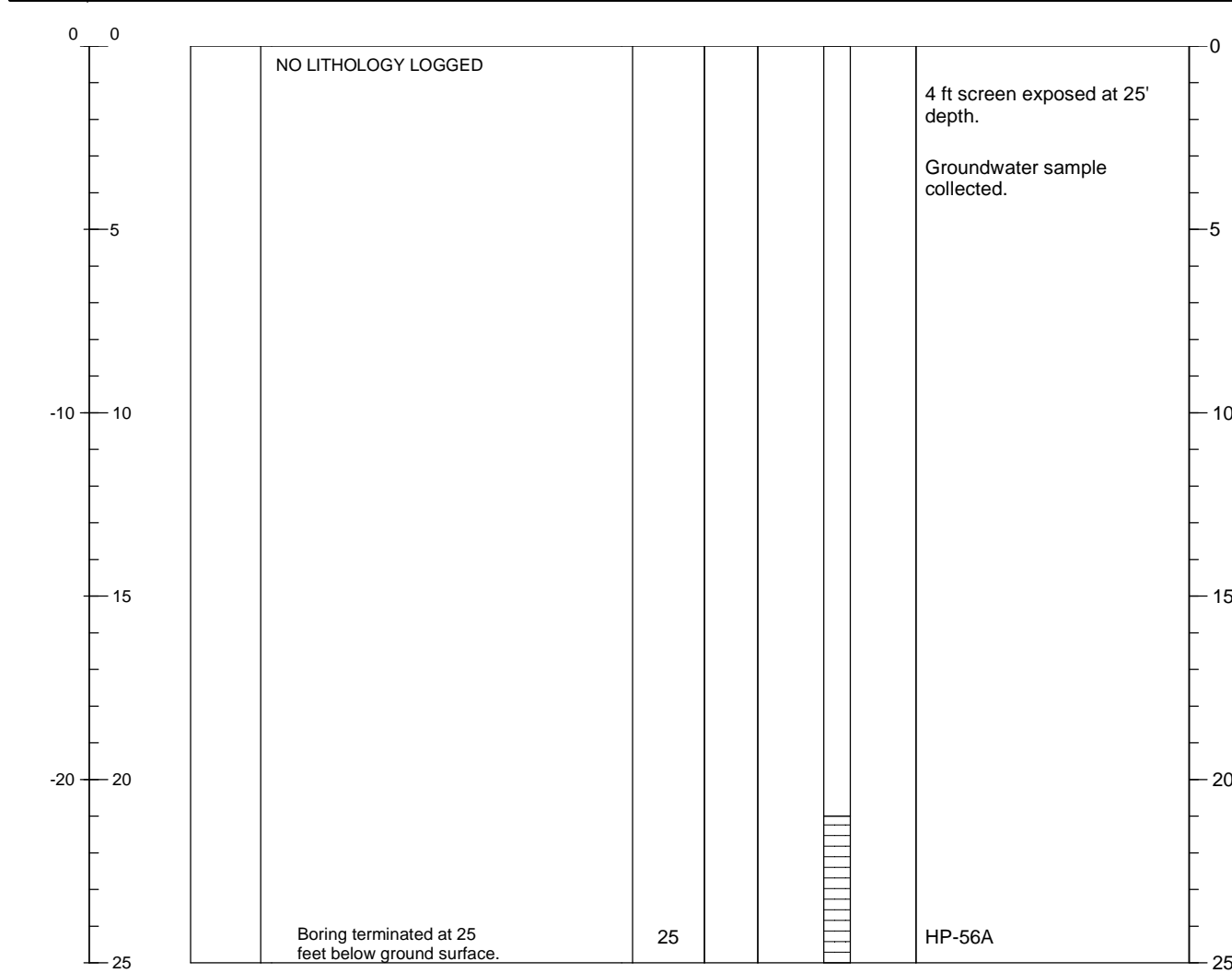
Note: At the 91-95' screen depth, water was slow to produce. Screen was inserted into fine flowing sands overnight until water could accumulate. Groundwater sample was collected 3/31/10.





<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> HP-56
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>SAEDACCO</b>	Northing <b>NA</b> Easting <b>NA</b>	Ground Surface Elevation <b>NA</b>	
	Drilling Equipment <b>Geoprobe</b>	Sampling Method <b>Grab Sample</b>		Top of Well Casing Elevation <b>NA</b>
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Geoprobe</b>	Sampling Equipment <b>Screen Point Sampler</b>		Well Casing Diameter <b>2 in.</b>
Logged By <b>C. Weaver</b> Approved By <b>R. Cate</b>	Date Drilling Started <b>3/30/10</b>	Headspace Monitoring Device <b>NA</b>		Well Screen Interval <b>NA</b>
Driller Name <b>R. Hoffman</b> Project Number <b>WBS30012B1</b>	Date Drilling Completed <b>3/30/10</b>	Boring Depth <b>25 ft.</b>	Boring Dia. <b>6 in.</b>	Well Depth <b>NA</b>

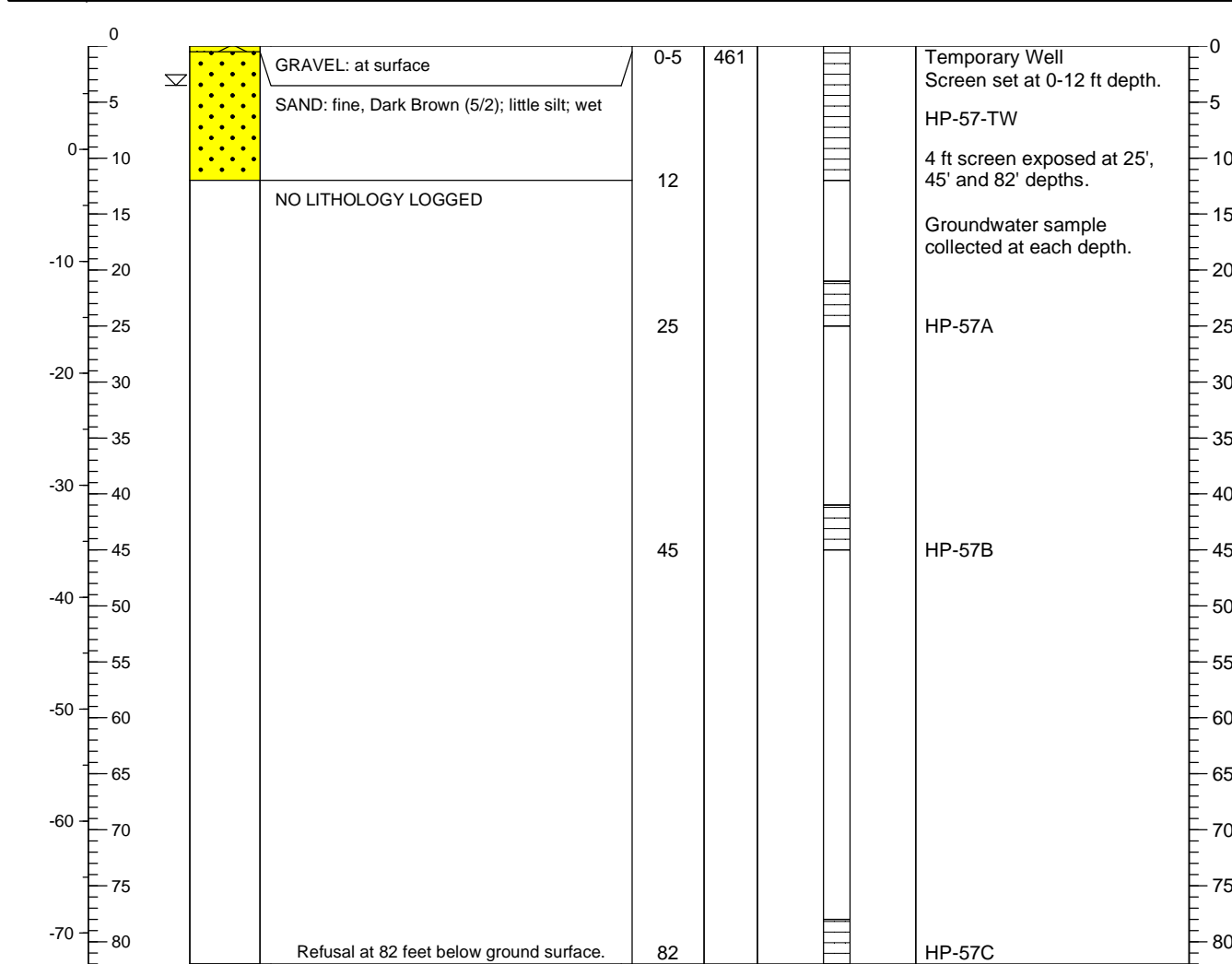
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Depth (ft)	Headspace (ppm)	Well Diagram	Well Details





<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> HP-57	
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>SAEDACCO</b>	Northing Easting	<b>424572.446</b> <b>870715.490</b>	Ground Surface Elevation <b>9.23</b>	
	Drilling Equipment <b>Geoprobe</b>	Sampling Method <b>Grab Sample</b>		Top of Well Casing Elevation <b>NA</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Geoprobe</b>	Sampling Equipment <b>Screen Point Sampler</b>		Well Casing Diameter <b>2 in.</b>	
Logged By <b>C. Weaver</b> Approved By <b>R. Cate</b>	Date Drilling Started <b>3/31/10</b>	Headspace Monitoring Device <b>NA</b>		Well Screen Interval <b>0-12 ft.</b>	
Driller Name <b>R. Hoffman</b> Project Number <b>WBS30012B1</b>	Date Drilling Completed <b>4/1/10</b>	Boring Depth <b>82 ft.</b>	Boring Dia. <b>6 in.</b>	Well Depth <b>NA</b>	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Depth (ft)	Headspace (ppm)	Well Diagram	Well Details



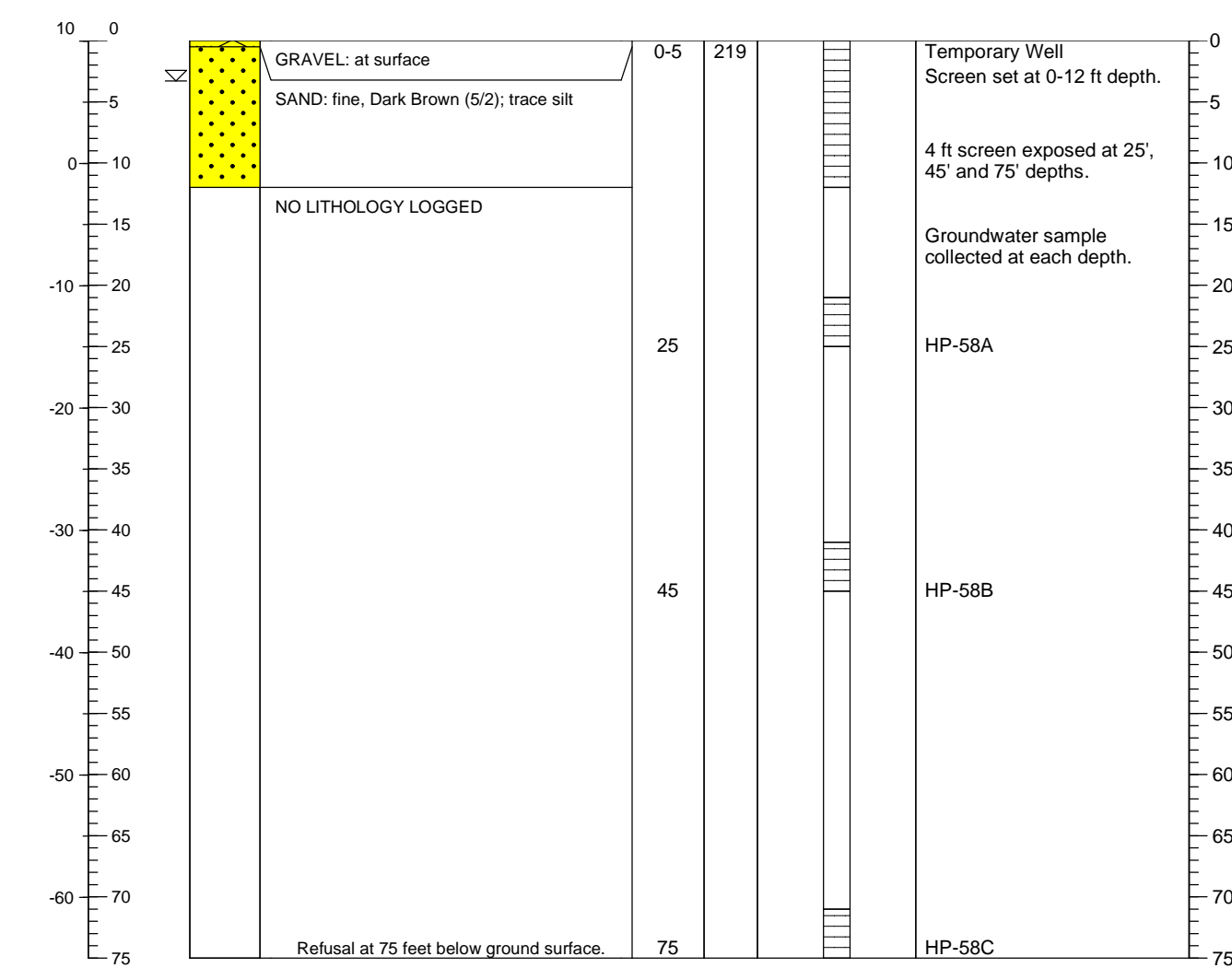
Temporary well set to determine the presence of free product. Oil NAPL discovered on 4/1/10 @ 08:53.





<b>Project Name</b> <b>Ashland Brunswick Georgia</b>		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> <b>HP-58</b>	
<b>Address</b> <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	<b>Drilling Contractor/License</b> <b>SAEDACCO</b>	<b>Northing</b> <b>424230.526</b>	<b>Ground Surface Elevation</b> <b>10.04</b>		
	<b>Drilling Equipment</b> <b>Geoprobe</b>	<b>Easting</b> <b>870735.373</b>		<b>Top of Well Casing Elevation</b> <b>NA</b>	
<b>GA EPD Number</b> <b>GAD004065520</b>	<b>Drilling Method</b> <b>Geoprobe</b>	<b>Sampling Method</b> <b>Grab Sample</b>		<b>Well Casing Diameter</b> <b>2 in.</b>	
<b>Logged By</b> <b>C. Weaver</b> <b>Approved By</b> <b>R. Cate</b>	<b>Date Drilling Started</b> <b>3/31/10</b>	<b>Headspace Monitoring Device</b> <b>NA</b>		<b>Well Screen Interval</b> <b>0-12 ft.</b>	
<b>Driller Name</b> <b>R. Hoffman</b> <b>Project Number</b> <b>WBS30012B1</b>	<b>Date Drilling Completed</b> <b>4/1/10</b>	<b>Boring Depth</b> <b>75 ft.</b>	<b>Boring Dia.</b> <b>6 in.</b>	<b>Well Depth</b> <b>NA</b>	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Depth (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Monitoring Well Construction Log		Well Number	
Ashland Brunswick Georgia					MW-11DD	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424866.69 872461.24	Ground Surface Elevation 5.20		
	Drilling Equipment Roto Sonic	Well Screen Interval 81-91 ft.	Top of Well Casing Elevation 8.23			
GA EPD Number GAD004065520	Drilling Method Roto Sonic	Well Screen Slot Size 0.01 inch	Total Well Depth 91 ft.			
Logged By H. Hight Approved By C. Weaver	Date Drilling Started 7/10/14	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 95 ft.	Boring Dia. 6 in.		
Driller Name A. Hak Project Number WBS2014B2	Date Drilling Completed 7/11/14	Sampling Method Continuous Cores	Headspace Monitoring Device PID			

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 0.3) TOPSOIL: Surface Grass/Topsoil / Black Sand, fine grained, roots		0-5	2.4		Protective Cover: Stick Up/Well Pad: 3'x3'	0
			(0.3- 5.0) SAND: Black to dark brown fine sand, trace silt, loose, slightly moist 0 - 5 Post-hole					Cement Grout: 0-77'	
	5		(5.0- 7.5) SAND: Brown-light brown, fine sand, loose	SM	5-10	2.3		Well Casing: 0-81'	5
			(7.5- 10.0) SAND: Light gray fine sand, loose, trace silt, loose	SM				Well Diameter: 2"	
	10		(10.0- 12.0) SILTY SAND: Gray silty fine sand, trace clay	SM	10-15	3.2			10
			(12.0- 13.0) SILTY SAND: Dark gray silty fine sand, angular shell fragments	SM					
	15		(13.0- 15.0) SILTY SAND: Gray silty fine sand, loose	SM	15-20	4.3			15
			(15.0- 16.0) SAND: Gray fine sand, trace silt, loose	SM					
			(16.0- 17.0) SAND: Fine-coarse sand, angular shell fragments, loose	SM					
	20		(17.0- 20.0) SILTY SAND: Gray fine sand, some silt, trace clay, small angular shell fragments, loose	CL	20-25	2.5			20
			(20.0- 21.0) SANDY CLAY: Medium gray sandy clay, small angular shell fragments	CL					
			(21.0- 23.0) SANDY CLAY: Medium gray clay, some fine sand	CL					
	25		(23.0- 25.0) SANDY CLAY: Gray sandy clay, small angular shell fragments						25



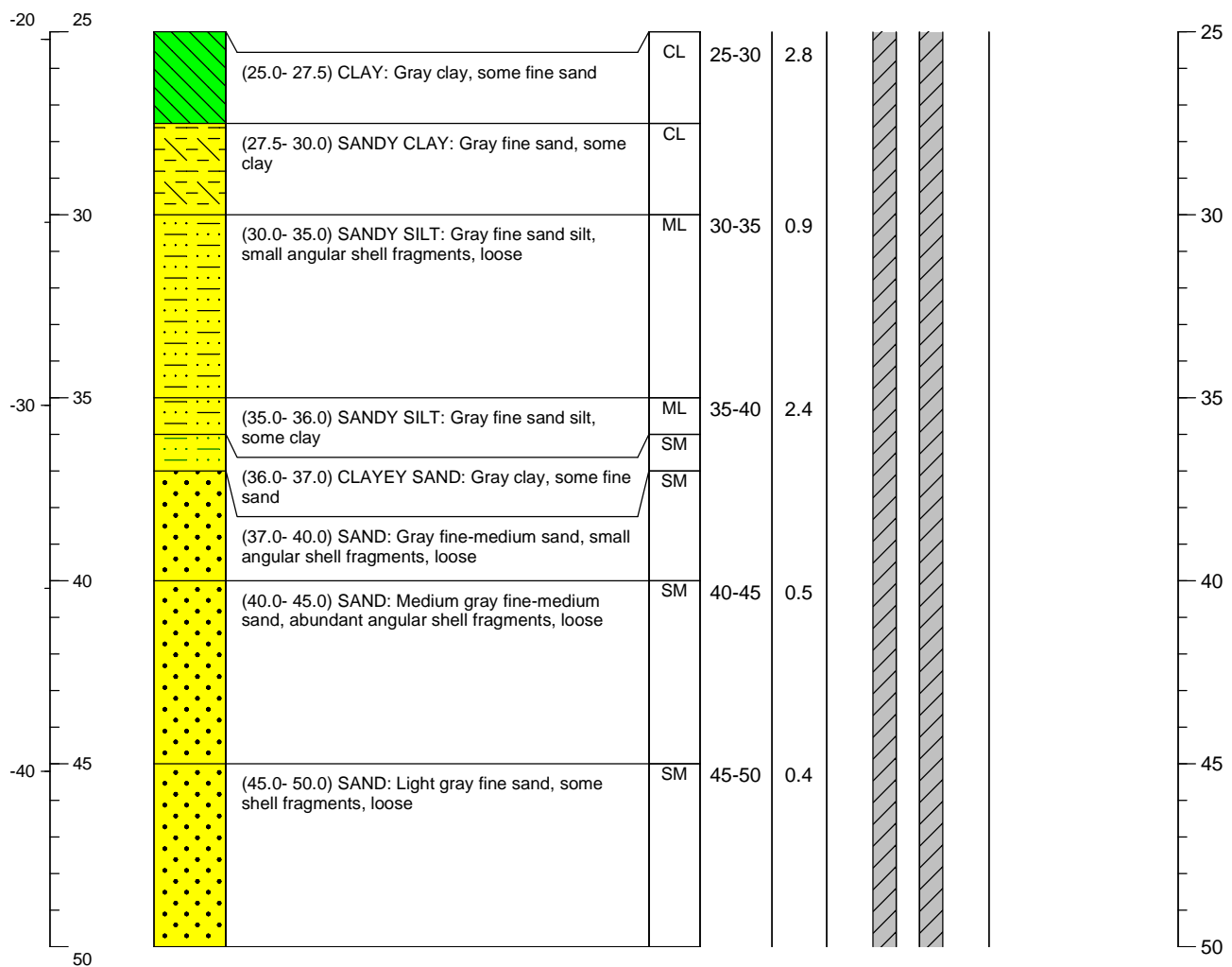


<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-11DD
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting <b>424866.69</b> <b>872461.24</b>	Ground Surface Elevation <b>5.20</b>	
	Drilling Equipment <b>Roto Sonic</b>	Well Screen Interval <b>81-91 ft.</b>	Top of Well Casing Elevation <b>8.23</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>91 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>7/10/14</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>95 ft.</b>	Boring Dia. <b>6 in.</b>
Driller Name <b>A. Hak</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>7/11/14</b>	Sampling Method <b>Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
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<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-11DD
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting <b>424866.69</b> <b>872461.24</b>	Ground Surface Elevation <b>5.20</b>	
	Drilling Equipment <b>Roto Sonic</b>	Well Screen Interval <b>81-91 ft.</b>	Top of Well Casing Elevation <b>8.23</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>91 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>7/10/14</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>95 ft.</b>	Boring Dia. <b>6 in.</b>
Driller Name <b>A. Hak</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>7/11/14</b>	Sampling Method <b>Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
50			(50.0- 54.0) SAND: Light gray fine sand, loose	SM	50-55	5.6			50
			(54.0- 55.0) SANDY CLAY: Gray clay, some sand, some medium-coarse subrounded gravel (>2 in diam)	CL					
-50	55		(55.0- 60.0) CLAYEY SAND: Gray clayey fine-coarse sand, some subrounded gravel (>2 in diam), loose	SC	55-60	2.3			55
			(60.0- 63.0) SAND: Gray fine-coarse sand, some subrounded gravel (>2 in diam.), loose	SM	60-65	5.7			60
			(63.0- 75.0) SAND: Gray fine-medium sand, loose	SM					
					65-70	5.0			65
-60	65								
					70-75	14.9			70
-70	75								75

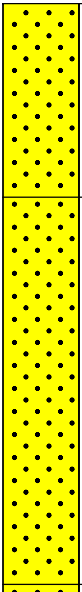
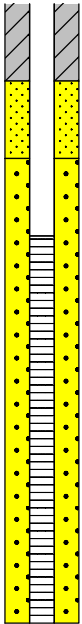
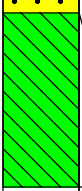




<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-11DD
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting <b>424866.69</b> <b>872461.24</b>	Ground Surface Elevation <b>5.20</b>	
	Drilling Equipment <b>Roto Sonic</b>	Well Screen Interval <b>81-91 ft.</b>	Top of Well Casing Elevation <b>8.23</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>91 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>7/10/14</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>95 ft.</b>	Boring Dia. <b>6 in.</b>
Driller Name <b>A. Hak</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>7/11/14</b>	Sampling Method <b>Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

























Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
-70	75		(75.0- 80.0) SAND: Gray fine-medium sand, loose, wet, some clay + silt nodules ~2" diam	SM	75-80	13.7		Fine Sand: 77-79'	75
-80	80		(80.0- 90.0) SAND: Gray fine-medium sand, loose	SM	80-85	122.0		#2 Silica Sand: 79-91'	80
-80	85		(90.0- 90.5) SAND: Gray fine-medium sand, some clay	SM CL	85-90	133.0		Well Screen: 81-91'	85
-90	90		(90.5- 95.0) CLAY: Gray clay, some fine sand, stiff, dry		90-95	8.7		Well set at 91 ft. bgs. with 10 ft of screen.	90
-90	95		Boring terminated at 95 ft. bgs.						95
	100								100



Project Name			Well Number	
Ashland Brunswick Georgia			MW-37S	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	427021.360 867926.180	Ground Surface Elevation 14.28
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 15-25 ft		Top of Well Casing Elevation 17.15
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 25 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/17/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 25 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/17/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0								0
			(0.0- 2.0) SAND: medium, Dusty Brown (5YR 2/2), well sorted, angular; trace gravel; moist	0-2	0.0		Protective Cover: Stick Up/Well Pad: 3'x3'	
			(2.0- 4.0) CEMENT	2-4	0.0		Bentonite/Cement: 0-11'	
10	5		(4.0- 6.0) SAND: medium, Pale Brown (5 YR 2/2), well sorted, rounded, loose; trace fine sand	4-6	0.0		Bentonite: 11-13'	5
			(6.0- 8.0) SAND: fine, Dusty Brown (5 YR 2/2), rounded, loose; trace medium (grain) sand	6-8	0.0		#2 Silica Sand: 13-25'	
			(8.0- 10.0) SAND: fine, Moderate Brown (3/4), rounded, loose; some medium sand	8-10	0.0		Well Casing: 0-15'	
			(10.0- 15.0) SAND: fine, Moderate Brown (4/2), rounded, loose	10-12	0.0		Well Screen: 15-25'	10
				12-14	0.0		Well Diameter: 2"	
				14-16	0.0			
			(15.0- 20.0) SAND: very fine, Medium Gray (N5); trace shells; saturated	16-18	0.0			15
				18-20	0.0			
			(20.0- 25.0) SAND: very fine, Light-Medium Gray (N6); some shells; saturated	20-25	0.0			20
							Boring terminated at 25 feet below ground surface.	25





Project Name			Well Number	
Ashland Brunswick Georgia			MW-371	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	427022.200 867920.710	Ground Surface Elevation 14.17
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 60-75 ft		Top of Well Casing Elevation 16.91
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 75 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/17/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 80 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/19/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 2.0) SAND: medium, Dusty Brown (5YR 2/2), well sorted, angular; trace gravel; moist 0 - 5 Post-hole	0-2	0.0		Protective Cover: Stick Up/Well Pad: 3'x3'	0
			(2.0- 4.0) CEMENT	2-4	0.0		Bentonite/Cement: 0-56'	
10	5		(4.0- 6.0) SAND: medium, Pale Brown (5 YR 2/2), well sorted, rounded, loose; trace fine sand	4-6	0.0		Bentonite: 56-58'	5
			(6.0- 8.0) SAND: fine, Dusty Brown (5 YR 2/2), rounded, loose; trace medium (grain) sand	6-8	0.0		#2 Silica Sand: 58-75'	
			(8.0- 10.0) SAND: fine, Moderate Brown (3/4), rounded, loose; some medium sand	8-10	0.0		Well Casing: 0-60'	
10			(10.0- 15.0) SAND: fine, Moderate Brown (4/2), rounded, loose	10-12	0.0		Well Screen: 60-75'	10
				12-14	0.0		Well Diameter: 2"	
0	15		(15.0- 20.0) SAND: very fine, Medium Gray (N5); trace shells; saturated	14-16	0.0		20/30 Sand Backfill	15
				16-18	0.0			
				18-20	0.0			
20			(20.0- 35.0) SAND: very fine, Light-Medium Gray (N6); some shells; saturated	20-25	0.0			20
-10	25			25-30	0.0			25





Project Name			Well Number	
Ashland Brunswick Georgia			MW-371	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	427022.200 867920.710	Ground Surface Elevation 14.17
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 60-75 ft		Top of Well Casing Elevation 16.91
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 75 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/17/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 80 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/19/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
30				30-35	0.0			30
-20								
	35		(35.0- 40.0) SAND: fine-medium, Medium Gray (N5), rounded, loose; trace shell Hash	35-40	0.0			35
	40		(40.0- 45.0) SAND: medium-coarse, Medium Gray (N5), poorly sorted, well rounded; shell fragments 2-3 mm; moist	40-45	0.0			40
-30								
	45		(45.0- 50.0) CLAYEY SAND: medium, Medium-Light Gray, well sorted, rounded; wet	45-50	0.0			45
	50		(50.0- 53.0) CLAYEY SAND: fine-medium, Medium-Dark Gray (N4), poorly sorted, rounded; trace shells	50-55	0.0			50
-40			(53.0- 55.0) CLAYEY SILT: fine, Light Gray (N6), well rounded, hard; 15-20% gravel					

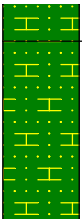
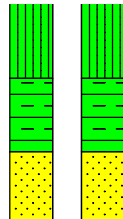
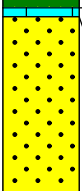
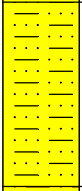
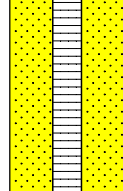
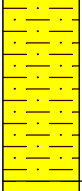
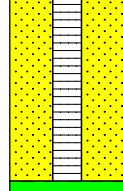




Project Name			Well Number	
Ashland Brunswick Georgia			MW-371	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	427022.200 867920.710	Ground Surface Elevation 14.17
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 60-75 ft		Top of Well Casing Elevation 16.91
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 75 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/17/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 80 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/19/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
-40								
	55		(55.0- 60.0) CLAYEY SILT: fine, Light Gray (N6), well rounded, hard; 30-40% gravel	55-60	0.0			55
	60		(60.0- 60.3) LIMESTONE: (CLAYEY)	60-65	0.0			60
			(60.3- 65.0) SAND: medium-coarse, Medium-Light Gray (N5), poorly sorted, rounded; 5-10% gravel; saturated					
-50	65		(65.0- 70.0) SANDY SILT: fine, Medium-Light Gray (N6), rounded; gravel (well sorted, well rounded)	65-70	0.0			65
	70		(70.0- 75.0) SILT: fine, Medium-Dark Gray (N4), rounded, hard; wet	70-75	0.0			70
-60	75		(75.0- 80.0) SANDY CLAY: medium, Medium Gray (N5), well sorted, rounded, hard; dry	75-80	0.0		Borehole backfilled with sand and bentonite seal.  Boring terminated at 80 feet below ground surface.	75
	80							80





Project Name			Well Number	
Ashland Brunswick Georgia			MW-37D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	427022.580 867917.230	Ground Surface Elevation 14.36
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 100-110 ft		Top of Well Casing Elevation 16.81
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 110 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/19/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/23/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

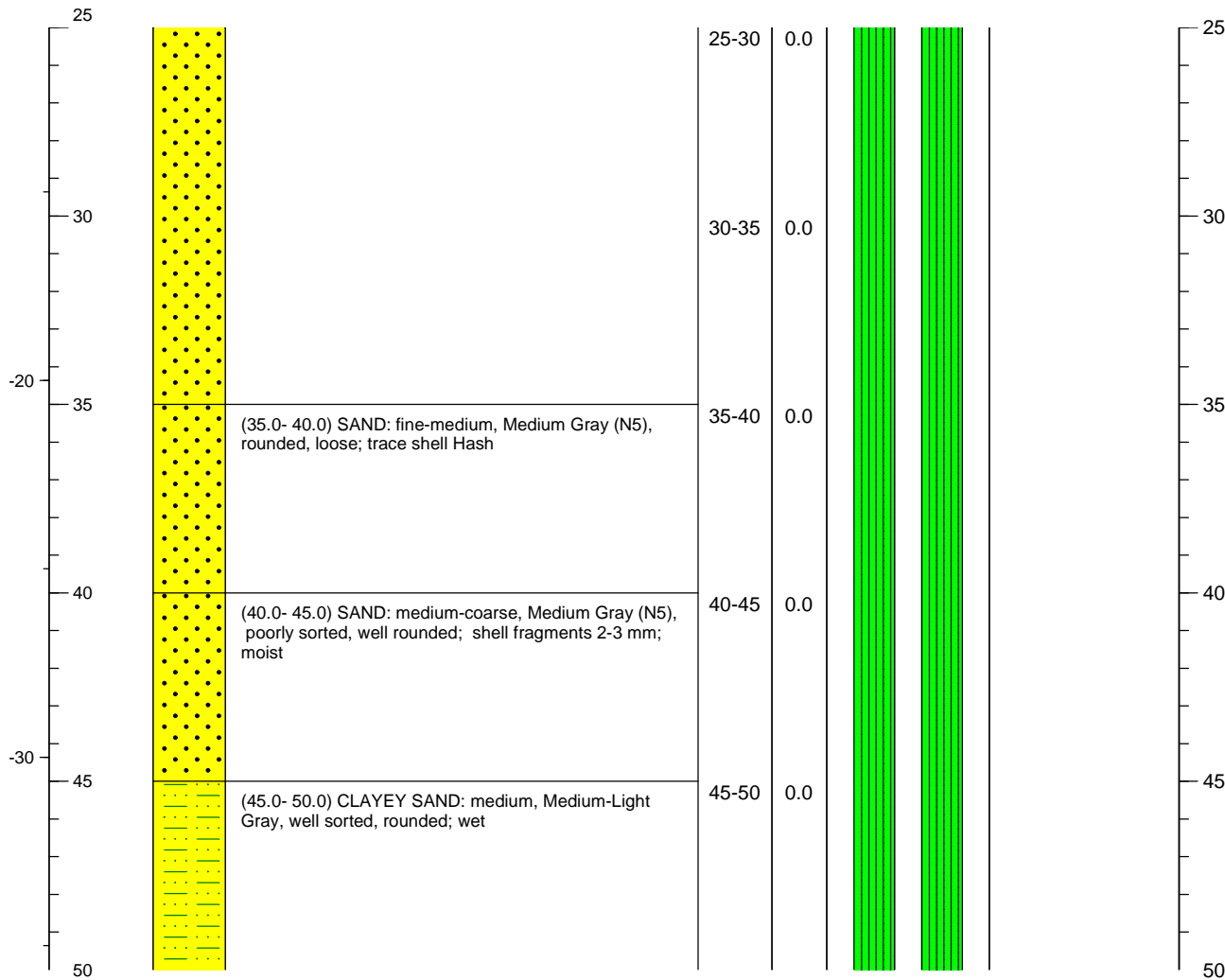
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0				0-2	0.0		Protective Cover: Stick Up/Well Pad: 3'x3'	0
				2-4	0.0		Bentonite/Cement: 0-96'	
10	5			4-6	0.0		Bentonite: 96-98'	5
				6-8	0.0		#2 Silica Sand: 98-110'	
				8-10	0.0		Well Casing: 0-100'	
	10			10-12	0.0		Well Screen: 100-110'	10
				12-14	0.0		Well Diameter: 2"	
				14-16	0.0		Bentonite: 110-115'	
0	15			16-18	0.0		20/30 Sand Backfill	15
				18-20	0.0			
	20			20-25	0.0			20
-10	25			25-30	0.0			25





Project Name Ashland Brunswick Georgia			Monitoring Well Construction Log		Well Number MW-37D			
Address 2801 Cook Street  Brunswick Georgia		Drilling Contractor/License Groundwater Protection	Northing Easting		427022.580 867917.230		Ground Surface Elevation 14.36	
		Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 100-110 ft				Top of Well Casing Elevation 16.81	
GA EPD Number GAD004065520		Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch				Total Well Depth 110 ft	
Logged By R. McLain Approved By R. Cate		Date Drilling Started 3/19/10	Well Casing Diameter and Type 2 in. SCH 40 PVC				Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1		Date Drilling Completed 3/23/10	Sampling Method Continuous Cores				Headspace Monitoring Device PID	

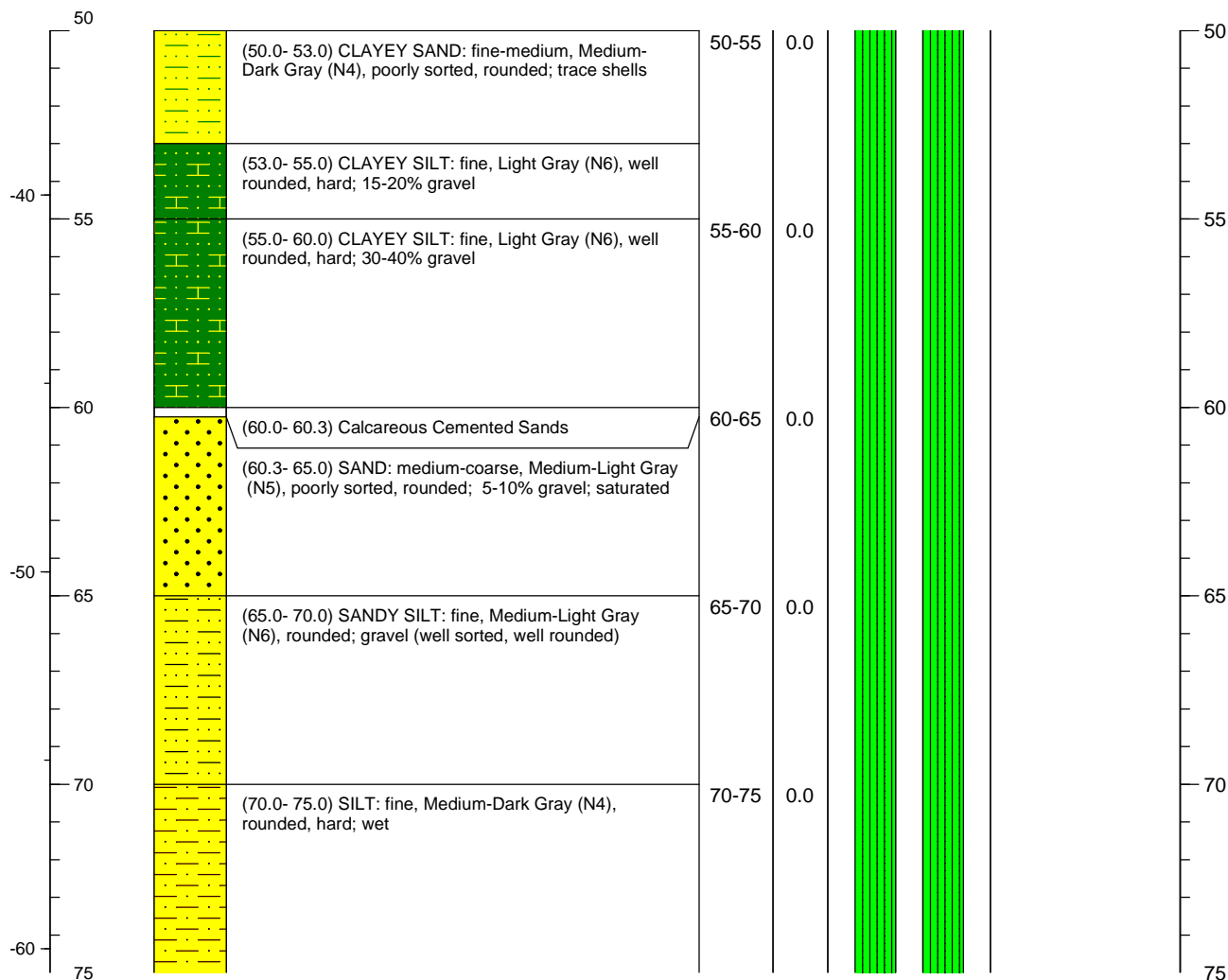
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Depth





Project Name			Well Number	
Ashland Brunswick Georgia			MW-37D	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	427022.580 867917.230	Ground Surface Elevation 14.36
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 100-110 ft		Top of Well Casing Elevation 16.81
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 110 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/19/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/23/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

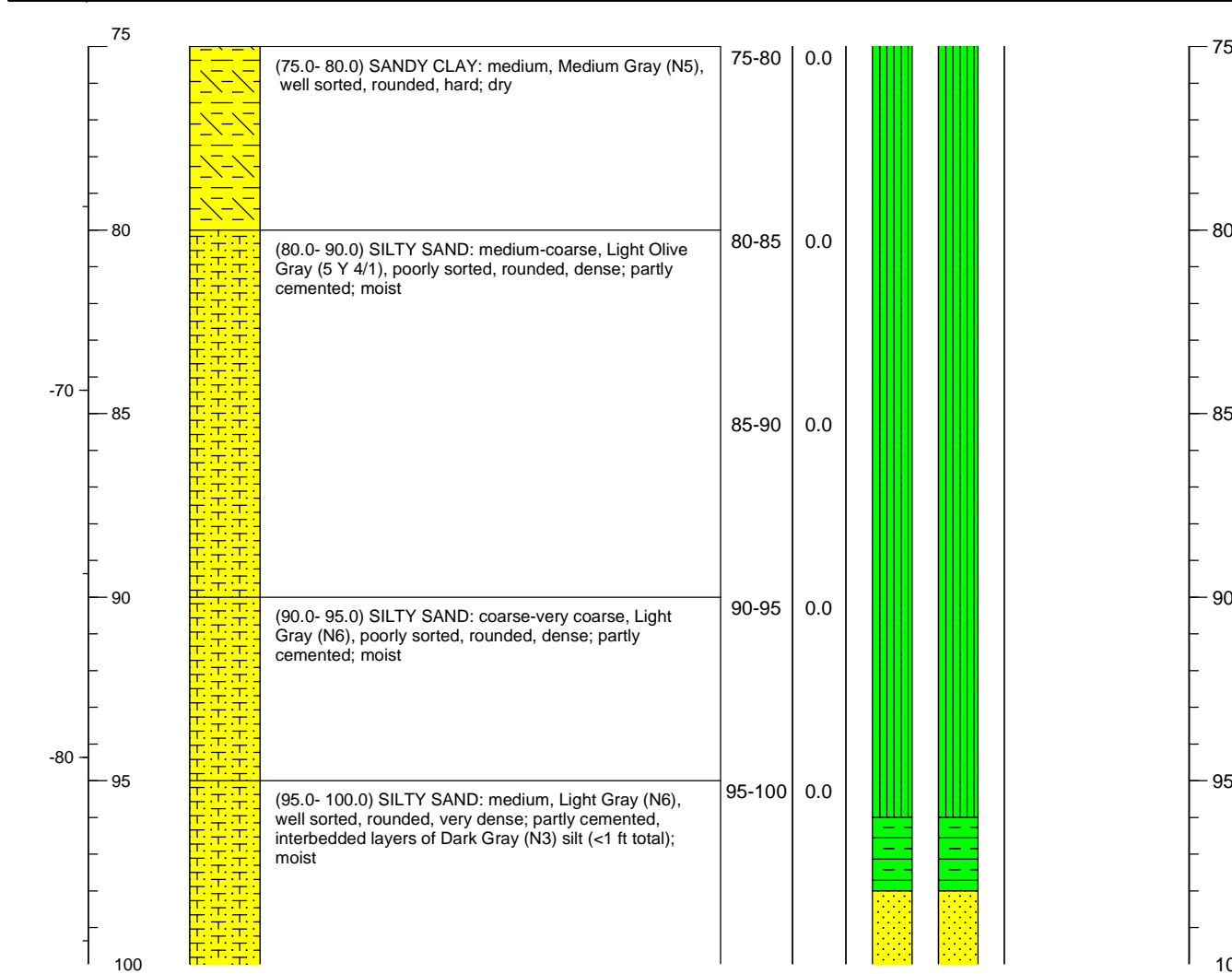
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Well Number	
Ashland Brunswick Georgia			MW-37D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	427022.580 867917.230	Ground Surface Elevation 14.36
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 100-110 ft		Top of Well Casing Elevation 16.81
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 110 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/19/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/23/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

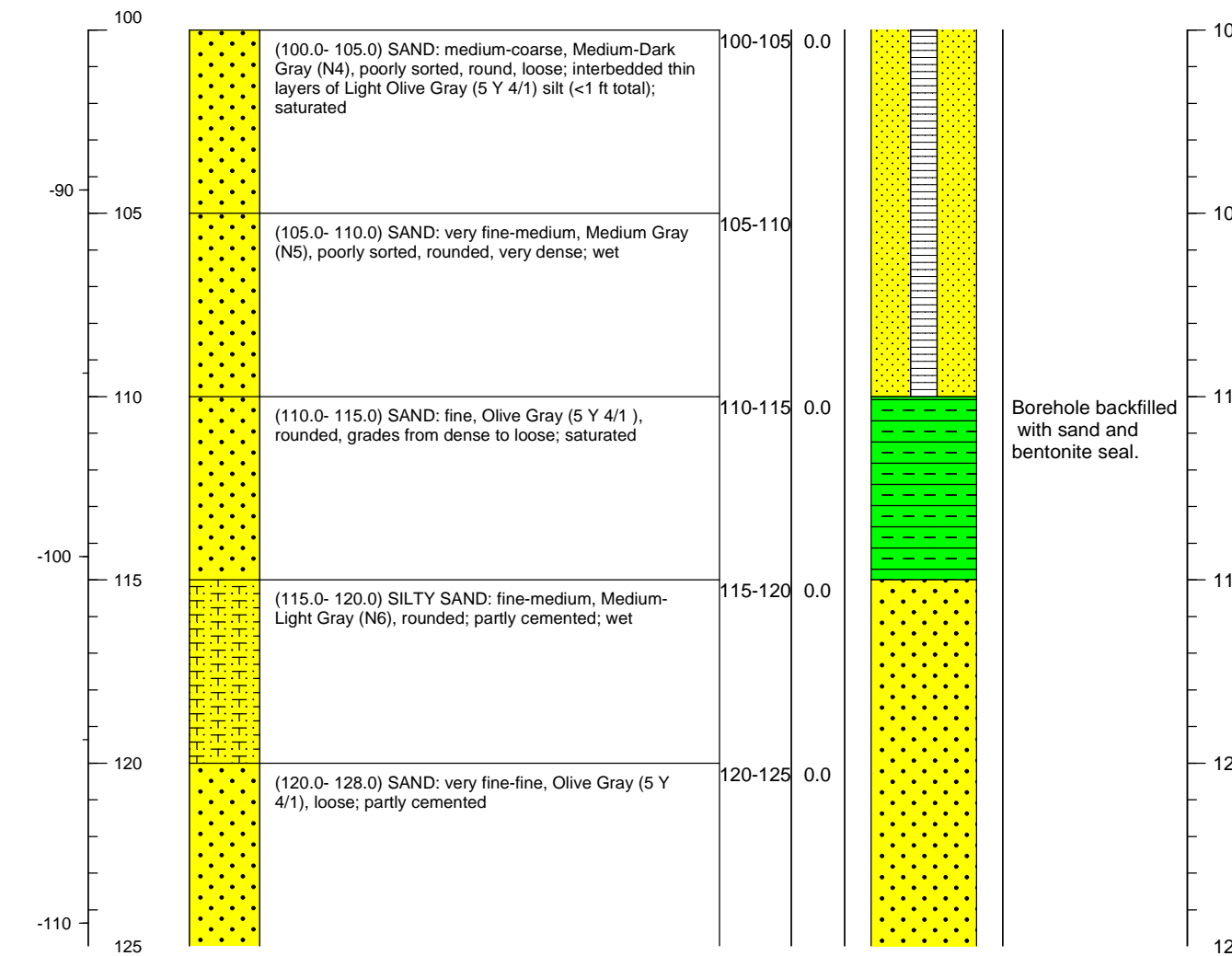
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name Ashland Brunswick Georgia			Monitoring Well Construction Log		Well Number MW-37D			
Address 2801 Cook Street  Brunswick Georgia		Drilling Contractor/License Groundwater Protection	Northing Easting		427022.580 867917.230		Ground Surface Elevation 14.36	
		Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 100-110 ft				Top of Well Casing Elevation 16.81	
GA EPD Number GAD004065520		Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch				Total Well Depth 110 ft	
Logged By R. McLain Approved By R. Cate		Date Drilling Started 3/19/10	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 150 ft		Boring Dia. 6 in.	
Driller Name B. Niles Project Number WBS30012B1		Date Drilling Completed 3/23/10	Sampling Method Continuous Cores				Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Well Number	
Ashland Brunswick Georgia			MW-37D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	427022.580 867917.230	Ground Surface Elevation 14.36
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 100-110 ft		Top of Well Casing Elevation 16.81
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 110 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/19/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/23/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details
125				125-130	0.0		
			(128.0- 136.0) SAND: very fine-fine, Olive Gray (5 Y 4/1), very dense; partly cemented; moist	130-135	0.0		
-120				135-140	0.0		
			(136.0- 140.0) SAND: fine-medium, Olive Gray (5 Y 4/1), rounded; 10% coarse sand; wet				
-140				140-145	0.0		
			(140.0- 145.0) SILTY SAND: medium-coarse, Light Olive Gray (5Y 4/1), poorly sorted, rounded, loose; saturated				
-130				145-150	0.0		
			(145.0- 150.0) SAND: fine-medium, Light Olive Gray (5 Y 4/1), rounded; 10% silt				
							Boring terminated at 150 feet below ground surface.
150							





Project Name Ashland Brunswick Georgia			Monitoring Well Construction Log		Well Number MW-38S	
Address 2801 Cook Street Brunswick Georgia		Drilling Contractor/License Groundwater Protection	Northing Easting	424935.395 873054.807	Ground Surface Elevation 5.81	
		Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 10-25 ft		Top of Well Casing Elevation 8.63	
GA EPD Number GAD004065520		Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 25 ft	
Logged By R. McLain Approved By R. Cate		Date Drilling Started 4/5/10	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 25 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1		Date Drilling Completed 4/6/10	Sampling Method Continuous Cores		Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 10.0) FILL: saturated	0-5	0.0		Protective Cover: Stick Up/Well Pad: 3'x3'	0
			0 - 5 Post-hole				Bentonite/Cement: 0-6'	
5			(10.0- 18.0) SILTY CLAY: Dark Gray (N3), soft; saturated	5-10	0.0		Bentonite: 6-8'	5
10							#2 Silica Sand: 8-25'	
			(18.0- 25.0) SAND: fine-medium, Medium Gray (N4), rounded, loose; saturated	10-15	0.0		Well Casing: 0-10'	10
							Well Screen: 10-25'	
15			(18.0- 25.0) SAND: fine-medium, Medium Gray (N4), rounded, loose; saturated	15-20	0.0		Well Diameter: 2"	15
20			(18.0- 25.0) SAND: fine-medium, Medium Gray (N4), rounded, loose; saturated	20-25	0.0			20
25							Boring terminated at 25 feet below ground surface.	25





Project Name			Well Number	
Ashland Brunswick Georgia			MW-38I	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424936.700 873051.899	Ground Surface Elevation 5.78
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 40-55 ft		Top of Well Casing Elevation 8.72
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 55 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/5/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 55 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/6/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0				0-5	0.0		Stick Up/Protective Cover: Well Pad: 3'x3' Bentonite/Cement: 0-36'	0
			0 - 5 Post-hole	5-10	0.0		Bentonite: 36-38'	5
-5				10-15	0.0		#2 Silica Sand: 38-55'	10
			(10.0- 18.0) SILTY CLAY: Dark Gray (N3), soft; saturated	15-20	0.0		Well Casing: 0-40'	15
-10				20-25	0.0		Well Screen: 40-55'	20
			(18.0- 30.0) SAND: fine-medium, Medium Gray (N4), rounded, loose; saturated	25-30	0.0		Well Diameter: 2"	25
-15								
-20								
-25								





Project Name			Well Number	
Ashland Brunswick Georgia			MW-38I	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424936.700 873051.899	Ground Surface Elevation 5.78
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 40-55 ft		Top of Well Casing Elevation 8.72
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 55 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/5/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 55 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/6/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
30								30
			(30.0- 31.0) SILTY CLAY: Dark Gray (N3), soft	30-35	0.0			
			(31.0- 36.0) SAND: medium-coarse, Medium Gray (N4), poorly sorted, rounded, loose; 10-20% shells; saturated					
35				35-40	0.0			35
			(36.0- 39.0) SANDY CLAY: fine-medium, Medium Gray (N4), rounded, soft; saturated					
40			(39.0- 42.0) SAND: coarse, Medium Gray (N4), well sorted, rounded, loose; saturated	40-45	0.0			40
			(42.0- 45.0) SILTY SAND: fine, Medium Gray (N4), rounded, very dense; wet					
45				45-50	0.0			45
			(45.0- 55.0) SAND: medium, Medium Gray (N4), well sorted, rounded, loose; saturated					
50				50-55	0.0			50
55							Boring terminated at 55 feet below ground surface.	55





Project Name			Well Number	
Ashland Brunswick Georgia			MW-38D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424939.029 873047.577	Ground Surface Elevation 5.83
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 75-85 ft		Top of Well Casing Elevation 8.76
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 85 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/5/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/6/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY


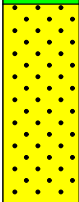
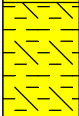
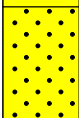
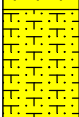
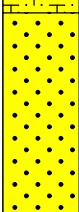
### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 10.0) FILL: saturated	0-5	0.0		Protective Cover: Stick Up/Well Pad: 3'x3'	0
			0 - 5 Post-hole				Bentonite/Cement: 0-71'	
	5			5-10	0.0		Bentonite: 71-73'	5
	10		(10.0- 18.0) SILTY CLAY: Dark Gray (N3), soft; saturated	10-15	0.0		#2 Silica Sand: 73-85'	10
	15			15-20	0.0		Well Casing: 0-75'	15
	20		(18.0- 30.0) SAND: fine-medium, Medium Gray (N4), rounded, loose; saturated	20-25	0.0		Well Screen: 75-85'	20
	25			25-30	0.0		Well Diameter: 2"	25
							Bentonite: 85-90'	
							20/30 Sand Backfill	





Project Name			Well Number	
Ashland Brunswick Georgia			MW-38D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting 424939.029 873047.577	Ground Surface Elevation 5.83	
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 75-85 ft	Top of Well Casing Elevation 8.76	
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 85 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/5/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/6/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

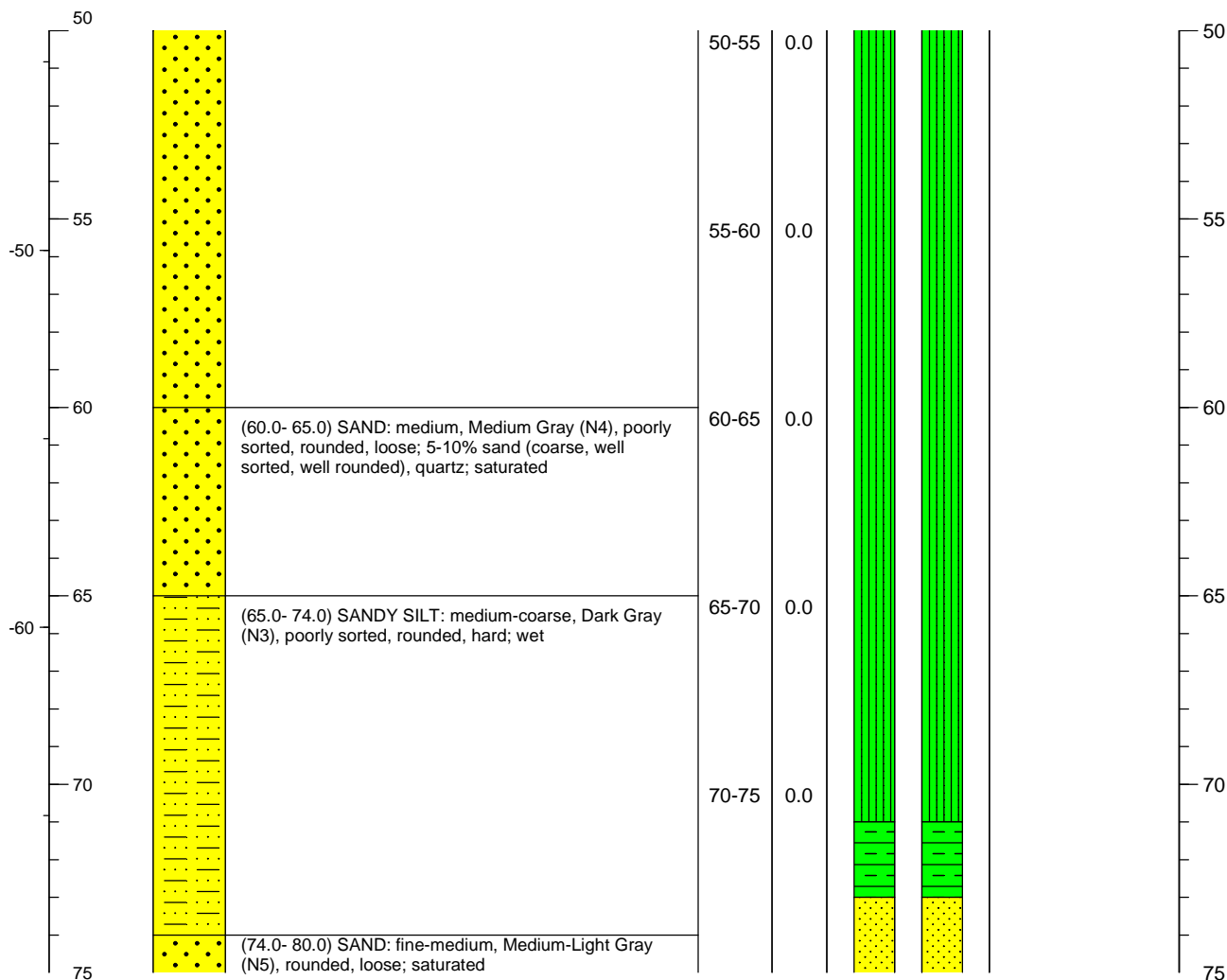
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Depth
25				25-30	0.0		25
-20							
	30		(30.0- 31.0) SILTY CLAY: Dark Gray (N3), soft	30-35	0.0		30
			(31.0- 36.0) SAND: medium-coarse, Medium Gray (N4), poorly sorted, rounded, loose; 10-20% shells; saturated				
	35			35-40	0.0		35
-30			(36.0- 39.0) SANDY CLAY: fine-medium, Medium Gray (N4), rounded, soft; saturated				
	40		(39.0- 42.0) SAND: coarse, Medium Gray (N4), well sorted, rounded, loose; saturated	40-45	0.0		40
			(42.0- 45.0) SILTY SAND: fine, Medium Gray (N4), rounded, very dense; wet				
-45				45-50	0.0		45
	45		(45.0- 60.0) SAND: medium, Medium Gray (N4), well sorted, rounded, loose; saturated				
-50							50





Project Name			Well Number	
Ashland Brunswick Georgia			MW-38D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424939.029 873047.577	Ground Surface Elevation 5.83
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 75-85 ft		Top of Well Casing Elevation 8.76
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 85 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/5/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/6/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Depth





Project Name			Well Number	
Ashland Brunswick Georgia			MW-38D	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424939.029 873047.577	Ground Surface Elevation  5.83
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 75-85 ft		Top of Well Casing Elevation  8.76
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 85 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/5/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/6/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

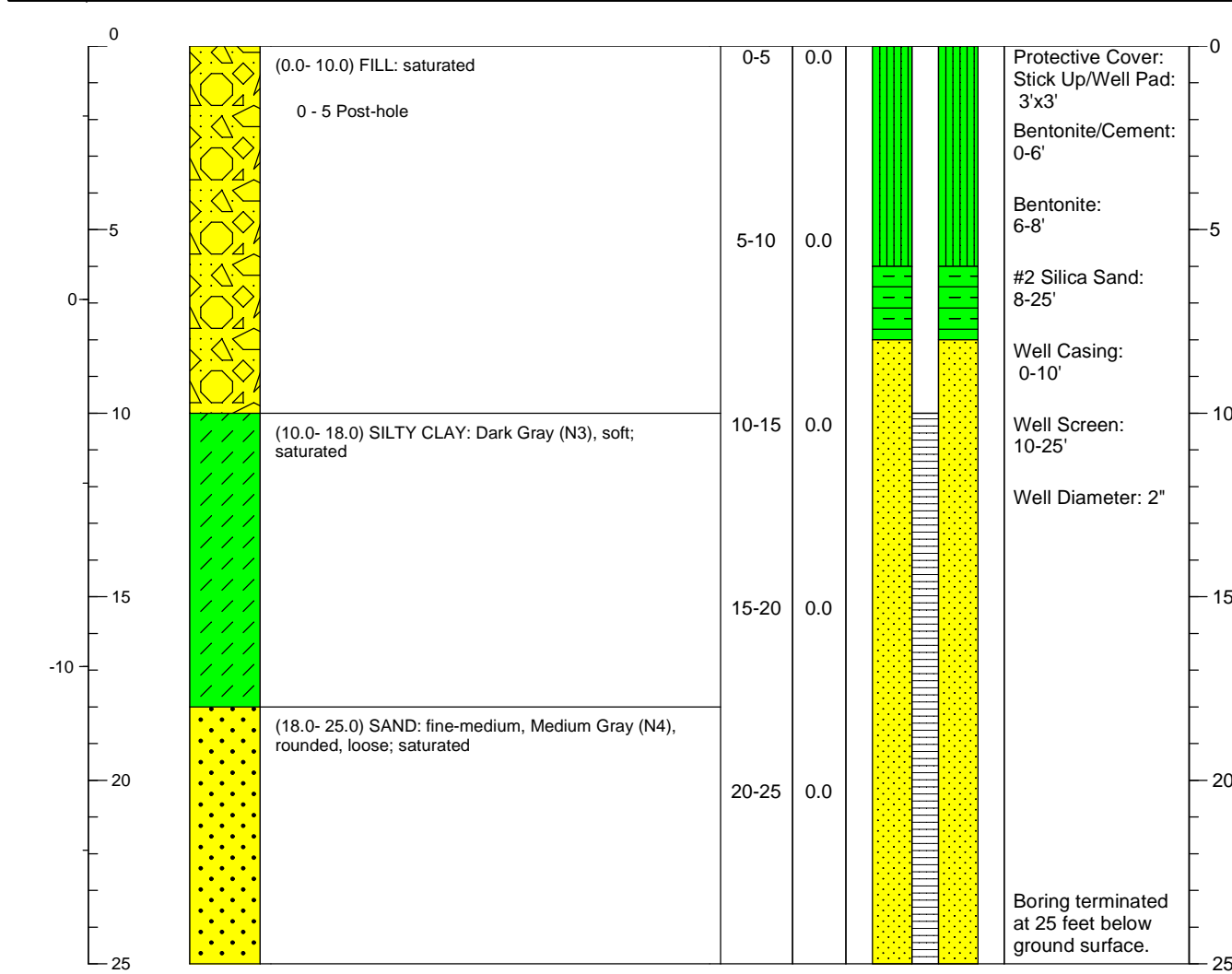
## SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
75								75
-70				75-80	0.0			
				80-85	0.0			80
-80				85-90	0.0			85
				90-95	0.0			90
-90				95-100	0.0			95
100								100



Project Name			Well Number	
Ashland Brunswick Georgia			MW-39S	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424321.659 873717.417	Ground Surface Elevation 6.90
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 10-25 ft		Top of Well Casing Elevation 9.36
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 25 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/1/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 25 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/1/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details









Project Name			Well Number	
Ashland Brunswick Georgia			MW-39I	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424316.007 873719.349	Ground Surface Elevation 6.94
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 40-55 ft		Top of Well Casing Elevation 9.60
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 55 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/1/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 55 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/1/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
30								30
			(30.0- 31.0) SILTY CLAY: Dark Gray (N3)	30-35	0.0			
			(31.0- 36.0) SAND: medium-coarse, Medium Gray (N4), poorly sorted, rounded, loose; 10-20% shells; saturated					
				35-40	0.0			35
-30			(36.0- 39.0) SANDY CLAY: fine-medium, Medium Gray (N4), rounded, soft; saturated					
				40-45	0.0			40
			(39.0- 42.0) SAND: coarse, Medium Gray (N4), well sorted, rounded, loose; saturated					
			(42.0- 45.0) SILTY SAND: fine, Medium Gray (N4), rounded, very dense; wet					
-40				45-50	0.0			45
			(45.0- 55.0) SAND: medium, Medium Gray (N4), well sorted, rounded, loose; saturated					
				50-55	0.0			50
55							Boring terminated at 55 feet below ground surface.	55

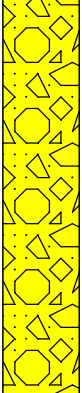
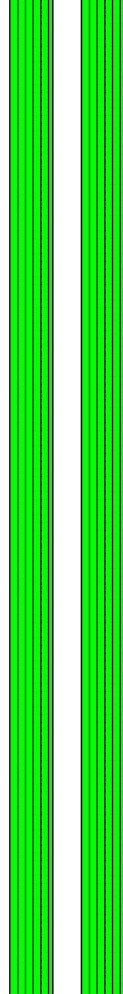
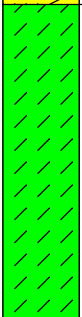
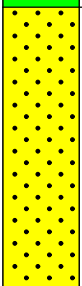




Project Name			Well Number	
Ashland Brunswick Georgia			MW-39D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424309.667 873721.548	Ground Surface Elevation 6.91
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 75-85 ft		Top of Well Casing Elevation 9.83
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 85 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/31/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/1/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

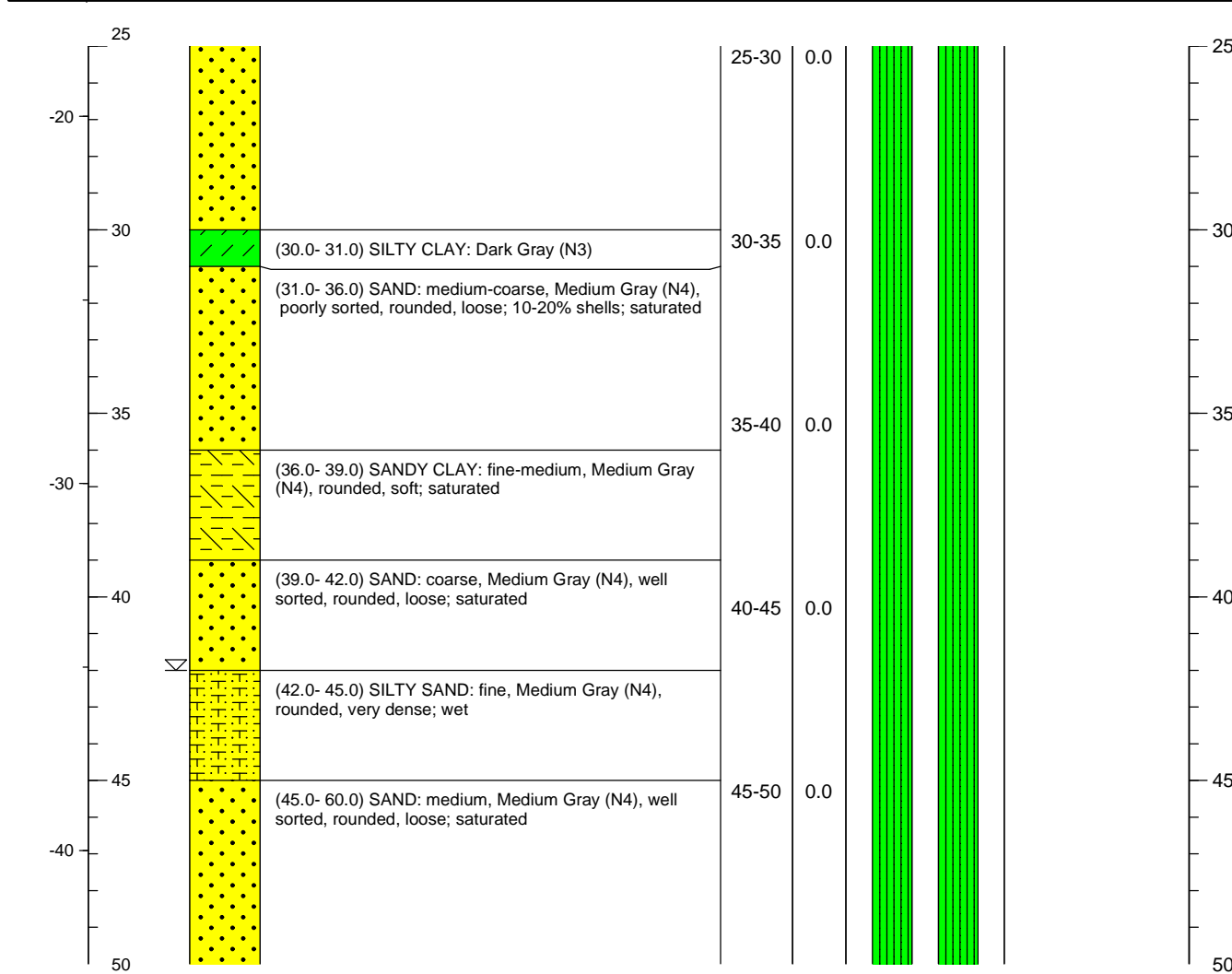
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 10.0) FILL: saturated  0 - 5 Post-hole	0-5	0.0		Protective Cover: Stick Up/Well Pad: 3'x3' Bentonite/Cement: 0-71'	0
				5-10	0.0		Bentonite: 71-73' #2 Silica Sand: 73-85'	5
			(10.0- 18.0) SILTY CLAY: Dark Gray (N3), soft; saturated	10-15	0.0		Well Casing: 0-75' Well Screen: 75-85'	10
				15-20	0.0		Well Diameter: 2"  Bentonite: 85-90'	15
			(18.0- 30.0) SAND: fine-medium, Medium Gray (N4), rounded, loose; saturated	20-25	0.0		20/30 Sand Backfill	20
				25-30	0.0			25





Project Name			Well Number	
Ashland Brunswick Georgia			MW-39D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424309.667 873721.548	Ground Surface Elevation 6.91
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 75-85 ft		Top of Well Casing Elevation 9.83
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 85 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/31/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/1/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

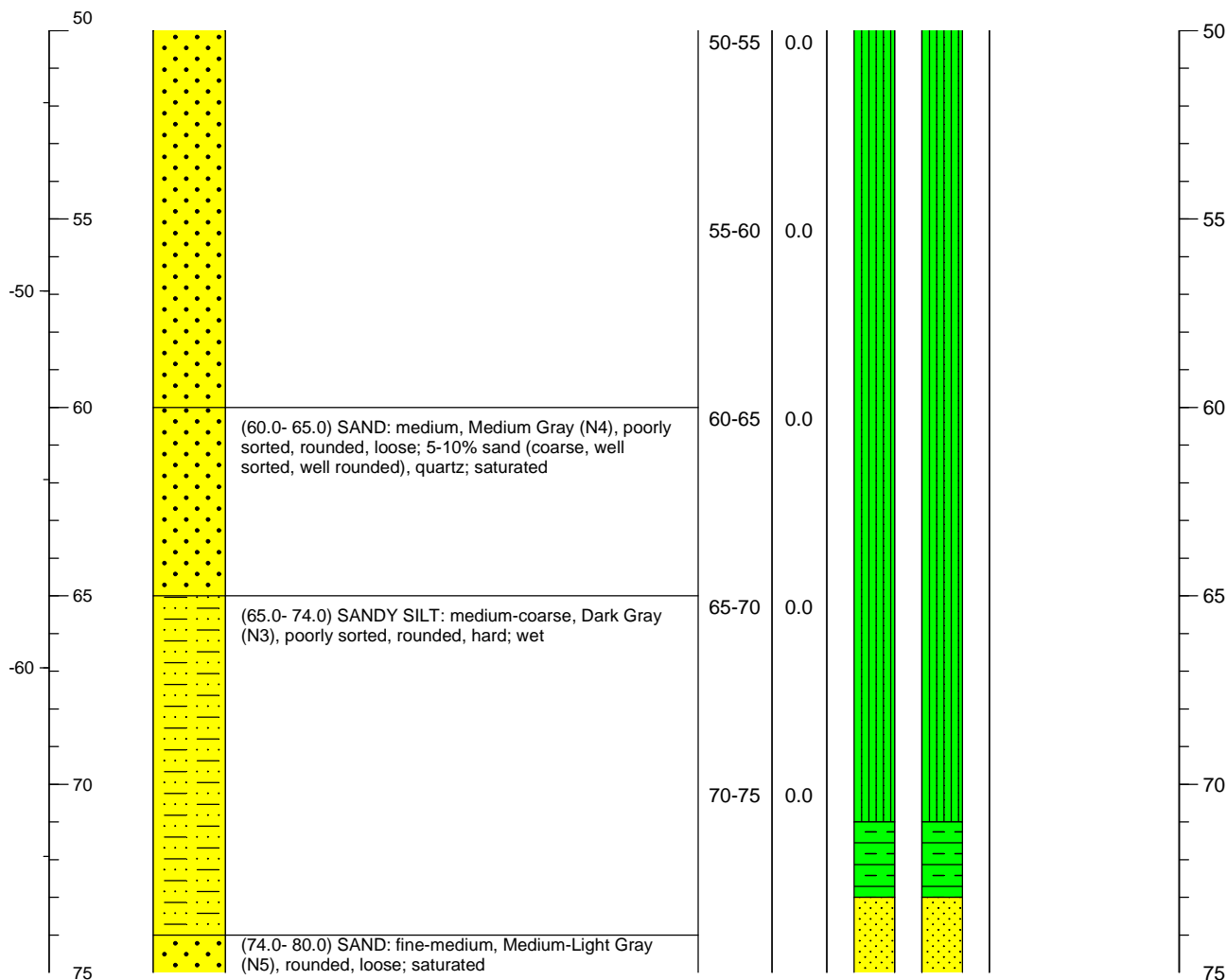
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Well Number	
Ashland Brunswick Georgia			MW-39D	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424309.667 873721.548	Ground Surface Elevation  6.91
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 75-85 ft		Top of Well Casing Elevation  9.83
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 85 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/31/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/1/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

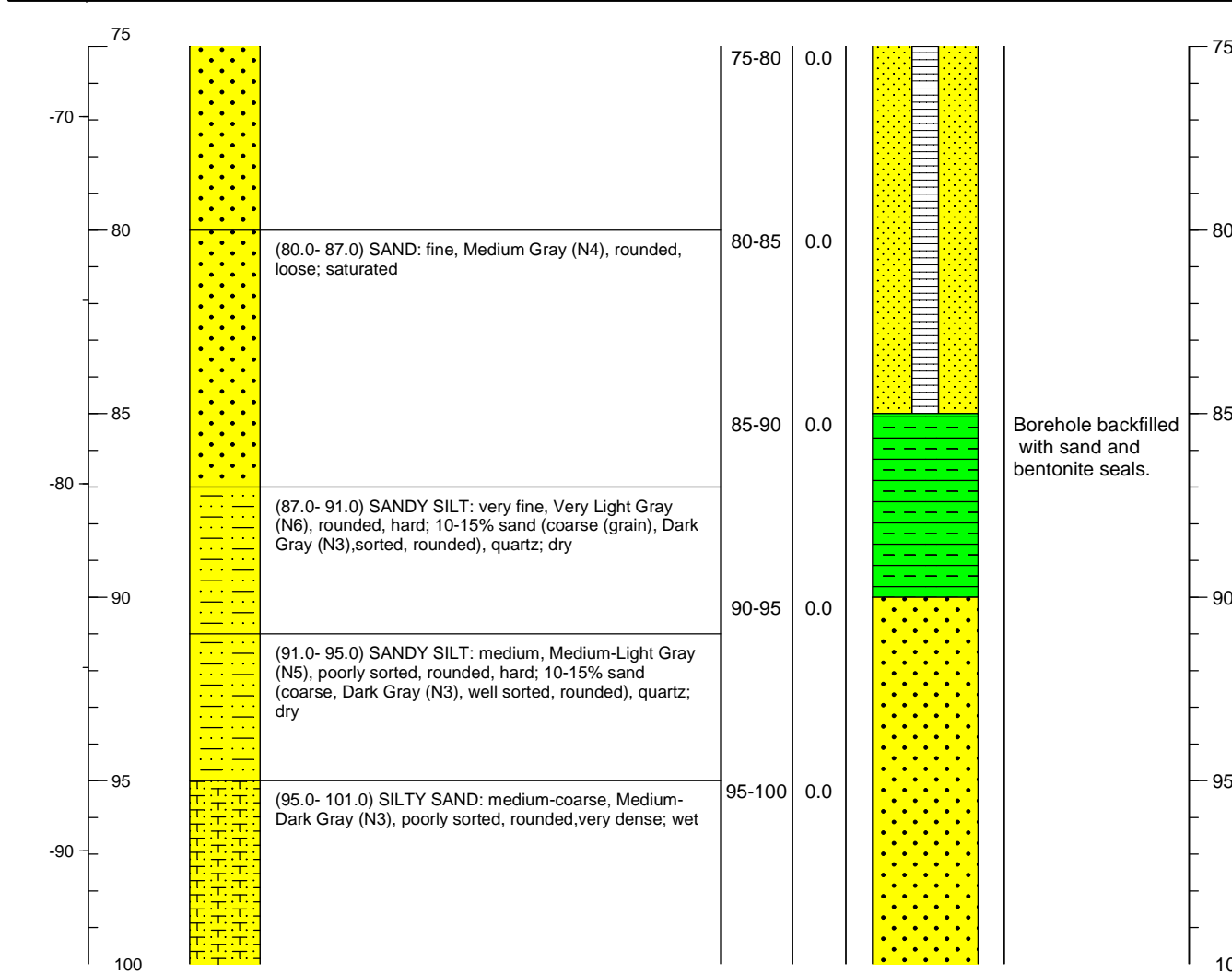
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Depth





Project Name			Well Number	
Ashland Brunswick Georgia			MW-39D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424309.667 873721.548	Ground Surface Elevation 6.91
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 75-85 ft		Top of Well Casing Elevation 9.83
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 85 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/31/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/1/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

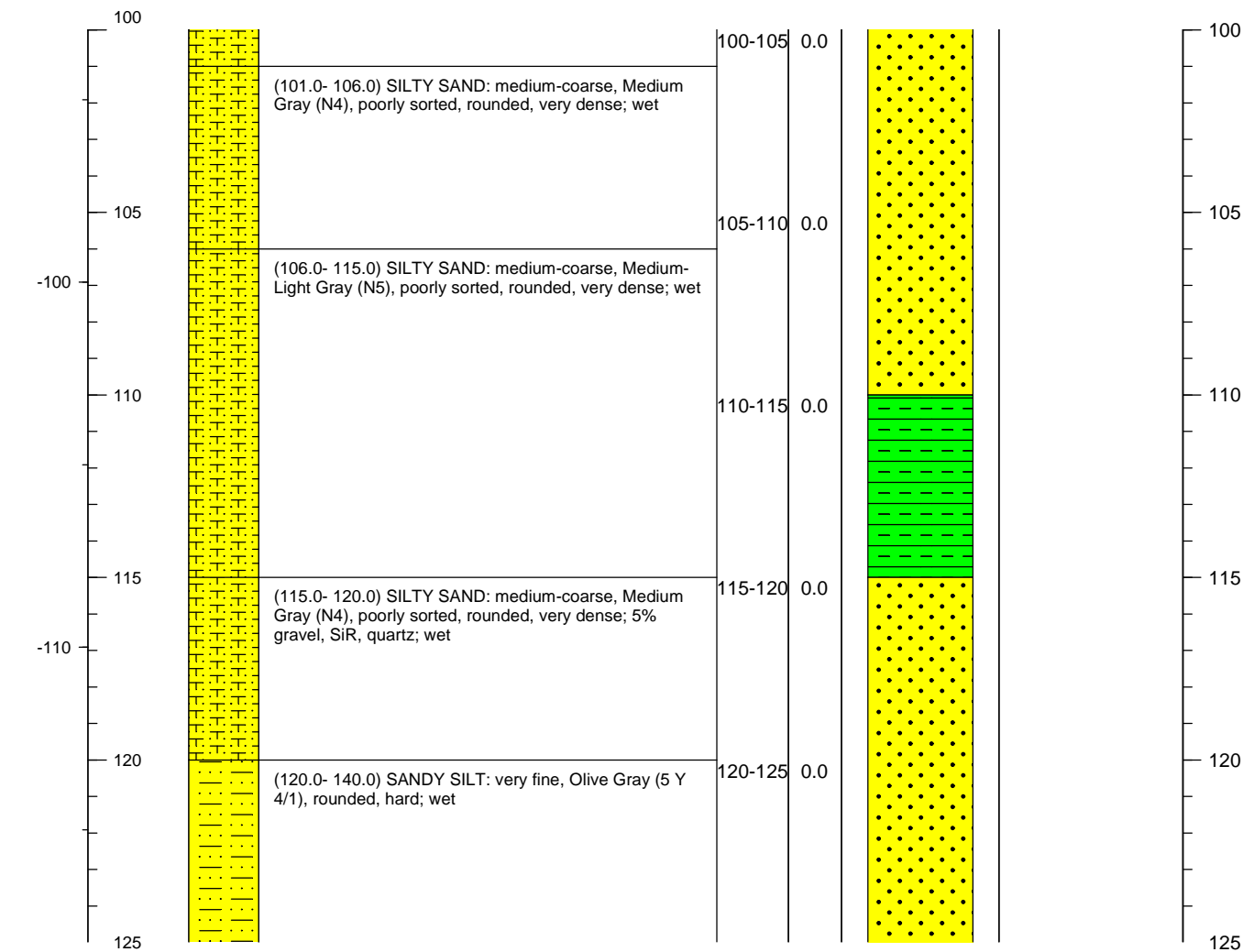
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Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





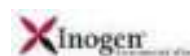
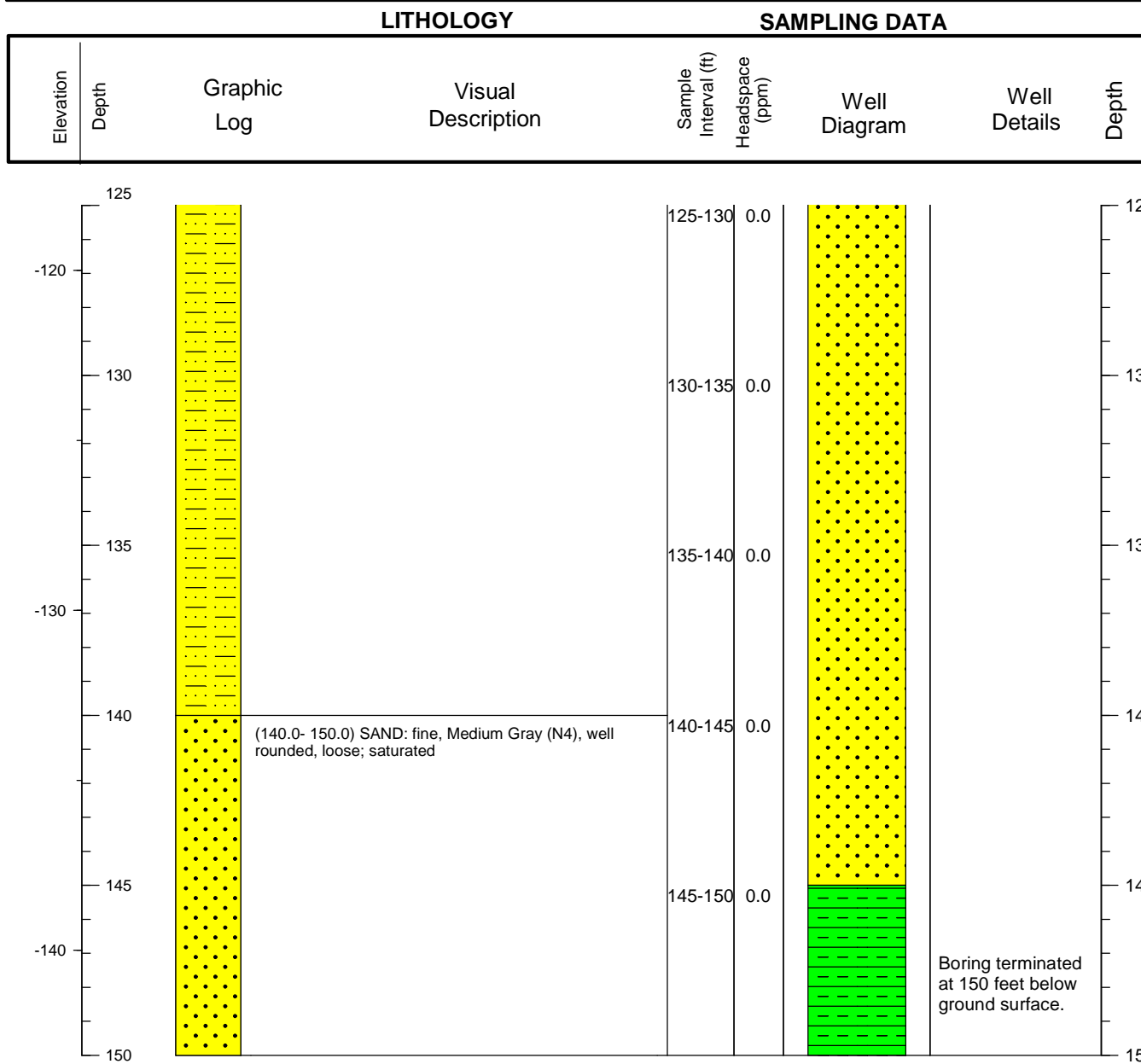
Project Name			Monitoring Well Construction Log		Well Number	
Ashland Brunswick Georgia					MW-39D	
Address	Drilling Contractor/License		Northing	424309.667	Ground Surface Elevation	
2801 Cook Street	Groundwater Protection		Easting	873721.548	6.91	
Brunswick	Georgia	Drilling Equipment	Well Screen Interval		Top of Well Casing Elevation	
		Rousie SR1 w/Detric Head	75-85 ft		9.83	
GA EPD Number		Drilling Method	Well Screen Slot Size		Total Well Depth	
GAD004065520		Sonic Drilling	0.01 inch		85 ft	
Logged By R. McLain		Date Drilling Started	Well Casing Diameter and Type		Boring Depth	Boring Dia.
Approved By R. Cate		3/31/10	2 in. SCH 40 PVC		150 ft	6 in.
Driller Name B. Niles		Date Drilling Completed	Sampling Method		Headspace Monitoring Device	
Project Number WBS30012B1		4/1/10	Continuous Cores		PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Depth





Project Name			Well Number	
Ashland Brunswick Georgia			MW-39D	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424309.667 873721.548	Ground Surface Elevation  6.91
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 75-85 ft		Top of Well Casing Elevation  9.83
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 85 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/31/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/1/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	





Project Name			Well Number	
Ashland Brunswick Georgia			MW-40S	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424370.069 869355.249	Ground Surface Elevation 11.69
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 10-25 ft		Top of Well Casing Elevation 14.19
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 25 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 25 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/29/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0								0
	10							
	5							5
	10							10
0								
	15							15
	20							20
-10								
	25							25





Project Name			Well Number	
Ashland Brunswick Georgia			MW-40I	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424365.436 869354.577	Ground Surface Elevation 11.82
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 40-55 ft		Top of Well Casing Elevation 14.18
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 55 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 55 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/29/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

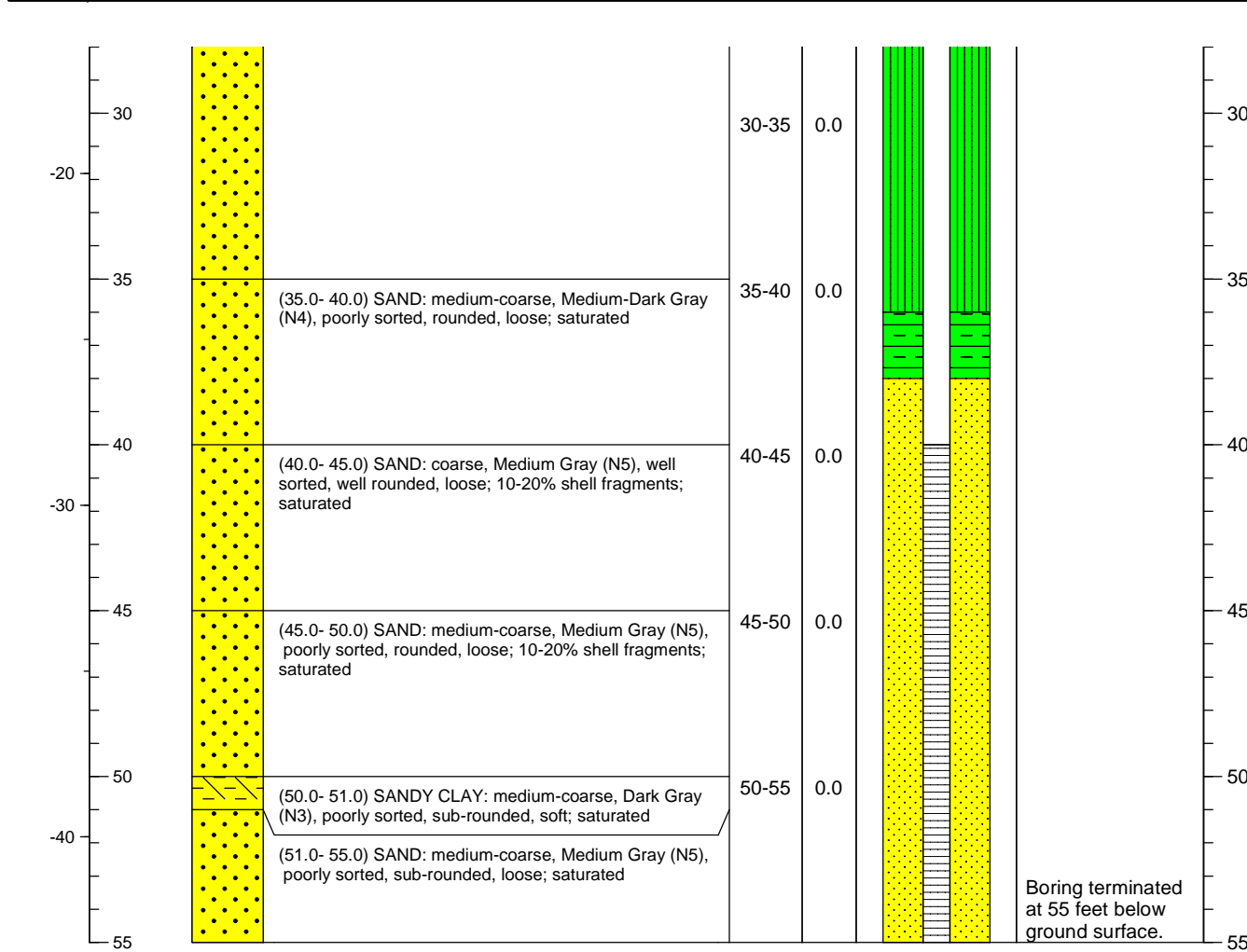
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0								0
	10		(0.0- 7.0) SAND: very fine-fine, Pale Brown (5 YR 2/2), well rounded, loose; wet	0-5	0.0		Protective Cover: Stick Up/Well Pad: 3'x3'	
	5		0 - 5 Post-hole				Bentonite/Cement: 0-36'	
				5-10	68.5		Bentonite: 36-38'	5
			(7.0- 8.0) SAND: very fine-fine, Dusty Brown (5 YR 2/2), well rounded, loose; wet				#2 Silica Sand: 38-55'	
	10		(8.0- 17.0) SAND: very fine-fine, Light Brown (5/6), well rounded, loose; wet	10-15	9.9		Well Casing: 0-40'	10
	0						Well Screen: 40-55'	
	15			15-20	5.5		Well Diameter: 2"	15
			(17.0- 21.0) SAND: very fine-fine, Moderate Brown (3/4), well rounded, loose; wet					
	20			20-25	8.9			20
	-10		(21.0- 27.0) SILTY SAND: very fine, Dark Yellow Brown (4/2), well rounded					
	25			25-30	0.0			25
			(27.0- 35.0) SAND: medium, Medium-Dark Gray (N4), well sorted, well rounded, loose; saturated					





Project Name			Well Number	
Ashland Brunswick Georgia			MW-40I	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424365.436 869354.577	Ground Surface Elevation 11.82
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 40-55 ft		Top of Well Casing Elevation 14.18
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 55 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 55 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/29/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Well Number	
Ashland Brunswick Georgia			MW-40D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424362.733 869354.345	Ground Surface Elevation 11.83
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 100-110 ft		Top of Well Casing Elevation 14.27
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 110 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/24/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/26/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

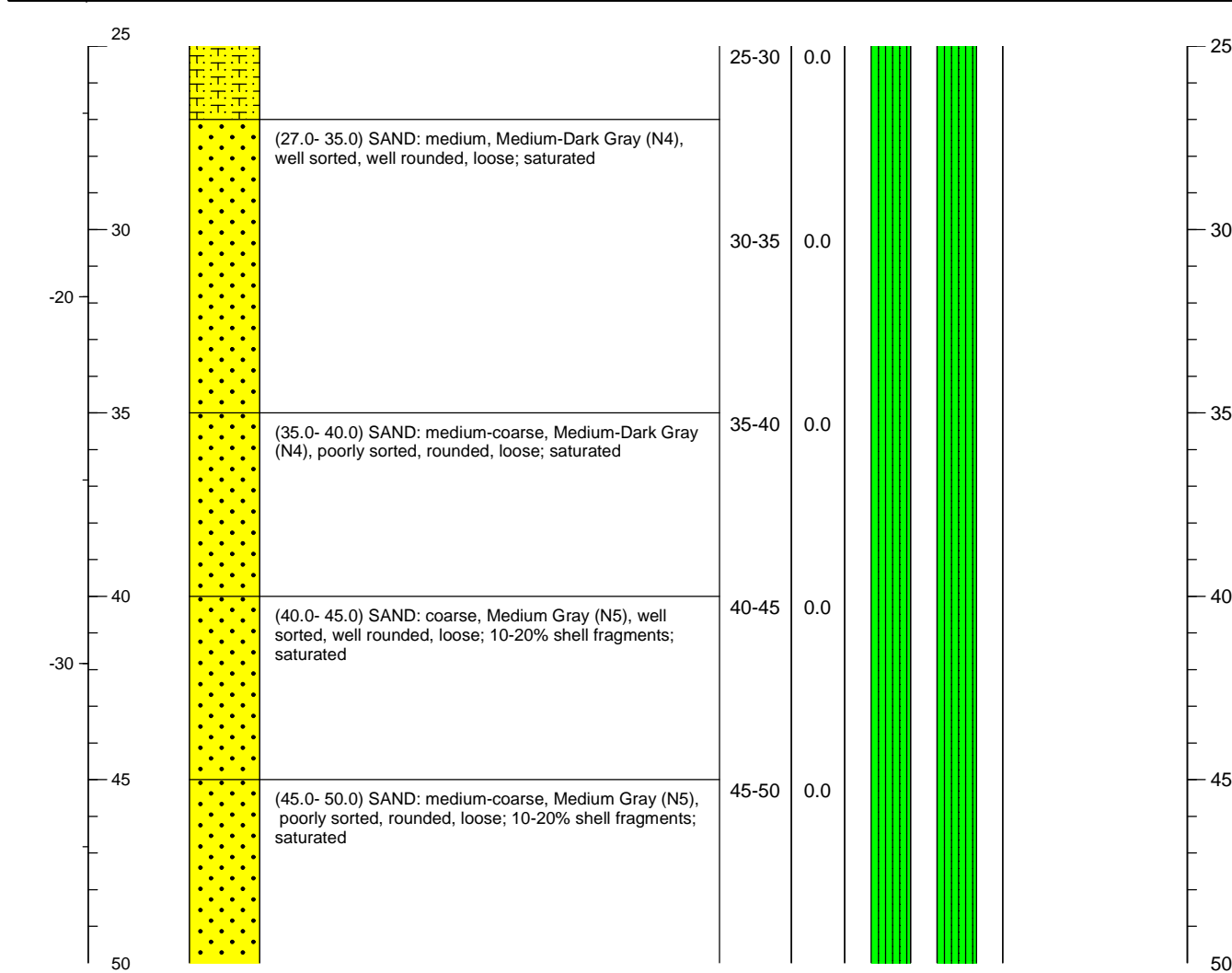
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0				0-5	0.0		Protective Cover: Stick Up/Well Pad: 3'x3'	0
10			0 - 5 Post-hole				Bentonite/Cement: 0-96'	
5				5-10	68.5		Bentonite: 96-98'	5
			(7.0- 8.0) SAND: very fine-fine, Dusty Brown (5 YR 2/2), well rounded, loose; wet				#2 Silica Sand: 98-110'	
			(8.0- 17.0) SAND: very fine-fine, Light Brown (5/6), well rounded, loose; wet	10-15	9.9		Well Casing: 0-100'	10
0							Well Screen: 100-110'	
10							Well Diameter: 2"	
15				15-20	5.5		Bentonite: 110-115'	15
			(17.0- 21.0) SAND: very fine-fine, Moderate Brown (3/4), well rounded, loose; wet				20/30 Sand Backfill	
20				20-25	8.9			20
-10			(21.0- 27.0) SILTY SAND: very fine, Dark Yellow Brown (4/2), well rounded					
25				25-30	0.0			25





Project Name			Well Number	
Ashland Brunswick Georgia			MW-40D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424362.733 869354.345	Ground Surface Elevation 11.83
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 100-110 ft		Top of Well Casing Elevation 14.27
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 110 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/24/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/26/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Well Number	
Ashland Brunswick Georgia			MW-40D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424362.733 869354.345	Ground Surface Elevation 11.83
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 100-110 ft		Top of Well Casing Elevation 14.27
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 110 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/24/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/26/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

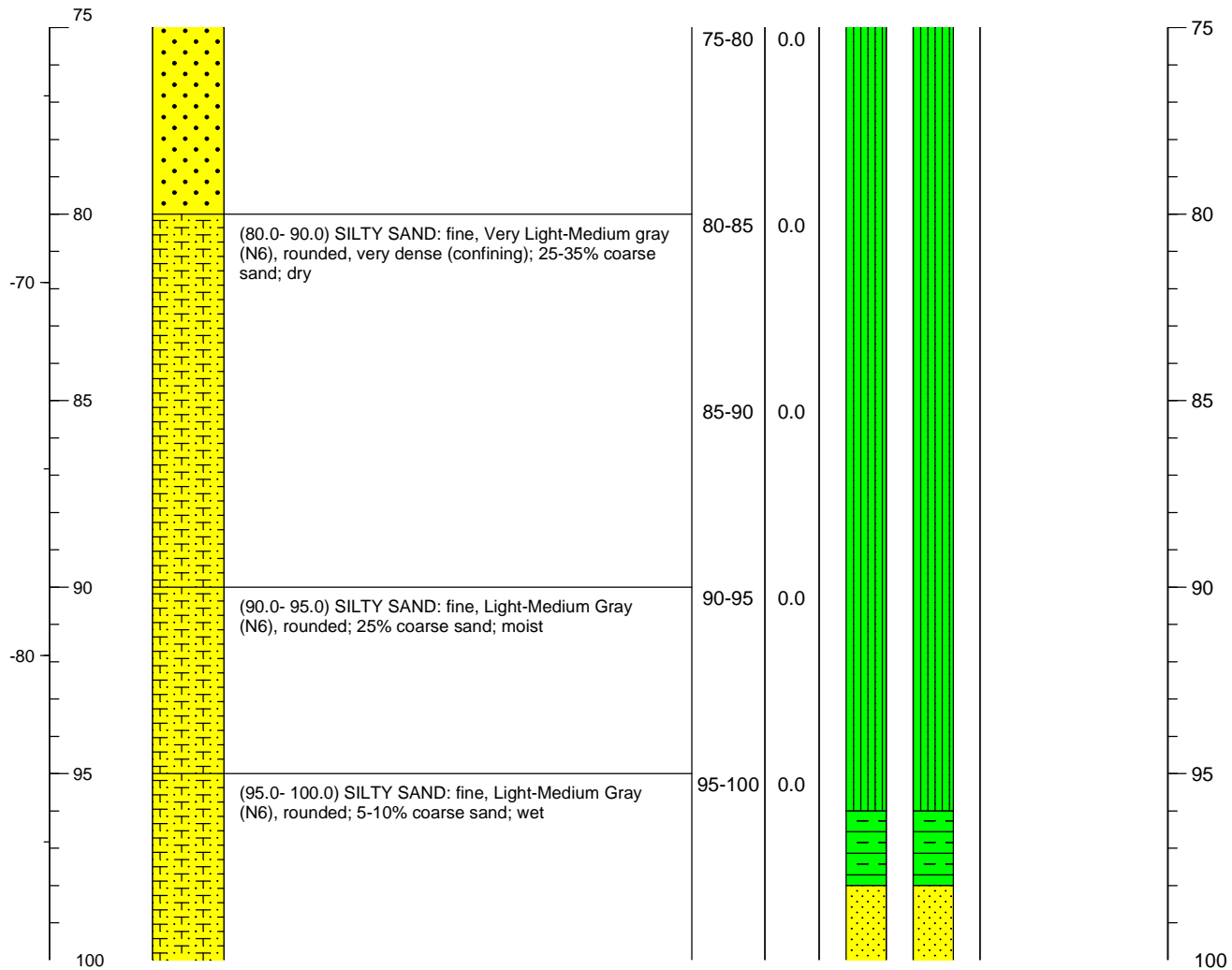
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Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details
50							
			(50.0- 51.0) SANDY CLAY: medium-coarse, Dark Gray (N3), poorly sorted, sub-rounded, soft; saturated	50-55	0.0		
-40			(51.0- 55.0) SAND: medium-coarse, Medium Gray (N5), poorly sorted, sub-rounded, loose; saturated				
	55		(55.0- 61.0) SAND: coarse, Medium-Dark Gray (N4), well sorted, rounded, loose; saturated	55-60	0.0		
	60			60-65	0.0		
			(61.0- 65.0) SILTY SAND: very fine, Light-Medium Gray (N6), rounded, loose; 5-10% coarse sand and gravel; saturated				
-50							
	65		(65.0- 66.0) SANDY SILT: fine, Medium Gray (N5), rounded, soft; 5% gravel; saturated	65-70	0.0		
			(66.0- 70.0) GRAVELLY SAND: coarse-very coarse, Medium-Dark Gray (N4), poorly sorted, rounded, loose; saturated				
	70			70-75	0.0		
			(70.0- 80.0) SAND: fine-medium, Light-Medium Gray (N6), rounded, loose; saturated				
-60							
	75						





Project Name			Well Number	
Ashland Brunswick Georgia			MW-40D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424362.733 869354.345	Ground Surface Elevation 11.83
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 100-110 ft		Top of Well Casing Elevation 14.27
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 110 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/24/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/26/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

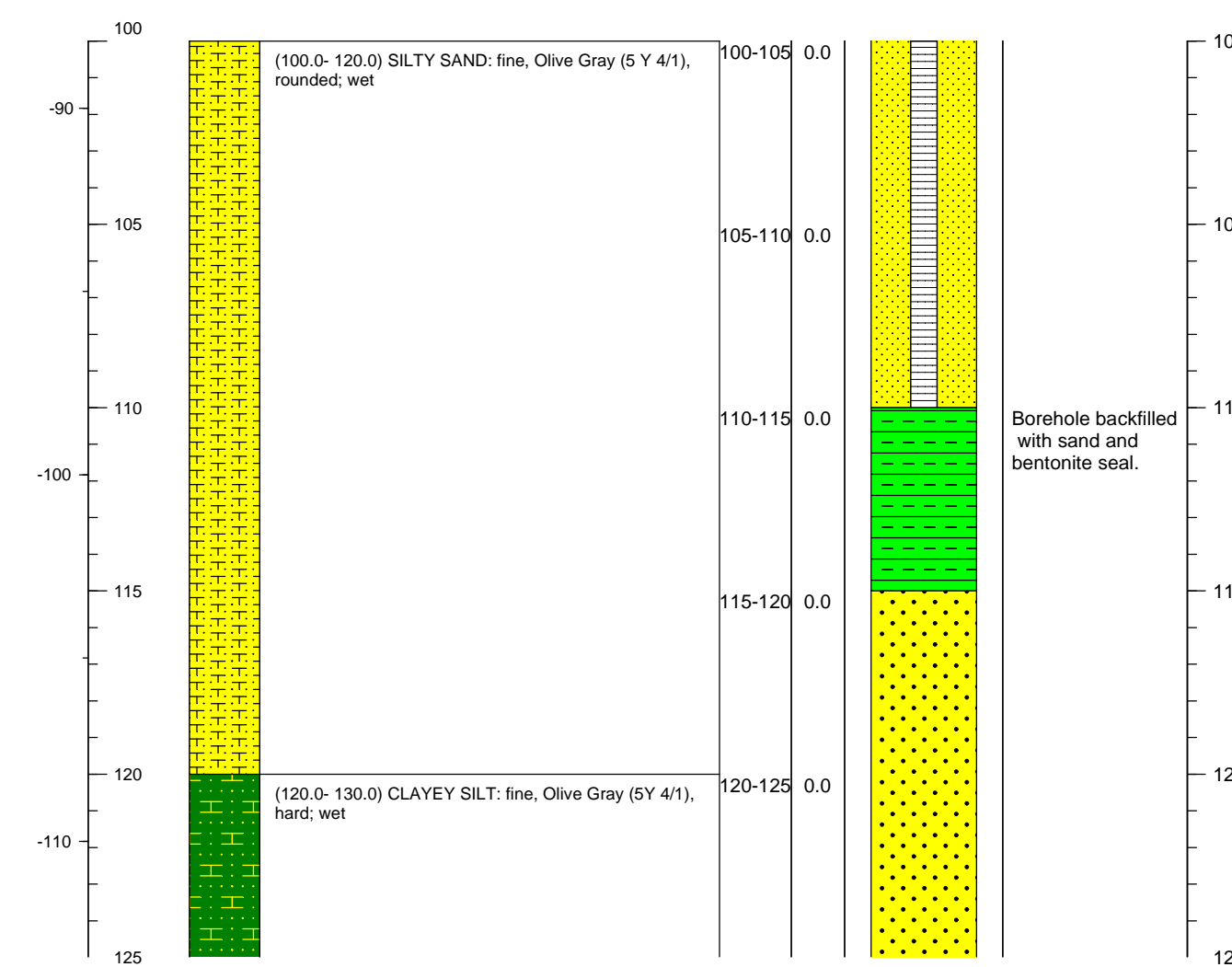
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Monitoring Well Construction Log		Well Number	
Ashland Brunswick Georgia					MW-40D	
Address	Drilling Contractor/License		Northing	424362.733	Ground Surface Elevation	
2801 Cook Street	Groundwater Protection		Easting	869354.345	11.83	
Brunswick	Georgia	Drilling Equipment	Well Screen Interval		Top of Well Casing Elevation	
		Rousie SR1 w/Detric Head	100-110 ft		14.27	
GA EPD Number		Drilling Method	Well Screen Slot Size		Total Well Depth	
GAD004065520		Sonic Drilling	0.01 inch		110 ft	
Logged By R. McLain		Date Drilling Started	Well Casing Diameter and Type		Boring Depth	Boring Dia.
Approved By R. Cate		3/24/10	2 in. SCH 40 PVC		150 ft	6 in.
Driller Name B. Niles		Date Drilling Completed	Sampling Method		Headspace Monitoring Device	
Project Number WBS30012B1		3/26/10	Continuous Cores		PID	

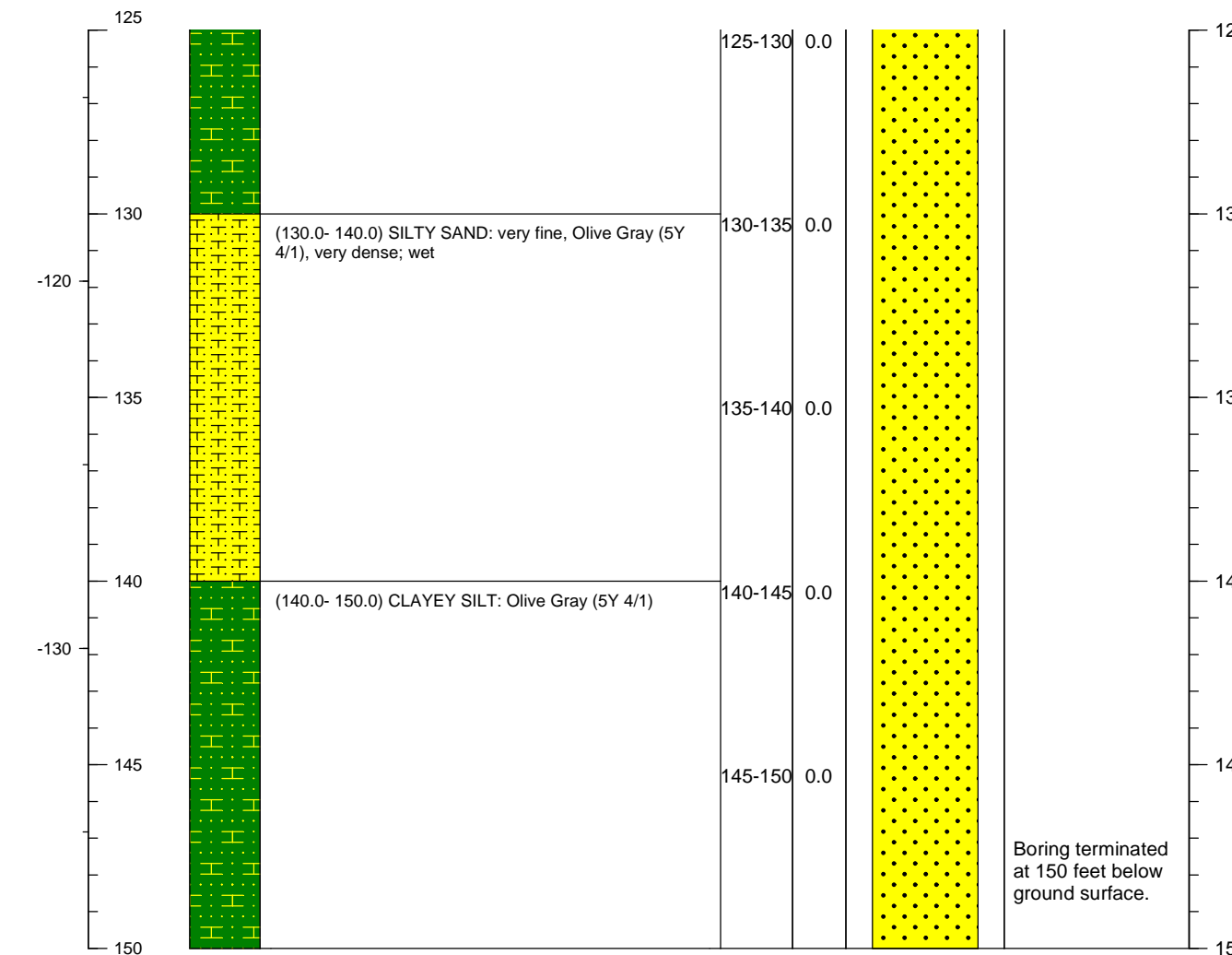
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Well Number	
Ashland Brunswick Georgia			MW-40D	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424362.733 869354.345	Ground Surface Elevation 11.83
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 100-110 ft		Top of Well Casing Elevation 14.27
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 110 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/24/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/26/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Well Number	
Ashland Brunswick Georgia			MW-411	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	425872.090 871633.340	Ground Surface Elevation  9.65
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 38-48 ft		Top of Well Casing Elevation 12.35
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 48 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/18/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/19/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

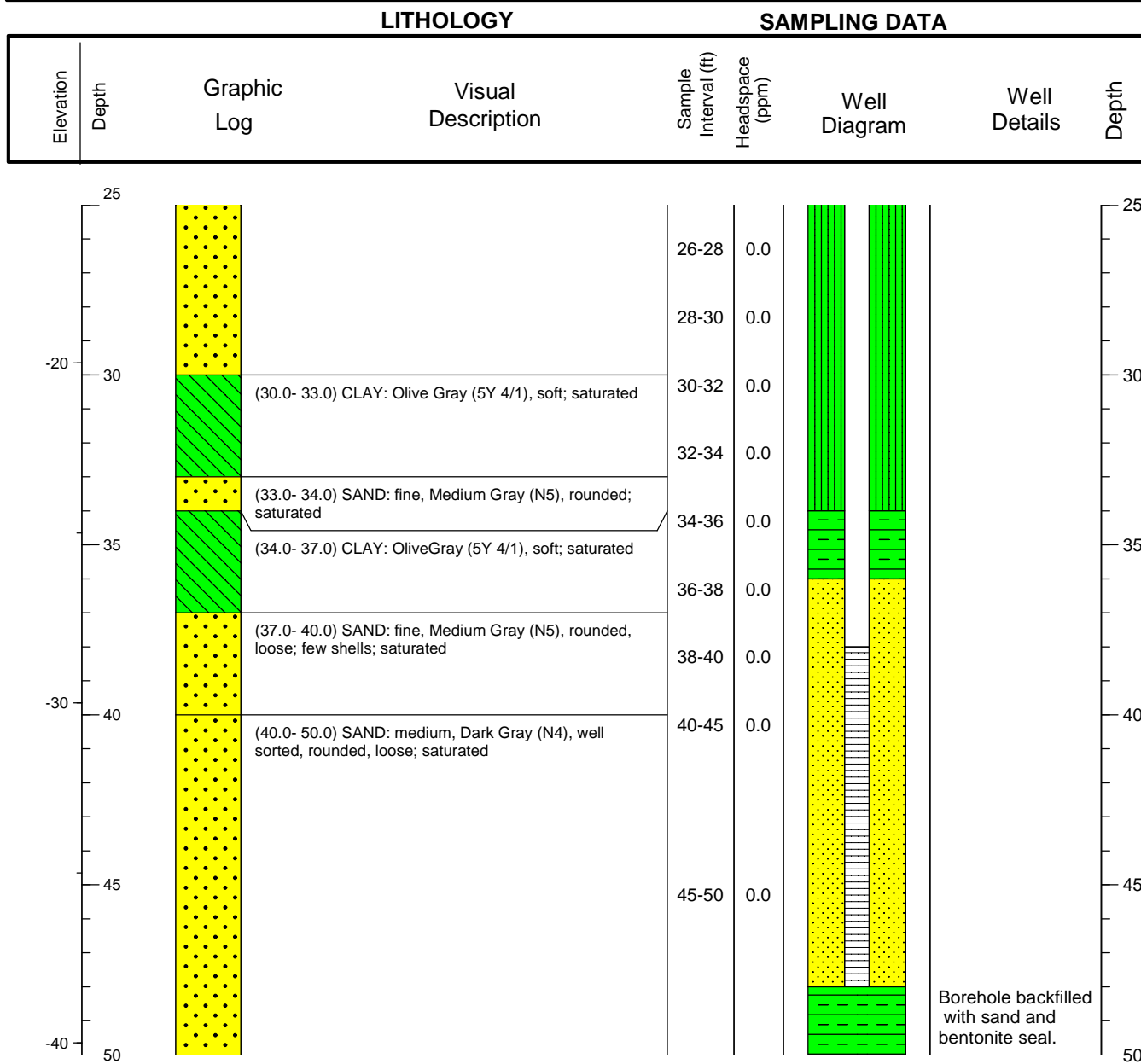
### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 7.0) SAND: fine, Dusty Brown (5YR 2/2), rounded; moist 0 - 5 Post-hole	0-2	0.0		Protective Cover: Stick Up/Well Pad: 3'x3'	0
				2-4	0.0		Bentonite/Cement: 0-34'	
				4-6	0.0		Bentonite: 34-36'	5
				6-8	0.0		#2 Silica Sand: 36-48'	
			(7.0- 10.0) SAND: fine, Moderate Brown (5YR 6/2), rounded; wet	8-10	0.0		Well Casing: 0-38'	10
0	10	▽	(10.0- 13.0) SAND: very fine, Pale Yellow Brown (10YR 6/2), rounded, loose; saturated	10-12	0.0		Well Screen: 38-48'	
				12-14	0.0		Well Diameter: 2"	
			(13.0- 15.0) SAND: very fine, Dark Gray (N4), rounded, loose; with clay; saturated	14-16	0.0		Bentonite: 48-53'	15
			(15.0- 30.0) SAND: medium-coarse, Medium Gray (N5), poorly sorted, rounded, loose; some shells; saturated	16-18	0.0		20/30 Sand Backfill	
				18-20	0.0			
				20-22	0.0			20
				22-24	0.0			
				24-26	0.0			25



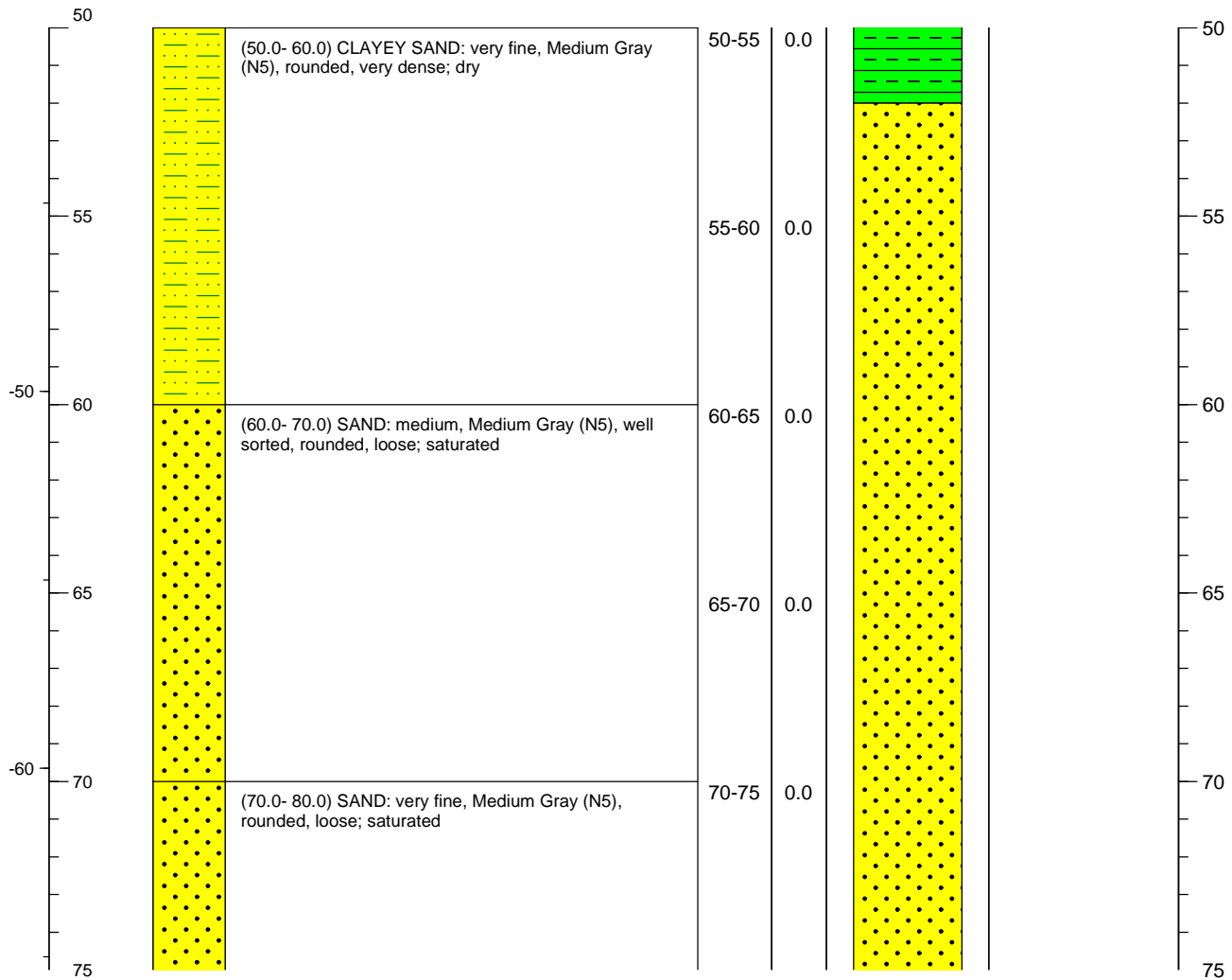
Project Name			Well Number	
Ashland Brunswick Georgia			MW-411	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	425872.090 871633.340	Ground Surface Elevation 9.65
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 38-48 ft		Top of Well Casing Elevation 12.35
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 48 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/18/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/19/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	





Project Name			Well Number	
Ashland Brunswick Georgia			MW-411	
Monitoring Well Construction Log				
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	425872.090 871633.340	Ground Surface Elevation 9.65
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 38-48 ft		Top of Well Casing Elevation 12.35
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 48 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/18/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/19/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

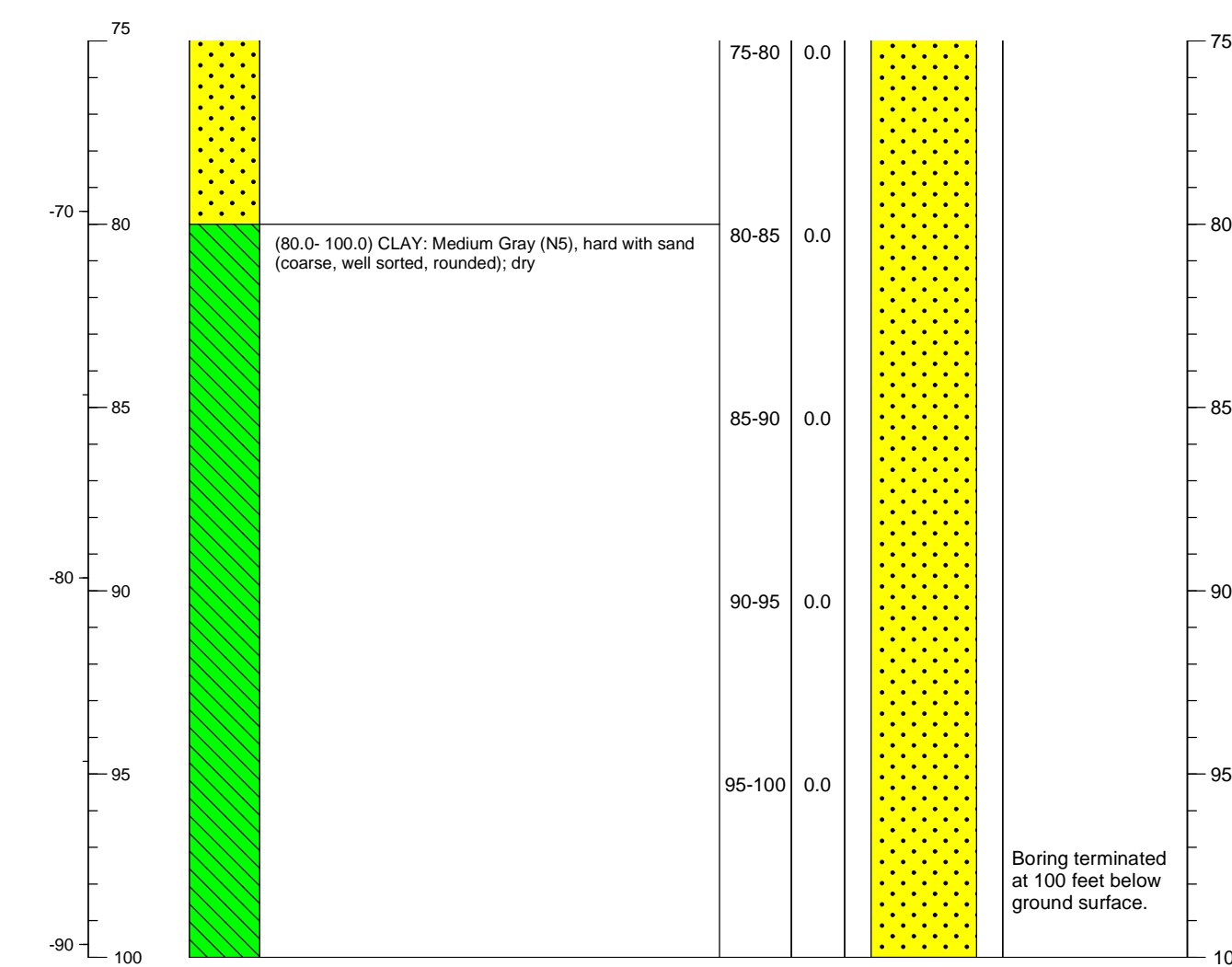
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Depth





Project Name			Well Number	
Ashland Brunswick Georgia			MW-411	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	425872.090 871633.340	Ground Surface Elevation 9.65
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 38-48 ft		Top of Well Casing Elevation 12.35
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 48 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/18/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/19/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Well Number	
Former Hercules Brunswick Facility Georgia			MW-42S	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	424651.6 870489.3	Ground Surface Elevation  8.80
	Drilling Equipment Mini Sonic	Well Screen Interval 10 - 20 ft		Top of Well Casing Elevation 11.52
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 20 ft	
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/21/12	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 20 ft	Boring Dia. 4 in. / 6 in.
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/27/12	Sampling Method 4" Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0				0-10	NA		Protective Cover: Stick Up/Well Pad: 3'x3'	0
			(0.0- 10.0) NO RECOVERY: Airknife - backfill with sand				Bentonite/Cement: 0-5'	
							Bentonite: 5-8'	
-5							#2 Silica Sand: 8-20'	5
							Well Casing: 0-10'	
0							Well Screen: 10-20'	
-10				10-15	46.1		Well Diameter: 2"	10
			(10.0- 15.0) SAND: fine, Dark Brown, well sorted, well rounded; saturated; pine resin odor					
-15				15-20	57.7			15
			(15.0- 20.0) SAND: fine, Brown, well sorted, well rounded; saturated					
-10							Boring terminated at 20 feet below ground surface.	
-20								20





Project Name			Well Number	
Former Hercules Brunswick Facility Georgia			MW-42I	
Address  2801 Cook Street  Brunswick      Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	424643.9 870491.4	Ground Surface Elevation  8.80
	Drilling Equipment Boart Big Rig	Well Screen Interval 40 - 50 ft		Top of Well Casing Elevation  11.43
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 50 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/21/12	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 50 ft	Boring Dia. 4 in / 6 in.
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/27/12	Sampling Method 4" Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 10.0) NO RECOVERY: Airknife - backfill with sand	0-5			Protective Cover: Stick Up/Well Pad: 3'x3'	0
5				5-10			Bentonite/Cement: 0-34'	5
10			(10.0- 15.0) SAND: fine, Dark Brown, well sorted, well rounded; saturated; pine resin odor	10-15	46.1		Bentonite: 34-38'	10
15			(15.0- 20.0) SAND: fine, Brown, well sorted, well rounded; saturated	15-20	57.7		#2 Silica Sand: 38-50'	15
20			(20.0- 30.0) SAND: fine-medium, Dark Brown, sorted, rounded; saturated	20-25	14.2		Well Casing: 0-40'	20
25				25-30	19.4		Well Screen: 40-50'	25
30			(30.0- 40.0) SAND: medium, Very Dark Brown, sorted, rounded; saturated	30-35			Well Diameter: 2"	30
35				35-40	37.2			35
40			(40.0- 50.0) SAND: coarse, Gray, well sorted, rounded; saturated	40-45	150			40
45				45-50	240			45
50							Boring terminated at 50 feet below ground surface.	50



Project Name			Well Number	
Former Hercules Brunswick Facility Georgia			MW-42D	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	424657.9 870487.0	Ground Surface Elevation  8.70
	Drilling Equipment Boart Big Rig	Well Screen Interval 88 - 98 ft		Top of Well Casing Elevation 11.54
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 98 ft
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/21/12	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 105 ft	Boring Dia. 4 in / 6 in.
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/27/12	Sampling Method 4" Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 10.0) NO RECOVERY: Airknife - backfill with sand	0-10	NA		Protective Cover: Stick Up/Well Pad: 3'x3'	0
							Bentonite/Cement: 0-81'	5
							Bentonite: 81-85'	10
			(10.0- 15.0) SAND: fine, Dark Brown, well sorted, well rounded; saturated; pine resin odor	10-15	46.1		#2 Silica Sand: 85-99'	15
			(15.0- 20.0) SAND: fine, Brown, well sorted, well rounded; saturated	15-20	57.7		Well Casing: 0-88'	20
			(20.0- 30.0) SAND: fine-medium, Dark Brown, sorted, rounded; saturated	20-25	14.2		Well Screen: 88-98'	25
				25-30	19.4		Well Diameter: 2"	30
			(30.0- 40.0) SAND: medium, Very Dark Brown, sorted, rounded; saturated	30-35	25		Backfill: Hydrated 3/8" Bentonite Chips: 99-105'	35



Project Name Former Hercules Brunswick Facility Georgia			Monitoring Well Construction Log		Well Number MW-42D	
Address  2801 Cook Street  Brunswick      Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	424657.9 870487.0	Ground Surface Elevation 8.70		
	Drilling Equipment Boart Big Rig	Well Screen Interval 88 - 98 ft		Top of Well Casing Elevation 11.54		
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 98 ft		
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/21/12	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 105 ft	Boring Dia. 4 in / 6 in.	
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/27/12	Sampling Method 4" Continuous Cores		Headspace Monitoring Device PID		

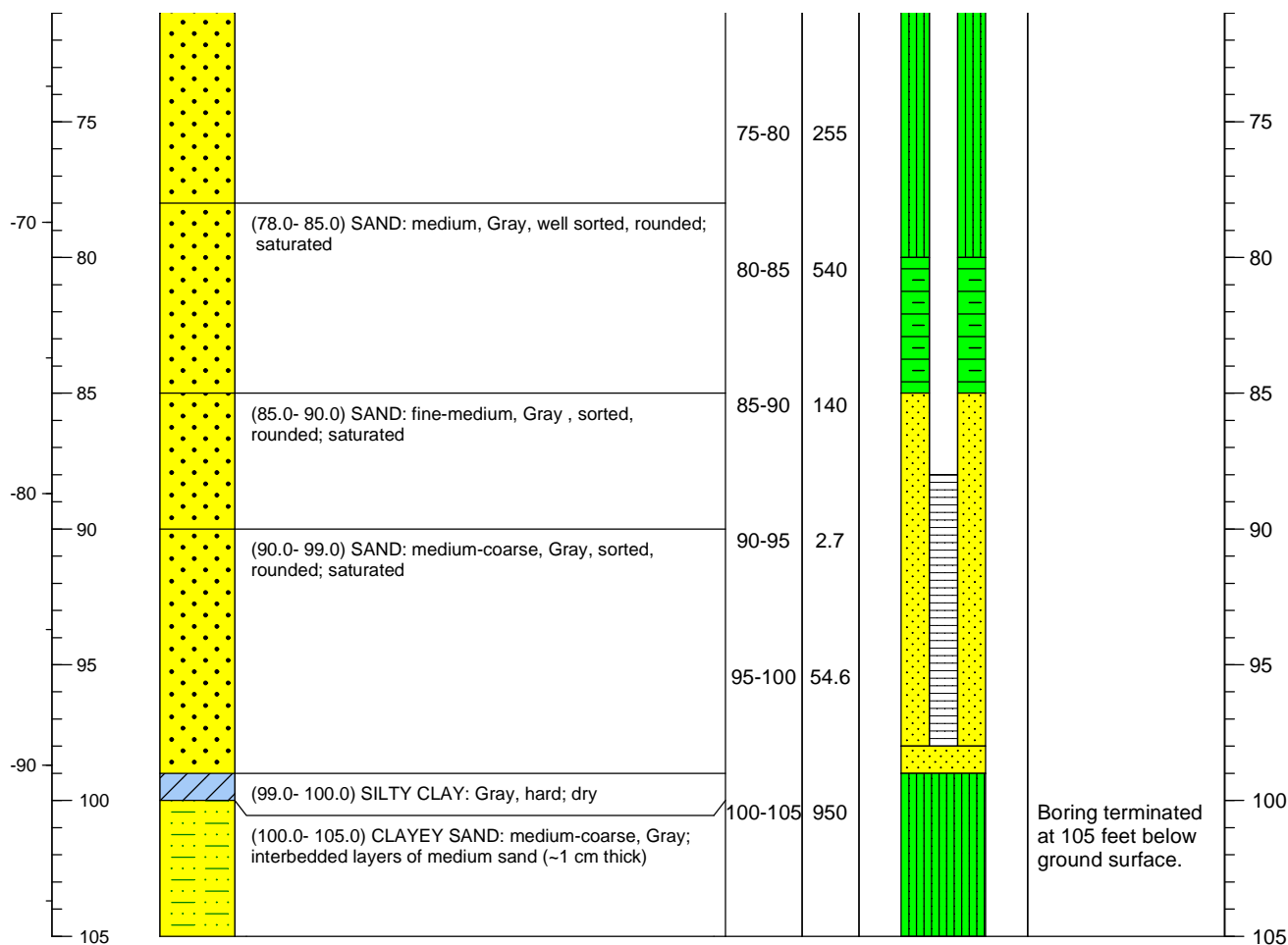
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details
35				35-40	37.2		
-30							
-40			(40.0- 50.0) SAND: coarse, Gray, well sorted, rounded; saturated	40-45	150		
-45				45-50	240		
-50							
-55			(50.0- 55.0) SAND: medium, Gray, well sorted, rounded; saturated	50-55	240		
-60				55-60	201		
-65			(55.0- 60.0) SAND: fine-medium, Gray, sorted, rounded; saturated	60-65	258		
-70			(60.0- 64.0) SAND: fine, Gray, well sorted, rounded; saturated	65-70	258		
			(64.0- 65.0) CLAYEY SAND: fine-coarse, Gray, poorly sorted, rounded; saturated; 20% gravel, 10% pebble				
			(65.0- 78.0) SAND: coarse, Gray, well sorted, rounded; saturated	70-75	255		





Project Name			Well Number		
Former Hercules Brunswick Facility Georgia			MW-42D		
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	424657.9 870487.0	Ground Surface Elevation 8.70	
	Drilling Equipment Boart Big Rig	Well Screen Interval 88 - 98 ft		Top of Well Casing Elevation 11.54	
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 98 ft	
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/21/12	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 105 ft	Boring Dia. 4 in / 6 in.
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/27/12	Sampling Method 4" Continuous Cores		Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Depth





Project Name Former Hercules Brunswick Facility Georgia			Monitoring Well Construction Log		Well Number MW-43S	
Address  2801 Cook Street  Brunswick      Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	424639.3 871552.9	Ground Surface Elevation 7.00		
	Drilling Equipment Mini Sonic	Well Screen Interval 10 - 20 ft		Top of Well Casing Elevation 9.94		
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 20 ft		
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/27/12	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 20 ft.	Boring Dia. 4 in. / 6 in.	
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/28/12	Sampling Method 4" Continuous Cores		Headspace Monitoring Device PID		

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0				0-10	NA		Protective Cover: Stick Up/Well Pad: 3'x3'	0
			(0.0- 10.0) NO RECOVERY: Air Knife, backfill with sand				Bentonite/Cement: 0-5'	
							Bentonite: 5-8'	
-5							#2 Silica Sand: 8-20'	5
0							Well Casing: 0-10'	
							Well Screen: 10-20'	
-10				10-15	0.0		Well Diameter: 2"	10
			(10.0- 15.0) SAND: fine, Tan, well sorted, rounded; saturated					
-15				15-20	0.0			15
			(15.0- 20.0) SAND: fine, Brown, well sorted, rounded; saturated					
-20							Boring terminated at 20 feet below ground surface.	20



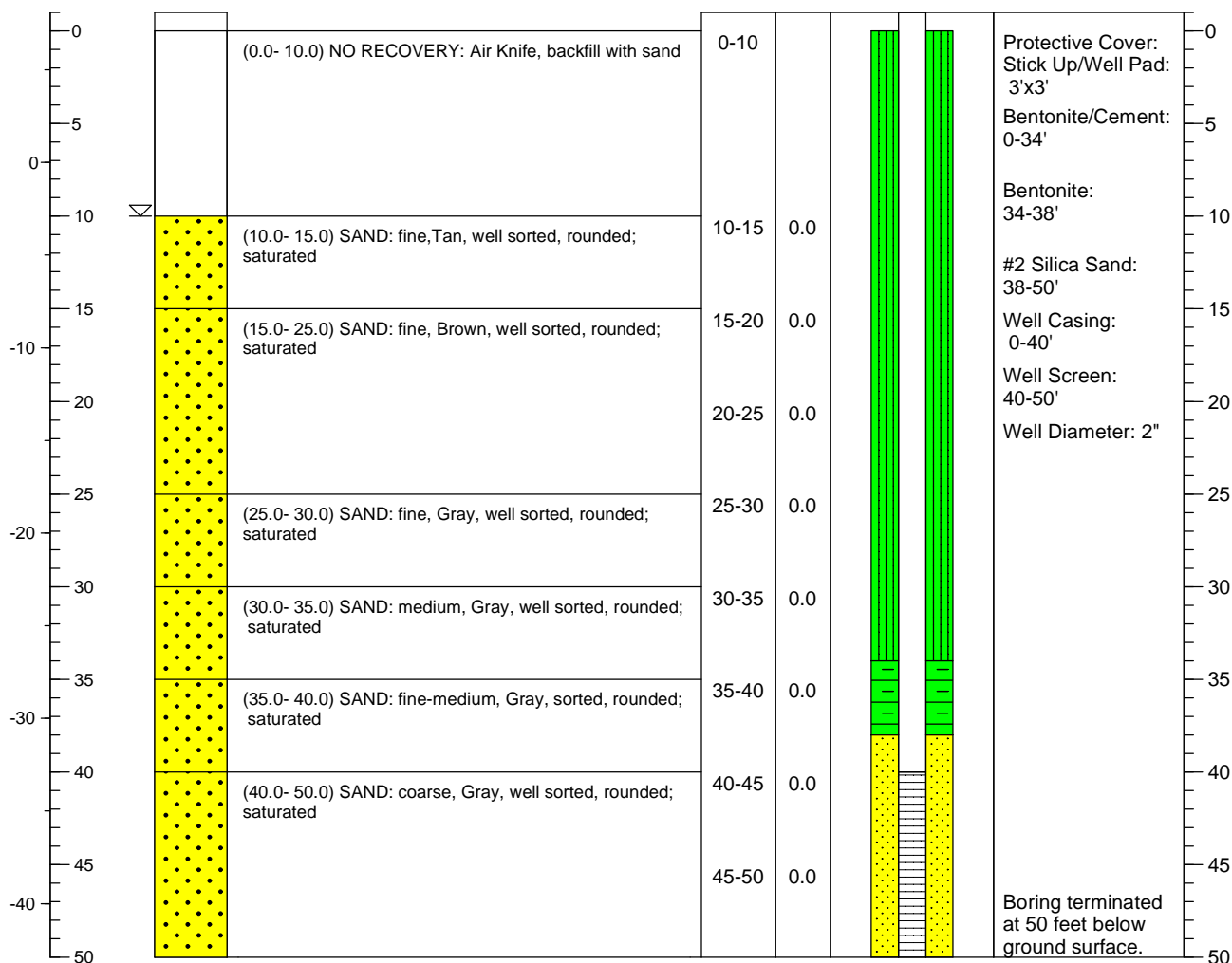


Project Name Former Hercules Brunswick Facility Georgia			Monitoring Well Construction Log		Well Number MW-43I	
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Boart Longyear</b>		Northing Easting	<b>424637.4</b> <b>871545.2</b>	Ground Surface Elevation <b>7.10</b>	
	Drilling Equipment <b>Boart Big Rig</b>		Well Screen Interval <b>40 - 50 ft</b>		Top of Well Casing Elevation <b>9.93</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Sonic Drilling</b>		Well Screen Slot Size <b>0.01 inch</b>		Total Well Depth <b>50 ft</b>	
Logged By <b>R. McLain</b> Approved By <b>D. Salisbury</b>	Date Drilling Started <b>3/27/12</b>		Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>		Boring Depth <b>50 ft.</b>	Boring Dia. <b>4 in. / 6 in.</b>
Driller Name <b>J. Sousa</b> Project Number <b>WBS30012B1</b>	Date Drilling Completed <b>3/28/12</b>		Sampling Method <b>4" Continuous Cores</b>		Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

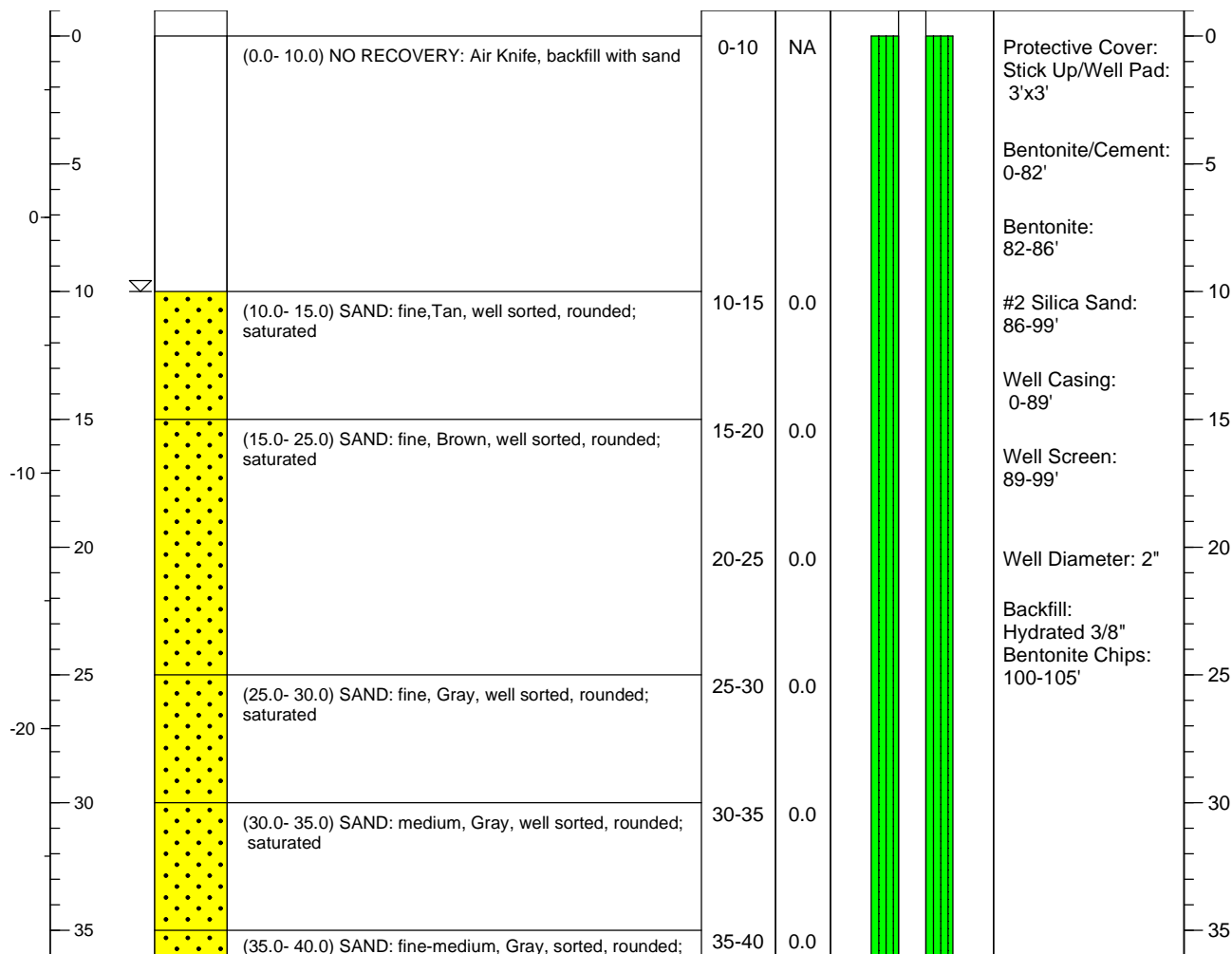
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
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<b>Project Name</b> <b>Former Hercules Brunswick Facility Georgia</b>			<b>Monitoring Well Construction Log</b>		<b>Well Number</b> <b>MW-43D</b>
<b>Address</b> <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	<b>Drilling Contractor/License</b> <b>Boart Longyear</b>	<b>Northing</b> <b>Easting</b>	<b>424636.8</b> <b>871537.0</b>	<b>Ground Surface Elevation</b> <b>7.10</b>	
	<b>Drilling Equipment</b> <b>Boart Big Rig</b>	<b>Well Screen Interval</b> <b>89 - 99 ft</b>		<b>Top of Well Casing Elevation</b> <b>9.96</b>	
<b>GA EPD Number</b> <b>GAD004065520</b>	<b>Drilling Method</b> <b>Sonic Drilling</b>	<b>Well Screen Slot Size</b> <b>0.01 inch</b>		<b>Total Well Depth</b> <b>99 ft</b>	
<b>Logged By</b> <b>R. McLain</b> <b>Approved By</b> <b>D. Salisbury</b>	<b>Date Drilling Started</b> <b>3/27/12</b>	<b>Well Casing Diameter and Type</b> <b>2 in. SCH 40 PVC</b>		<b>Boring Depth</b> <b>107 ft.</b>	<b>Boring Dia.</b> <b>4 in. / 6 in.</b>
<b>Driller Name</b> <b>J. Sousa</b> <b>Project Number</b> <b>WBS30012B1</b>	<b>Date Drilling Completed</b> <b>3/28/12</b>	<b>Sampling Method</b> <b>4" Continuous Cores</b>		<b>Headspace Monitoring Device</b> <b>PID</b>	

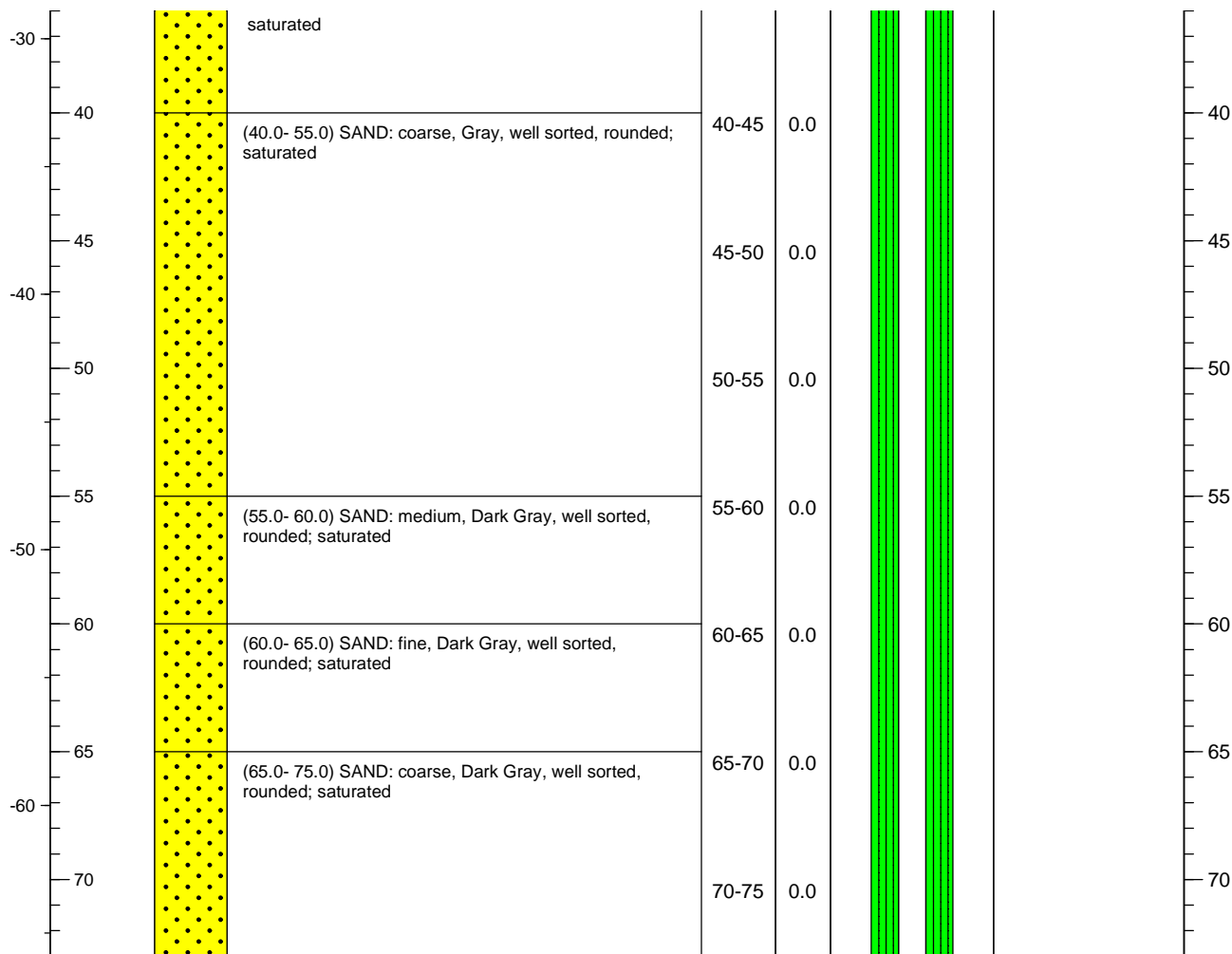
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name Former Hercules Brunswick Facility Georgia			Monitoring Well Construction Log		Well Number MW-43D	
Address  2801 Cook Street  Brunswick      Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	424636.8 871537.0	Ground Surface Elevation 7.10		
	Drilling Equipment Boart Big Rig	Well Screen Interval 89 - 99 ft		Top of Well Casing Elevation 9.96		
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 99 ft		
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/27/12	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 107 ft.	Boring Dia. 4 in. / 6 in.	
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/28/12	Sampling Method 4" Continuous Cores		Headspace Monitoring Device PID		

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details



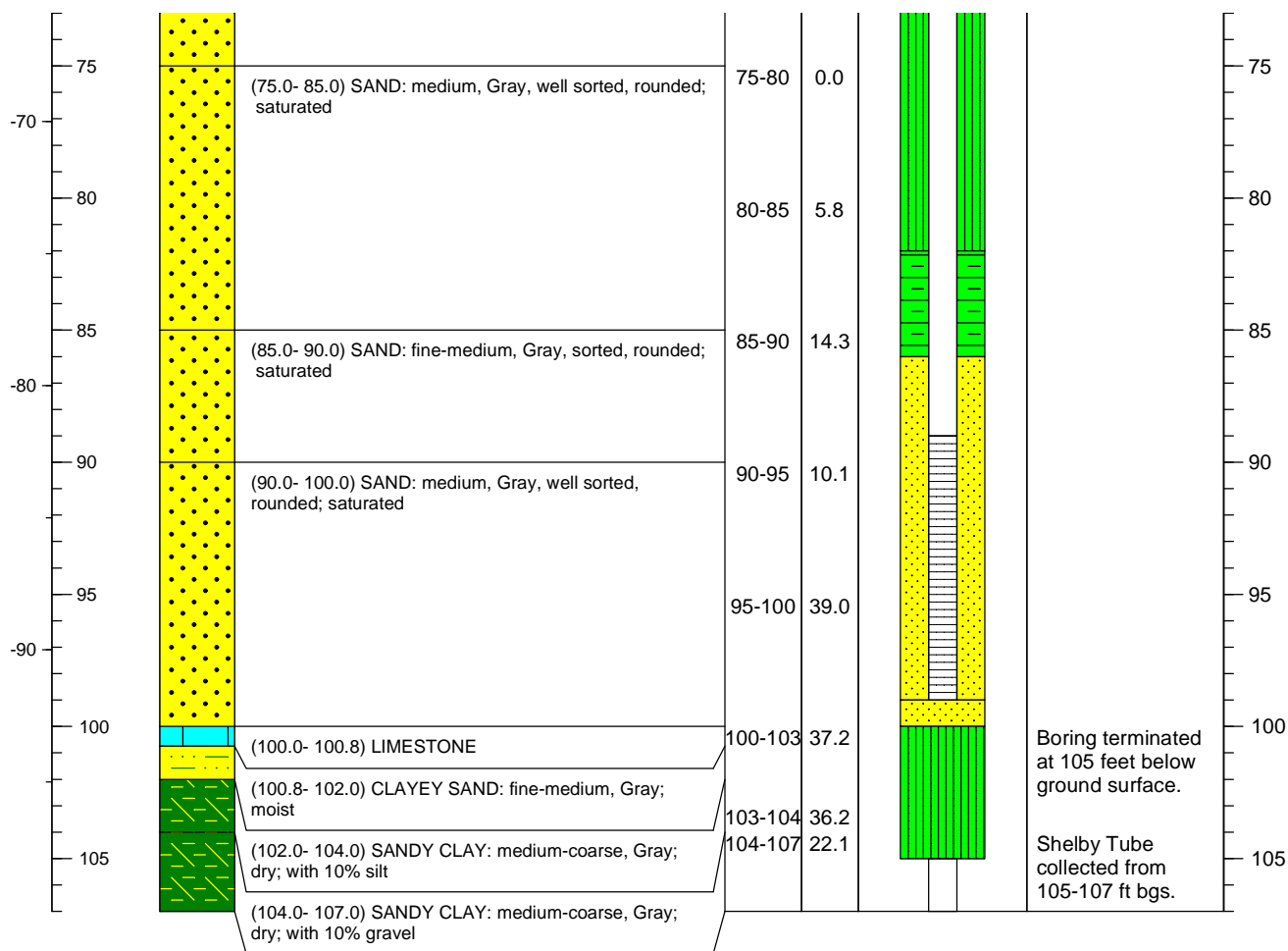


Project Name Former Hercules Brunswick Facility Georgia			Monitoring Well Construction Log		Well Number MW-43D	
Address  2801 Cook Street  Brunswick      Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	424636.8 871537.0	Ground Surface Elevation 7.10		
	Drilling Equipment Boart Big Rig	Well Screen Interval 89 - 99 ft		Top of Well Casing Elevation 9.96		
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 99 ft		
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/27/12	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 107 ft.	Boring Dia. 4 in. / 6 in.	
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/28/12	Sampling Method 4" Continuous Cores		Headspace Monitoring Device PID		

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
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Project Name Ashland Brunswick Georgia			Monitoring Well Construction Log		Well Number MW-44S	
Address 2801 Cook Street Brunswick Georgia		Drilling Contractor/License Groundwater Protection	Northing Easting	424874.740 871756.290	Ground Surface Elevation 9.36	
		Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 11-21 ft		Top of Well Casing Elevation 11.93	
GA EPD Number GAD004065520		Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 21 ft	
Logged By R. McLain Approved By R. Cate		Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 21 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1		Date Drilling Completed 3/31/10	Sampling Method Continuous Cores		Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 3.0) SAND: fine-medium, Dusty Brown (2/2), sub-rounded; dry 0 - 5 Post-hole	0-5	0.0		Protective Cover: Stick Up/Well Pad: 3'x3'	0
			(3.0- 10.0) SAND: fine-very fine, Moderate Brown (3/4), rounded, loose; saturated	5-10	0.0		Bentonite/Cement: 0-7'	
							Bentonite: 7-9'	
							#2 Silica Sand: 9-21'	
							Well Casing: 0-11'	
			(10.0- 13.0) SAND: fine, Brown (5/2), rounded, loose; saturated	10-15	0.0		Well Screen: 11-21'	
			(13.0- 17.0) SAND: fine, Pale Brown (2/2), rounded, loose; saturated	15-20	0.0		Well Diameter: 2"	
			(17.0- 19.0) SAND: fine, Gray (N4), rounded, loose; saturated					
			(19.0- 21.0) SAND: fine-coarse, Medium Gray (N5), poorly sorted, sub-rounded, loose; 40-50% shells; saturated	20-21	0.0		Boring terminated at 21 feet below ground surface.	





Project Name			Well Number	
Ashland Brunswick Georgia			MW-44I	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	425872.090 871633.340	Ground Surface Elevation 9.65
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 40-55 ft		Top of Well Casing Elevation 12.35
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 55 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 55 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/31/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 3.0) SAND: fine-medium, Dusty Brown (2/2), sub-rounded; dry 0 - 5 Post-hole	0-5	0.0		Protective Cover: Stick Up/Well Pad: 3'x3' Bentonite/Cement: 0-36'	0
			(3.0- 10.0) SAND: fine-very fine, Moderate Brown (3/4), rounded, loose; saturated	5-10	0.0		Bentonite: 36-38'	5
			(10.0- 13.0) SAND: fine, Brown (5/2), rounded, loose; saturated	10-15	0.0		#2 Silica Sand: 38-55'	10
			(13.0- 17.0) SAND: fine, Pale Brown (2/2), rounded, loose; saturated	15-20	0.0		Well Casing: 0-40'	15
			(17.0- 19.0) SAND: fine, Gray (N4), rounded, loose; saturated				Well Screen: 40-55'	
			(19.0- 21.0) SAND: fine-coarse, Medium Gray (N5), poorly sorted, sub-rounded, loose; 40-50% shells; saturated	20-25	0.0		Well Diameter: 2"	20
			(21.0- 25.0) SILTY SAND: fine-medium, Medium Gray (N5), rounded, loose; 5-15% shells; saturated					
			(25.0- 26.0) CLAYEY SILT: Medium Gray (N5), well sorted, rounded, soft; saturated	25-30	0.0			25
			(26.0- 29.0) SILTY SAND: fine-medium, Medium Gray (N5), rounded, loose; 10% clay; saturated					





Project Name			Well Number	
Ashland Brunswick Georgia			MW-44I	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	425872.090 871633.340	Ground Surface Elevation 9.65
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 40-55 ft		Top of Well Casing Elevation 12.35
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 55 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 55 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/31/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
-20	30		(29.0- 31.0) SILTY CLAY: fine, Medium Gray (N5)	30-35	0.0			30
			(31.0- 35.0) SAND: fine, Medium-Light Gray (N5), rounded, loose; saturated					
-35	35		(35.0- 37.0) SANDY SILT: fine, Medium Gray (N5), rounded, soft; saturated	35-40	0.0			35
			(37.0- 40.0) SAND: fine-medium, Medium Gray (N5), rounded, loose; 10% silt and shells; saturated	40-45	0.0			40
-30	40		(40.0- 55.0) SAND: coarse, Medium Gray (N5), well sorted, rounded, loose; 10-20% shells; saturated	45-50	0.0			45
-45	45			50-55	0.0			50
-40	50							55
							Boring terminated at 55 feet below ground surface.	





Project Name			Well Number	
Ashland Brunswick Georgia			MW-44ID	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424880.130 87153.280	Ground Surface Elevation 9.39
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 90-100 ft		Top of Well Casing Elevation 12.22
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 100 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/30/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

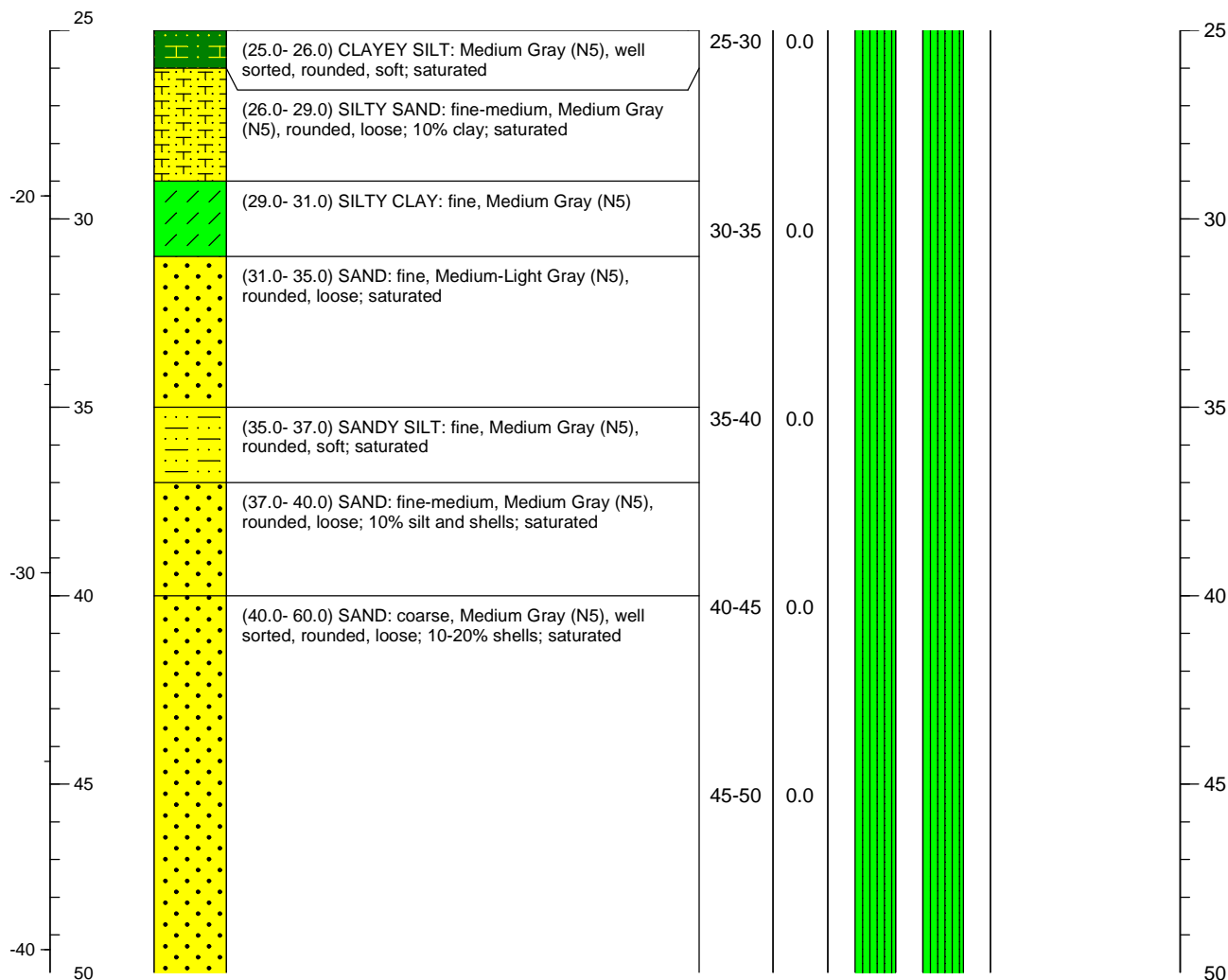
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 3.0) SAND: fine-medium, Dusty Brown (2/2), sub-rounded; dry 0 - 5 Post-hole	0-5	0.0		Protective Cover: Stick Up/Well Pad: 3'x3' Bentonite/Cement: 0-86'	0
			(3.0- 10.0) SAND: fine-very fine, Moderate Brown (3/4), rounded, loose; saturated	5-10	0.0		Bentonite: 86-88'	5
			(10.0- 13.0) SAND: fine, Brown (5/2), rounded, loose; saturated	10-15	0.0		#2 Silica Sand: 88-100'	10
			(13.0- 17.0) SAND: fine, Pale Brown (2/2), rounded, loose; saturated	15-20	0.0		Well Casing: 0-90'	15
			(17.0- 19.0) SAND: fine, Gray (N4), rounded, loose; saturated	20-25	0.0		Well Screen: 90-100'	20
			(19.0- 21.0) SAND: fine-coarse, Medium Gray (N5), poorly sorted, sub-rounded, loose; 40-50% shells; saturated	25-30	0.0		Well Diameter: 2"	25
			(21.0- 25.0) SILTY SAND: fine-medium, Medium Gray (N5), rounded, loose; 5-15% shells; saturated					





Project Name			Well Number	
Ashland Brunswick Georgia			MW-44ID	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424880.130 87153.280	Ground Surface Elevation 9.39
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 90-100 ft		Top of Well Casing Elevation 12.22
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 100 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/30/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Well Number	
Ashland Brunswick Georgia			MW-44ID	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424880.130 87153.280	Ground Surface Elevation 9.39
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 90-100 ft		Top of Well Casing Elevation 12.22
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 100 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/30/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

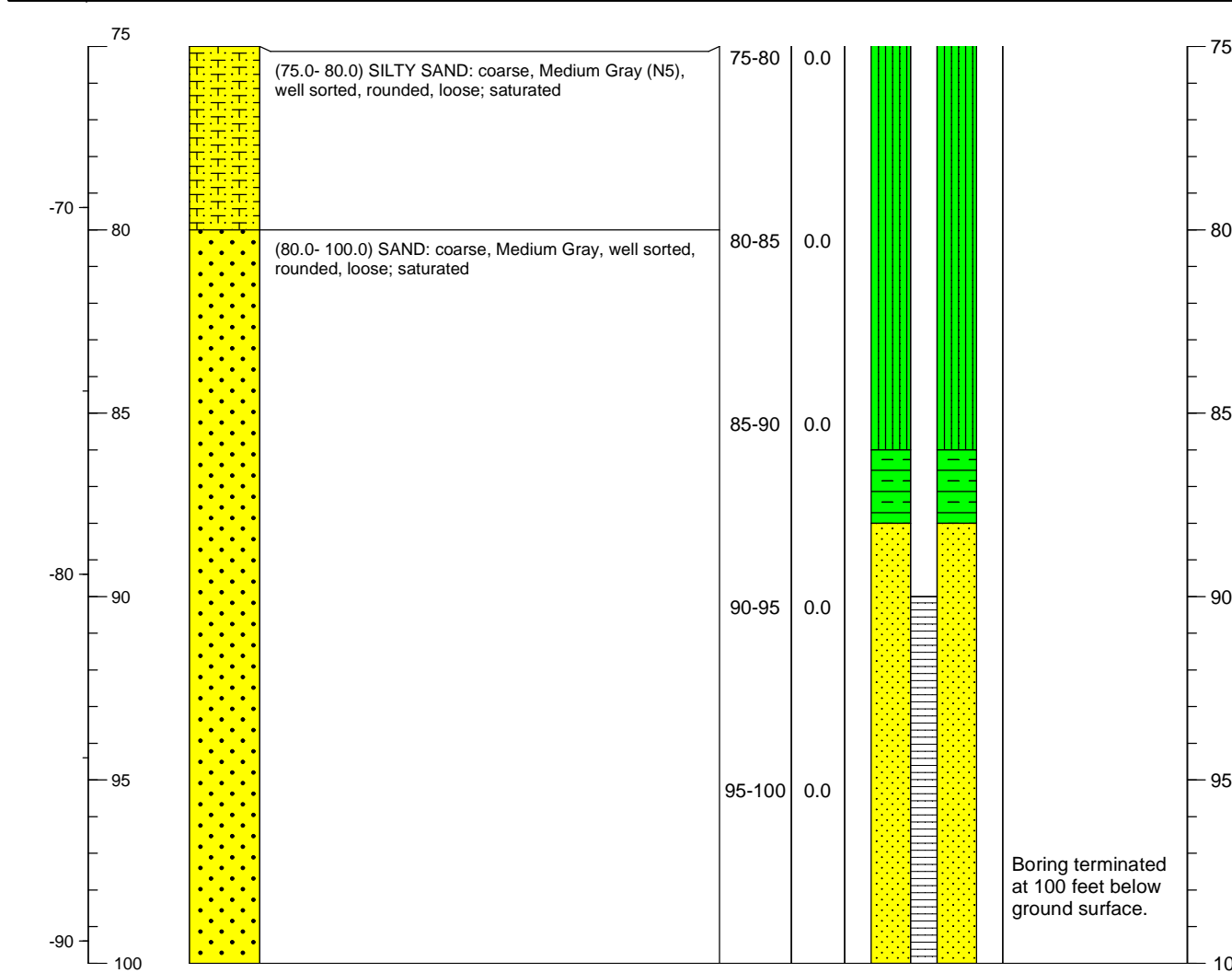
## SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
50				50-55	0.0			50
55				55-60	0.0			55
-50	60		(60.0- 63.0) SAND: medium, Medium-Dark Gray (N4), well sorted, rounded, loose; saturated	60-65	0.0			60
			(63.0- 65.0) SILTY SAND: very fine, Medium Gray (N5), rounded, very dense; 5-10% coarse sand; dry					
65			(65.0- 68.0) SAND: coarse, Medium Gray (N5), well sorted, rounded, loose; 20% silt; saturated	65-70	0.0			65
			(68.0- 70.0) SANDY SILT: medium-coarse, Medium Gray (N5), poorly sorted, sub-rounded, hard; wet					
-60	70		(70.0- 73.0) SAND: coarse, Medium Gray (N5), well sorted, rounded, loose; saturated	70-75	0.0			70
			(73.0- 75.0) SILTY SAND: very fine-medium, Medium Gray (N5), sub-rounded, very dense; 20% coarse sand; dry					
75								75



Project Name			Well Number	
Ashland Brunswick Georgia			MW-44ID	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424880.130 87153.280	Ground Surface Elevation 9.39
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 90-100 ft		Top of Well Casing Elevation 12.22
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 100 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/30/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Well Number	
Ashland Brunswick Georgia			MW-44D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424883.450 871751.700	Ground Surface Elevation 9.23
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 120-130 ft		Top of Well Casing Elevation 12.07
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 130 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/31/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA























Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 3.0) SAND: fine-medium, Dusty Brown (2/2), sub-rounded; dry 0 - 5 Post-hole	0-5	0.0		Protective Cover: Stick Up/Well Pad: 3'x3' Bentonite/Cement: 0-116'	0
			(3.0- 10.0) SAND: fine-very fine, Moderate Brown (3/4), rounded, loose; saturated	5-10	0.0		Bentonite: 116-118'	5
			(10.0- 13.0) SAND: fine, Brown (5/2), rounded, loose; saturated	10-15	0.0		#2 Silica Sand: 118-130'	10
			(13.0- 17.0) SAND: fine, Pale Brown (2/2), rounded, loose; saturated	15-20	0.0		Well Casing: 0-120'	15
			(17.0- 19.0) SAND: fine, Gray (N4), rounded, loose; saturated	20-25	0.0		Well Screen: 120-130'	20
			(19.0- 21.0) SAND: fine-coarse, Medium Gray (N5), poorly sorted, sub-rounded, loose; 40-50% shells; saturated	25-30	0.0		Well Diameter: 2"	25
			(21.0- 25.0) SILTY SAND: fine-medium, Medium Gray (N5), rounded, loose; 5-15% shells; saturated				Bentonite: 130-135'	
							20/30 Sand Backfill	





Project Name			Well Number	
Ashland Brunswick Georgia			MW-44D	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424883.450 871751.700	Ground Surface Elevation 9.23
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 120-130 ft		Top of Well Casing Elevation 12.07
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 130 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/31/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

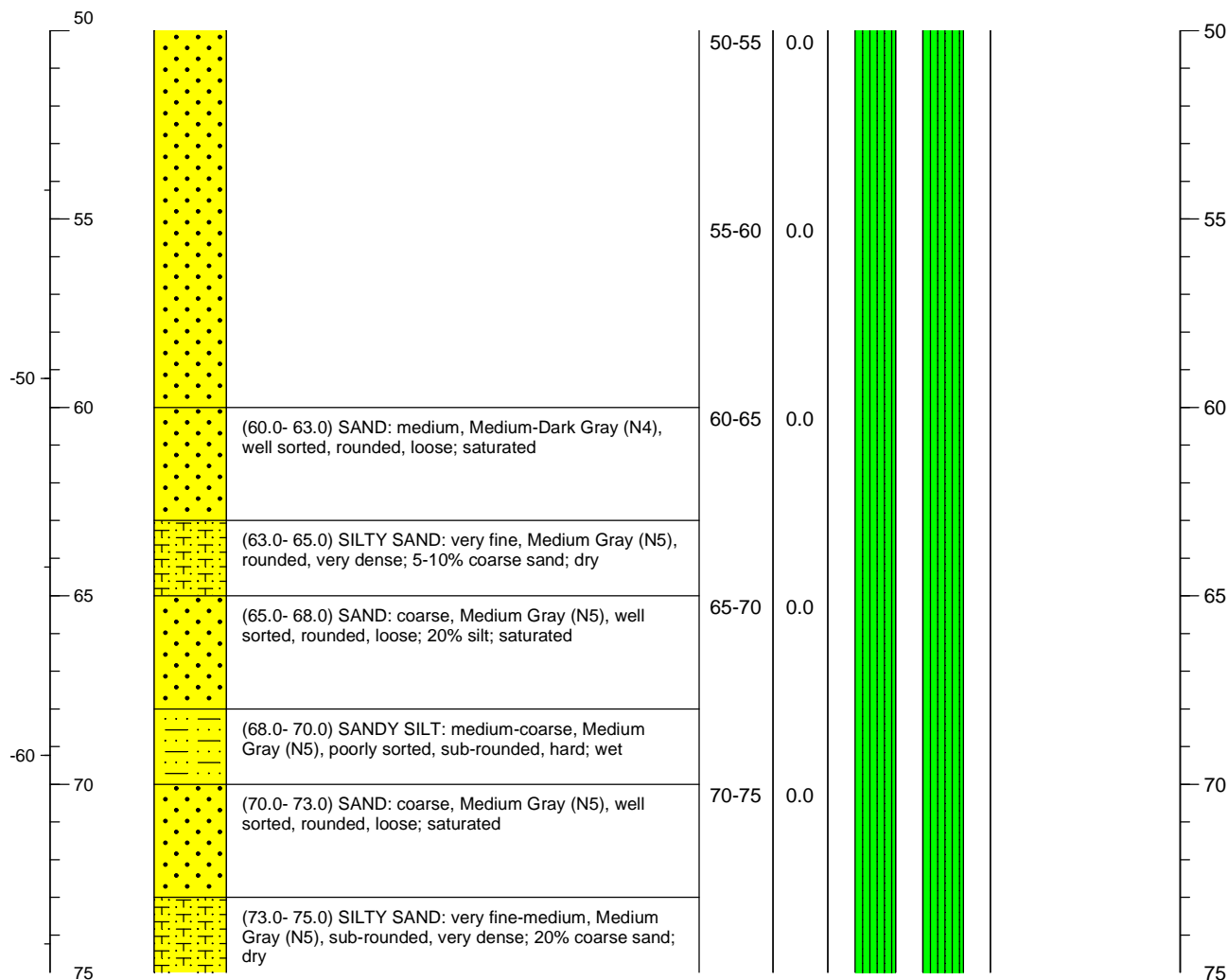
## SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
25								25
			(25.0- 26.0) CLAYEY SILT: Medium Gray (N5), well sorted, rounded, soft; saturated	25-30	0.0			
			(26.0- 29.0) SILTY SAND: fine-medium, Medium Gray (N5), rounded, loose; 10% clay; saturated					
-20	30		(29.0- 31.0) SILTY CLAY: fine, Medium Gray (N5)	30-35	0.0			30
			(31.0- 35.0) SAND: fine, Medium-Light Gray (N5), rounded, loose; saturated					
-35			(35.0- 37.0) SANDY SILT: fine, Medium Gray (N5), rounded, soft; saturated	35-40	0.0			35
			(37.0- 40.0) SAND: fine-medium, Medium Gray (N5), rounded, loose; 10% silt and shells; saturated					
-30	40		(40.0- 60.0) SAND: coarse, Medium Gray (N5), well sorted, rounded, loose; 10-20% shells; saturated	40-45	0.0			40
								
-45				45-50	0.0			45
								
-40	50							50



Project Name Ashland Brunswick Georgia			Monitoring Well Construction Log		Well Number MW-44D			
Address 2801 Cook Street Brunswick Georgia		Drilling Contractor/License Groundwater Protection	Northing Easting		424883.450 871751.700		Ground Surface Elevation 9.23	
		Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 120-130 ft				Top of Well Casing Elevation 12.07	
GA EPD Number GAD004065520		Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch				Total Well Depth 130 ft	
Logged By R. McLain Approved By R. Cate		Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 150 ft		Boring Dia. 6 in.	
Driller Name B. Niles Project Number WBS30012B1		Date Drilling Completed 3/31/10	Sampling Method Continuous Cores				Headspace Monitoring Device PID	

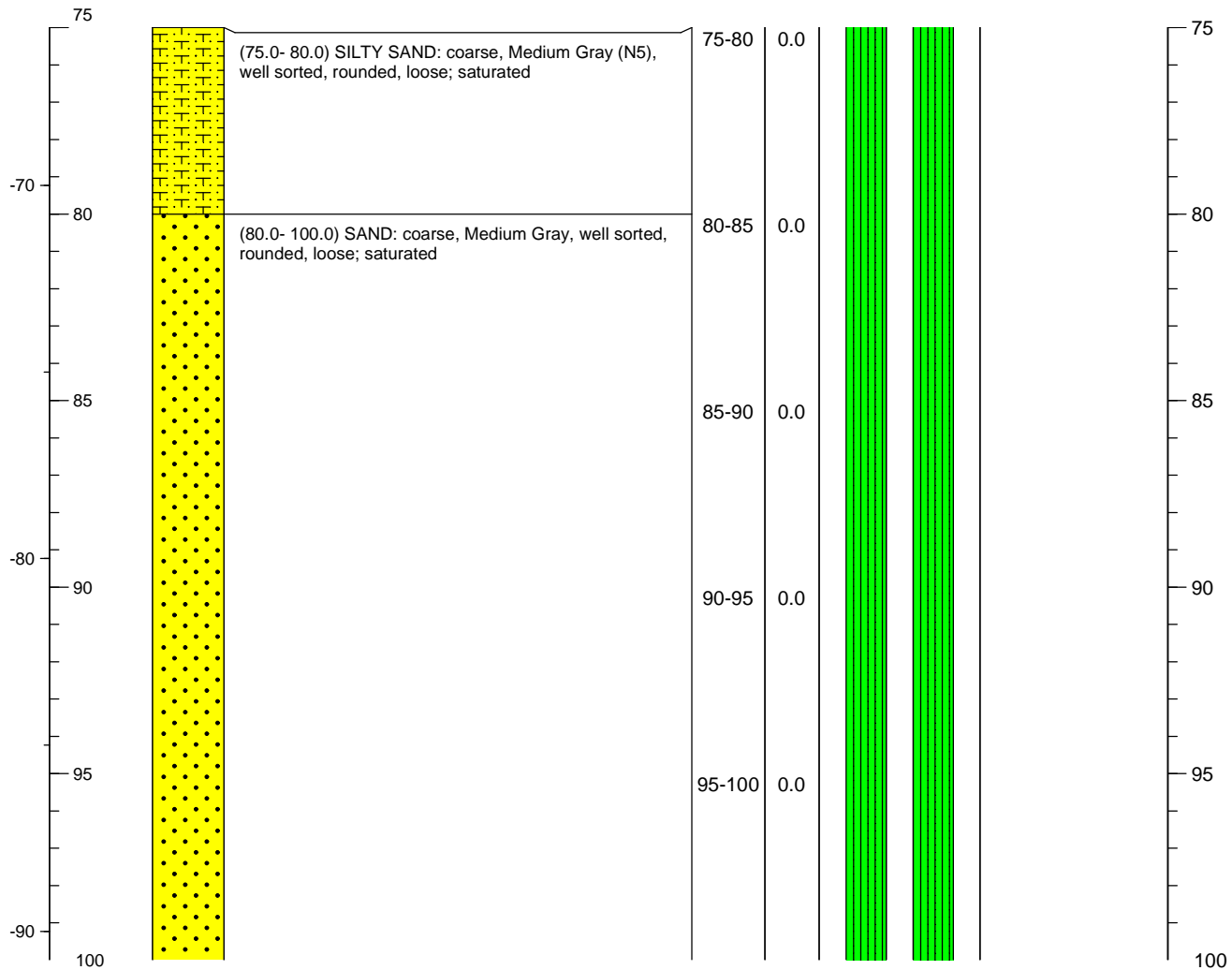
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Depth





Project Name			Well Number	
Ashland Brunswick Georgia			MW-44D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424883.450 871751.700	Ground Surface Elevation 9.23
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 120-130 ft		Top of Well Casing Elevation 12.07
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 130 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/31/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

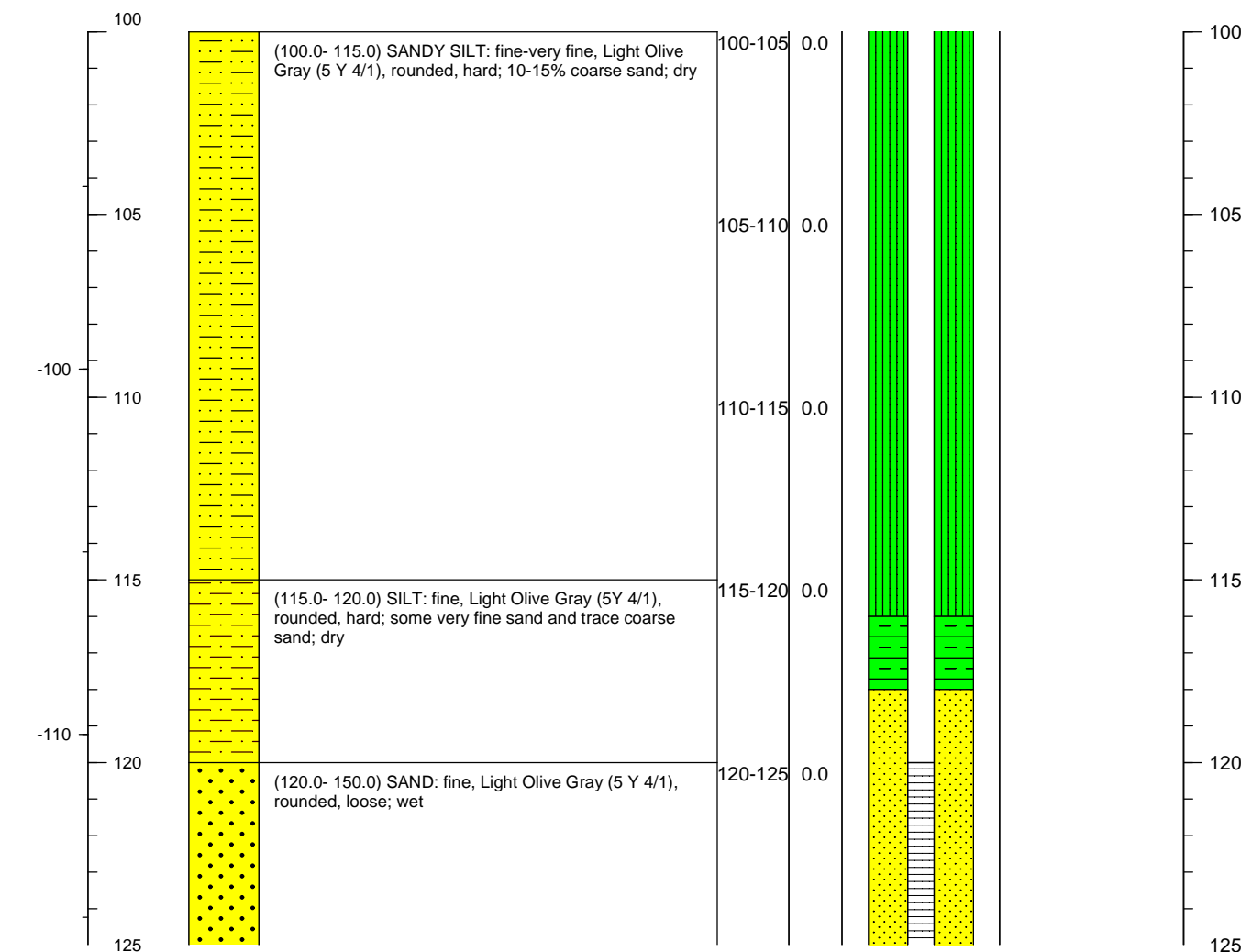
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Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Depth





Project Name			Well Number	
Ashland Brunswick Georgia			MW-44D	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424883.450 871751.700	Ground Surface Elevation 9.23
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 120-130 ft		Top of Well Casing Elevation 12.07
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 130 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 150 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 3/31/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

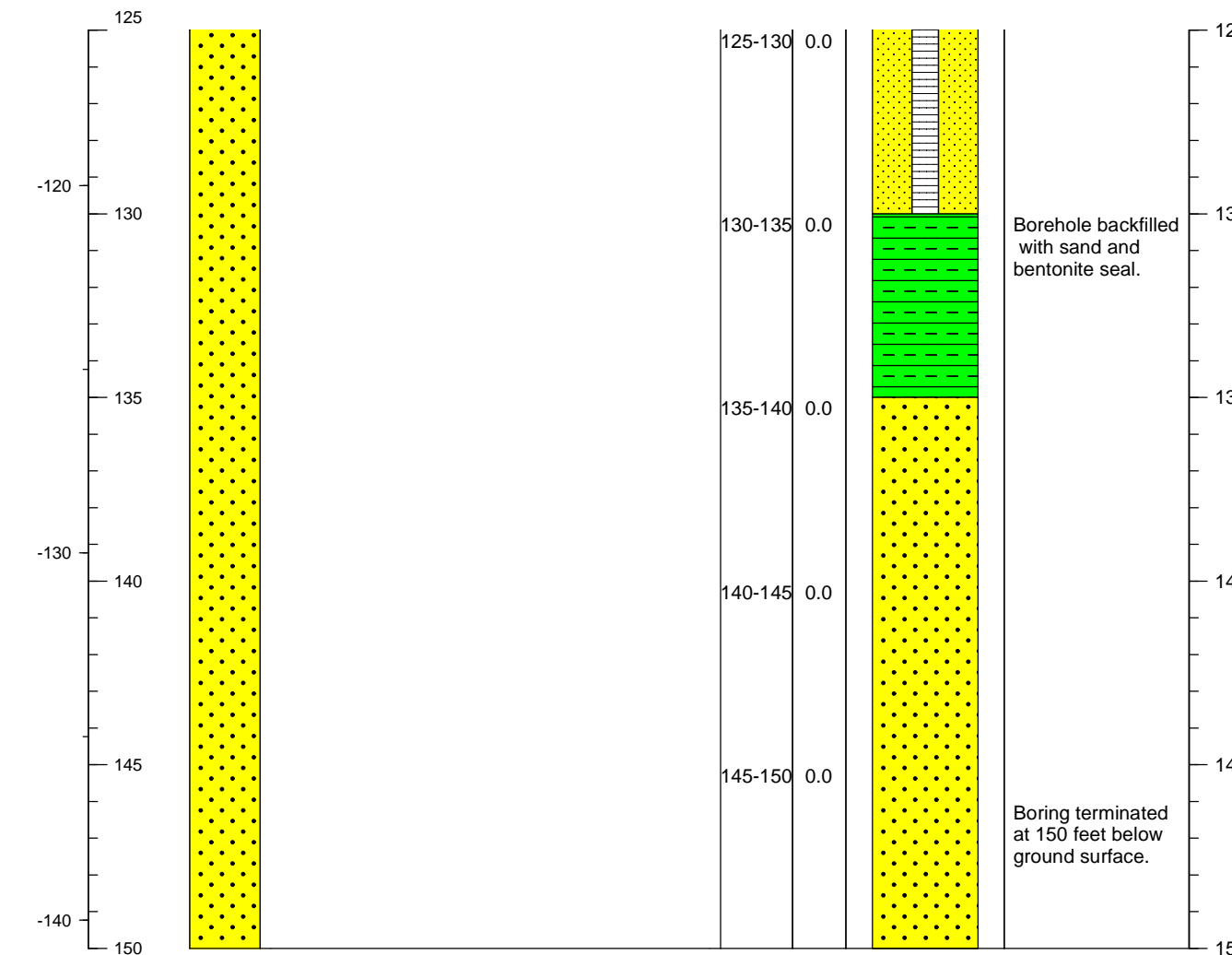
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Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Depth





Project Name Ashland Brunswick Georgia			Monitoring Well Construction Log		Well Number MW-44D			
Address 2801 Cook Street Brunswick Georgia		Drilling Contractor/License Groundwater Protection	Northing Easting		424883.450 871751.700		Ground Surface Elevation 9.23	
		Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 120-130 ft				Top of Well Casing Elevation 12.07	
GA EPD Number GAD004065520		Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch				Total Well Depth 130 ft	
Logged By R. McLain Approved By R. Cate		Date Drilling Started 3/29/10	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 150 ft		Boring Dia. 6 in.	
Driller Name B. Niles Project Number WBS30012B1		Date Drilling Completed 3/31/10	Sampling Method Continuous Cores				Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details


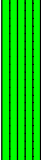
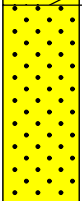
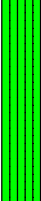






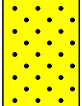
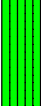
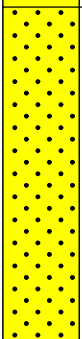
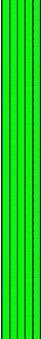






Project Name			Well Number	
Ashland Brunswick Georgia			MW-45I	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	423891.953 870162.216	Ground Surface Elevation 11.08
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 40-55 ft		Top of Well Casing Elevation 13.84
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 55 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/7/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 60 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/7/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

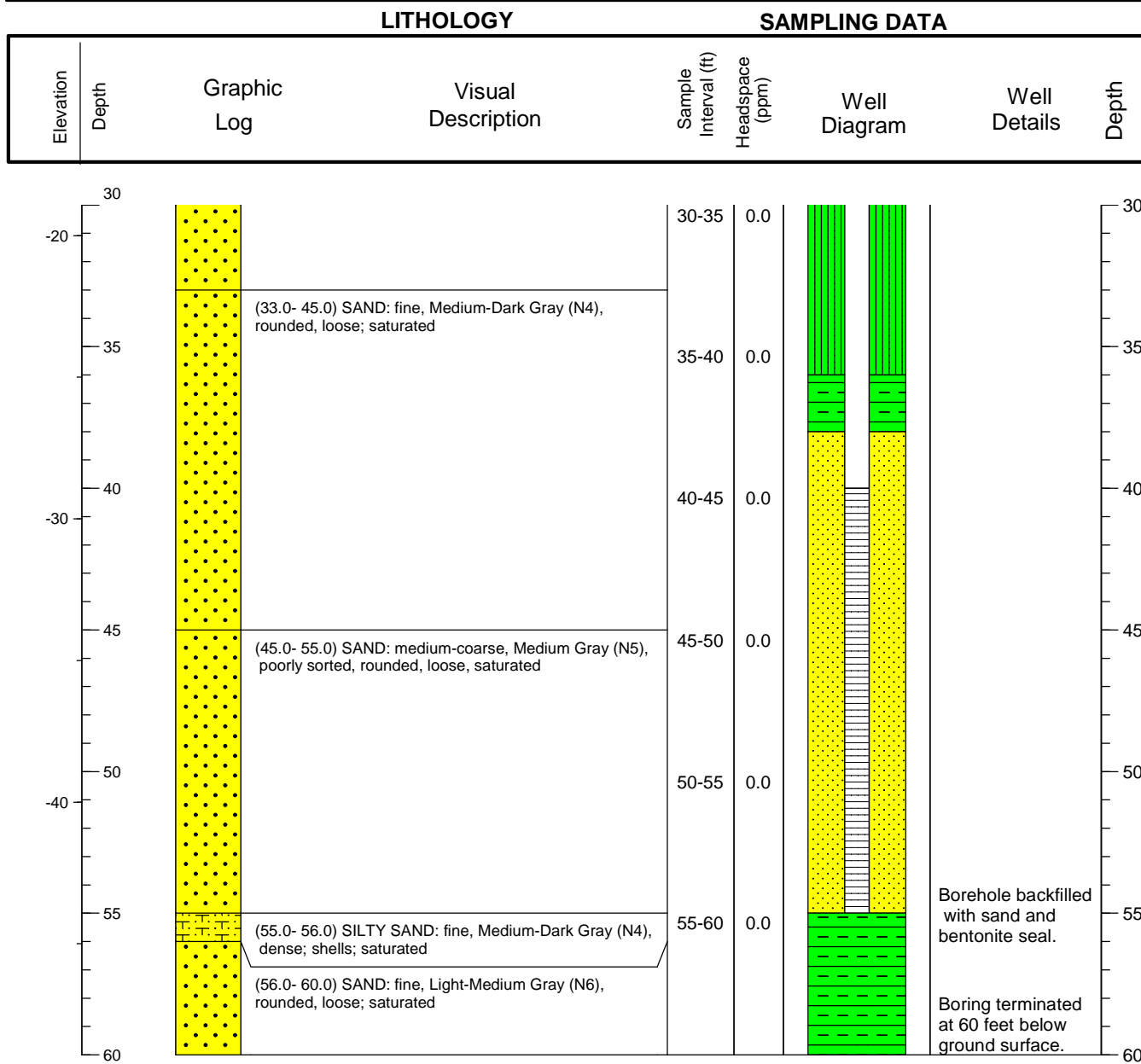
### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0								0
10			(0.0- 5.0) FILL  0 - 5 Post-hole	0-5	0.0		Protective Cover: Stick Up/Well Pad: 3'x3'	
5			(5.0- 11.0) SAND: fine, Grayish Brown, well rounded, loose; saturated	5-10	0.0		Bentonite/Cement: 0-36'	5
10			(11.0- 13.0) SAND: fine, Dusty Brown (2/2), well rounded, loose; saturated	10-15	0.0		Bentonite: 36-38'	10
0			(13.0- 16.0) SAND: fine, Pale Brown (2/2), well rounded, loose; saturated	15-20	0.0		#2 Silica Sand: 38-55'	
15			(16.0- 20.0) SAND: fine, Moderate Brown (3/4), well rounded, loose; saturated	20-25	0.0		Well Casing: 0-40'	15
20			(20.0- 33.0) SAND: fine-medium, Medium-Dark Gray (N4), rounded, loose; saturated	25-30	0.0		Well Screen: 40-55'	20
-10							Well Diameter: 2"	15
25							Bentonite: 55-60'	25
30							20/30 Sand Backfill	30





Project Name			Well Number	
Ashland Brunswick Georgia			MW-45I	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	423891.953 870162.216	Ground Surface Elevation 11.08
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 40-55 ft		Top of Well Casing Elevation 13.84
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 55 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/7/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 60 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/7/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

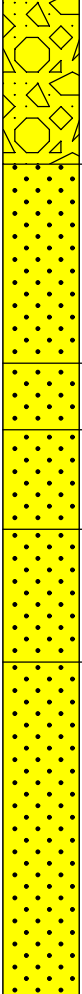
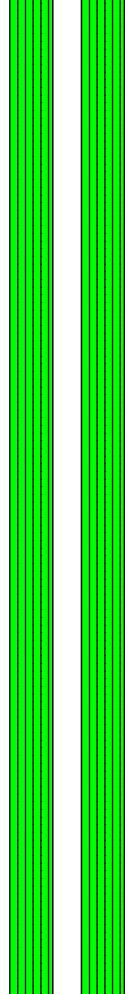




Project Name			Monitoring Well Construction Log		Well Number	
Ashland Brunswick Georgia					MW-46I	
Address	Drilling Contractor/License		Northing	423608.107	Ground Surface Elevation	
2801 Cook Street	Groundwater Protection		Easting	871022.739	8.34	
Brunswick	Georgia	Drilling Equipment	Well Screen Interval		Top of Well Casing Elevation	
		Rousie SR1 w/Detric Head	40-55 ft		10.94	
GA EPD Number		Drilling Method	Well Screen Slot Size		Total Well Depth	
GAD004065520		Sonic Drilling	0.01 inch		55 ft	
Logged By R. McLain		Date Drilling Started	Well Casing Diameter and Type		Boring Depth	Boring Dia.
Approved By R. Cate		4/6/10	2 in. SCH 40 PVC		60 ft	6 in.
Driller Name B. Niles		Date Drilling Completed	Sampling Method		Headspace Monitoring Device	
Project Number WBS30012B1		4/6/10	Continuous Cores		PID	

### LITHOLOGY

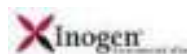
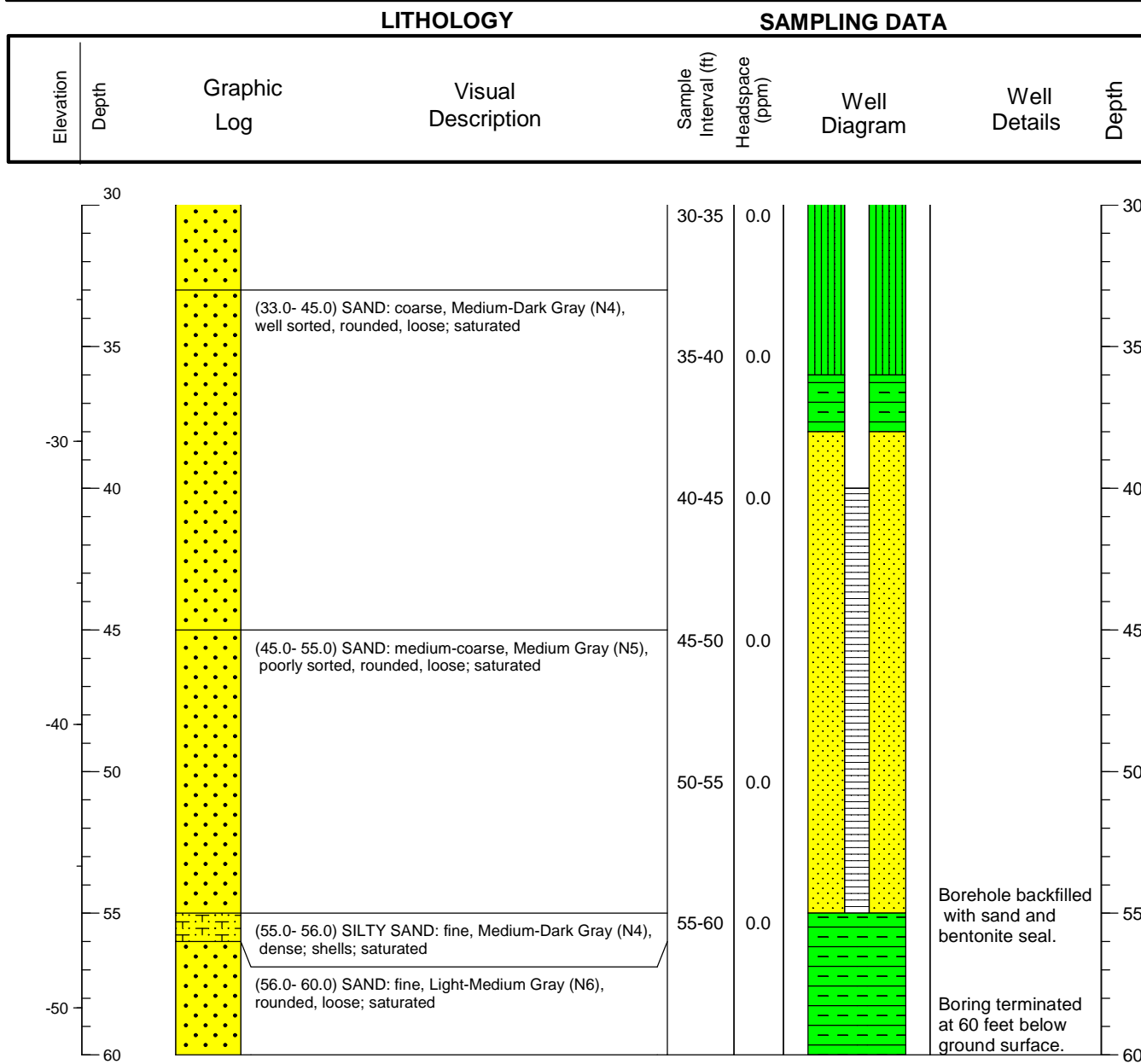
### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 5.0) FILL 0 - 5 Post-hole	0-5	0.0		Protective Cover: Stick Up/Well Pad: 3'x3'  Bentonite/Cement: 0-36'  Bentonite: 36-38'  #2 Silica Sand: 38-55'  Well Casing: 0-40'  Well Screen: 40-55'  Well Diameter: 2"  Bentonite: 55-60'  20/30 Sand Backfill	0
	5		(5.0- 11.0) SAND: fine, Grayish Brown, well rounded, loose; saturated	5-10	7.4			5
	10		(11.0- 13.0) SAND: fine, Dusty Brown (2/2), well rounded, loose; saturated	10-15	3.0			10
	15		(13.0- 16.0) SAND: fine, Pale Brown (2/2), well rounded, loose; saturated	15-20	70.0			15
	20		(16.0- 20.0) SAND: fine, Moderate Brown (3/4), well rounded, loose; saturated	20-25	14.4			20
	25		(20.0- 33.0) SAND: fine-medium, Medium-Dark Gray (N4), rounded, loose; saturated	25-30	2.5			25
	30							30





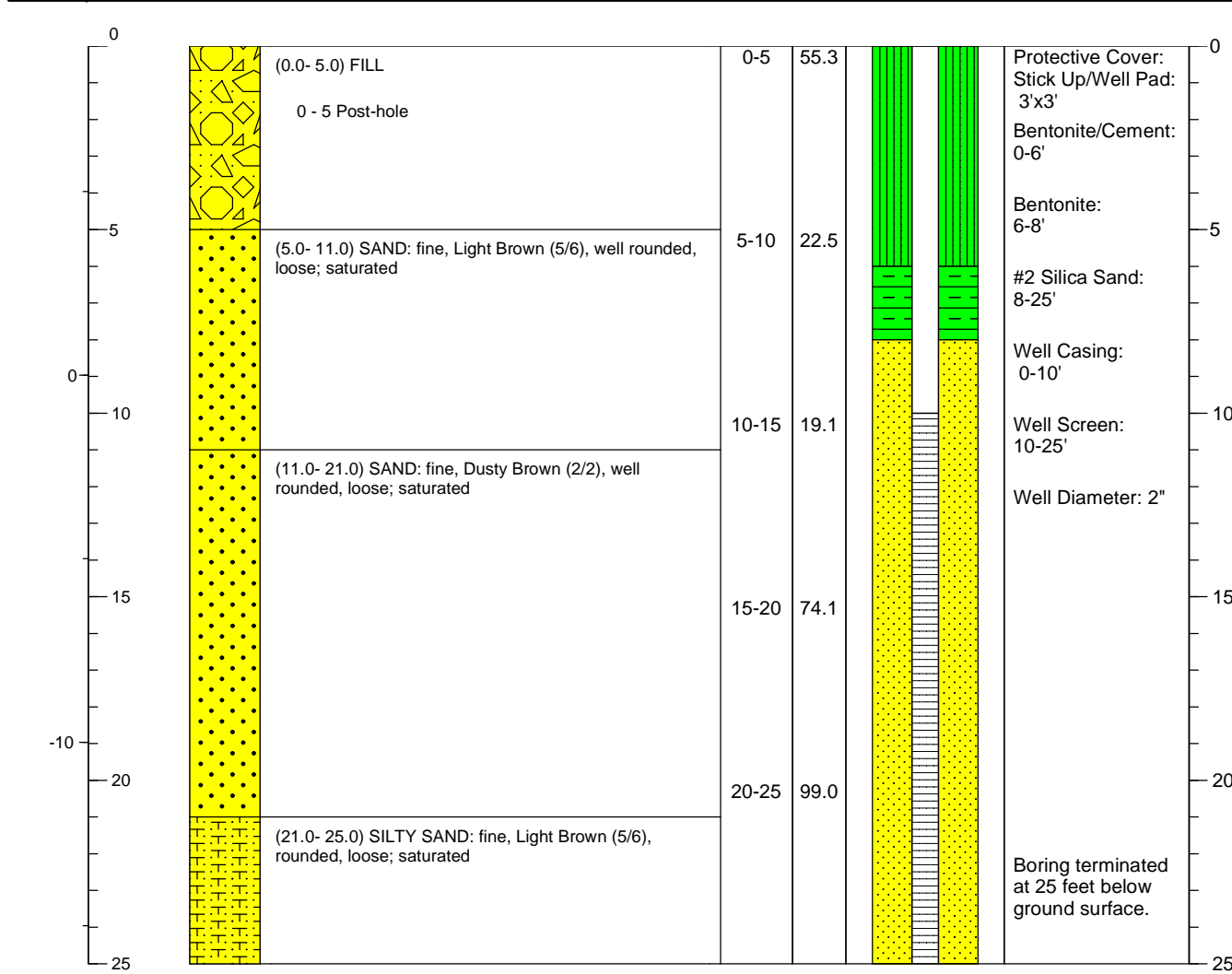
Project Name			Well Number	
Ashland Brunswick Georgia			MW-46I	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	423608.107 871022.739	Ground Surface Elevation 8.34
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 40-55 ft		Top of Well Casing Elevation 10.94
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 55 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/6/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 60 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/6/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	





Project Name			Well Number	
Ashland Brunswick Georgia			MW-48S	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424383.285 870157.589	Ground Surface Elevation 8.96
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 10-25 ft		Top of Well Casing Elevation 11.15
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 25 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/8/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 25 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/9/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Monitoring Well Construction Log		Well Number	
Ashland Brunswick Georgia					MW-48I	
Address	Drilling Contractor/License		Northing	424390.920	Ground Surface Elevation	
2801 Cook Street	Groundwater Protection		Easting	870164.910	9.14	
Brunswick	Georgia	Drilling Equipment	Well Screen Interval		Top of Well Casing Elevation	
		Rousie SR1 w/Detric Head	40-55 ft		11.12	
GA EPD Number		Drilling Method	Well Screen Slot Size		Total Well Depth	
GAD004065520		Sonic Drilling	0.01 inch		55 ft	
Logged By R. McLain		Date Drilling Started	Well Casing Diameter and Type		Boring Depth	Boring Dia.
Approved By R. Cate		4/12/10	2 in. SCH 40 PVC		55 ft	6 in.
Driller Name B. Niles		Date Drilling Completed	Sampling Method		Headspace Monitoring Device	
Project Number WBS30012B1		4/12/10	Continuous Cores		PID	

### LITHOLOGY

### SAMPLING DATA

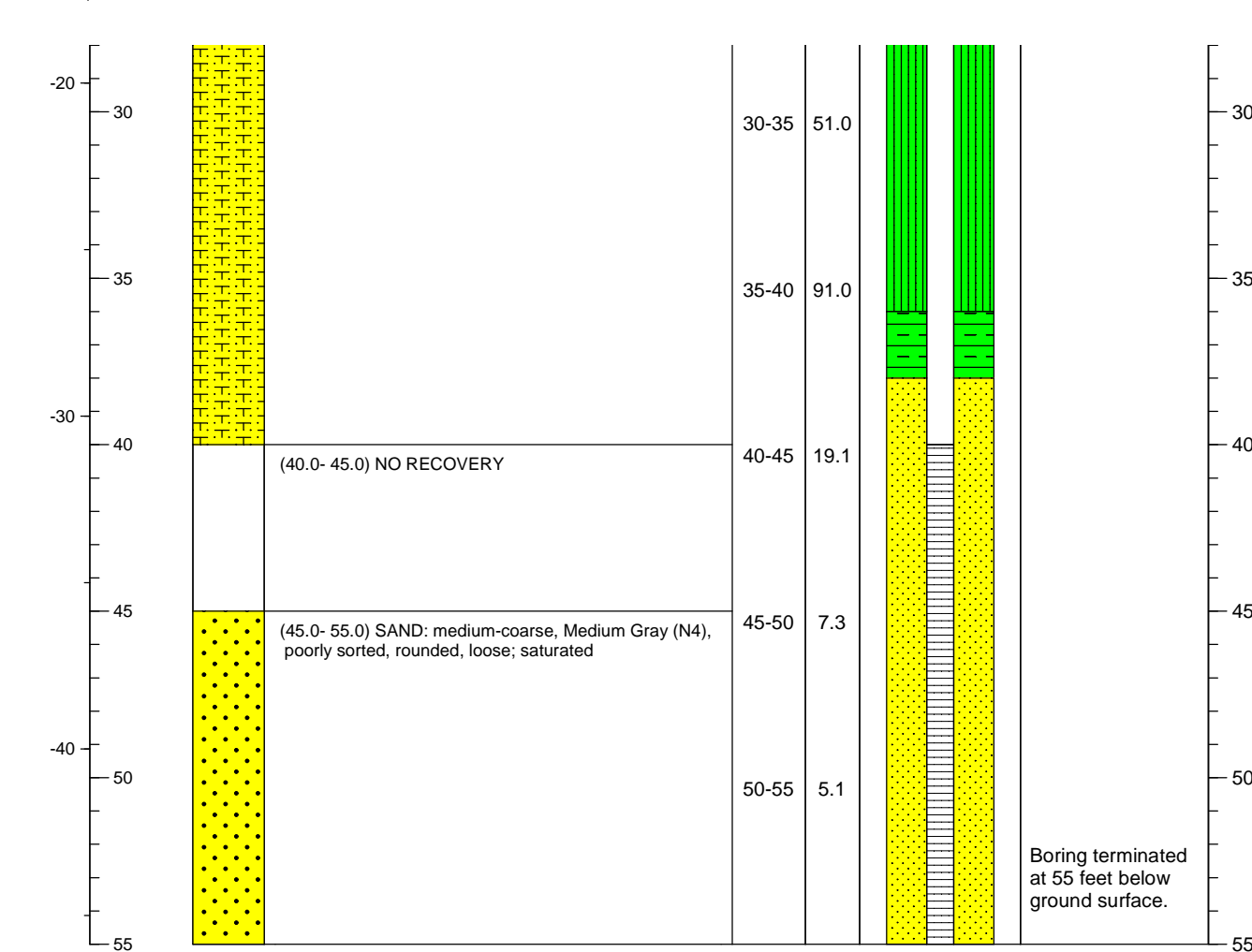
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 5.0) FILL 0 - 5 Post-hole	0-5	55.3		Protective Cover: Stick Up/Well Pad: 3'x3' Bentonite/Cement: 0-36'	0
-5			(5.0- 11.0) SAND: fine, Light Brown (5/6), well rounded, loose; saturated	5-10	22.5		Bentonite: 36-38'	5
0				10-15	19.1		#2 Silica Sand: 38-55'	
-10			(11.0- 21.0) SAND: fine, Dusty Brown (2/2), well rounded, loose; saturated	15-20	74.1		Well Casing: 0-40'	10
-15				20-25	99.0		Well Screen: 40-55'	15
-20			(21.0- 26.0) SILTY SAND: fine, Light Brown (5/6), rounded, loose; saturated	25-30	30.0		Well Diameter: 2"	20
-25			(26.0- 40.0) SILTY SAND: fine, Dark Yellowish-Brown (10YR 4/2), rounded, loose; saturated					25





Project Name			Monitoring Well Construction Log		Well Number	
Ashland Brunswick Georgia					MW-48I	
Address	Drilling Contractor/License		Northing	424390.920	Ground Surface Elevation	
2801 Cook Street	Groundwater Protection		Easting	870164.910	9.14	
Brunswick	Georgia	Drilling Equipment	Well Screen Interval	40-55 ft	Top of Well Casing Elevation	
		Rousie SR1 w/Detric Head			11.12	
GA EPD Number		Drilling Method	Well Screen Slot Size		Total Well Depth	
GAD004065520		Sonic Drilling	0.01 inch		55 ft	
Logged By R. McLain		Date Drilling Started	Well Casing Diameter and Type		Boring Depth	Boring Dia.
Approved By R. Cate		4/12/10	2 in. SCH 40 PVC		55 ft	6 in.
Driller Name B. Niles		Date Drilling Completed	Sampling Method		Headspace Monitoring Device	
Project Number WBS30012B1		4/12/10	Continuous Cores		PID	

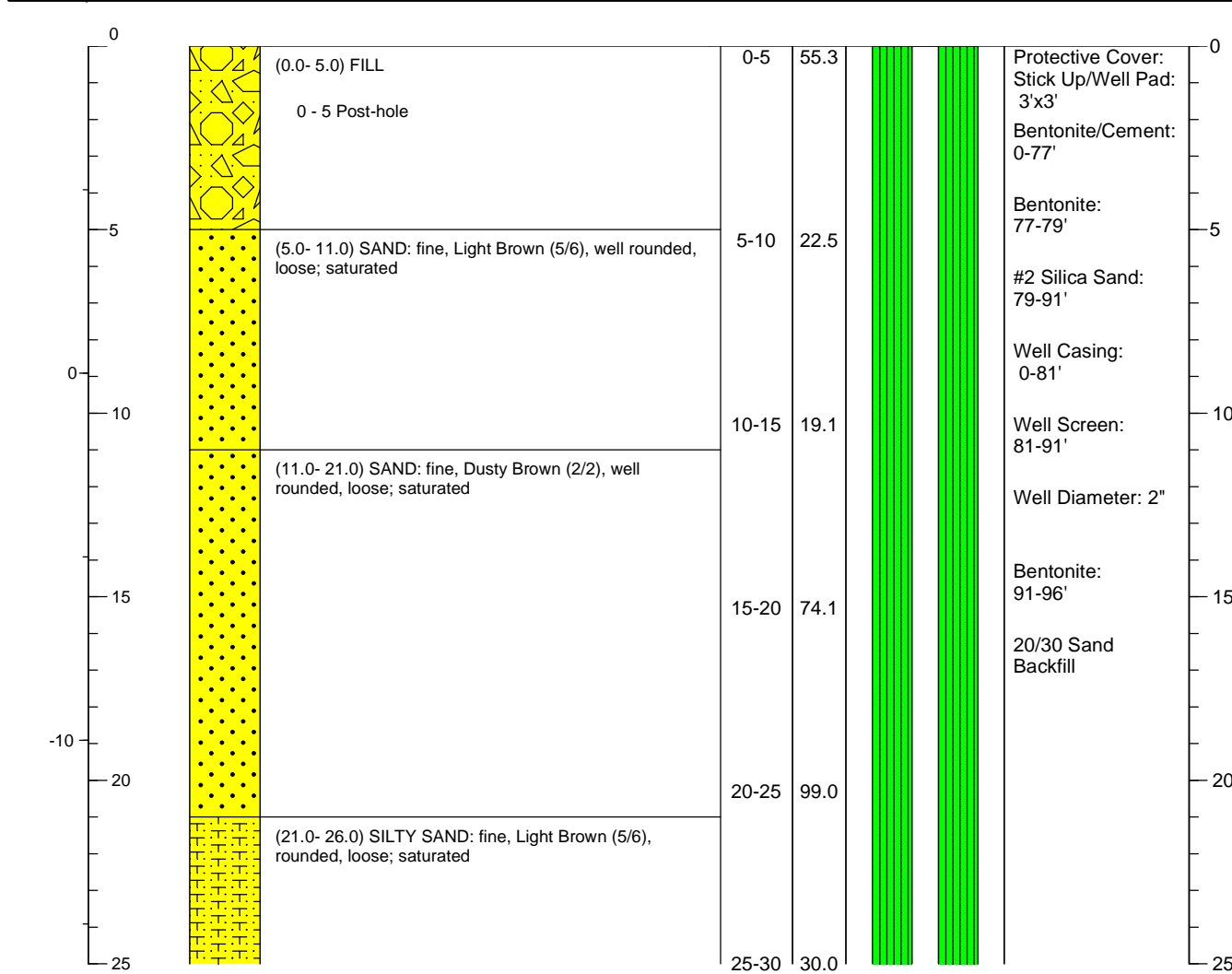
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Well Number	
Ashland Brunswick Georgia			MW-48D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424392.800 870154.611	Ground Surface Elevation 8.91
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 81-91 ft		Top of Well Casing Elevation 11.12
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 91 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/8/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/9/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

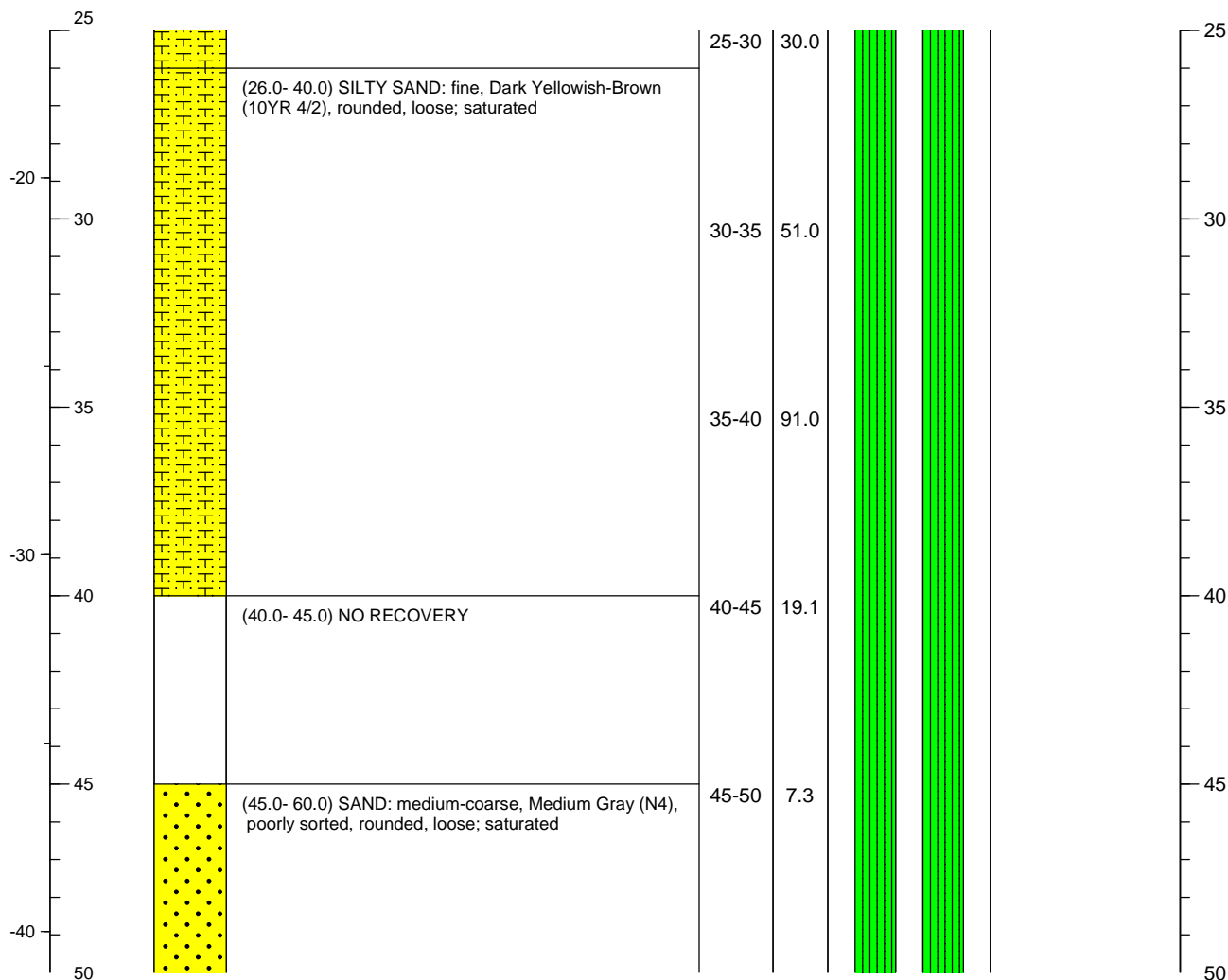
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Well Number	
Ashland Brunswick Georgia			MW-48D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424392.800 870154.611	Ground Surface Elevation 8.91
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 81-91 ft		Top of Well Casing Elevation 11.12
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 91 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/8/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/9/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

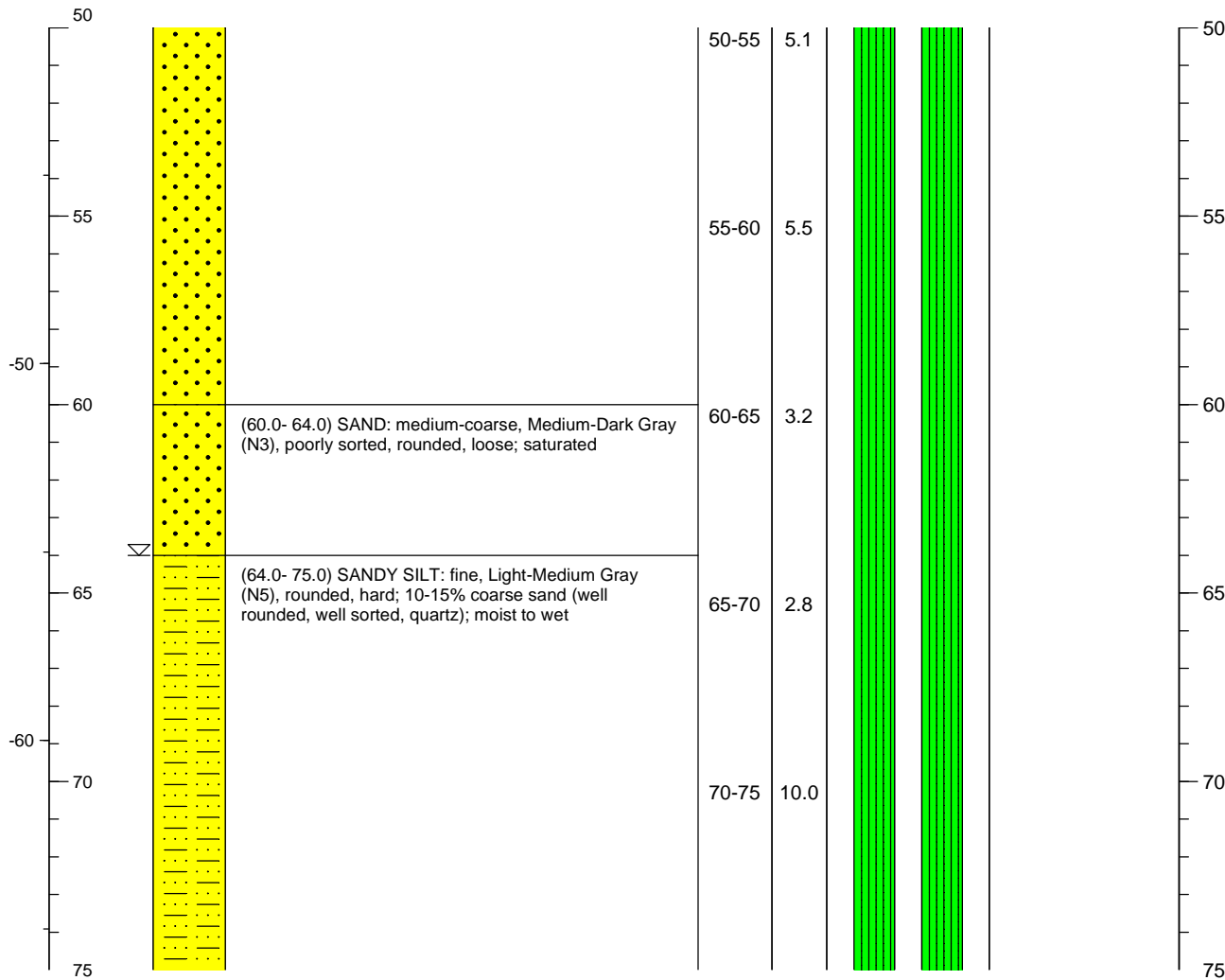
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name Ashland Brunswick Georgia			Monitoring Well Construction Log		Well Number MW-48D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424392.800 870154.611	Ground Surface Elevation 8.91		
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 81-91 ft		Top of Well Casing Elevation 11.12		
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 91 ft		
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/8/10	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 100 ft	Boring Dia. 6 in.	
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/9/10	Sampling Method Continuous Cores		Headspace Monitoring Device PID		

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Depth





Project Name			Well Number	
Ashland Brunswick Georgia			MW-48D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424392.800 870154.611	Ground Surface Elevation 8.91
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 81-91 ft		Top of Well Casing Elevation 11.12
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 91 ft	
Logged By R. McLain Approved By R. Cate	Date Drilling Started 4/8/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/9/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

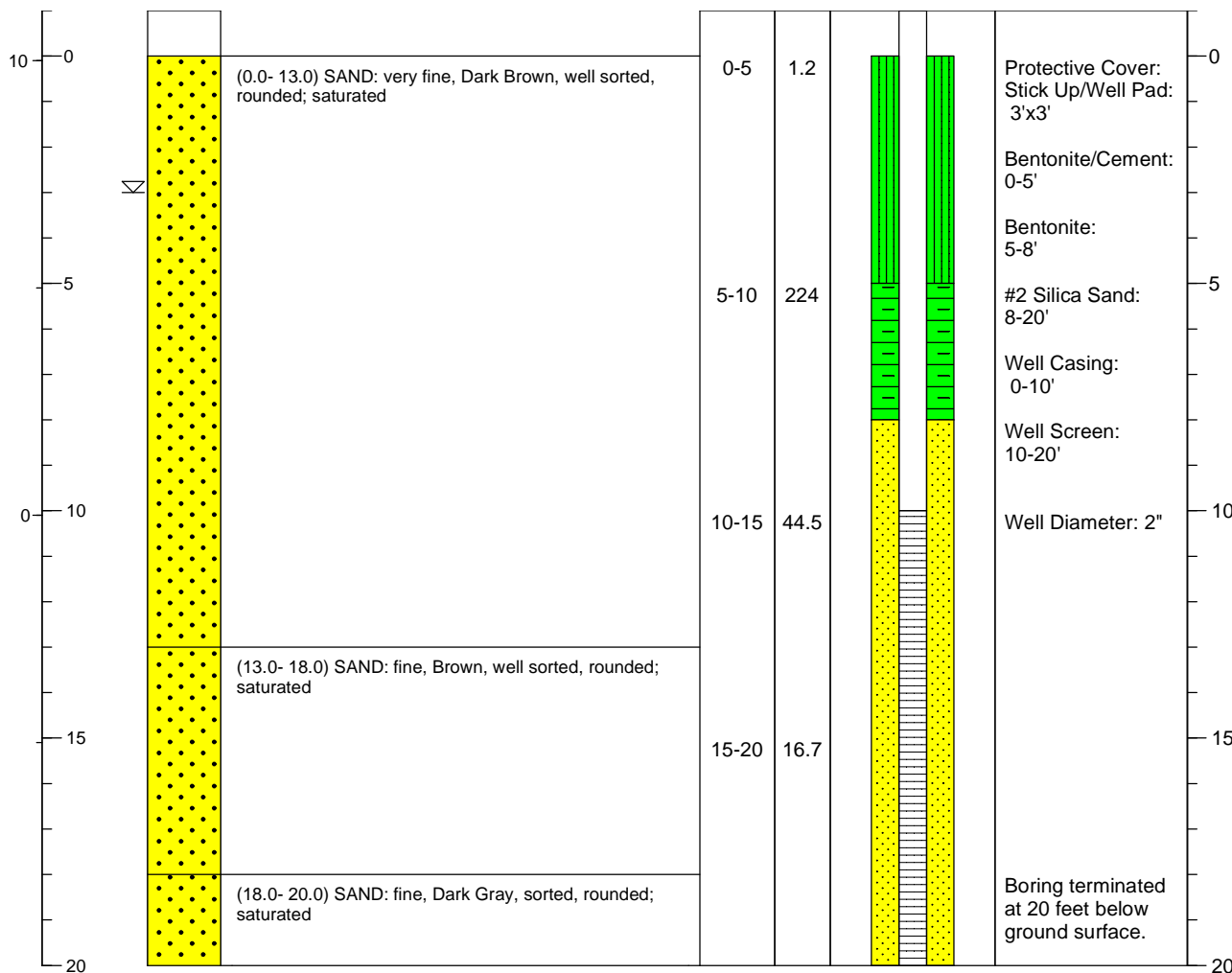
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
75								75
			(75.0- 80.0) SANDY SILT: fine-medium, Light-Medium Gray (N5), rounded, hard; dry	75-80	6.6			
-70								
	80		(80.0- 91.0) SAND: coarse, Medium-Dark Gray (N3), well sorted, rounded, loose; saturated	80-85	6.1			80
	85			85-90	5.9			85
-80								
	90		(91.0- 93.0) SANDY SILT: fine, Light-Medium Gray (N5), rounded, hard; moist	90-95	6.4			90
			(92.0- 93.0) SANDY SILT: fine, Light-Medium Gray (N5), rounded, hard; dry					
	95		(93.0- 100.0) SANDY SILT: fine, Olive Gray (5 Y 4/1), rounded, hard; 15-25% coarse sand, quartz; moist	95-100	7.1			95
							Borehole backfilled with sand and bentonite seal.	
-90								
	100						Boring terminated at 100 feet below ground surface.	100





Project Name Former Hercules Brunswick Facility Georgia			Monitoring Well Construction Log		Well Number MW-49S	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	424230.9 870730.9	Ground Surface Elevation 10.10		
	Drilling Equipment Boart Big Rig	Well Screen Interval 10 - 20 ft		Top of Well Casing Elevation 10.00		
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 20 ft		
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/29/12	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 20 ft.	Boring Dia. 4 in. / 6 in.	
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/29/12	Sampling Method 4" Continuous Cores		Headspace Monitoring Device PID		

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details

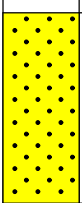








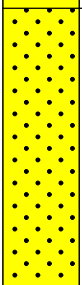









Project Name Former Hercules Brunswick Facility Georgia			Monitoring Well Construction Log		Well Number MW-49I	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	424229.7 870726.5	Ground Surface Elevation 10.10		
	Drilling Equipment Mini Sonic	Well Screen Interval 57 - 67 ft		Top of Well Casing Elevation 9.85		
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 67 ft		
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/29/12	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 67 ft.	Boring Dia. 4 in. / 6 in.	
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/29/12	Sampling Method 4" Continuous Cores		Headspace Monitoring Device PID		

### LITHOLOGY

### SAMPLING DATA

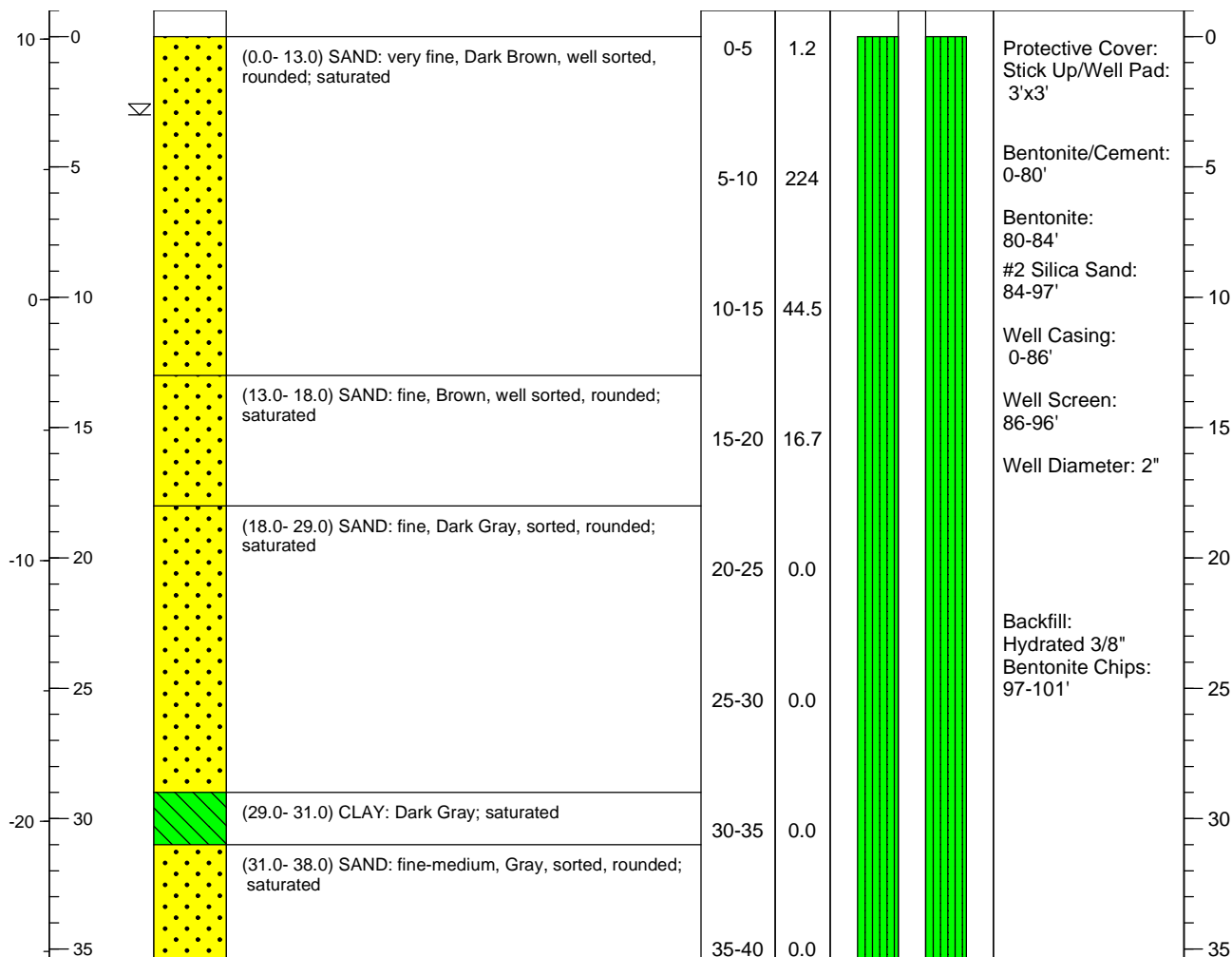
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
10	0		(0.0- 13.0) SAND: very fine, Dark Brown, well sorted, rounded; saturated	0-5	1.2		Protective Cover: Stick Up/Well Pad: 3'x3'	0
5				5-10	224		Bentonite/Cement: 0-51'	5
0	10			10-15	44.5			10
15			(13.0- 18.0) SAND: fine, Brown, well sorted, rounded; saturated	15-20	16.7		Bentonite: 51-55'	15
-10	20		(18.0- 29.0) SAND: fine, Dark Gray, sorted, rounded; saturated	20-25	0.0		#2 Silica Sand: 55-67'	20
-25				25-30	0.0		Well Casing: 0-57'	25
-20	30		(29.0- 31.0) CLAY: Dark Gray; saturated	30-35	0.0		Well Screen: 57-67'	30
-35			(31.0- 38.0) SAND: fine-medium, Gray, sorted, rounded; saturated	35-40	0.0		Well Diameter: 2"	35
-30	40		(38.0- 57.0) SAND: medium, Light Gray, well sorted, rounded; saturated	40-45	4.2			40
-45				45-50	13.1			45
-40	50			50-55	0.0			50
-55			(57.0- 61.0) SAND: medium-coarse, Dark Gray, sorted, rounded; saturated	55-60	0.0			55
-50	60		(61.0- 67.0) SAND: coarse, Dark Gray, well sorted, rounded; saturated	60-65	0.3			60
-65				65-67	0.0		Boring terminated at 67 feet below ground surface.	65





Project Name			Well Number	
Former Hercules Brunswick Facility Georgia			MW-49D	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	424232.1 870735.1	Ground Surface Elevation 10.10
	Drilling Equipment Boart Big Rig	Well Screen Interval 86 - 96 ft		Top of Well Casing Elevation 9.79
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 96 ft	
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/29/12	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 103 ft.	Boring Dia. 4 in. / 6 in.
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/29/12	Sampling Method 4" Continuous Cores	Headspace Monitoring Device PID	

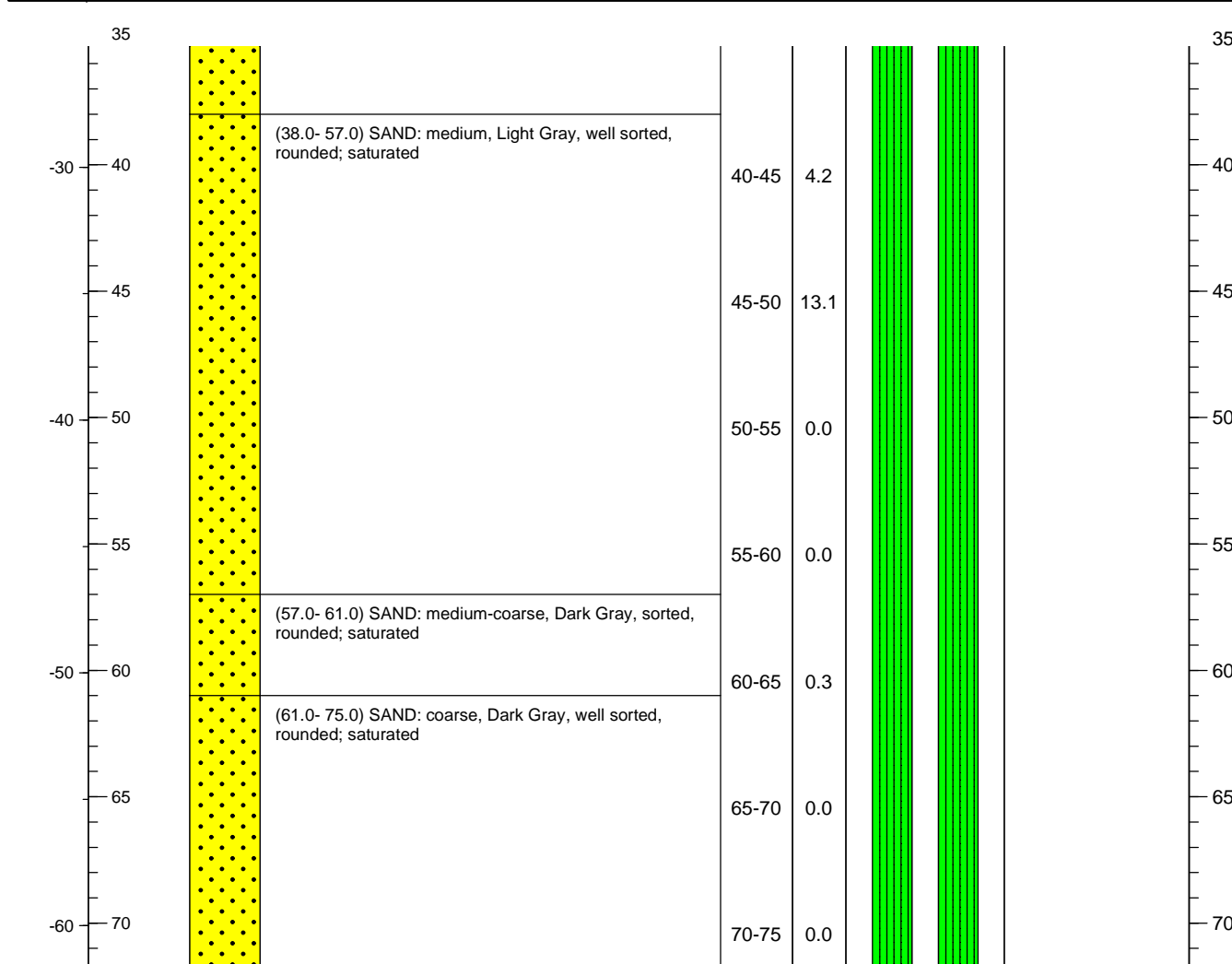
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





<b>Project Name</b> Former Hercules Brunswick Facility Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-49D
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Boart Longyear</b>	Northing Easting <b>424232.1</b> <b>870735.1</b>	Ground Surface Elevation <b>10.10</b>	
	Drilling Equipment <b>Boart Big Rig</b>	Well Screen Interval <b>86 - 96 ft</b>	Top of Well Casing Elevation <b>9.79</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Sonic Drilling</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>96 ft</b>	
Logged By <b>R. McLain</b> Approved By <b>D. Salisbury</b>	Date Drilling Started <b>3/29/12</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>103 ft.</b>	Boring Dia. <b>4 in. / 6 in.</b>
Driller Name <b>J. Sousa</b> Project Number <b>WBS30012B1</b>	Date Drilling Completed <b>3/29/12</b>	Sampling Method <b>4" Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

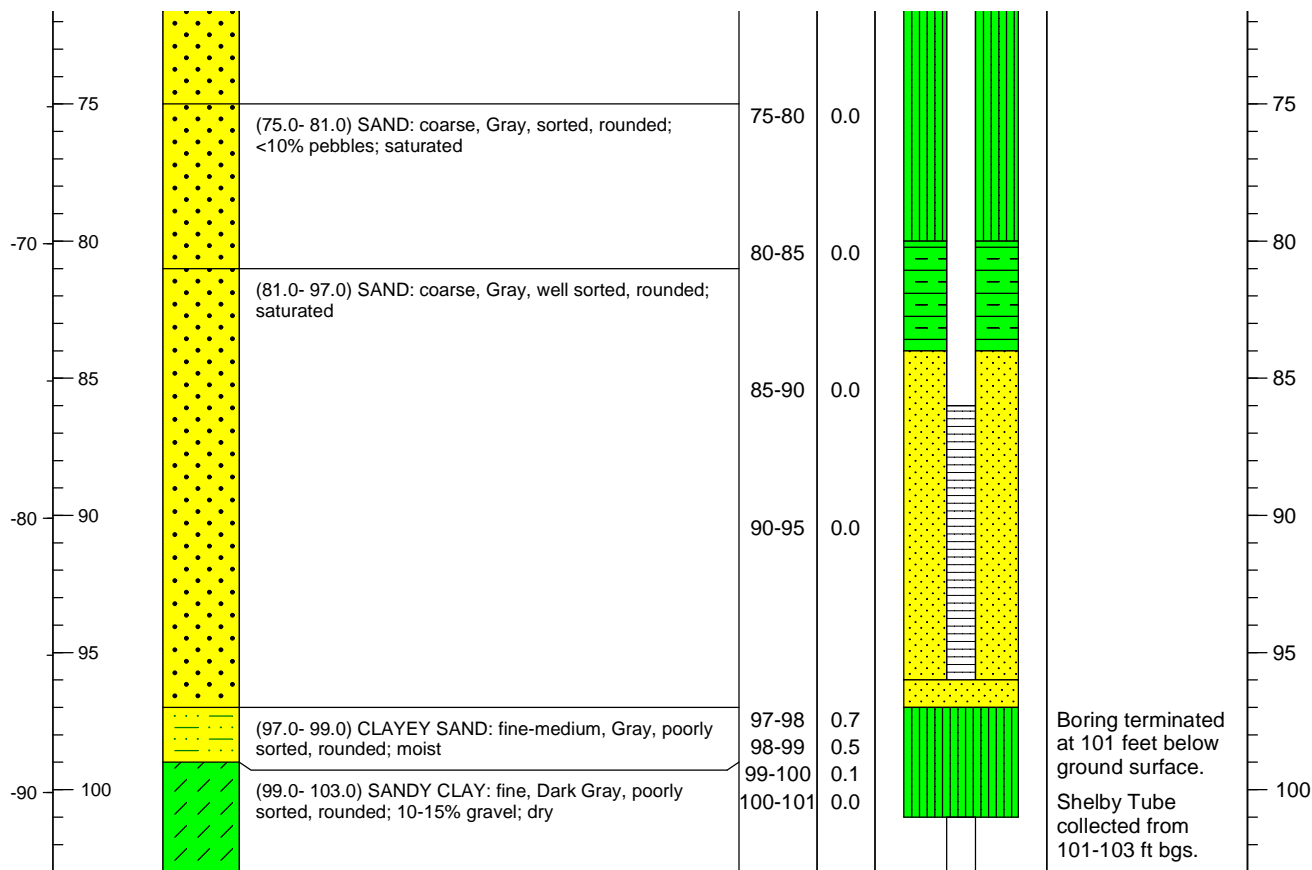
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Depth





Project Name			Well Number	
Former Hercules Brunswick Facility Georgia			MW-49D	
Monitoring Well Construction Log				
Address		Drilling Contractor/License	Northing	Ground Surface Elevation
2801 Cook Street		Boart Longyear	424232.1	10.10
Brunswick Georgia		Drilling Equipment	Easting	
		Boart Big Rig	870735.1	
			Well Screen Interval	Top of Well Casing Elevation
			86 - 96 ft	9.79
GA EPD Number		Drilling Method	Well Screen Slot Size	Total Well Depth
GAD004065520		Sonic Drilling	0.01 inch	96 ft
Logged By R. McLain		Date Drilling Started	Well Casing Diameter and Type	Boring Depth
Approved By D. Salisbury		3/29/12	2 in. SCH 40 PVC	Boring Dia.
				103 ft.
				4 in. / 6 in.
Driller Name J. Sousa		Date Drilling Completed	Sampling Method	Headspace Monitoring Device
Project Number WBS30012B1		3/29/12	4" Continuous Cores	PID

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Depth





Project Name Former Hercules Brunswick Facility Georgia			Monitoring Well Construction Log		Well Number MW-50S	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	422953.1 872360.3	Ground Surface Elevation 7.80		
	Drilling Equipment Mini Sonic	Well Screen Interval 10 - 20 ft		Top of Well Casing Elevation 7.82		
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 20 ft		
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/14/12	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 20 ft	Boring Dia. 4 in. / 6 in.	
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/15/12	Sampling Method 4" Continuous Cores		Headspace Monitoring Device PID		

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0	0		(0.0- 10.0) SAND: fine, Dark Brown, well sorted, rounded; saturated at 3'	0-5	3.0		Protective Cover: Flush Mount 8" Manhole Well Pad: 3'x3'	0
	5			5-10	1.7			5
	10			10-15	0.0			10
	15			15-20	0.0			15
	20							20





Project Name			Well Number	
Former Hercules Brunswick Facility Georgia			MW-50I	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	422952.7 872366.4	Ground Surface Elevation 7.90
	Drilling Equipment Mini Sonic	Well Screen Interval 36 - 46 ft		Top of Well Casing Elevation 7.88
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 46 ft	
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/14/12	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 46 ft	Boring Dia. 4 in. / 6 in.
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/15/12	Sampling Method 4" Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0				0-5	3.0		Protective Cover: Flush Mount 8" Manhole Well Pad: 3'x3'	0
-5			(0.0- 10.0) SAND: fine, Dark Brown, well sorted, rounded; saturated at 3'	5-10	1.7		Bentonite/Cement: 0-30'	5
0							Bentonite: 30-34'	10
-10			(10.0- 20.0) SAND: fine, Gray, well sorted, rounded; saturated	10-15	0.0		#2 Silica Sand: 34-46'	15
-15				15-20	0.0		Well Casing: 0-36'	20
-20			(20.0- 30.0) SAND: fine, Gray, well sorted, rounded; <10% shell fragments	20-25	0.0		Well Screen: 36-46'	25
-25				25-30	0.0		Well Diameter: 2"	30
-30			(30.0- 35.0) SAND: very fine, Gray, well sorted, rounded; moist-wet; <10% shell fragments	30-35	0.0			35
-35			(35.0- 40.0) SAND: medium, Gray, well sorted, rounded; saturated; 10-20% shell fragments	35-36	0.0			40
-40			(40.0- 46.0) SAND: medium, Light Gray, well sorted, rounded; moist					45
-45							Boring terminated at 46 feet below ground surface.	





Project Name				Well Number	
Former Hercules Brunswick Facility Georgia		Monitoring Well Construction Log		MW-50D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting 422952.2 872372.5	Ground Surface Elevation 8.10		
	Drilling Equipment Mini Sonic	Well Screen Interval 78 - 88 ft	Top of Well Casing Elevation 8.01		
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 88 ft		
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/14/12	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 4 in. / 6 in.	
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/15/12	Sampling Method 4" Continuous Cores	Headspace Monitoring Device PID		

### LITHOLOGY

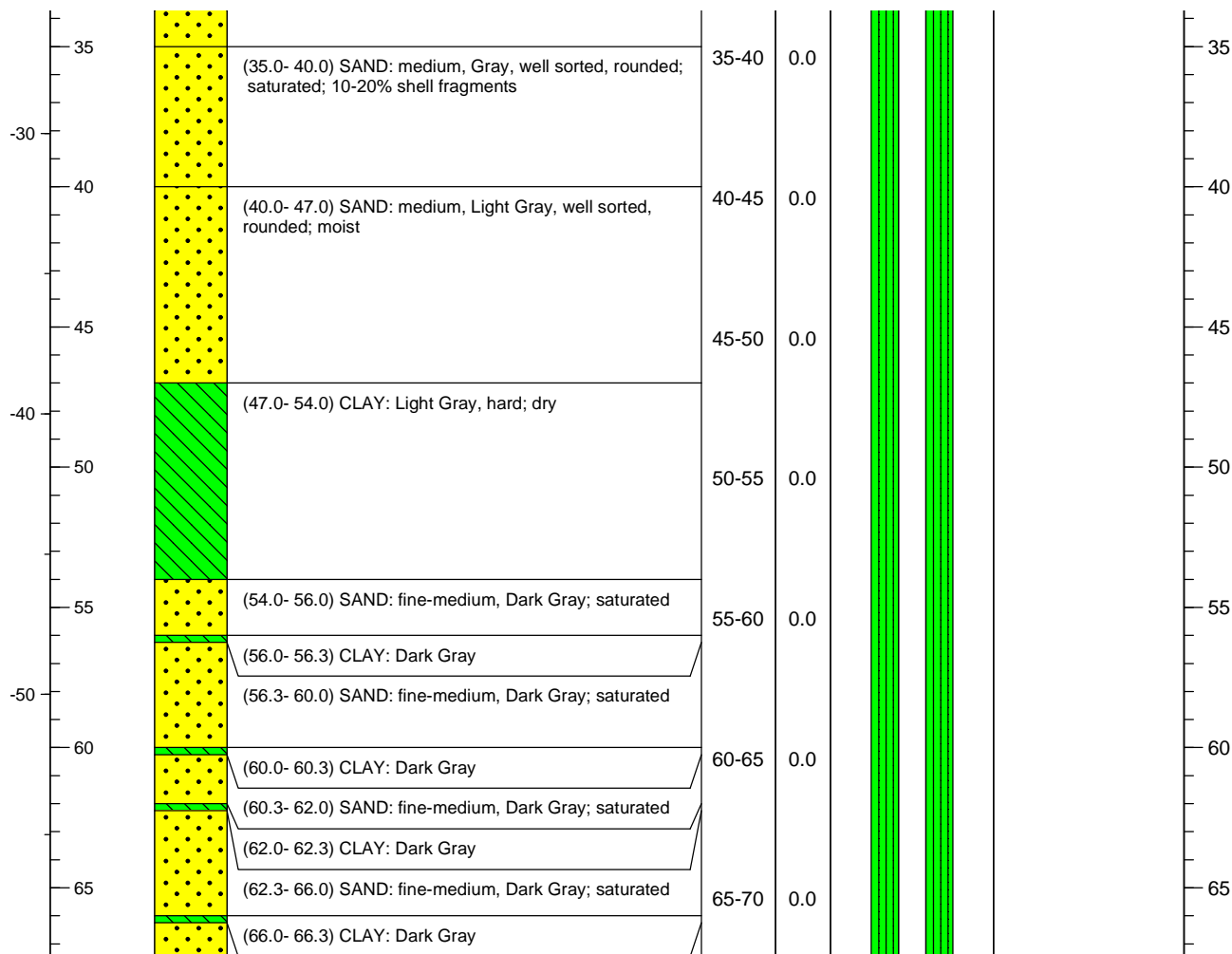
### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0				0-5	3.0		Protective Cover: Flush Mount 8" Manhole Well Pad: 3'x3'	0
				5-10	1.7		Bentonite/Cement: 0-70'	5
				10-15	0.0		Bentonite: 70-75'	10
				15-20	0.0		#2 Silica Sand: 75-89'	15
				20-25	0.0		Well Casing: 0-78'	20
				25-30	0.0		Well Screen: 78-88'	25
				30-35	0.0		Well Diameter: 2"	30
							Backfill: Hydrated 3/8" Bentonite Chips: 89-100'	



Project Name			Well Number	
Former Hercules Brunswick Facility Georgia			MW-50D	
Address  2801 Cook Street  Brunswick      Georgia	Drilling Contractor/License <b>Boart Longyear</b>	Northing Easting	<b>422952.2</b> <b>872372.5</b>	Ground Surface Elevation <b>8.10</b>
	Drilling Equipment <b>Mini Sonic</b>	Well Screen Interval <b>78 - 88 ft</b>	Top of Well Casing Elevation <b>8.01</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Sonic Drilling</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>88 ft</b>	
Logged By <b>R. McLain</b> Approved By <b>D. Salisbury</b>	Date Drilling Started <b>3/14/12</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>100 ft</b>	Boring Dia. <b>4 in. / 6 in.</b>
Driller Name <b>J. Sousa</b> Project Number <b>WBS30012B1</b>	Date Drilling Completed <b>3/15/12</b>	Sampling Method <b>4" Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details









<b>Project Name</b> Former Hercules Brunswick Facility Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> <b>MW-51S</b>
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Boart Longyear</b>	Northing Easting <b>423424.6</b> <b>8723733.4</b>	Ground Surface Elevation <b>7.00</b>	
	Drilling Equipment <b>Mini Sonic</b>	Well Screen Interval <b>10-20 ft</b>	Top of Well Casing Elevation <b>6.71</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Sonic Drilling</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>20 ft</b>	
Logged By <b>R. McLain</b> Approved By <b>D. Salisbury</b>	Date Drilling Started <b>3/20/12</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>20 ft</b>	Boring Dia. <b>4 in / 6 in.</b>
Driller Name <b>J. Sousa</b> Project Number <b>WBS30012B1</b>	Date Drilling Completed <b>3/21/12</b>	Sampling Method <b>4" Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0				0-5	34.1		Protective Cover: Flush Mount 8" Manhole Well Pad: 3'x3'	0
				5-10	2.2		Bentonite/Cement: 0-5'	
				10-15	1.7		Bentonite: 5-8'	
				15-20	2.4		#2 Silica Sand: 8-20'	
							Well Casing: 0-10'	
							Well Screen: 10-20'	
							Well Diameter: 2"	
							Boring terminated at 20 feet below ground surface.	
-10								-10
-20								-20

























Project Name			Well Number	
Former Hercules Brunswick Facility Georgia			MW-511	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	423430.1 872734.5	Ground Surface Elevation 7.10
	Drilling Equipment Mini Sonic	Well Screen Interval 40-50 ft		Top of Well Casing Elevation 6.75
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 50 ft	
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/20/12	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 50 ft	Boring Dia. 4 in / 6 in.
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/21/12	Sampling Method 4" Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0								0
			(0.0- 5.0) SAND: fine, Dark Brown, well sorted, well rounded; saturated at 3'; organic odor	0-5	34.1		Protective Cover: Flush Mount 8" Manhole Well Pad: 3'x3'	
			(5.0- 10.0) SAND: fine, Brown, well sorted, well rounded; saturated	5-10	2.2		Bentonite/Cement: 0-34'	
			(10.0- 15.0) SAND: fine, White to Tan, well sorted, well rounded; saturated	10-15	1.7		Bentonite: 34-38'	
			(15.0- 20.0) SAND: fine, Tan, well sorted, well rounded; saturated	15-20	2.4		#2 Silica Sand: 38-50'	
			(20.0- 40.0) SAND: fine, Gray, well sorted, well rounded; saturated	20-25	1.4		Well Casing: 0-40'	
				25-30	0.1		Well Screen: 40-50'	
				30-35	0.1		Well Diameter: 2"	
				35-40	0.0			
			(40.0- 45.0) NO RECOVERY	40-45	NA			
			(45.0- 50.0) SAND: medium, Gray, sorted, rounded; saturated; 10% shell fragments (~3 mm dia.)	45-50	0.0		Boring terminated at 50 feet below ground surface.	
								50





Project Name			Well Number	
Former Hercules Brunswick Facility Georgia			MW-51D	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	423435.3 872735.5	Ground Surface Elevation 7.10
	Drilling Equipment Mini Sonic	Well Screen Interval 76 - 86 ft		Top of Well Casing Elevation 6.68
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 86 ft	
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/20/12	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 110 ft	Boring Dia. 4 in / 6 in.
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/21/12	Sampling Method 4" Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 5.0) SAND: fine, Dark Brown, well sorted, well rounded; saturated at 3'; organic odor	0-5	34.1		Protective Cover: Flush Mount 8" Manhole Well Pad: 3'x3'	0
	5		(5.0- 10.0) SAND: fine, Brown, well sorted, well rounded; saturated	5-10	2.2		Bentonite/Cement: 0-70'	5
	10		(10.0- 15.0) SAND: fine, White to Tan, well sorted, well rounded; saturated	10-15	1.7		Bentonite: 70-73'	10
	15		(15.0- 20.0) SAND: fine, Tan, well sorted, well rounded; saturated	15-20	2.4		#2 Silica Sand: 73-87'	15
	20		(20.0- 40.0) SAND: fine, Gray, well sorted, well rounded; saturated	20-25	1.4		Well Casing: 0-76'	20
	25			25-30	0.1		Well Screen: 76-86'	25
	30			30-35	0.1		Well Diameter: 2"	30
	35			35-40	0.0		Backfill: Hydrated 3/8" Bentonite Chips: 87-110'	35





Project Name			Well Number	
Former Hercules Brunswick Facility Georgia			MW-51D	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	423435.3 872735.5	Ground Surface Elevation 7.10
	Drilling Equipment Mini Sonic	Well Screen Interval 76 - 86 ft		Top of Well Casing Elevation 6.68
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 86 ft	
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/20/12	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 110 ft	Boring Dia. 4 in / 6 in.
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/21/12	Sampling Method 4" Continuous Cores	Headspace Monitoring Device PID	

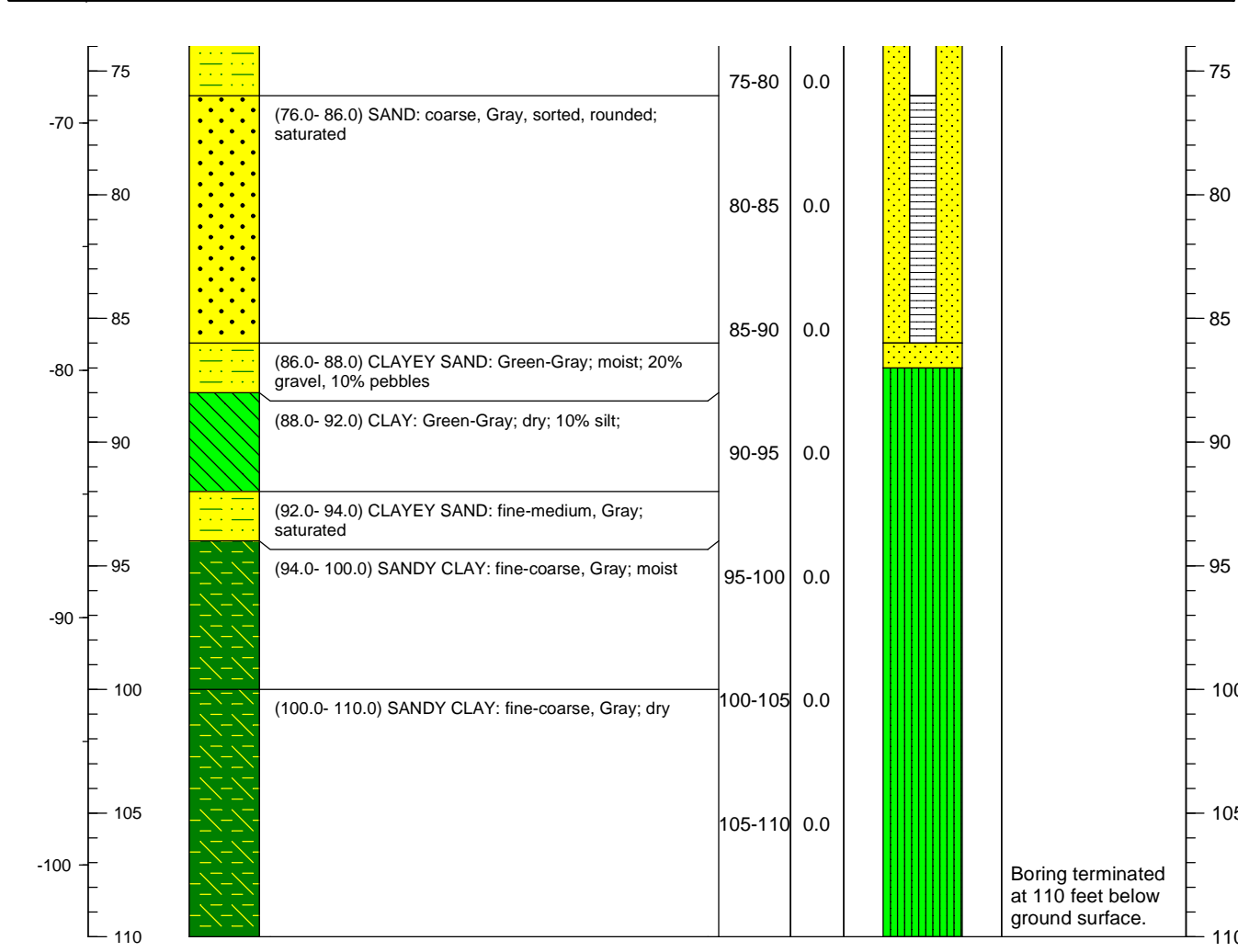
LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details
-30							
	40		(40.0- 45.0) NO RECOVERY	40-45	NA		40
	45		(45.0- 50.0) SAND: medium, Gray, sorted, rounded; saturated; 10% shell fragments (~3 mm dia.)	45-50	0.0		45
-40							
	50		(50.0- 60.0) CLAYEY SAND: fine, Gray, sorted, rounded; saturated	50-55	0.0		50
	55						
-50				55-60	0.0		55
	60		(60.0- 70.0) SANDY CLAY: Dark Gray, sorted, rounded; moist	60-65	0.0		60
	65			65-70	0.0		65
-60							
	70		(70.0- 76.0) CLAYEY SAND: Gray, sorted, rounded; wet	70-75	0.0		70





Project Name			Well Number	
Former Hercules Brunswick Facility Georgia			MW-51D	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	423435.3 872735.5	Ground Surface Elevation 7.10
	Drilling Equipment Mini Sonic	Well Screen Interval 76 - 86 ft		Top of Well Casing Elevation 6.68
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 86 ft	
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/20/12	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 110 ft	Boring Dia. 4 in / 6 in.
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/21/12	Sampling Method 4" Continuous Cores	Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details





Project Name			Well Number		
Former Hercules Brunswick Facility Georgia			MW-52S		
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	425611.9 872662.5	Ground Surface Elevation 7.60	
	Drilling Equipment Mini Sonic	Well Screen Interval 10 - 20 ft		Top of Well Casing Elevation 7.26	
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 20 ft	
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/15/12	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 20 ft	Boring Dia. 4 in. / 6 in.
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/15/12	Sampling Method 4" Continuous Cores		Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 3.0) SAND: very fine-fine, Light Brown, well sorted, rounded; silt; moist	0-5	0.0		Protective Cover: Stick Up/Well Pad: 3'x3'	0
			(3.0- 5.0) SAND: very fine-fine, Dark Brown, well sorted, rounded; degraded organic odor; saturated				Bentonite/ Cement Grout: 0-5'	
			(5.0- 10.0) SAND: very fine-fine, Dark Brown, well sorted, rounded; degraded organic odor; saturated	5-10	0.0		Bentonite: 5-8'	5
			(10.0- 11.0) SANDY SILT: very fine, Gray, sorted, rounded; saturated	10-15	0.0		#2 Silica Sand: 8-20'	
			(11.0- 13.0) SAND: very fine-fine, Dark Brown, well sorted, rounded; saturated				Well Casing: 0-10'	
			(13.0- 16.0) SAND: very fine; Dark Gray, well sorted, rounded; few silt cross bedding	15-20	0.0		Well Screen: 10-20'	10
			(16.0- 20.0) SAND: very fine, Tan, well sorted, rounded; saturated				Well Diameter: 2"	15
							Boring terminated at 20 feet below ground surface.	20





Project Name Former Hercules Brunswick Facility Georgia			Monitoring Well Construction Log		Well Number MW-52I	
Address  2801 Cook Street  Brunswick      Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	425604.1 872662.9	Ground Surface Elevation 7.50		
	Drilling Equipment Mini Sonic	Well Screen Interval 40 - 50 ft		Top of Well Casing Elevation 7.33		
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 50 ft		
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/15/12	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 50 ft	Boring Dia. 4 in. / 6 in.	
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/16/12	Sampling Method 4" Continuous Cores		Headspace Monitoring Device PID		

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 3.0) SAND: very fine-fine, Dark Brown, well sorted, rounded; saturated	0-5	0.0		Protective Cover: Flush Mount 8" Manhole Well Pad: 3'x3'	0
			(3.0- 5.0) SAND: very fine; Dark Gray, well sorted, rounded; few silt cross bedding	5-10	0.0			5
			(5.0- 10.0) SAND: very fine, Tan, well sorted, rounded; saturated	10-15	0.0		Bentonite/ Cement Grout: 0-34'	10
			(10.0- 11.0) SANDY SILT: fine, Brown, well sorted, rounded; saturated	10-15	0.0		Bentonite: 34-38'	10
			(11.0- 13.0) SAND: fine, Dark Gray, sorted, rounded; saturated; some shell fragments (<1/4" dia)	15-20	0.0		#2 Silica Sand: 38-50'	15
			(13.0- 16.0) SAND: medium, Gray, well sorted, rounded; saturated	15-20	0.0		Well Casing: 0-40'	15
			(16.0- 20.0) SAND: very fine, Gray, well sorted, rounded; saturated	20-25	0.0		Well Screen: 40-50'	20
			(20.0- 30.0) SAND: fine, Brown, well sorted, rounded; saturated	25-30	0.0		Well Diameter: 2"	25
			(30.0- 40.0) SANDY CLAY: fine, Dark Gray, sorted, rounded; some shell fragments (<1/4" dia); saturated	30-35	0.0			30
			(40.0- 43.0) SAND: medium, Gray, well sorted, rounded; saturated	40-45	0.0			40
			(43.0- 50.0) SAND: very fine, Gray, well sorted, rounded; saturated	45-50	0.0			45
							Boring terminated at 50 feet below ground surface.	50



Project Name Former Hercules Brunswick Facility Georgia			Monitoring Well Construction Log		Well Number MW-52D	
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Boart Longyear</b>		Northing Easting	<b>425608.4</b> <b>872668.8</b>	Ground Surface Elevation <b>7.50</b>	
	Drilling Equipment <b>Mini Sonic</b>		Well Screen Interval <b>79 - 89 ft</b>		Top of Well Casing Elevation <b>7.41</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Sonic Drilling</b>		Well Screen Slot Size <b>0.01 inch</b>		Total Well Depth <b>89 ft</b>	
Logged By <b>R. McLain</b> Approved By <b>D. Salisbury</b>	Date Drilling Started <b>3/15/12</b>		Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>		Boring Depth <b>110 ft</b>	Boring Dia. <b>4 in. / 6 in.</b>
Driller Name <b>J. Sousa</b> Project Number <b>WBS30012B1</b>	Date Drilling Completed <b>3/16/12</b>		Sampling Method <b>4" Continuous Cores</b>		Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 3.0) SAND: very fine-fine, Light Brown, well sorted, rounded; moist; with 10-20% silt	0-5	0.0		Protective Cover: Flush Mount 8" Manhole Well Pad: 3'x3'	0
			(3.0- 5.0) SAND: very fine-fine, Dark Brown, well sorted, rounded; saturated; degraded organic odor	5-10	0.0		Bentonite/ Cement Grout: 0-72'	5
			(5.0- 10.0) SAND: very fine-fine, Dark Brown, well sorted, rounded; saturated; degraded organic odor					
			(10.0- 11.0) SANDY SILT: very fine, Gray, sorted, rounded; saturated	10-15	0.0		Bentonite Seal: 72-76'	10
			(11.0- 13.0) SAND: very fine-fine, Dark Brown, well sorted, rounded; saturated	15-20	0.0		#2 Silica Sand: 76-89	
			(13.0- 16.0) SAND: very fine; Dark Gray, well sorted, rounded; few silt cross bedding					
			(16.0- 20.0) SAND: very fine, Tan, well sorted, rounded; saturated	20-25	0.0		Well Casing: 0-79'	15
			(20.0- 30.0) SAND: fine, Brown, well sorted, rounded; saturated	25-30	0.0		Well Screen: 79-89' Well Diameter: 2"	20
			(30.0- 40.0) SANDY CLAY: fine, Dark Gray, sorted, rounded; saturated; some shell fragments (<1/4" dia)	30-35	0.0		Backfill: Hydrated 3/8" Bentonite Chips: 90-110'	25
				35-40	0.0			30
								35





Project Name Former Hercules Brunswick Facility Georgia			Monitoring Well Construction Log		Well Number MW-52D	
Address  2801 Cook Street  Brunswick      Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	425608.4 872668.8	Ground Surface Elevation 7.50		
	Drilling Equipment Mini Sonic	Well Screen Interval 79 - 89 ft		Top of Well Casing Elevation 7.41		
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch		Total Well Depth 89 ft		
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/15/12	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 110 ft	Boring Dia. 4 in. / 6 in.	
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/16/12	Sampling Method 4" Continuous Cores		Headspace Monitoring Device PID		

### LITHOLOGY

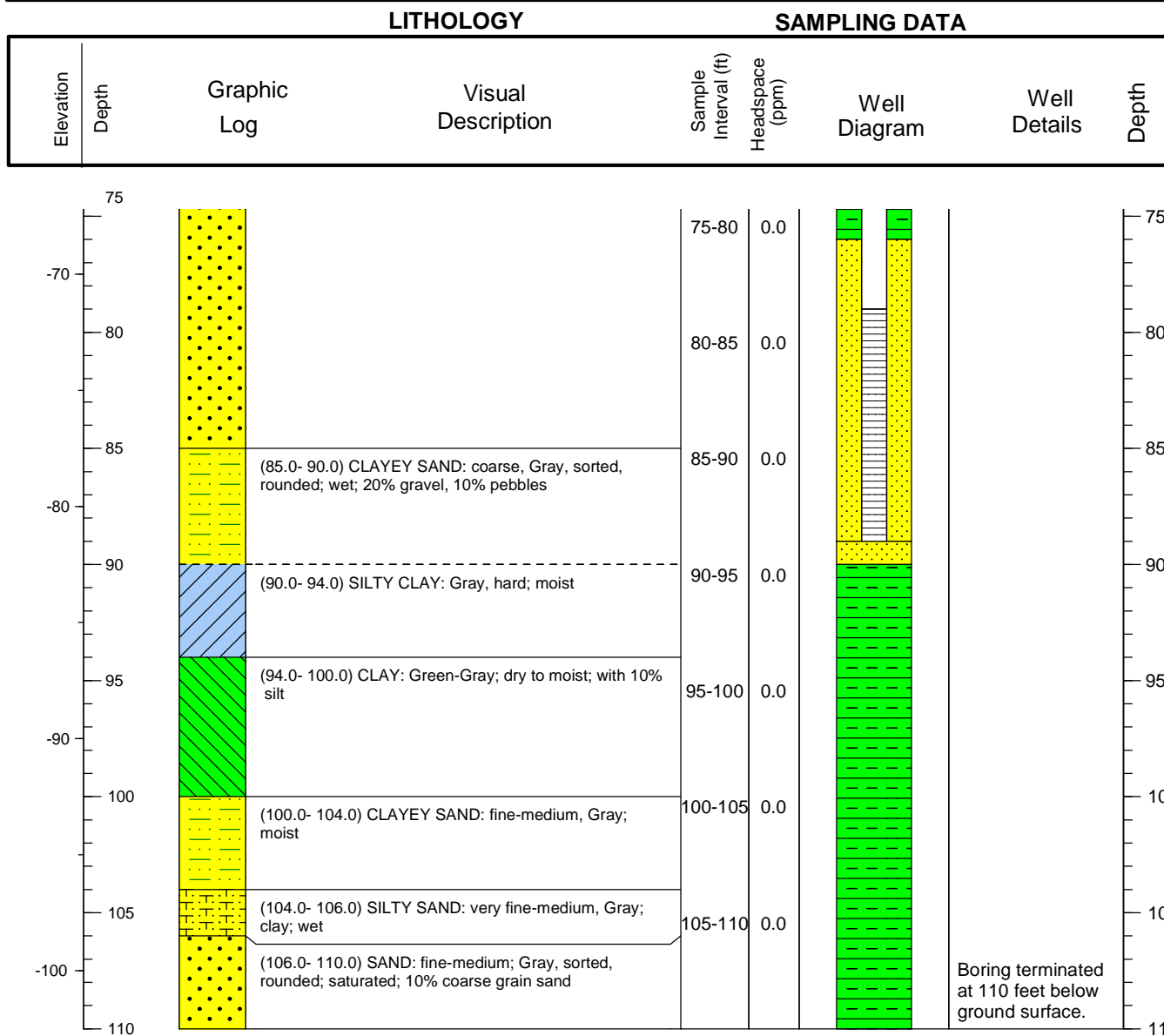
### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
-30								
	40		(40.0- 43.0) SAND: medium, Gray, well sorted, rounded; saturated	40-45	0.0			40
	45		(43.0- 56.0) SAND: very fine, Gray, well sorted, rounded; saturated	45-50	0.0			45
-40								
50				50-55	0.0			50
55				55-60	0.0			55
-50			(56.0- 66.0) SANDSTONE: medium-coarse, Dark Gray, hard	60-65	0.0			60
65				65-70	0.0			65
-60			(66.0- 70.0) CLAYEY SAND: fine-very fine; Dark Gray, poorly sorted, well rounded; saturated; 50% gravel (almost cobblestone (1/4-3/4" dia)	70-75	0.0			70
70			(70.0- 73.0) CLAYEY SILTY SANDY GRAVEL					
			(73.0- 85.0) SAND: coarse, Light Gray					
75								75




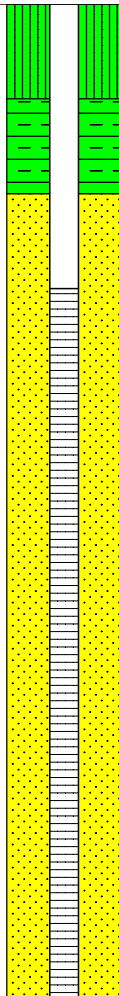
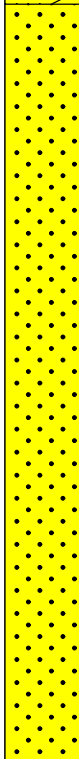


Project Name			Well Number	
Former Hercules Brunswick Facility Georgia			MW-52D	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Boart Longyear	Northing Easting	425608.4 872668.8	Ground Surface Elevation 7.50
	Drilling Equipment Mini Sonic	Well Screen Interval 79 - 89 ft		Top of Well Casing Elevation 7.41
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 89 ft	
Logged By R. McLain Approved By D. Salisbury	Date Drilling Started 3/15/12	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 110 ft	Boring Dia. 4 in. / 6 in.
Driller Name J. Sousa Project Number WBS30012B1	Date Drilling Completed 3/16/12	Sampling Method 4" Continuous Cores	Headspace Monitoring Device PID	





Project Name Ashland Brunswick Georgia			Monitoring Well Construction Log		Well Number MW-53S	
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting <b>424165.610</b> <b>871731.447</b>	Ground Surface Elevation <b>7.13</b>			
	Drilling Equipment <b>Rousie SR1 w/Detric Head</b>	Well Screen Interval <b>6-21 ft</b>	Top of Well Casing Elevation <b>10.14</b>			
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Sonic Drilling</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>21 ft</b>			
Logged By <b>R. McLain</b> Approved By <b>R. Cate</b>	Date Drilling Started <b>4/7/10</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>21 ft</b>	Boring Dia. <b>6 in.</b>		
Driller Name <b>B. Niles</b> Project Number <b>WBS30012B1</b>	Date Drilling Completed <b>4/7/10</b>	Sampling Method <b>Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>			

LITHOLOGY				SAMPLING DATA				
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 5.0) FILL	0-5	15.5		Protective Cover: Stick Up/Well Pad: 3'x3'	0
			0 - 5 Post-hole				Bentonite/Cement: 0-2'	
-5			(5.0- 21.0) SAND: fine, Dusty Brown (2/2), rounded, loose; saturated	5-10	3.3		Bentonite: 2-4'	-5
0							#2 Silica Sand: 4-21'	
-10							Well Casing: 0-6'	-10
-15				10-15	0.0	Well Screen: 6-21'	-15	
						Well Diameter: 2"		
-20				15-20	0.0		Boring terminated at 21 feet below ground surface.	-20


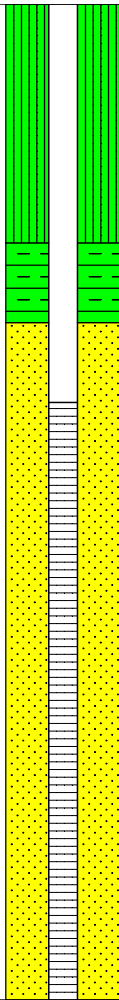








Project Name			Well Number	
Ashland Brunswick Georgia			MW-54S	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424965.830 870896.370	Ground Surface Elevation 8.90
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 10-25 ft		Top of Well Casing Elevation 11.24
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 25 ft	
Logged By J. Soban Approved By R. Cate	Date Drilling Started 4/13/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 25 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/13/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0								0
			(0.0- 5.0) SAND: fine-medium, Dusty Brown (2/2), sub-rounded, loose; dry 0 - 5 Post-hole	0-5	NA		Protective Cover: Stick Up/Well Pad: 3'x3' Bentonite/Cement: 0-6'	
	5		(5.0- 10.0) SAND: fine, Brown (5/2), rounded - sub-rounded, loose; saturated	5-10	9.2		Bentonite: 6-8'	5
	10		(10.0- 15.0) SAND: fine-coarse, Brown (5/2), poorly sorted, sub-rounded - sub-angular, loose; saturated	10-15	2.3		#2 Silica Sand: 8-25'	10
	15		(15.0- 20.0) SAND: fine-medium, Pale Brown (2/2), sub-rounded, loose; saturated	15-20	6.9		Well Casing: 0-10'	15
	20		(20.0- 25.0) NO RECOVERY	20-25	NA		Well Screen: 10-25'	20
	25						Well Diameter: 2"	25
							Boring terminated at 25 feet below ground surface.	





Project Name			Well Number	
Ashland Brunswick Georgia			MW-54I	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424962.340 870897.820	Ground Surface Elevation  8.92
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 40-55 ft		Top of Well Casing Elevation 11.23
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 55 ft	
Logged By J. Soban Approved By R. Cate	Date Drilling Started 4/13/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 55 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/13/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 5.0) SAND: fine-medium, Dusty Brown (2/2), sub-rounded, loose; dry 0 - 5 Post-hole	0-5	NA		Protective Cover: Stick Up/Well Pad: 3'x3' Bentonite/Cement: 0-36'	0
-5			(5.0- 10.0) SAND: fine, Brown (5/2), rounded - sub-rounded, loose; saturated	5-10	9.2		Bentonite: 36-38'	5
0			(10.0- 15.0) SAND: fine-coarse, Brown (5/2), poorly sorted, sub-rounded - sub-angular, loose; saturated	10-15	2.3		#2 Silica Sand: 38-55'	10
-10			(15.0- 20.0) SAND: fine-medium, Pale Brown (2/2), sub-rounded, loose; saturated	15-20	6.9		Well Casing: 0-40'	15
-20			(20.0- 25.0) NO RECOVERY	20-25	NA		Well Screen: 40-55'	20
-25			(25.0- 30.0) SAND: fine-coarse, Medium Gray (N4), poorly sorted, sub-rounded - sub-angular; saturated	25-30	18.5		Well Diameter: 2"	25





Project Name			Well Number	
Ashland Brunswick Georgia			MW-54I	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424962.340 870897.820	Ground Surface Elevation  8.92
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 40-55 ft		Top of Well Casing Elevation 11.23
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 55 ft	
Logged By J. Soban Approved By R. Cate	Date Drilling Started 4/13/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 55 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/13/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
-20								
	30		(30.0- 38.0) SAND: medium-very coarse, Medium Gray (N4), poorly sorted, sub-rounded; saturated	30-35	35.8			30
	35			35-40	249			35
	-30		(38.0- 39.0) CLAY: Blue to Gray					
	40		(39.0- 40.0) SAND: medium-very coarse, Medium Gray (N4), poorly sorted, sub-rounded; saturated	40-45	119			40
	45		(40.0- 44.0) SAND: coarse-very coarse, Medium Gray (N4), well sorted, sub-angular - sub-rounded, loose; saturated	45-50	38.3			45
	-40		(44.0- 51.0) SAND: coarse-very coarse, Medium Gray (N4), well sorted, sub-angular - sub-rounded, loose; 10% shells; saturated	50-55	39.8			50
	50		(51.0- 55.0) SAND: medium with some coarse, Dark Gray (N3), poorly sorted, sub-rounded - rounded; some gravel-sized quartz pebbles and clay clasts; saturated					55
	55						Boring terminated at 55 feet below ground surface.	





Project Name			Well Number	
Ashland Brunswick Georgia			MW-54D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting 424957.870 870899.810	Ground Surface Elevation 8.90	
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 81-91 ft	Top of Well Casing Elevation 11.20	
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 90 ft	
Logged By J. Soban Approved By R. Cate	Date Drilling Started 4/13/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/13/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details
0			(0.0- 5.0) SAND: fine-medium, Dusty Brown (2/2), sub-rounded, loose; dry 0 - 5 Post-hole	0-5	NA		Protective Cover: Stick Up/Well Pad: 3'x3' Bentonite/Cement: 0-76'
	5		(5.0- 10.0) SAND: fine, Brown (5/2), rounded - sub-rounded, loose; saturated	5-10	9.2		Bentonite: 76-78' #2 Silica Sand: 78-90'
0	10		(10.0- 15.0) SAND: fine-coarse, Brown (5/2), poorly sorted, sub-rounded - sub-angular, loose; saturated	10-15	2.3		Well Casing: 0-80' Well Screen: 80-90' Well Diameter: 2"
	15		(15.0- 20.0) SAND: fine-medium, Pale Brown (2/2), sub-rounded, loose; saturated	15-20	6.9		Bentonite: 90-95' 20/30 Sand Backfill
-10	20		(20.0- 25.0) NO RECOVERY	20-25	NA		
	25			25-30	18.5		





Project Name			Well Number	
Ashland Brunswick Georgia			MW-54D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting 424957.870 870899.810	Ground Surface Elevation 8.90	
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 81-91 ft	Top of Well Casing Elevation 11.20	
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 90 ft	
Logged By J. Soban Approved By R. Cate	Date Drilling Started 4/13/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/13/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

LITHOLOGY				SAMPLING DATA			
Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Depth
25							25
		(25.0- 30.0) SAND: fine-coarse, Medium Gray (N4), poorly sorted, sub-rounded - sub-angular; saturated		25-30	18.5		
-20							
	30	(30.0- 38.0) SAND: medium-very coarse, Medium Gray (N4), poorly sorted, sub-rounded; saturated		30-35	35.8		30
	35			35-40	249		35
	-30	(38.0- 39.0) CLAY: Blue to Gray					
	40	(39.0- 40.0) SAND: medium-very coarse, Medium Gray (N4), poorly sorted, sub-rounded; saturated		40-45	119		40
		(40.0- 44.0) SAND: coarse-very coarse, Medium Gray (N4), well sorted, sub-angular - sub-rounded, loose; saturated					
	45	(44.0- 51.0) SAND: coarse-very coarse, Medium Gray (N4), well sorted, sub-angular - sub-rounded, loose; 10% shells; saturated		45-50	38.3		45
-40							
50							50





Project Name			Well Number	
Ashland Brunswick Georgia			MW-54D	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424957.870 870899.810	Ground Surface Elevation  8.90
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 81-91 ft		Top of Well Casing Elevation 11.20
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 90 ft	
Logged By J. Soban Approved By R. Cate	Date Drilling Started 4/13/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/13/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
50				50-55	39.8			50
			(51.0- 57.0) SAND: medium with some coarse, Dark Gray (N3), poorly sorted, sub-rounded - rounded; some gravel-sized quartz pebbles and clay clasts; saturated					
	55			55-60	34.7			55
			(57.0- 60.0) SANDY CLAY: Dark Gray (N3); some fine-medium sand; saturated					
-50				60-65	24.9			60
	60		(60.0- 65.0) SAND: medium-coarse, Medium Gray (N4), poorly sorted, sub-rounded - rounded; few gravel-sized rounded quartz pebbles; saturated					
			(65.0- 68.0) SAND: medium-very coarse, Medium Gray (N4), poorly sorted, sub-rounded - rounded, loose; few gravel-sized rounded quartz pebbles; saturated	65-70	25.7			65
	65							
			(68.0- 70.0) SAND: medium-very coarse, Medium Gray (N4), poorly sorted, sub-rounded - rounded, loose; some clay (clayey sand), few gravel-sized rounded quartz pebbles; saturated	70-75	8.9			70
-60								
	70		(70.0- 73.0) SAND: fine-coarse, Light Gray (N6), poorly sorted, sub-angular - sub-rounded; some clay (clayey sand); saturated					
			(73.0- 76.0) SAND: medium-coarse, Medium Gray (N4), poorly sorted, sub-rounded-rounded; saturated					
	75							75





Project Name			Well Number	
Ashland Brunswick Georgia			MW-54D	
Address 2801 Cook Street Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting 424957.870 870899.810	Ground Surface Elevation 8.90	
	Drilling Equipment Rousie SR1 w/Detric Head	Well Screen Interval 81-91 ft	Top of Well Casing Elevation 11.20	
GA EPD Number GAD004065520	Drilling Method Sonic Drilling	Well Screen Slot Size 0.01 inch	Total Well Depth 90 ft	
Logged By J. Soban Approved By R. Cate	Date Drilling Started 4/13/10	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 100 ft	Boring Dia. 6 in.
Driller Name B. Niles Project Number WBS30012B1	Date Drilling Completed 4/13/10	Sampling Method Continuous Cores	Headspace Monitoring Device PID	


### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
75				75-80	7.6			75
			(76.0- 78.0) SILTY SAND: fine-coarse, Light Gray (N6), poorly sorted, sub-angular - sub-rounded, hard; abundance of gravel-sized rounded quartz pebbles; dry					
-70			(78.0- 80.0) CLAYEY SAND: fine-coarse, Light Gray (N6), poorly sorted, sub-angular - sub-rounded, very dense					
-80			(80.0- 83.0) SAND: coarse-very coarse, Medium Gray, well sorted, rounded - well-rounded, loose; saturated	80-85	1.2			80
			(83.0- 85.0) SAND: coarse, Medium Gray (N4), well sorted, rounded - sub-rounded, loose; saturated					
-85			(85.0- 90.0) SAND: medium-very coarse, Medium Gray (N4), poorly sorted, rounded - well-rounded, loose; abundance of gravel-sized particles; saturated	85-90	2.1			85
-90			(90.0- 92.0) SAND: medium-coarse, Medium Gray (N4), poorly sorted, rounded, loose; saturated	90-95	1.7			90
			(92.0- 95.0) SAND: medium-very coarse, Medium Gray (N4), poorly sorted, rounded, loose; saturated				Borehole backfilled with sand and bentonite seal.	
-95			(95.0- 100.0) SAND: medium-very coarse, Light Gray (N6), poorly sorted, rounded, loose; some shell material and gravel-sized rounded quartz pebbles; saturated	95-100	1.3			95
-90							Boring terminated at 100 feet below ground surface.	
100								100





		Boring No. HP-III-59		Page 1 of 4	
		Contractor: Boart Longyear		Drilling Method: Roto sonic	
		Drill Crew: Tommy Ardito		Drill Rig: PS Sonic	
		Project Name and Location: Ashland/Pinova Brunswick, GA		Date Started: 11/29/2013	
		Logged by: Hartford Hight		Protective cover: N/A	
Well Construction Information: N/A		Packer Interval (feet bgs): 89 - 99		Screen Set: N/A	
Filter pack interval (feet bgs): N/A		Riser: N/A		Water level while drilling (feet bgs): Not Measured	
Seal interval (feet bgs): N/A		Seal type: N/A		Water level at completion (feet bgs):	
Grout Interval (feet bgs): N/A		Filter pack: N/A		Boring Abandoned After Drilling	
DEPTH	SAMPLE INTERVAL	PID (PPM)	Recovery inches	Lithology	SAMPLE DESCRIPTION
2					AK to 7 feet, rod probed to 11 feet. Clearance took place prior to arrival of driller 0-6 ft. no recovery.
4					Groundwater estimated 4-5 ft.
6		2.8	0/60		sand, fine grained, well sorted, some silt, organic, black-dark grey.
8		2.4			
10		3.5			
12		3.1			sand, fine grained, abundant shell fragments, angular, poorly sorted, trace silt. Dark Gray.
14		2.3			
16		1.7	64/120		sand fine grained, abundant shell fragments, angular <2mm. Poorly sorted, some silt, dark gray.
18		1.8			
20		2.2			
22		2.0			21-21.5 sandy clay fine grained, dark gray, stiff.
					21.5-21.8 clay, some sand, fine grained, stiff. Dark gray.
					21.8-28 sand fine grained well sorted, trace clay, dark gray.
24		1.8			



				Boring No.	HP-III-59	Page 2 of 4
DEPTH	SAMPLE INTERVAL	PID (PPM)	Recovery	Lithology	Sample Description / Depths are in Feet Below Ground Surface SAND <sup>1</sup> , silty <sup>2</sup> , fine to medium grained <sup>3</sup> , brownish grey <sup>4</sup> , loose <sup>5</sup> , wet <sup>6</sup>	
26		2.9	120/120			
28		2.8			29-29.8 clay, some sand, fine grained, sand is <15%, dark gray.	
30		2.6			29.8-31.8 sandy clay, fine grained, dark gray.	
32		1.9			31.8-35.7 Sand, med. To fine grained, sub rounded. Shell fragments <2mm approx. 15%. Dark gray.	
34		2.8				
36		4.7	120/120		35.7-36.8 sandy clay, fine grained. Dark Gray	
38		3.9			36.8-40.7 Sand, med. To fine grained shell fragments <15%. Dark Gray.	
40		3.2				
42		2.6			40.7-41 sandy clay, fine grained. Dark gray. Sand, med. To fine grained, shell fragments, angular, <1mm, 15%, trace clay. Dark gray.	
44		2.2				
46		2.2	120/120		Sand, med. To fine grained, poorly sorted, shell fragments, angular 25%. Dark gray.	
48		1.2				




Boring No. HP-III-59					Page 3 of 4
DEPTH	SAMPLE INTERVAL	PID (PPM)	Recovery	Lithology	SAMPLE DESCRIPTION SAND <sup>1</sup> , silty <sup>2</sup> , fine to medium grained <sup>3</sup> , brownish grey <sup>4</sup> , loose <sup>5</sup> , wet <sup>6</sup>
50		2.8			Sand, med. To fine grained, well sorted, some shell fragments <10%. Gray.
52		6.4			
54		3.4			
56		3.2	120/120		Sand fine grained, trace clay. Gray
58		1.6			Sand becomes coarser. becomes, sand, med. to fine grained, poorly sorted. Gray.
60		3.7			
62		6.4			
64		3.2			Sand, med. To fine grained, poorly sorted, pea gravel, rounded 1-3 mm, <10%, trace clay. Gray.
66		3.7	120/120		Sand, med. To fine grained, poorly sorted, pea gravel, rounded 1-3mm, <10%, trace clay. There were some sandy clay clumps 1-inch diameter. Gray.
68		0.1			Sand, med. To fine grained, sorted, trace shell fragments, occasional pea gravel rounded 1-3 mm. Gray.
70		0.0			
72		0.0			72-72.5 sand, fine grained, well sorted, trace clay. Gray.



Boring No. HP-III-59					Page 4 of 4
DEPTH	SAMPLE INTERVAL	PID (PPM)	Recovery	Lithology	SAMPLE DESCRIPTION SAND <sup>1</sup> , silty <sup>2</sup> , fine to medium grained <sup>3</sup> , brownish grey <sup>4</sup> , loose <sup>5</sup> , wet <sup>6</sup>
74		0.0			Sand, fine grained well sorted. Little clay, gray.
76		0.2	120/120		Sand, med. To fine grained, sub angular, occasional pea gravel 1-3mm. Gray.
78		0.6			Sand, med. To fine grained well sorted, sub rounded, occasional pea gravel rounded, 1-3mm, trace clay. Gray.
80		0.6			
82		2.4			
84		2.1			
86		2.4			
88	89-99	4.8			Changes to lighter gray densely packed sand, medium to fine grained occasional pea gravel, rounded 1-3mm, clay content is increasing.
90		13.2	154/168		90-94.7 sand med-fine grained, well sorted sub-rounded, trace clay.
92		4.9			
94		5.7			Clay, very stiff, dry, gray.
96		1.6			96.7-97.4 Sand, fine grained, some clay. Gray.
98		0.8			Clay, sand fine grained <10%, stiff, gray.
100		2.0	96/120		Refusal at 99 feet. Boring terminated.



		Boring No. HP-III-60		Page 1 of 4			
		Contractor: Boart Longyear		Drilling Method: Roto sonic			
		Drill Crew: Tommy Ardito		Drill Rig: PS Sonic			
		Project Name and Location: Ashland/Pinova Brunswick, GA		Date Started: 1/30/2013		Date Finished: 1/30/2013	
		Logged by: Hartford Hight		Protective cover: N/A			
Well Construction Information:		N/A					
1st Packer Interval (feet bgs):		20 - 26		Screen Set: N/A		Water level while drilling (feet bgs):	
2nd Packer Interval (feet bgs):		50 - 56		Riser: N/A		Not Measured	
3rd Packer Interval (feet bgs):		75 - 86		Seal type: N/A		Water level at completion (feet bgs):	
Grout Interval (feet bgs):		N/A		Filter pack: N/A		Boring Abandoned After Drilling	
DEPTH	SAMPLE INTERVAL	PID (PPM)	Recovery inches	Lithology	Sample Description / Depths are in Feet Below Ground Surface SAND <sup>1</sup> , silty <sup>2</sup> , fine to medium grained <sup>3</sup> , brownish grey <sup>4</sup> , loose <sup>5</sup> , wet <sup>6</sup>		
2					No recovery 0-6.		
4							
6		12.0	0/60		Organic silt, roots, trace clay, very fine grained sand, strong sulfur odor, black.		
8		20.8			Becomes silty sandy clay, fine grained. Strong sulfur odor. Gray/black.		
10		16.0					
12		11.9			Clay, sand, fine grained, some silt. Gray/green		
14		6.7					
16		3.1	106/120				
18		0.8			Sandy clay, fine grained, shell fragments <1mm, 15%, sorted, Gray.		
20	20-26	0.6			Becomes clayey sand, fine grained, shell fragments <1mm. Gray.		
22		0.8			22-26 drill bit blocked off, no recovery.		
24							



Boring No. HP-III-60					Page 2 of 4
DEPTH	SAMPLE INTERVAL	PID (PPM)	Recovery	Lithology	SAMPLE DESCRIPTION SAND <sup>1</sup> , silty <sup>2</sup> , fine to medium grained <sup>3</sup> , brownish grey <sup>4</sup> , loose <sup>5</sup> , wet <sup>6</sup>
26			62/120		
28		3.7			Sandy clay, med. To fine grained, shell fragments <1mm, angular, 25%. soft. Gray.
30		4.0			Becomes sand, fine grained, sorted, clay 30%, shell fragments <1mm, 15%.
32		3.9			
34		4.4			
36		3.9	107/120		Sandy clay, med. To fine grained, poorly sorted, abundant shells whole shells to fragments >4mm to <1mm, stiff. Gray.
38		8.4			Sand, poorly sorted, coarse to fine grained, abundant gravel 1-4 inch dia., some clay<105, trace shell fragments. Gray.
40		6.6			
42		6.1			
44					Bit blocked off by rock fragment, no recovery.
46		1.5	60/120		Clayey sand, med. To fine grained, few rocks 2-4 inch dia., trace clay. Gray.
48		1.8			



Boring No. HP-III-60					Page 3 of 4
DEPTH	SAMPLE INTERVAL	PID (PPM)	Recovery	Lithology	SAMPLE DESCRIPTION SAND <sup>1</sup> , silty <sup>2</sup> , fine to medium grained <sup>3</sup> , brownish grey <sup>4</sup> , loose <sup>5</sup> , wet <sup>6</sup>
50	50-56	3.1			Sand, med. To fine grained, sorted, little to no clay. Gray.
52		4.8			
54		4.7			
56		5.3	120/120		
58		7.0			Sand med. To fine grained, some pea gravel <3mm, rounded, trace clay. Gray.
60		6.8			sand med. To fine grained, abundant gravel 1-inch dia., rounded. Some clay. Light gray.
62		11.4			sand, med. To fine grained, rock fragments >2 inch dia., angular, trace clay Black/gray.
64		7.2			
66		7.7	120/120		Sand, med. To fine grained well sorted. Little to no clay. Gray.
68		11.9			Sand, med. To fine grained, some pea gravel rounded, trace clay.
70		35.4			
72		38.6			



			Boring No. HP-III-60		Page 4 of 4
DEPTH	SAMPLE INTERVAL	PID (PPM)	Recovery	Lithology	SAMPLE DESCRIPTION SAND <sup>1</sup> , silty <sup>2</sup> , fine to medium grained <sup>3</sup> , brownish grey <sup>4</sup> , loose <sup>5</sup> , wet <sup>6</sup>
74		44.7			
76	75-86	49.7			76-84, finished run to 76 ft. rod dropped to 84 ft. continued run to 86 ft.
78					No recovery 76-84 ft. Driller said it was very soft material not a void.
80					
82					
84					
86		17.2	131/240		Sand med. To fine grained, sub rounded, well sorted. Little to no clay. Gray.
88	89-99	19.7			Sand, med. To coarse grained, some gravel, angular, some clay.
90		49.2			Sand, med. To fine grained, sorted, some pea gravel, rounded, 15%, no clay.
92		21.2			
94		16.9			
96		17.4			Clay, trace sand, stiff, bottom of run. Gray.
98		19.2			No recovery 96-97 feet. Refusal 97 feet.
100			140/144		



<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-55S
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting <b>424924.42</b> <b>873353.35</b>	Ground Surface Elevation <b>5.30</b>	
	Drilling Equipment <b>Geoprobe 8140LS</b>	Well Screen Interval <b>75-85 ft.</b>	Top of Well Casing Elevation <b>8.07</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>25 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>12/2/13</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>85 ft.</b>	Boring Dia. <b>6 in.</b>
Driller Name <b>B. Moss</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>12/3/13</b>	Sampling Method <b>Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 5.0) SANDY SILT: Black sandy silt, strong sulfur odor 0 - 5 Post-hole	SM	0-5	NA		Protective Cover: Stick Up/Well Pad: 3'x3' Cement Grout: 1-6'	0
			(5.0- 6.5) SILTY SAND: Dark gray silty sand, fine grained, roots, shells, strong sulfur odor	SM	5-10			Well Casing: 0-10'	5
			(6.5- 10.5) SANDY CLAY: Dark gray silty sandy clay, fine grained	SC				Fine Sand: 6-8'	
			(10.5- 14.0) CLAYEY SAND: Gray fine grained sand, silt, clay	SC	10-15	12.5		Well Diameter: 2"	10
			(14.0- 16.0) SAND: Gray sand, poorly sorted, shell fragments angular 1-4 mm	SP	15-20	2.8		#2 Silica Sand: 8-25'	15
			(16.0- 19.5) SAND: Gray sand, medium-fine grained, some large quartz gravel, rounded 1-4 mm	SP				Well Screen: 10-25'	
			(19.5- 20.3) SANDY CLAY: Gray sandy clay, fine grained, stiff, saturated	CL	20-25	1.4			20
			(20.3- 25.0) CLAYEY SAND: Gray sand, clay, medium-fine grained	SC					25

Sample descriptions were obtained from the boring log for MW-55D.





<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-55I
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting <b>424922.79</b> <b>873363.21</b>	Ground Surface Elevation <b>5.10</b>	
	Drilling Equipment <b>Geoprobe 8140LS</b>	Well Screen Interval <b>40-55 ft.</b>	Top of Well Casing Elevation <b>7.92</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>55 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>12/2/13</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>55 ft.</b>	Boring Dia. <b>6 in.</b>
Driller Name <b>B. Moss</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>12/3/13</b>	Sampling Method <b>Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

**LITHOLOGY**
**SAMPLING DATA**

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
0			(0.0- 5.0) SANDY SILT: Black sandy silt, strong sulfur odor 0 - 5 Post-hole	SM	0-5	NA		Protective Cover: Stick Up/Well Pad: 3'x3' Cement Grout: 1-36'	0
			(5.0- 6.5) SILTY SAND: Dark gray silty sand, fine grained, roots, shells, strong sulfur odor	SM	5-10			Well Casing: 0-40'	5
			(6.5- 10.5) SANDY CLAY: Dark gray silty sandy clay, fine grained	SC				Well Diameter: 2"	
			(10.5- 14.0) CLAYEY SAND: Gray fine grained sand, silt, clay	SC	10-15	12.5			10
			(14.0- 16.0) SAND: Gray sand, poorly sorted, shell fragments angular 1-4 mm	SP	15-20	2.8			15
			(16.0- 19.5) SAND: Gray sand, medium-fine grained, some large quartz gravel, rounded 1-4 mm	SP					
			(19.5- 20.3) SANDY CLAY: Gray sandy clay, fine grained, stiff, saturated	CL	20-25	1.4			20
			(20.3- 25.0) CLAYEY SAND: Gray sand, clay, medium-fine grained	SC					25
-20	25								

Sample descriptions were obtained from the boring log for MW-55D.

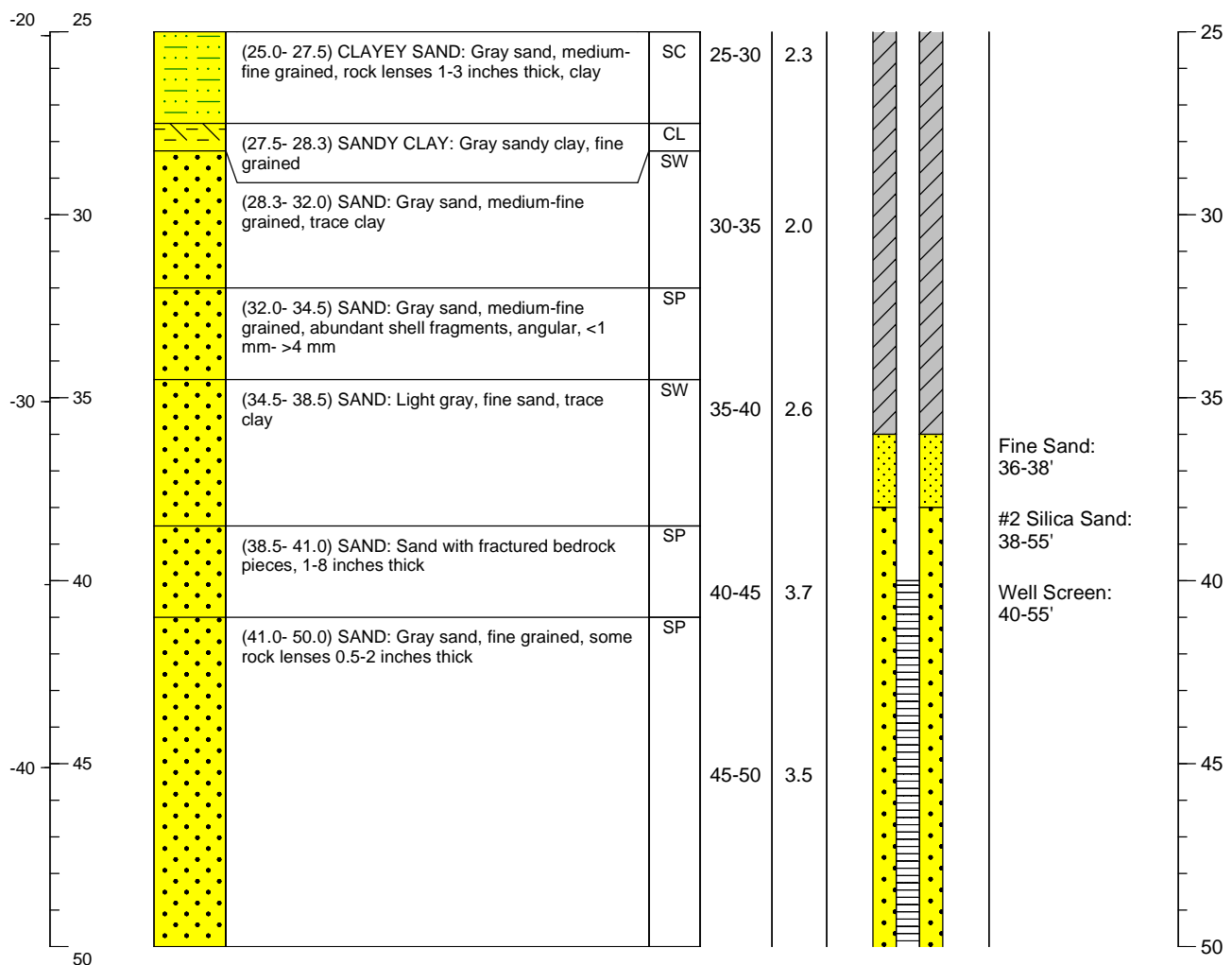




Project Name			Well Number	
Ashland Brunswick Georgia			MW-55I	
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	424922.79 873363.21	Ground Surface Elevation  5.10
	Drilling Equipment Geoprobe 8140LS	Well Screen Interval 40-55 ft.		Top of Well Casing Elevation  7.92
GA EPD Number GAD004065520	Drilling Method Roto Sonic	Well Screen Slot Size 0.01 inch	Total Well Depth 55 ft.	
Logged By H. Hight Approved By C. Weaver	Date Drilling Started 12/2/13	Well Casing Diameter and Type 2 in. SCH 40 PVC	Boring Depth 55 ft.	Boring Dia. 6 in.
Driller Name B. Moss Project Number WBS2014B2	Date Drilling Completed 12/3/13	Sampling Method Continuous Cores	Headspace Monitoring Device PID	

## SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
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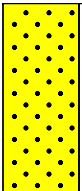
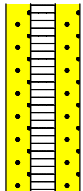
Sample descriptions were obtained from the boring log for MW-55D.



<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-55I
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting <b>424922.79</b> <b>873363.21</b>	Ground Surface Elevation <b>5.10</b>	
	Drilling Equipment <b>Geoprobe 8140LS</b>	Well Screen Interval <b>40-55 ft.</b>	Top of Well Casing Elevation <b>7.92</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>55 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>12/2/13</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>55 ft.</b>	Boring Dia. <b>6 in.</b>
Driller Name <b>B. Moss</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>12/3/13</b>	Sampling Method <b>Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
50			(50.0- 55.0) SAND: Gray sand, medium-fine grained, trace silt, some quartz gravel, subrounded 1-6 mm	SP	50-55	3.5			50
-50	55		Boring terminated at 55 ft. bgs.					Well set at 55 ft. bgs. with 15 ft of screen.	55
-60	60								60
-65	65								65
-70	70								70
-75	75								75

Sample descriptions were obtained from the boring log for MW-55D.

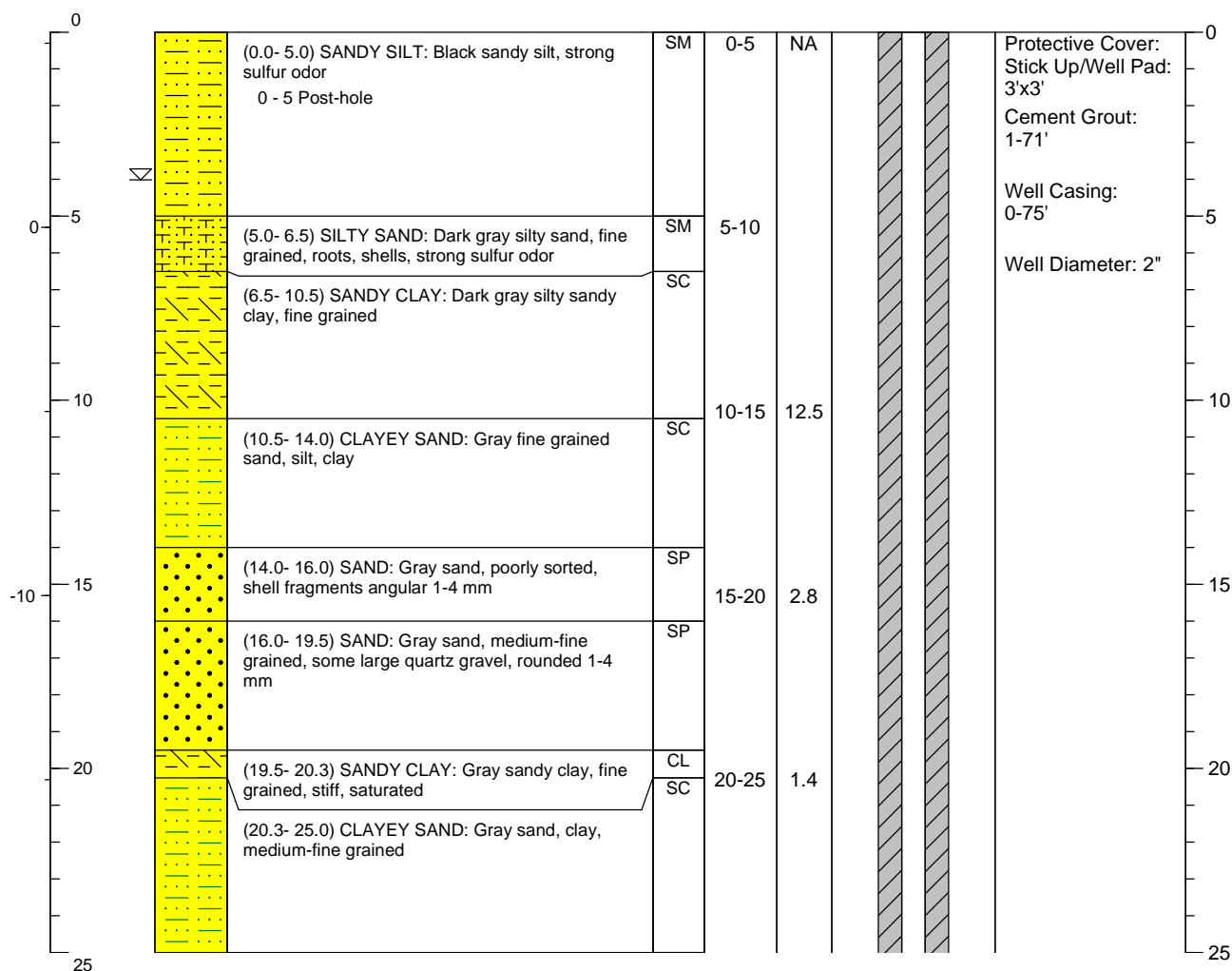




<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-55D
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting <b>424923.59</b> <b>873358.3</b>	Ground Surface Elevation <b>5.30</b>	
	Drilling Equipment <b>Geoprobe 8140LS</b>	Well Screen Interval <b>75-85 ft.</b>	Top of Well Casing Elevation <b>7.81</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>85 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>12/2/13</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>85 ft.</b>	Boring Dia. <b>6 in.</b>
Driller Name <b>B. Moss</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>12/3/13</b>	Sampling Method <b>Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

**LITHOLOGY**
**SAMPLING DATA**

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
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## Monitoring Well Construction Log

## SAMPLING DATA

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<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-55D
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting <b>424923.59</b> <b>873358.3</b>	Ground Surface Elevation <b>5.30</b>	
	Drilling Equipment <b>Geoprobe 8140LS</b>	Well Screen Interval <b>75-85 ft.</b>	Top of Well Casing Elevation <b>7.81</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>85 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>12/2/13</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>85 ft.</b>	Boring Dia. <b>6 in.</b>
Driller Name <b>B. Moss</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>12/3/13</b>	Sampling Method <b>Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
50			(50.0- 60.0) SAND: Gray sand, medium-fine grained, trace silt, some quartz gravel, subrounded 1-6 mm	SP	50-55	3.5			50
			same as above, with shell fragments						
-50			(had trouble with having sands coming into drill casing.)		55-60	3.4			55
			(60.0- 70.0) SAND: Light gray sand, medium-fine grained, well sorted, subrounded quartz grains	SW	60-65	4.8			60
-60					65-70	5.9			65
-70			(70.0- 74.5) SAND: Gray sand, medium-fine grained, moderate odor like degraded paint thinner	SW	70-75	17.7			70
				SC					
-75									75

Fine Sand:  
71-73'

#2 Silica Sand:  
73-85'





<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-55D
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting <b>424923.59</b> <b>873358.3</b>	Ground Surface Elevation <b>5.30</b>	
	Drilling Equipment <b>Geoprobe 8140LS</b>	Well Screen Interval <b>75-85 ft.</b>	Top of Well Casing Elevation <b>7.81</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>85 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>12/2/13</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>85 ft.</b>	Boring Dia. <b>6 in.</b>
Driller Name <b>B. Moss</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>12/3/13</b>	Sampling Method <b>Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
75									75
-70			(74.5- 76.0) SAND: Light gray sand, medium-fine grained, some clay	SW	75-80	20.7		Well Screen: 75-85'	
			(76.0- 85.0) SAND: Light gray sand, medium-fine grained, trace clay		80-85	24.2			
-80									80
-85			End of boring at 85 ft. bgs.					Well set at 85 ft. bgs. with 10 ft of screen.	85
-90									90
-95									95
-90									90
-95									95
-100									100

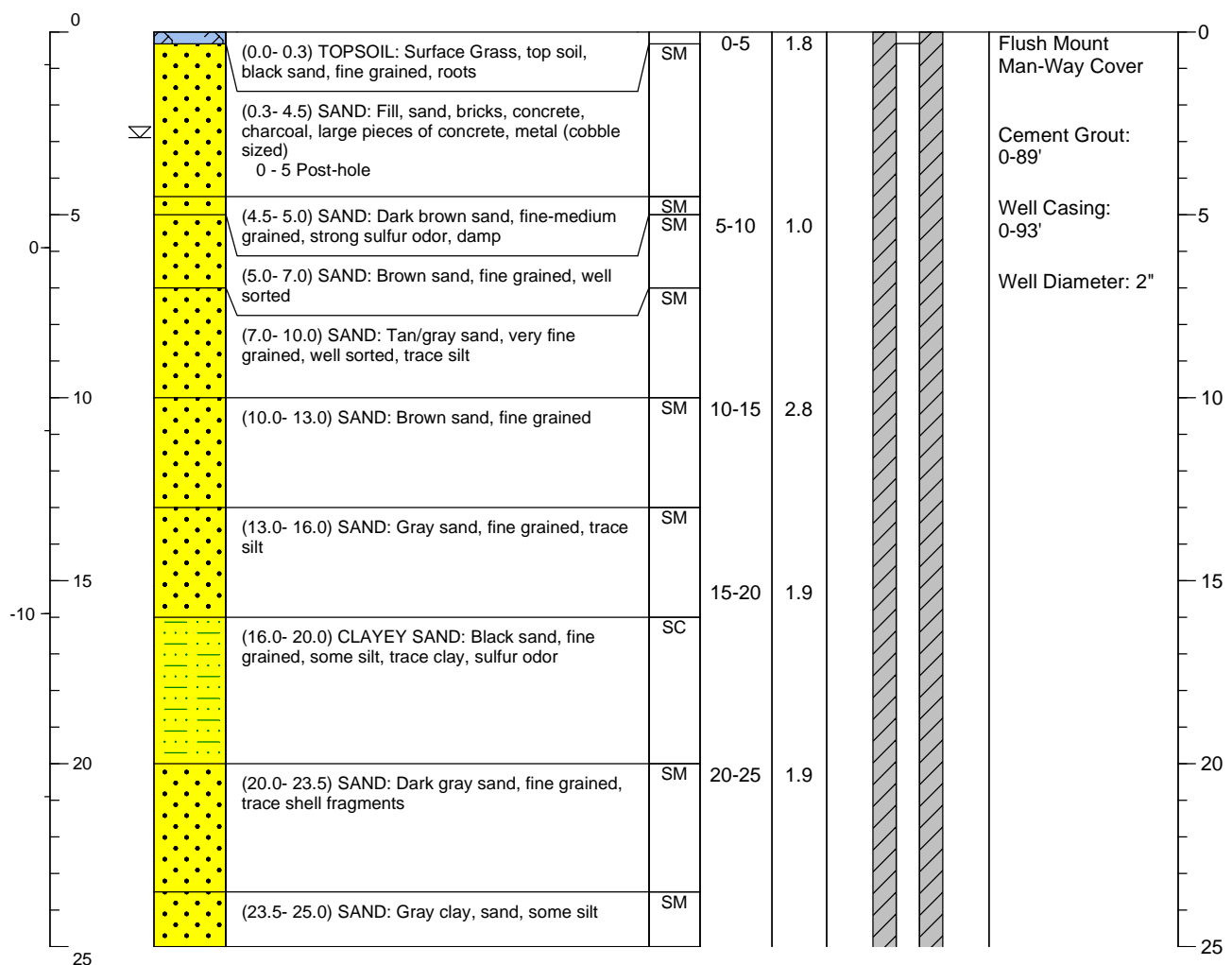


<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-56D	
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting	<b>425399.45</b> <b>873177.19</b>	Ground Surface Elevation <b>5.90</b>	
	Drilling Equipment <b>Roto Sonic</b>	Well Screen Interval <b>93-103 ft.</b>		Top of Well Casing Elevation <b>5.58</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>		Total Well Depth <b>103 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>7/8/14</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>		Boring Depth <b>105 ft.</b>	Boring Dia. <b>6 in.</b>
Driller Name <b>A. Hak</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>7/8/14</b>	Sampling Method <b>Continuous Cores</b>		Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
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<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-56D	
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting	<b>425399.45</b> <b>873177.19</b>	Ground Surface Elevation <b>5.90</b>	
	Drilling Equipment <b>Roto Sonic</b>	Well Screen Interval <b>93-103 ft.</b>		Top of Well Casing Elevation <b>5.58</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>		Total Well Depth <b>103 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>7/8/14</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>		Boring Depth <b>105 ft.</b>	Boring Dia. <b>6 in.</b>
Driller Name <b>A. Hak</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>7/8/14</b>	Sampling Method <b>Continuous Cores</b>		Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
25									25
-20			(25.0- 30.8) SANDY CLAY: Gray clay, sand, silt	CL	25-30	2.0			
					30-35	2.7			
-30			(30.8- 33.0) SAND: Gray sand, fine grained	SM					
			(33.0- 34.0) SAND: Gray sand medium-fine grained, some shell fragments (30%), angular	SM					
-35			(34.0- 36.0) CLAYEY SAND: Gray sand, medium-fine grained, some shell fragments, some clay	SC	35-40	1.8			
-40			(36.0- 36.3) ROCK: 3-inches of rock	SM					
			(36.3- 40.0) SAND: Gray sand, medium-fine grained, few pieces of rock, gravel size.						
-45			(40.0- 52.0) SAND: Gray sand, fine grained	SM	40-45	0.9			
-50					45-50	0.4			
									50





Project Name			Well Number		
Ashland Brunswick Georgia			MW-56D		
Address  2801 Cook Street  Brunswick Georgia	Drilling Contractor/License Groundwater Protection	Northing Easting	425399.45 873177.19	Ground Surface Elevation 5.90	
	Drilling Equipment Roto Sonic	Well Screen Interval 93-103 ft.		Top of Well Casing Elevation 5.58	
GA EPD Number GAD004065520	Drilling Method Roto Sonic	Well Screen Slot Size 0.01 inch		Total Well Depth 103 ft.	
Logged By H. Hight Approved By C. Weaver	Date Drilling Started 7/8/14	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 105 ft.	Boring Dia. 6 in.
Driller Name A. Hak Project Number WBS2014B2	Date Drilling Completed 7/8/14	Sampling Method Continuous Cores		Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
50					50-55	1.9			50
			(52.0- 52.3) ROCK: 2-inches of rock	SM					
			(52.3- 55.0) SAND: Gray sand, medium-fine grained, pieces of rock						
-50			(55.0- 60.0) SANDY CLAY: Gray sandy clay, stiff, several rock lenses 1-2 inches thick	CL	55-60	3.8			55
-60			(60.0- 72.0) SAND: Gray sand, medium-fine grained, dark black grains	SM	60-65	2.2			60
-65					65-70	3.1			65
-70					70-75	2.9			70
-75			(72.0- 73.5) SANDY CLAY: Gray sandy clay, medium grained, stiff	CL					75
			(73.5- 79.2) SAND: Gray sand, medium grained, trace clay	SM					





<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-56D	
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting	<b>425399.45</b> <b>873177.19</b>	Ground Surface Elevation <b>5.90</b>	
	Drilling Equipment <b>Roto Sonic</b>	Well Screen Interval <b>93-103 ft.</b>		Top of Well Casing Elevation <b>5.58</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>		Total Well Depth <b>103 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>7/8/14</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>		Boring Depth <b>105 ft.</b>	Boring Dia. <b>6 in.</b>
Driller Name <b>A. Hak</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>7/8/14</b>	Sampling Method <b>Continuous Cores</b>		Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
75					75-80	2.0			75
-70									
			(79.2- 80.0) SANDY CLAY: Gray sandy clay, medium grained, stiff	CL	80-85	2.2			80
-80			(80.0- 90.0) SAND: Gray sand, medium grained	SM					
					85-90	2.6			85
-85									
-90			(90.0- 100.0) CLAYEY SAND: Gray sand, medium grained, some pieces of rock, sub angular, few lumps of clay	SC	90-95	1.6			90
								Fine Sand: 89-91'	
-95					95-100	3.4		#2 Silica Sand: 91-103'	
								Well Screen: 93-103'	
-90									95
-95									
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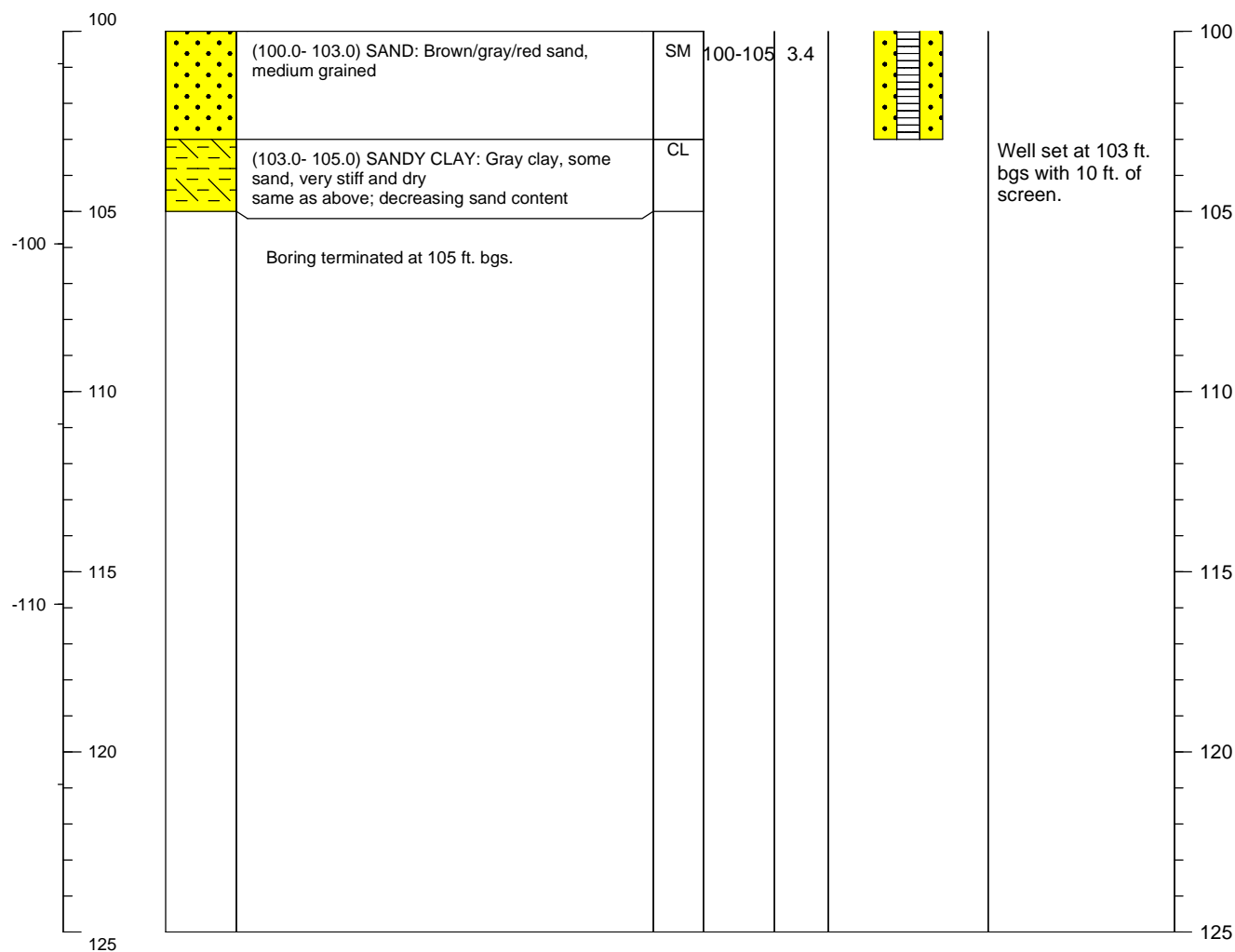


<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-56D
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting <b>425399.45</b> <b>873177.19</b>	Ground Surface Elevation <b>5.90</b>	
	Drilling Equipment <b>Roto Sonic</b>	Well Screen Interval <b>93-103 ft.</b>	Top of Well Casing Elevation <b>5.58</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>103 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>7/8/14</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>105 ft.</b>	Boring Dia. <b>6 in.</b>
Driller Name <b>A. Hak</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>7/8/14</b>	Sampling Method <b>Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
-----------	-------	-------------	--------------------	------	----------------------	-----------------	--------------	--------------	-------



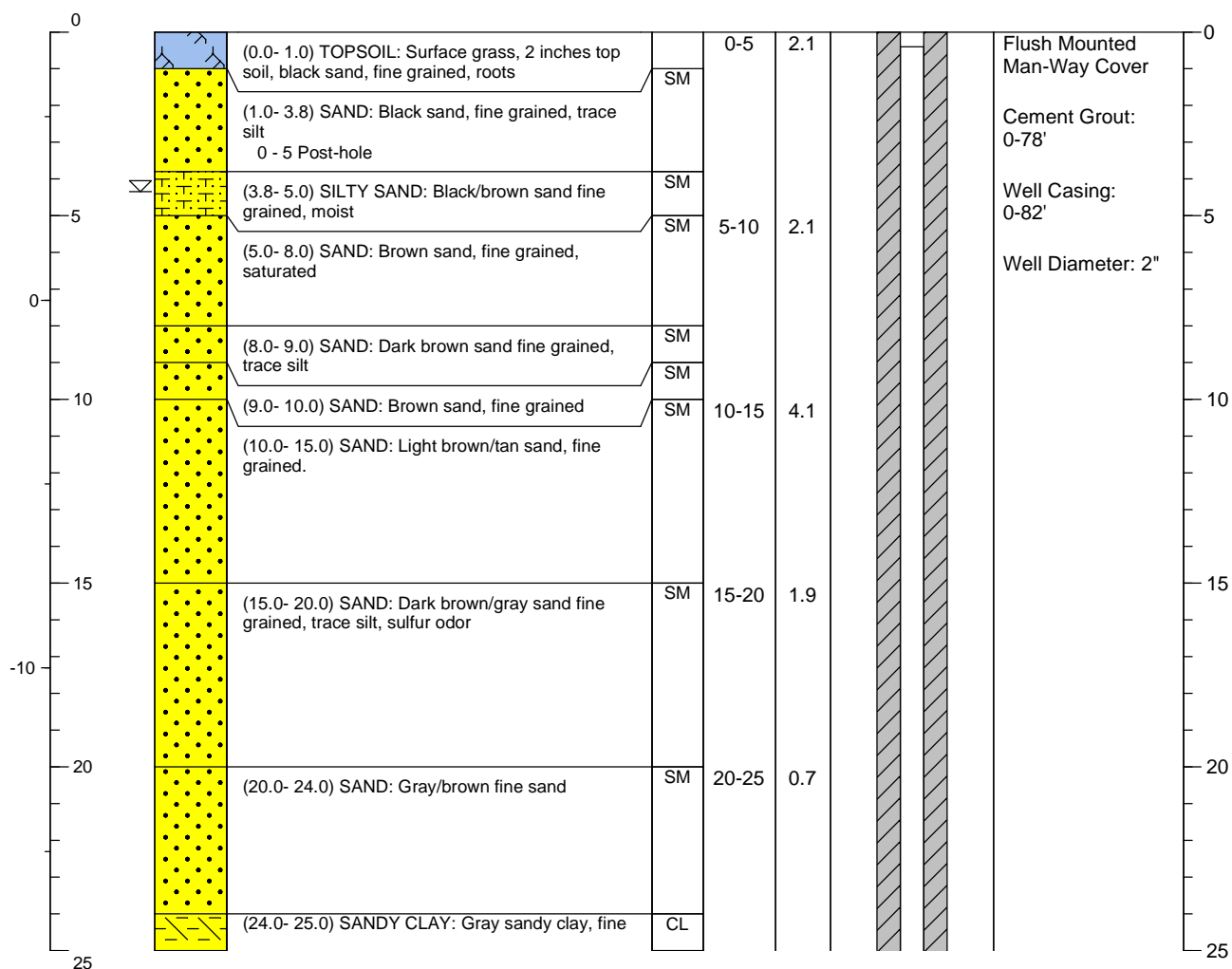


Project Name Ashland Brunswick Georgia			Monitoring Well Construction Log		Well Number MW-57D	
Address 2801 Cook Street  Brunswick Georgia		Drilling Contractor/License Groundwater Protection	Northing 425877.55 Easting 872717.34		Ground Surface Elevation 7.30	
		Drilling Equipment Roto Sonic	Well Screen Interval 82-92 ft.		Top of Well Casing Elevation 6.90	
GA EPD Number GAD004065520		Drilling Method Roto Sonic	Well Screen Slot Size 0.01 inch		Total Well Depth 92 ft.	
Logged By H. Hight Approved By C. Weaver		Date Drilling Started 7/9/14	Well Casing Diameter and Type 2 in. SCH 40 PVC		Boring Depth 95 ft.	Boring Dia. 7/8/14
Driller Name A. Hak Project Number WBS2014B2		Date Drilling Completed 7/9/14	Sampling Method Continuous Cores		Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
-----------	-------	-------------	--------------------	------	----------------------	-----------------	--------------	--------------	-------





<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-57D
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting <b>425877.55</b> <b>872717.34</b>	Ground Surface Elevation <b>7.30</b>	
	Drilling Equipment <b>Roto Sonic</b>	Well Screen Interval <b>82-92 ft.</b>	Top of Well Casing Elevation <b>6.90</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>92 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>7/9/14</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>95 ft.</b>	Boring Dia. <b>7/8/14</b>
Driller Name <b>A. Hak</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>7/9/14</b>	Sampling Method <b>Continuous Cores</b>	Headspace Monitoring Device PID	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
25									25
			grained						
			(25.0- 28.5) SANDY CLAY: Dark gray sandy clay, fine grained, some silt	CL	25-30	0.2			
-20									
			(28.5- 30.0) SANDY CLAY: Dark gray clay, fine sand, stiff	CL					
			(30.0- 31.0) CLAYEY SAND: Gray fine sand, some clay	SC	30-35	1.0			30
			(31.0- 33.0) SANDY CLAY: Gray sandy clay, some silt	CL					
			(33.0- 36.0) CLAYEY SAND: Gray sandy clay, fine grained	SC					
					35-40	0.4			35
-30			(36.0- 38.0) CLAYEY SAND: Gray fine sand, some clay	SC					
			(38.0- 40.0) SAND: Gray fine sand	SM					
			(40.0- 42.0) CLAYEY SAND: Gray fine-coarse sand, clay, angular gravel	SC	40-45	1.6			40
			(42.0- 43.0) CLAYEY SAND: Dark gray clay, some fine sand, stiff	SC					
			(43.0- 45.0) CLAYEY SAND: Dark gray fine sand, clay, moderately stiff	SC					
-45			(45.0- 50.0) CLAYEY SAND: Gray medium-fine sand, some clay	SC	45-50	0.7			45
-50									50





<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-57D
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting <b>425877.55</b> <b>872717.34</b>	Ground Surface Elevation <b>7.30</b>	
	Drilling Equipment <b>Roto Sonic</b>	Well Screen Interval <b>82-92 ft.</b>	Top of Well Casing Elevation <b>6.90</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>92 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>7/9/14</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>95 ft.</b>	Boring Dia. <b>7/8/14</b>
Driller Name <b>A. Hak</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>7/9/14</b>	Sampling Method <b>Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
50			(50.0- 50.5) SANDY CLAY: Gray, sandy clay, fine grained, stiff	CL	50-55	1.8			50
			(50.5- 54.0) SAND: Gray fine sand, trace clay	SM					
			(54.0- 55.0) CLAYEY SAND: Gray clayey medium-fine sand, very stiff	SC	55-60	0.9			55
			(55.0- 59.0) CLAYEY SAND: Gray clayey medium-coarse sand, rounded grains, very stiff	SC					
-50			(59.0- 60.0) SANDY CLAY: Gray sandy clay, medium grained, stiff	CL	60-65	1.0			60
			(60.0- 65.0) SAND: Gray fine sand, trace clay	SM					
			(65.0- 80.0) SAND: Gray medium sand, some angular shell fragments (<1 mm diam.), loose	SM	65-70	2.4			65
-60									
					70-75	0.4			70
-70									
-75									75





<b>Project Name</b> Ashland Brunswick Georgia		<b>Monitoring Well Construction Log</b>		<b>Well Number</b> MW-57D
Address <b>2801 Cook Street</b> <b>Brunswick Georgia</b>	Drilling Contractor/License <b>Groundwater Protection</b>	Northing Easting <b>425877.55</b> <b>872717.34</b>	Ground Surface Elevation <b>7.30</b>	
	Drilling Equipment <b>Roto Sonic</b>	Well Screen Interval <b>82-92 ft.</b>	Top of Well Casing Elevation <b>6.90</b>	
GA EPD Number <b>GAD004065520</b>	Drilling Method <b>Roto Sonic</b>	Well Screen Slot Size <b>0.01 inch</b>	Total Well Depth <b>92 ft.</b>	
Logged By <b>H. Hight</b> Approved By <b>C. Weaver</b>	Date Drilling Started <b>7/9/14</b>	Well Casing Diameter and Type <b>2 in. SCH 40 PVC</b>	Boring Depth <b>95 ft.</b>	Boring Dia. <b>7/8/14</b>
Driller Name <b>A. Hak</b> Project Number <b>WBS2014B2</b>	Date Drilling Completed <b>7/9/14</b>	Sampling Method <b>Continuous Cores</b>	Headspace Monitoring Device <b>PID</b>	

### LITHOLOGY

### SAMPLING DATA

Elevation	Depth	Graphic Log	Visual Description	USCS	Sample Interval (ft)	Headspace (ppm)	Well Diagram	Well Details	Depth
75					75-80	0.9			75
-70									
-80			(80.0- 90.0) SAND: Gray medium sand, some black grains, loose	SM	80-85	1.3		Fine Sand: 78-80'	-80
-85					85-90	3.0		#2 Silica Sand: 80-95'	-85
-90			(90.0- 91.5) CLAYEY SAND: Gray fine sand, some clay	SC	90-95	5.8		Well Screen: 82-92'	-90
-95			(91.5- 91.8) ROCK: 2 inches of rock	CL					-95
			(91.8- 95.0) SANDY CLAY: Clayey medium sand, very stiff and dry					Well set at 92 ft. bgs. with 10 ft of screen.	
-95			Boring terminated at 95 ft. bgs.						-95
-90									
100									100



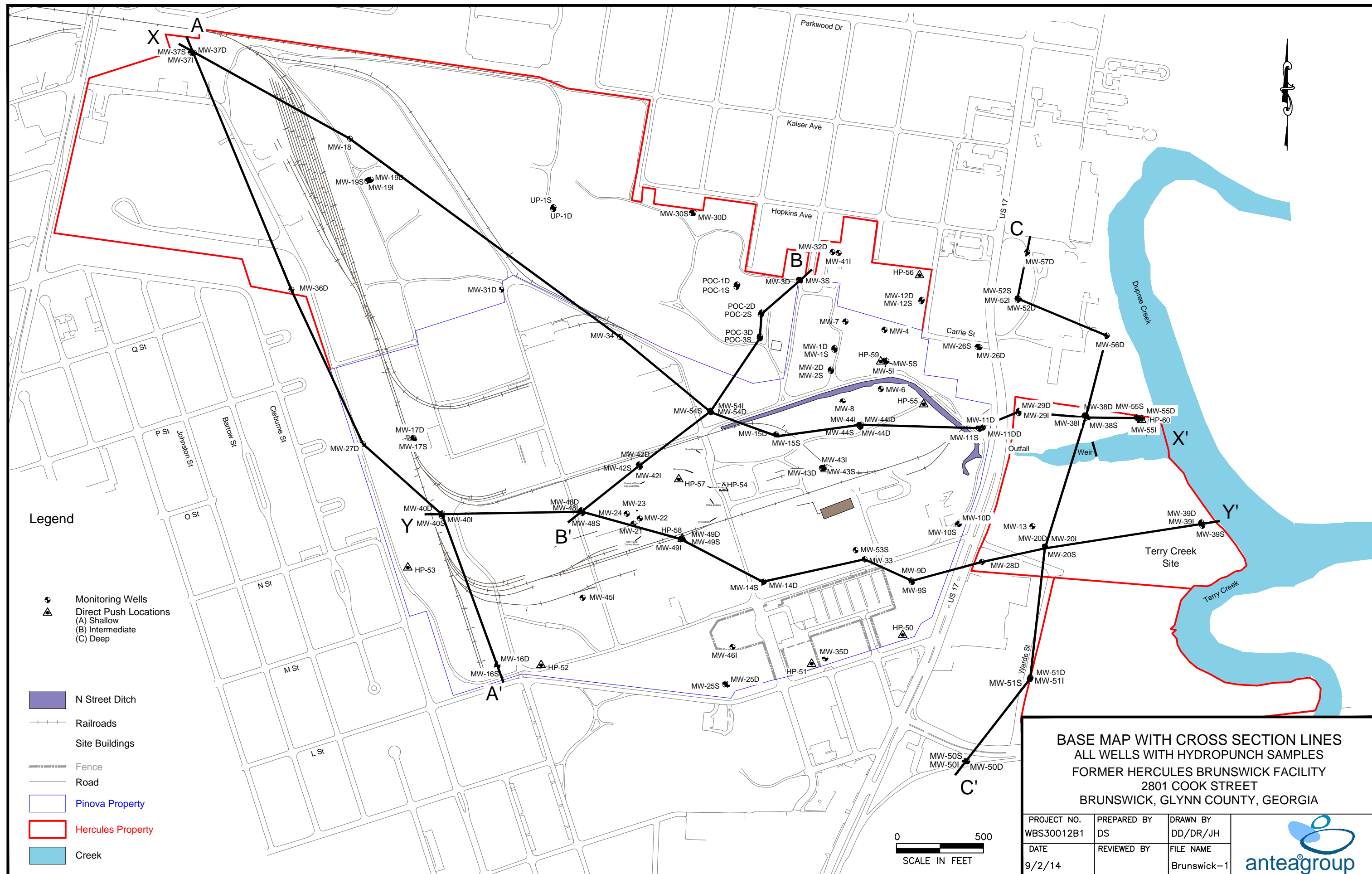


## ***Appendix C***

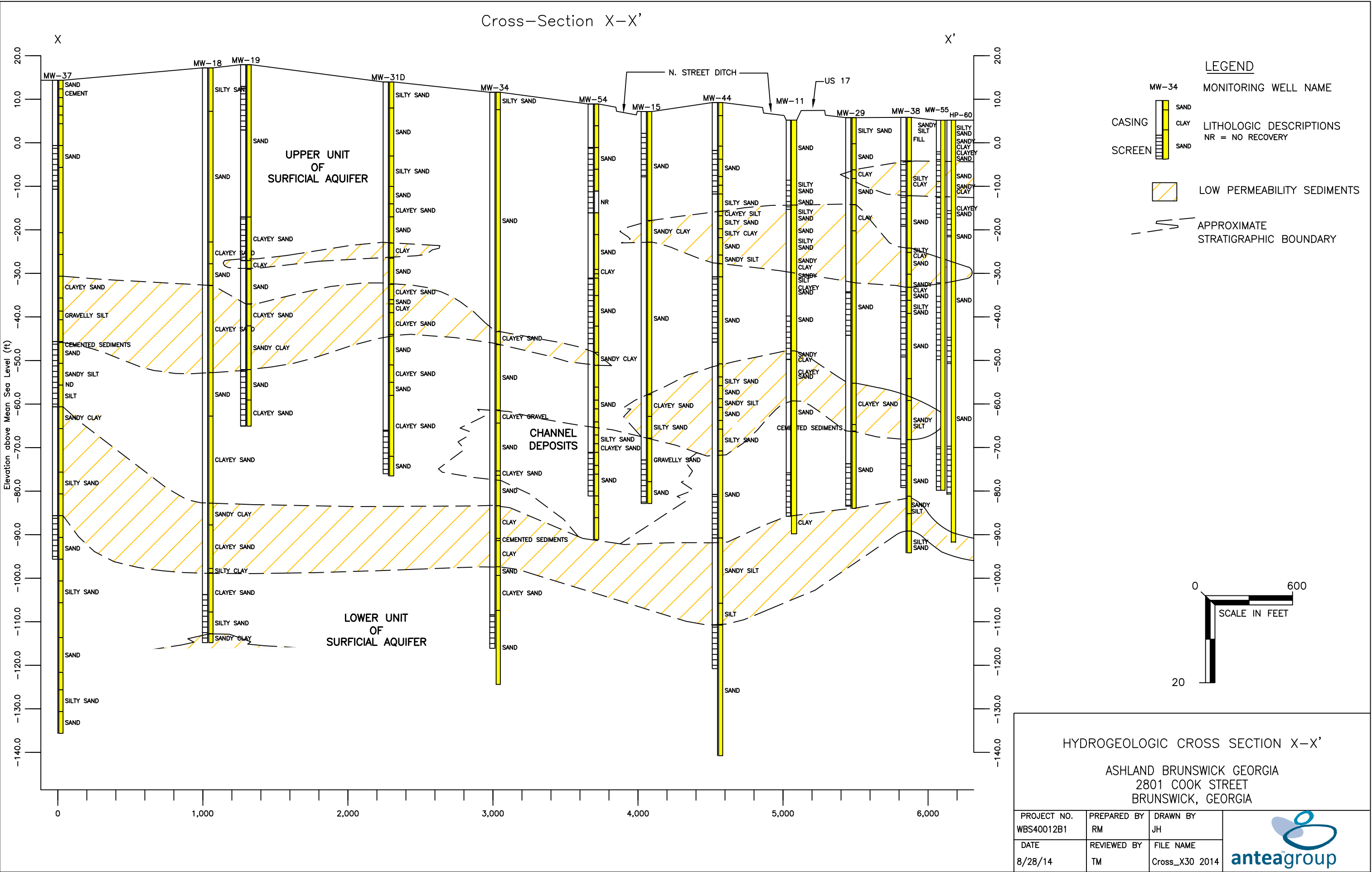
### ***Cross-Section Transects and Cross-Sections***









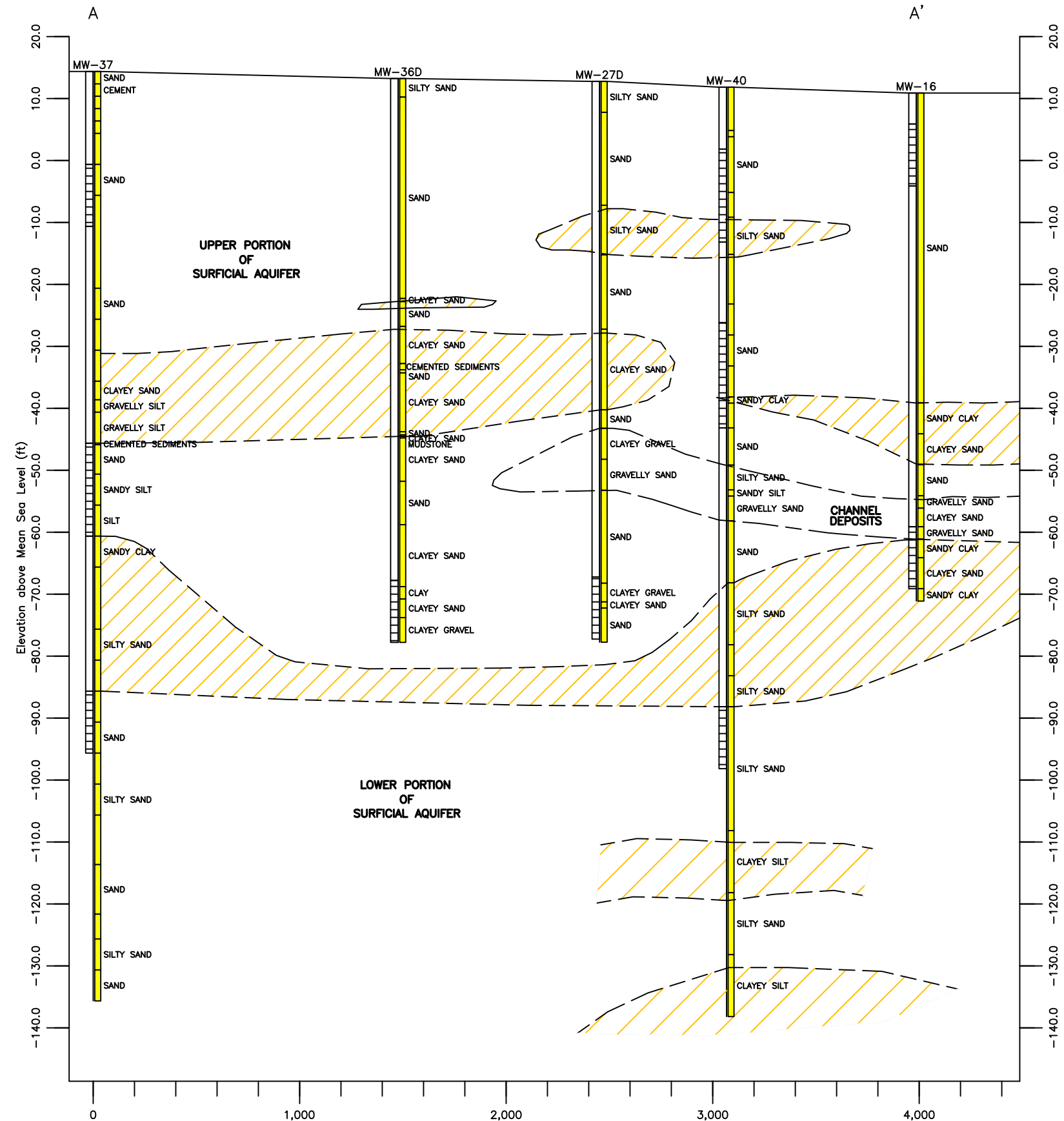








Cross-Section A-A'



LEGEND

- MONITORING WELL NAME
- LITHOLOGIC DESCRIPTIONS  
NR = NO RECOVERY
- LOW PERMEABILITY SEDIMENTS
- APPROXIMATE STRATIGRAPHIC BOUNDARY

HYDROGEOLOGIC CROSS SECTION A-A'

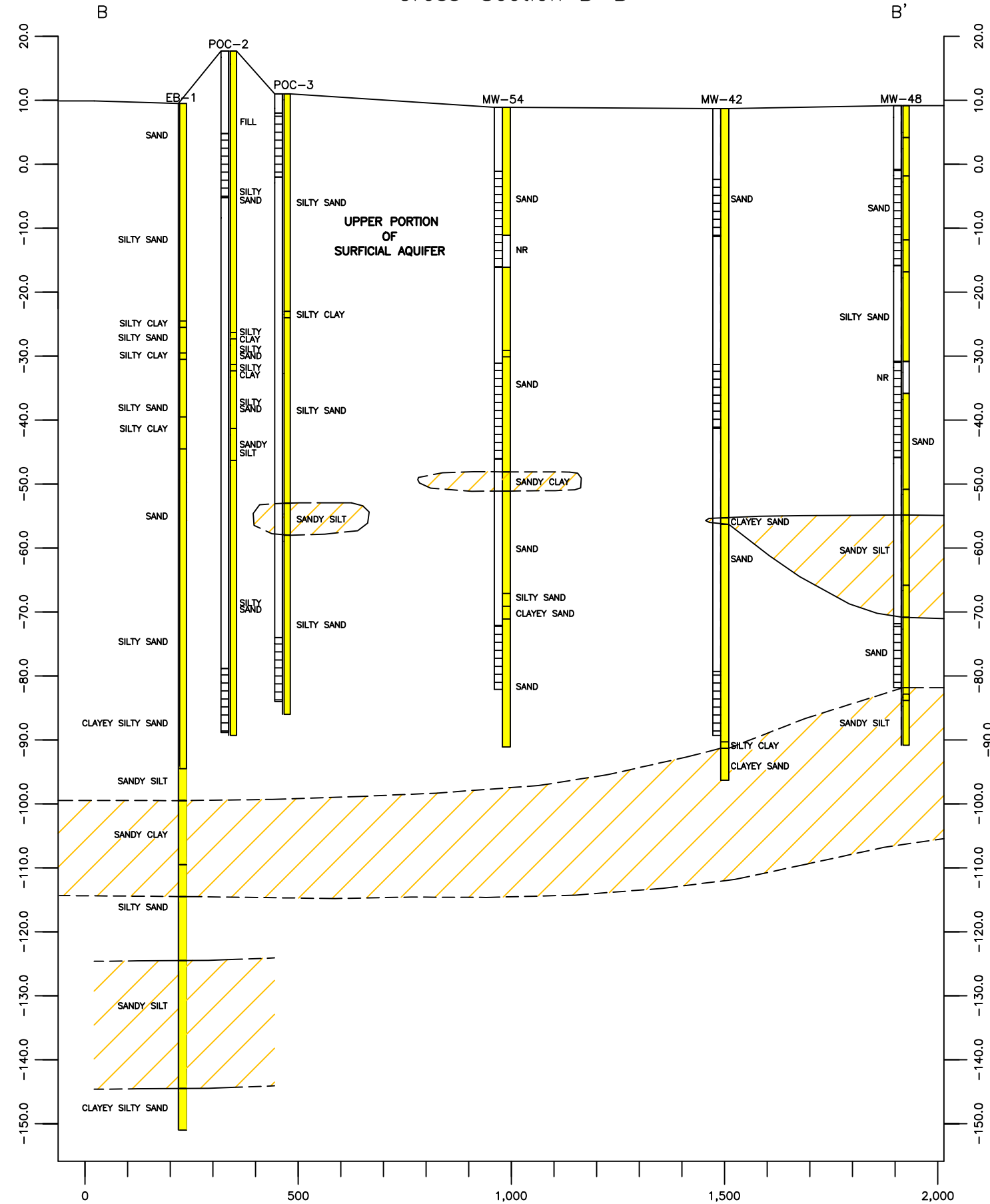
FORMER HERCULES BRUNSWICK FACILITY  
2801 COOK STREET  
BRUNSWICK, GEORGIA

PROJECT NO. WBS40012B1	PREPARED BY RM	DRAWN BY JH
DATE 10/24/12	REVIEWED BY TM	FILE NAME Cross_A30





Cross-Section B-B'



LEGEND

- MONITORING WELL NAME
- LITHOLOGIC DESCRIPTIONS
- NR = NO RECOVERY
- LOW PERMEABILITY SEDIMENTS
- APPROXIMATE STRATIGRAPHIC BOUNDARY

HYDROGEOLOGIC CROSS SECTION B-B'

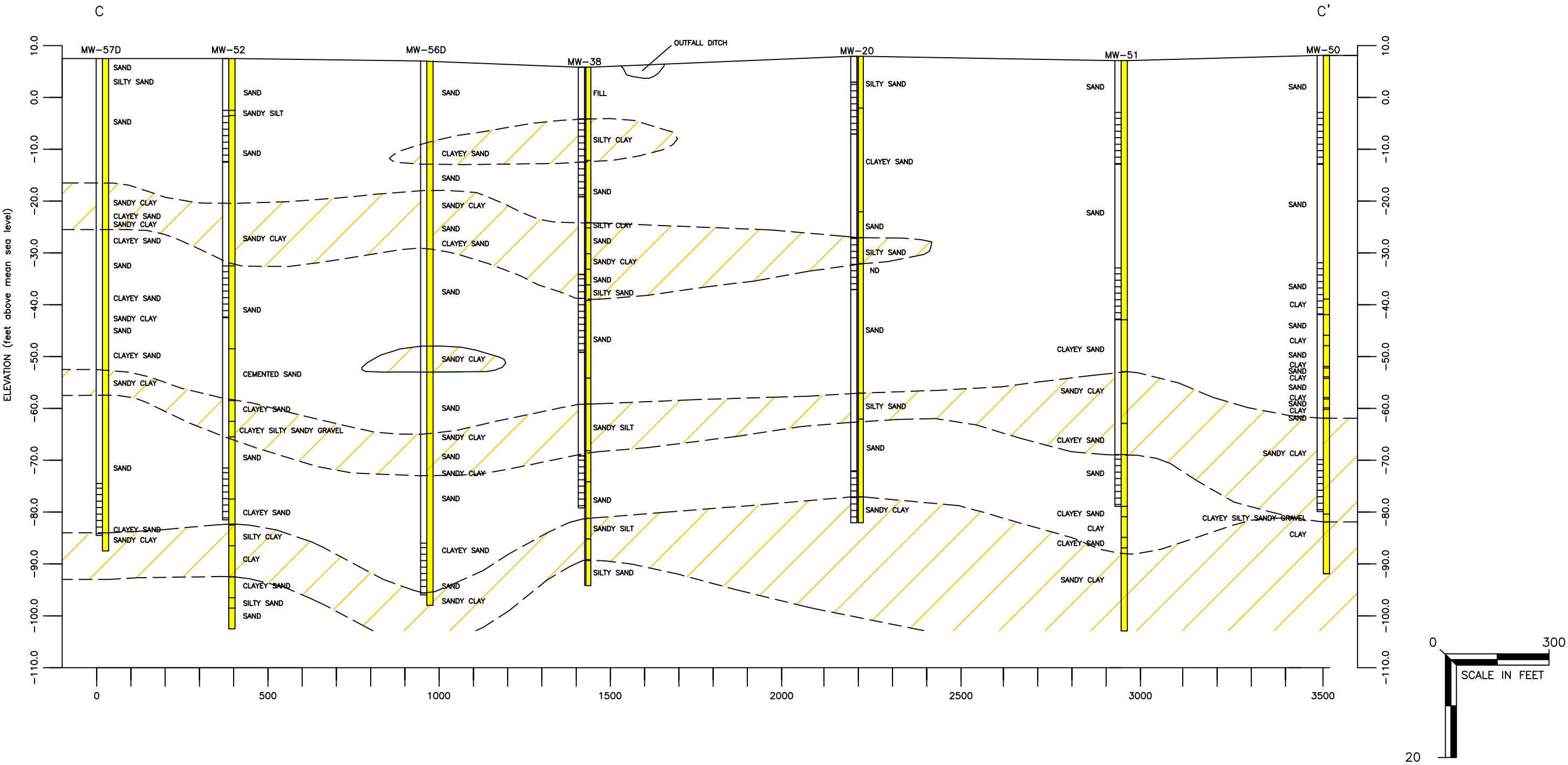
ASHLAND BRUNSWICK GEORGIA  
2801 COOK STREET  
BRUNSWICK, GEORGIA

PROJECT NO. WBS400112B1	PREPARED BY DS	DRAWN BY JH
DATE 10/26/12	REVIEWED BY	FILE NAME Cross_B30





Cross-Section C-C'



LEGEND

WELL CASING

WELL SCREEN

MW-38

MONITORING WELL NAME

LITHOLOGIC DESCRIPTIONS

NR = NO RECOVERY

LOW PERMEABILITY SEDIMENTS

APPROXIMATE STRATIGRAPHIC BOUNDARY

HYDROGEOLOGIC CROSS SECTION C-C'

FORMER HERCULES BRUNSWICK FACILITY

2801 COOK STREET

BRUNSWICK, GEORGIA

PROJECT NO. WBS40012B1	PREPARED BY JB	DRAWN BY JH
DATE 8/29/14	REVIEWED BY TM	FILE NAME Cross_C 2014



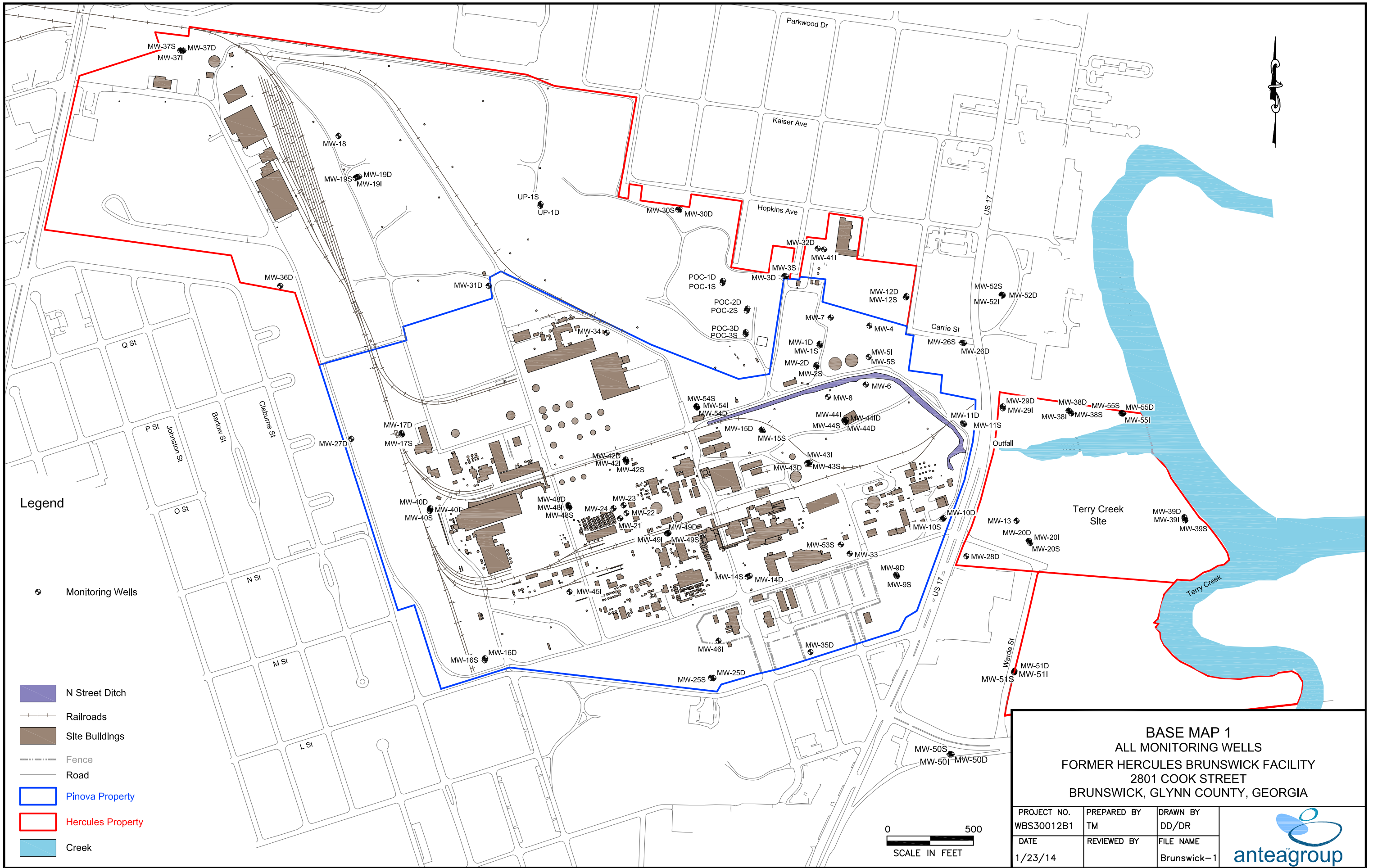


## ***Appendix D***

### ***Grain Size and Permeability Testing***









**EMC ENGINEERING SERVICES, INC.**  
23 E. Charlton St., Savannah, GA 31412

**DELTA ENVIRONMENTAL - HERCULES**

Job No.

Sample I.D.: #1, 40-50' **MW-40** Date Tested: 4/21/10

Sample Description:

Gray medium to fine slightly silty sand with shell fragments (SP-SM)

Moisture=14.1%, Specific Gravity = 2.55

$D_{10}=0.1513$ ,  $D_{30}=0.3358$ ,  $D_{60}=0.5121$ ,  $D_{80}=0.6213$ ,  $C_c=1.20$ ,  $C_u=4.11$

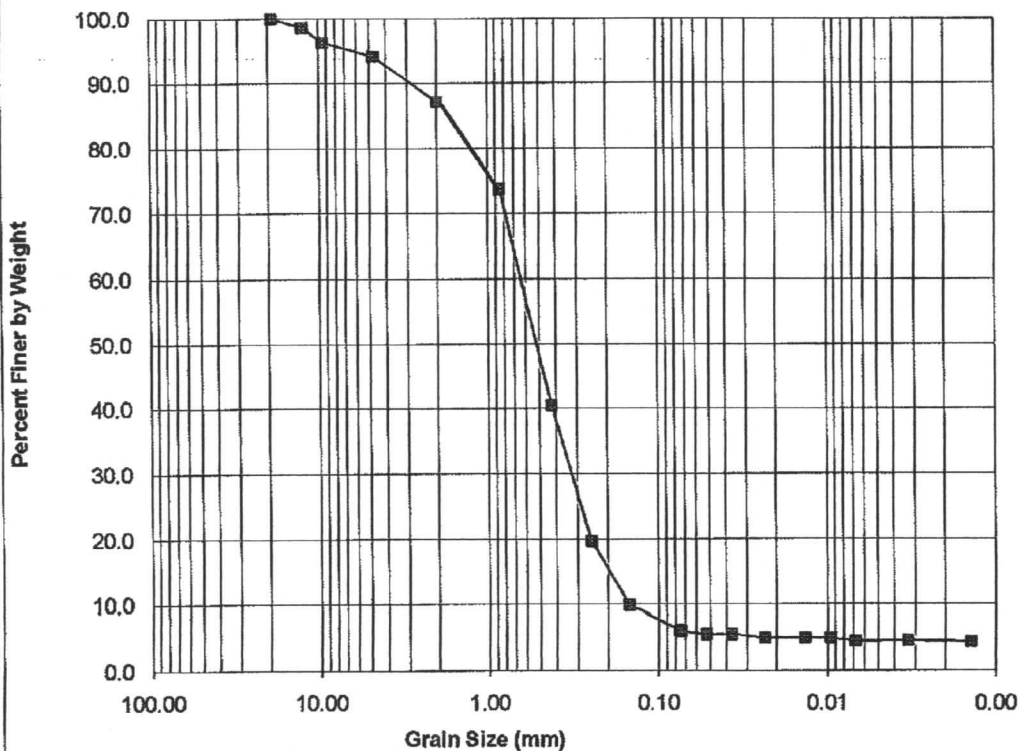
Recommended Coefficient of Permeability =  $600 \text{ cm} \times 10^{-4}/\text{sec}$  (loose)

=  $200 \text{ cm} \times 10^{-4}/\text{sec}$  (dense)

\*Sample split at the #20 sieve

Sieve No.	Sieve Opening (mm)	Weight Retained (grams)	Cum. Wt. Ret. (grams)	% Pass.
3/4"	19.00	0.00	0.00	100.0
1/2"	12.50	2.28	2.28	98.7
3/8"	9.50	4.22	6.50	96.4
#4	4.75	3.89	10.39	94.2
#10	2.00	12.73	23.12	87.1
TOTAL WEIGHT		179.18		
#20*	0.850	14.18	14.18	73.7
#40	0.425	35.31	49.49	40.5
#60	0.250	22.06	71.55	19.7
#100	0.150	10.46	82.01	9.9
#200	0.075	4.09	86.10	6.1
hydrometer 0.5 min	0.0740			6.0
1.0 min	0.0525			5.5
2.0 min	0.0371			5.5
5.0 min	0.0235			5.0
15.0 min	0.0136			5.0
30.0 min	0.0096			5.0
60.0 min	0.0068			4.5
250.0 min	0.0033			4.6
1440 min	0.0014			4.4
TOTAL WEIGHT		92.53		

**Grain Size Distribution**







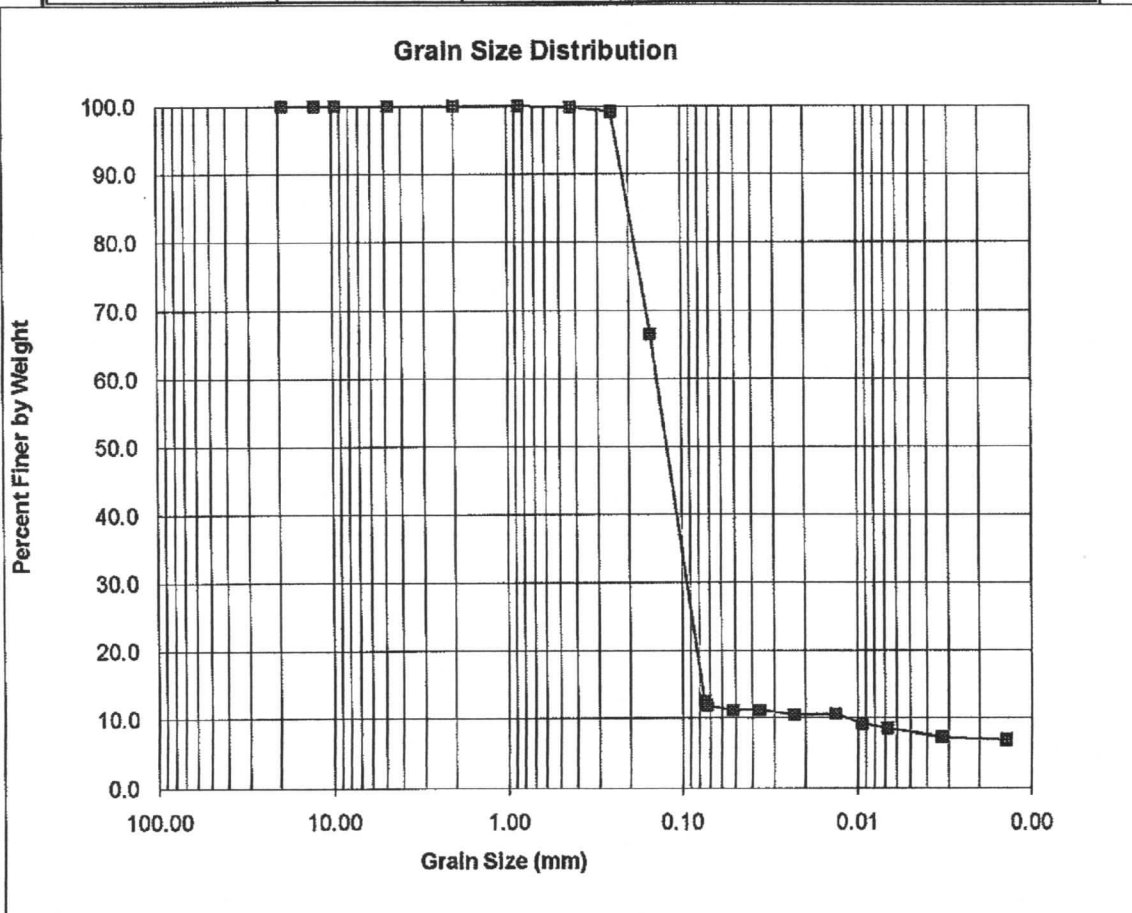


**EMC ENGINEERING SERVICES, INC.**  
23 E. Charlton St., Savannah, GA 31412

**DELTA ENVIRONMENTAL - HERCULES**

Job No. Sample I.D.: #3, 100-110' *MW-40* Date Tested: 4/21/10  
 Sample Description: Gray clayey fine sand (SP-SC)  
 Moisture=19.0%, Specific Gravity = 2.55  
 $D_{10}=0.0114$ ,  $D_{30}=0.1014$ ,  $D_{60}=0.1260$ ,  $D_{80}=0.1397$ ,  $C_c=6.45$ ,  $C_u=12.25$   
 Recommended Coefficient of Permeability =

Sieve No.	Sieve Opening (mm)	Weight Retained (grams)	Cum. Wt. Ret. (grams)	% Pass.
3/4"	19.00	0.00	0.00	100.0
1/2"	12.50	0.00	0.00	100.0
3/8"	9.50	0.00	0.00	100.0
#4	4.75	0.00	0.00	100.0
#10	2.00	0.00	0.00	100.0
#20	0.850	0.00	0.00	100.0
#40	0.425	0.12	0.12	99.8
#60	0.250	0.50	0.62	99.2
#100	0.150	24.32	24.94	66.6
#200	0.075	40.46	65.40	12.5
hydrometer 0.5 min	0.0730			11.9
1.0 min	0.0518			11.2
2.0 min	0.0366			11.2
5.0 min	0.0232			10.5
15.0 min	0.0134			10.6
30.0 min	0.0095			9.2
60.0 min	0.0068			8.5
250.0 min	0.0033			7.3
1440 min	0.0014			6.9
TOTAL WEIGHT		74.75		





**EMC ENGINEERING SERVICES, INC.**  
23 E. Charlton St., Savannah, GA 31412

**DELTA ENVIRONMENTAL - HERCULES**

Job No.

Sample I.D.: #4, 140-150' *MW-40* Date Tested: 4/21/10

Sample Description:

Gray fine sand with clay and silt (SC)

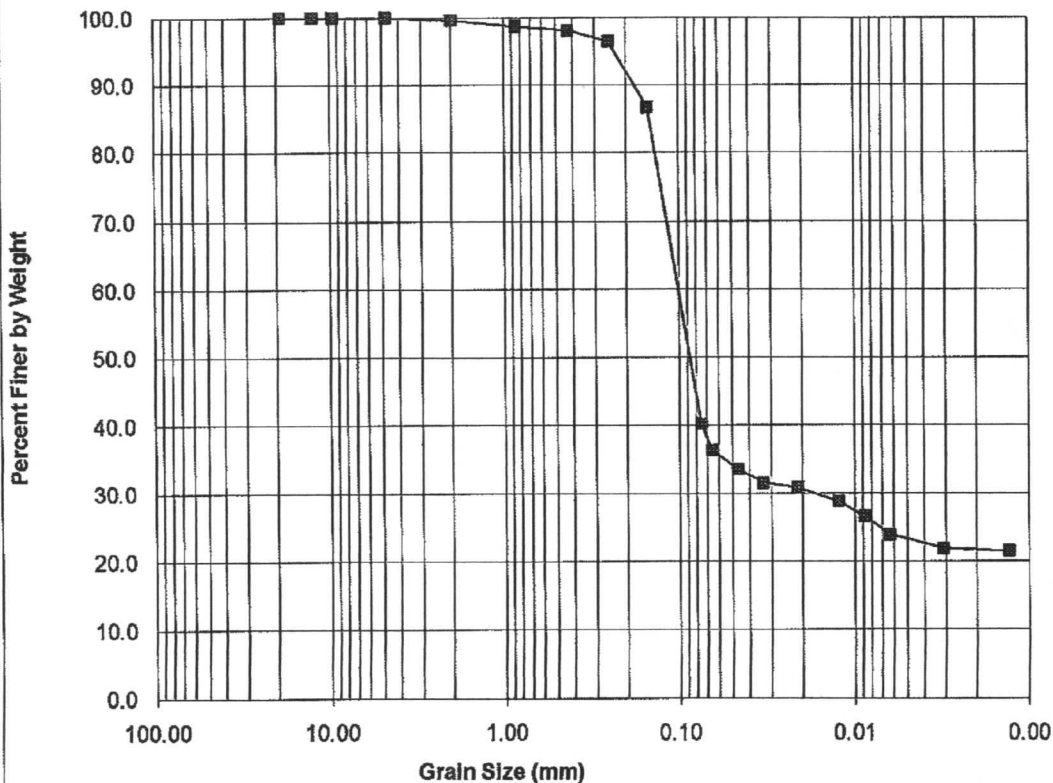
Moisture=36.5%, Specific Gravity = 2.55

$D_{10}=$  ,  $D_{30}=0.0160$ ,  $D_{60}=0.0896$ ,  $D_{80}=0.1026$ ,  $C_c=$  ,  $C_u=$

Recommended Coefficient of Permeability =

Seive No.	Sieve Opening (mm)	Weight Retained (grams)	Cum. Wt. Ret. (grams)	% Pass.
3/4"	19.00	0.00	0.00	100.0
1/2"	12.50	0.00	0.00	100.0
3/8"	9.50	0.00	0.00	100.0
#4	4.75	0.00	0.00	100.0
#10	2.00	0.32	0.32	99.6
#20	0.850	0.67	0.99	98.7
#40	0.425	0.47	1.46	98.1
#80	0.250	1.29	2.75	96.5
#100	0.150	7.55	10.30	86.7
#200	0.075	36.14	46.44	40.2
hydrometer 0.5 min	0.0652			36.3
1.0 min	0.0468			33.5
2.0 min	0.0334			31.5
5.0 min	0.0212			30.8
15.0 min	0.0124			28.8
30.0 min	0.0088			26.6
60.0 min	0.0063			23.9
250.0 min	0.0031			21.9
1440 min	0.0013			21.5
TOTAL WEIGHT		77.61		

**Grain Size Distribution**







8100 Secura Way • Santa Fe Springs, CA 90670  
Telephone (562) 347-2500 • Fax (562) 907-3610

May 10, 2012

Dean Salisbury  
Antea Group  
800 Dutch Square Blvd.  
Columbia, SC 29210

Re: PTS File No: 42301  
Physical Properties Data  
RFI Phase III; WBS30012B1

Dear Mr. Salisbury:

Please find enclosed report for Physical Properties analyses conducted upon samples received from your RFI Phase III; WBS30012B1 project. All analyses were performed by applicable ASTM, EPA, or API methodologies. An electronic version of the report has previously been sent to your attention via the internet. The samples are currently in storage and will be retained for thirty days past completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

PTS Laboratories appreciates the opportunity to be of service. If you have any questions or require additional information, please contact Rachel Spitz at (562) 347-2504.

Sincerely,  
PTS Laboratories

Michael Mark Brady, P.G.  
District Manager

Encl.



Project Name: RFI Phase III  
Project Number: WBS30012B1

PTS File No: 42301  
Client: Antea Group

TEST PROGRAM - 20120430

CORE ID	Depth ft.	Core Recovery ft.	TOC/foc Walkley- Black	Hydraulic Conductivity Pkg. Vert. 1"			Notes
Date Received: 20120427		Plugs:	Grab				
MW-51S (10-20)	10-20	N/A	X				
MW-51I (36-46)	36-46	N/A	X				
MW-51D (76-86)	76-86	N/A	X				
MW-43 (105-107)	105-107	2.50		X			Labeled MW-43 104-106 (top & bottom)
MW-49 (101-103)	101-103	2.50		X			
TOTALS:	2 cores 3 jars	5.00	3	2			5

Laboratory Test Program Notes

Standard TAT for basic analysis is 15 business days.

Hydraulic Conductivity Package – Saturated Zone: Native-state permeability to water, total and air-filled porosity, grain and bulk density, moisture content, total pore fluid (water only) saturation.

MW-43 (105-107) labeled correctly on COC per R. McLain/Antea 20120430.



PHYSICAL PROPERTIES DATA - HYDRAULIC CONDUCTIVITY PACKAGE

PROJECT NAME: RFI Phase III  
PROJECT NO: WBS30012B1

METHODS: API RP 40 / ASTM D2216									
SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	MOISTURE CONTENT, % weight	API RP 40		API RP 40		API RP 40	
				DENSITY		POROSITY, %V <sub>b</sub> (2)		TOTAL PORE FLUID SATURATIONS (3), % P <sub>v</sub>	
				DRY BULK, g/cc	GRAIN, g/cc	TOTAL	AIR FILLED	PERMEABILITY TO WATER, millidarcy	HYDRAULIC CONDUCTIVITY (4,5), cm/s
MW-43 (105-107)	106.5	V	12.9	1.72	2.65	34.9	12.6	63.9	9.19E-06
MW-49 (101-103)	102.2	V	18.0	1.71	2.71	36.7	5.9	83.8	9.51E-07

(1) Sample Orientation: H = horizontal; V = vertical; R = remold (2) Total Porosity = no pore fluids in place; all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids (3) Water = 0.9996 g/cc (4) Native State or Effective = With as-received pore fluids in place (5) Permeability to water and hydraulic conductivity measured at saturated conditions; V<sub>b</sub> = Bulk Volume, cc; P<sub>v</sub> = Pore Volume, cc; ND = Not Detected



PTS File No: 42301  
Client: Antea Group

# ORGANIC CARBON DATA - TOC (foc)

(METHODOLOGY: WALKLEY-BLACK)

PROJECT NAME: RFI Phase III  
PROJECT NO: WBS30012B1

SAMPLE ID.	DEPTH, ft.	ANALYSIS DATE	ANALYSIS TIME	SAMPLE MATRIX	TOTAL ORGANIC CARBON, mg/kg	FRACTION ORGANIC CARBON, g/g
MW-51S (10-20)	10-20	20120504	1052	SOIL	6800	6.80E-03
MW-51I (36-46)	36-46	20120504	1052	SOIL	2150	2.15E-03
MW-51D (76-86)	76-86	20120504	1052	SOIL	540	5.40E-04
Blank	N/A	20120504	1052	BLANK	ND	ND
SRM D076-542	N/A	20120504	1052	SRM	2900	2.90E-03
Reporting Limit:					100	1.00E-04

## QC DATA

SRM ID/Lot No.	REC (%)	Control Limits	Certified Concentration mg/kg	QC Performance Acceptance Limits, mg/kg	
				Lower	Upper
D076-542	105	75-125	2750	2063	3438

ND = Not Detected







## ***Appendix E***

### ***Historic Potentiometric Maps***





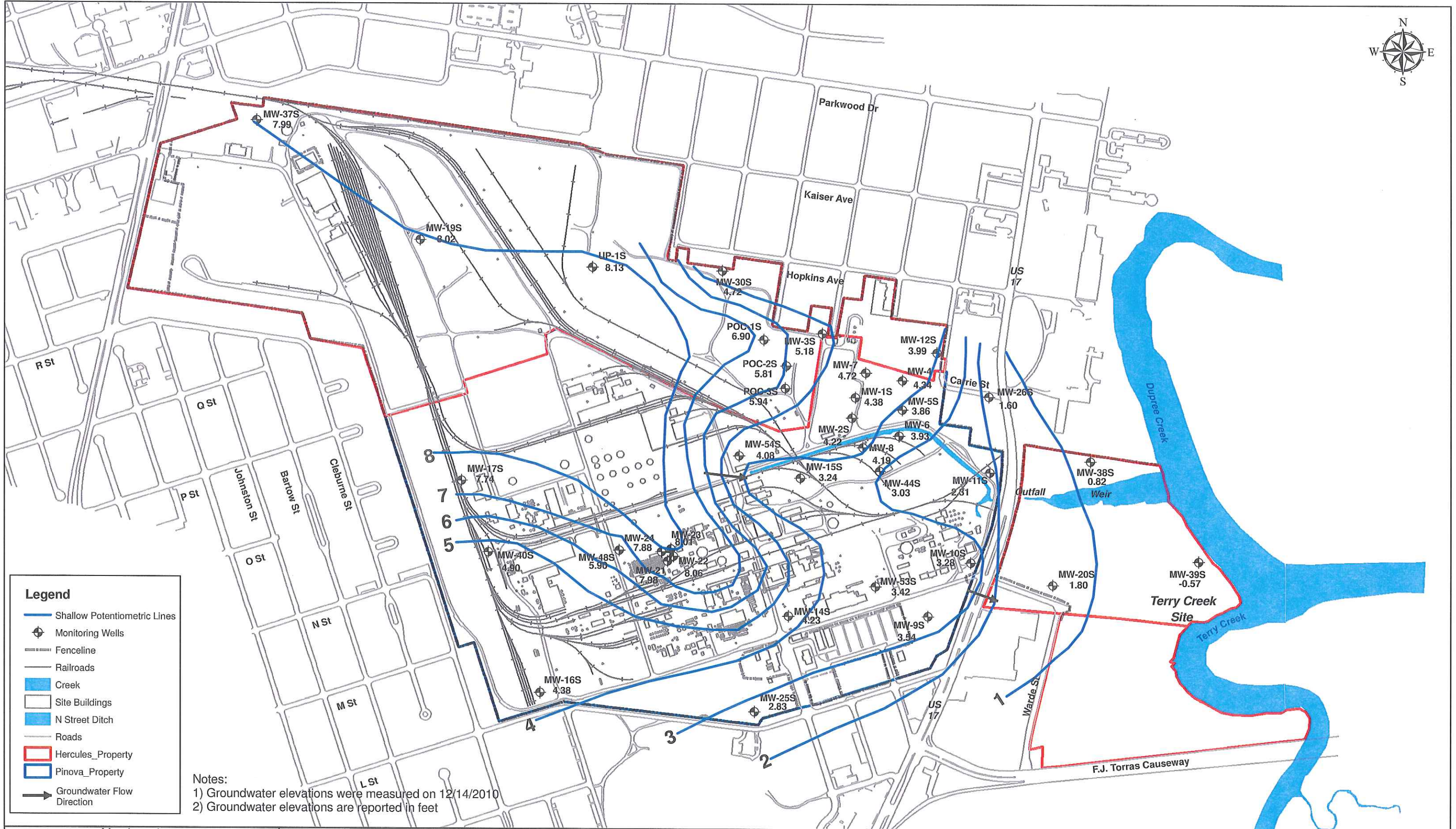
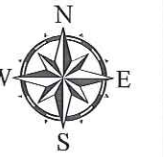
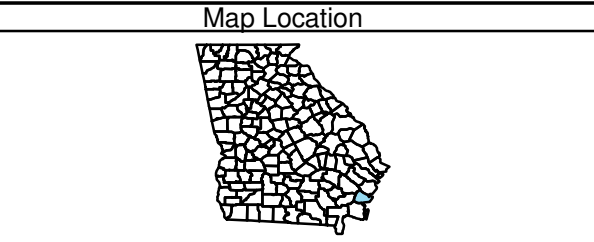
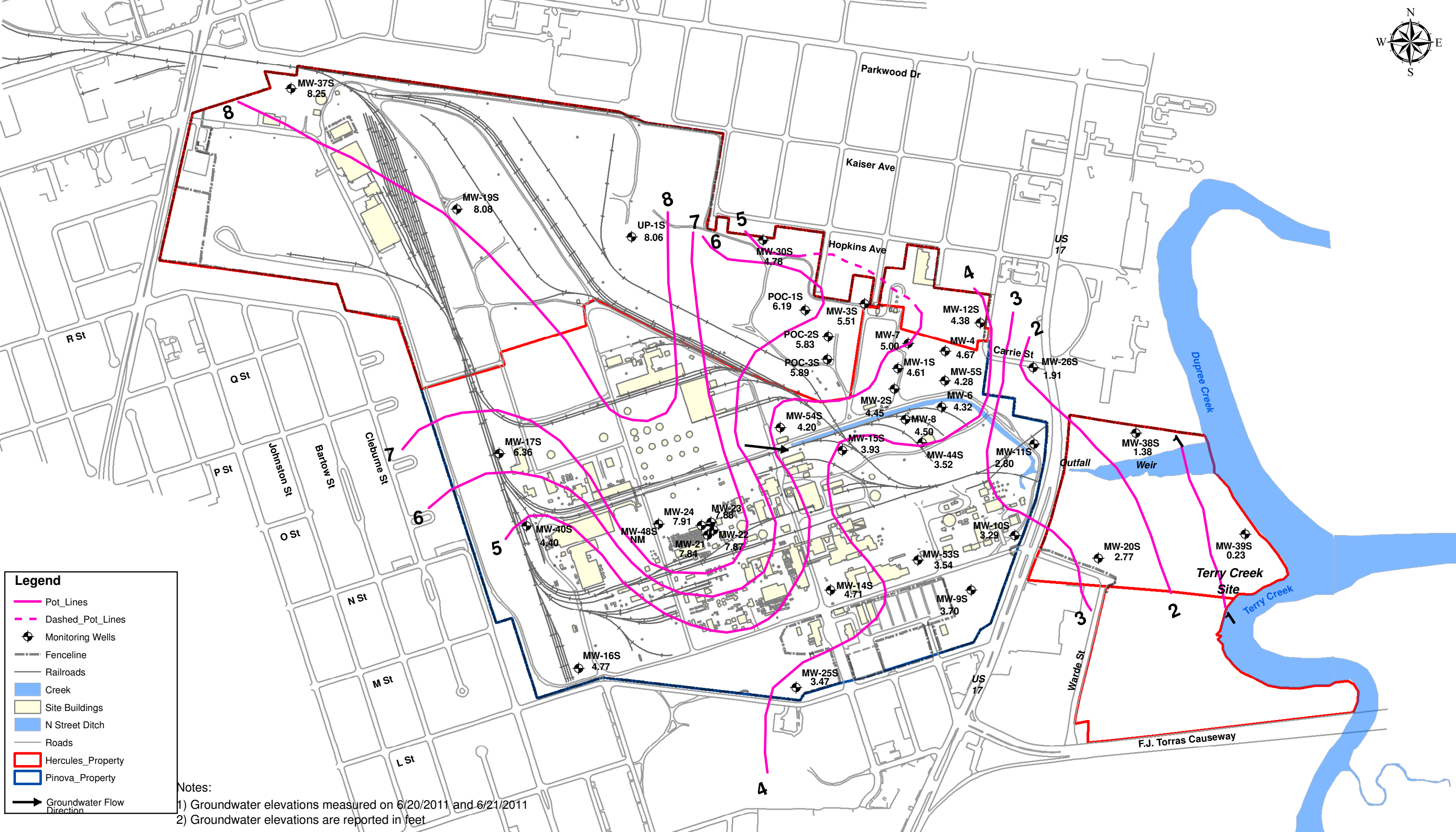
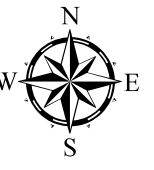


Figure:4

Date: May 2011

Project Number: J09850809





**Former Hercules Brunswick Facility**

Potentiometric Map

Surficial Aquifer - Upper Unit

0 130 260 520 780 1,040

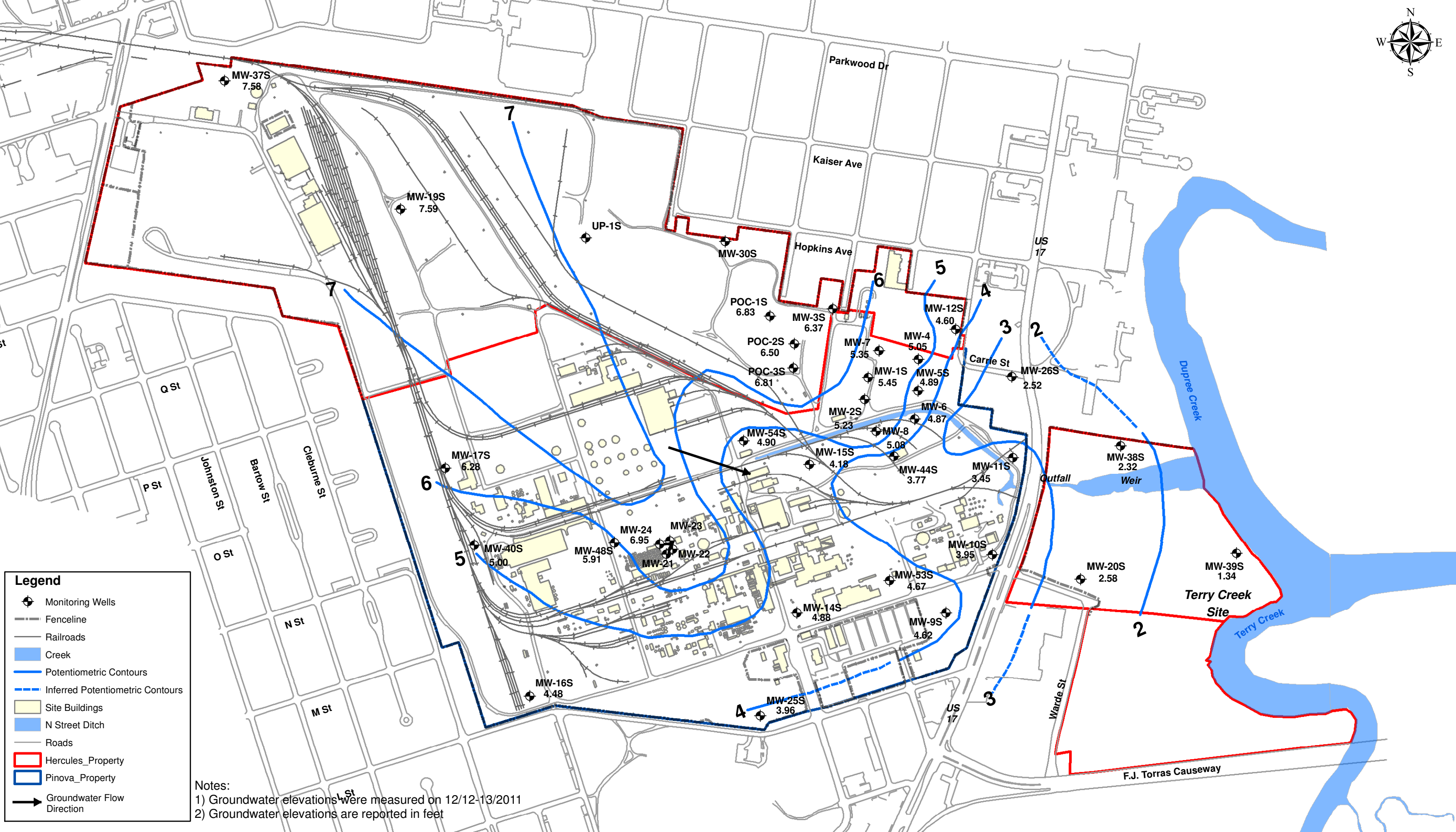
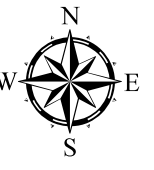
Feet

Figure:4

Date:October 2011

Project Number: WBS40012B1

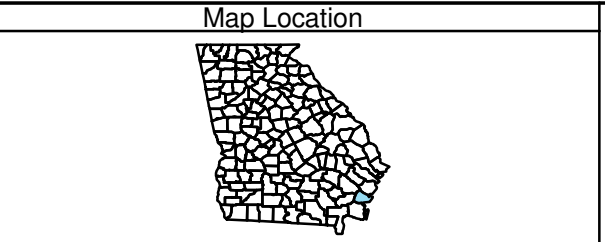




**Legend**

- Monitoring Wells
- Fenceline
- Railroads
- Creek
- Potentiometric Contours
- Inferred Potentiometric Contours
- Site Buildings
- N Street Ditch
- Roads
- Hercules\_Property
- Pinova\_Property
- Groundwater Flow Direction

Notes:  
1) Groundwater elevations were measured on 12/12-13/2011  
2) Groundwater elevations are reported in feet



**Former Hercules Brunswick Facility**  
Potentiometric Map  
Surficial Aquifer - Upper Unit

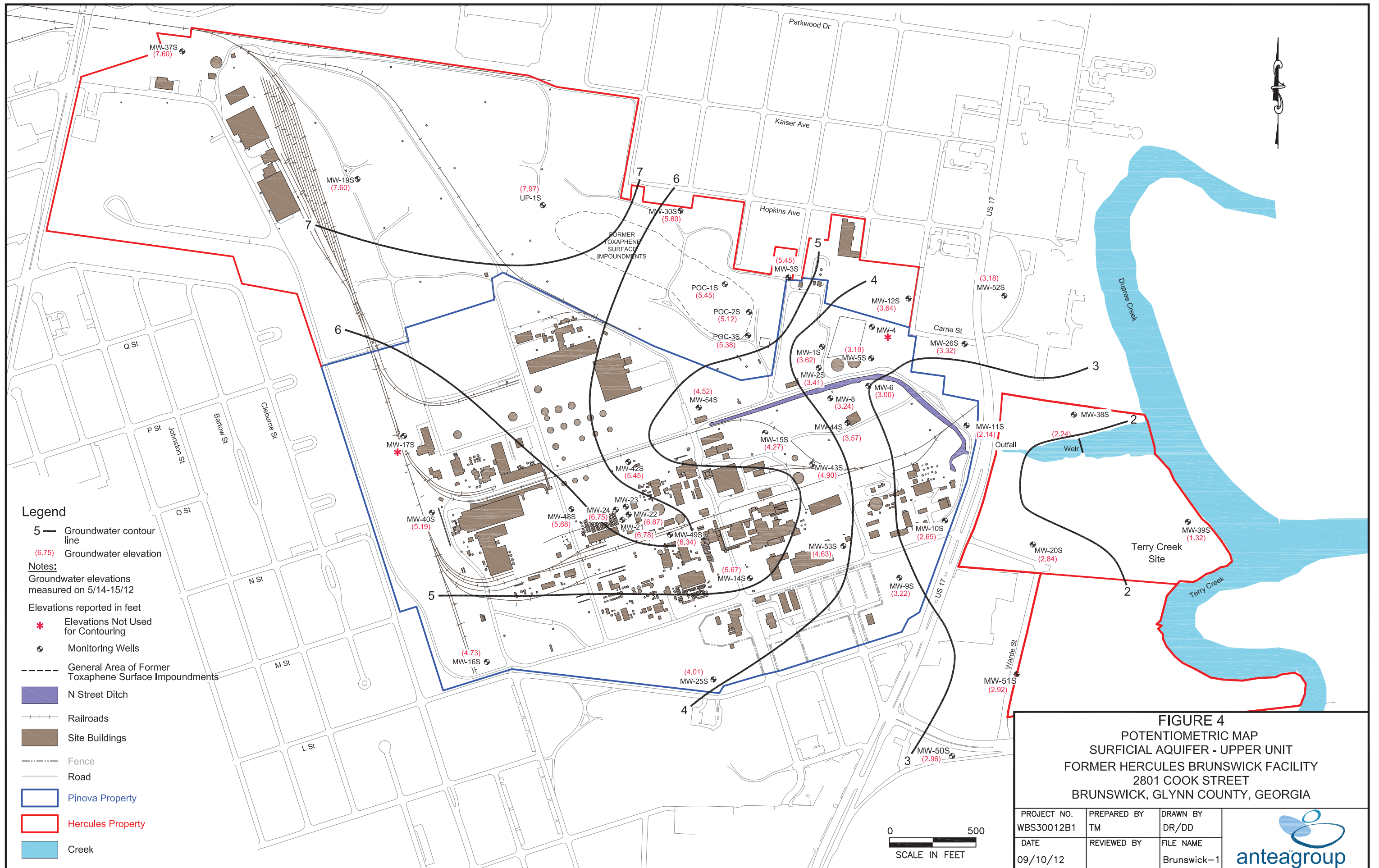
0 125 250 500 750 1,000 Feet

Figure:4

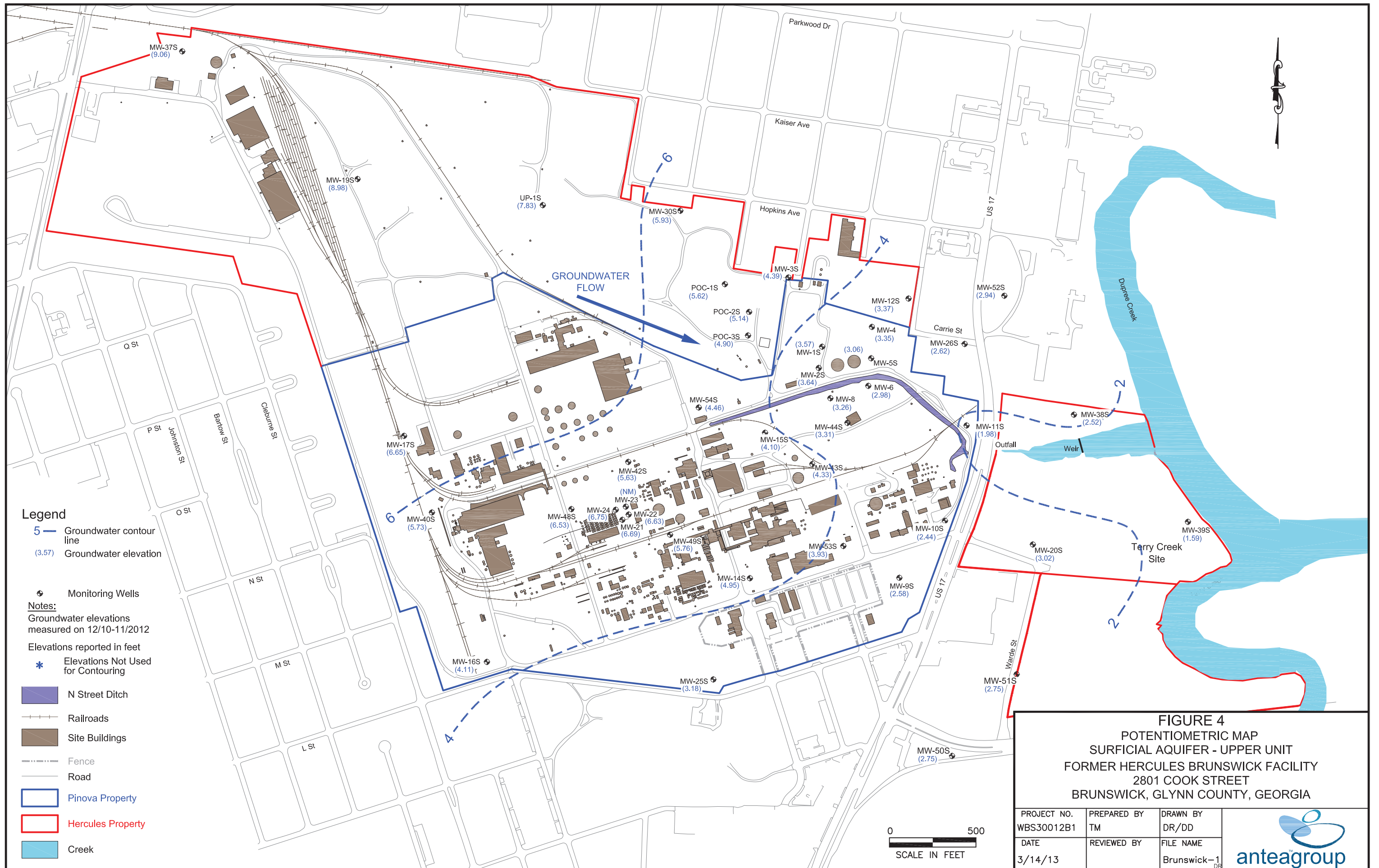
Date: January 2012

Project Number: WBS40012B1

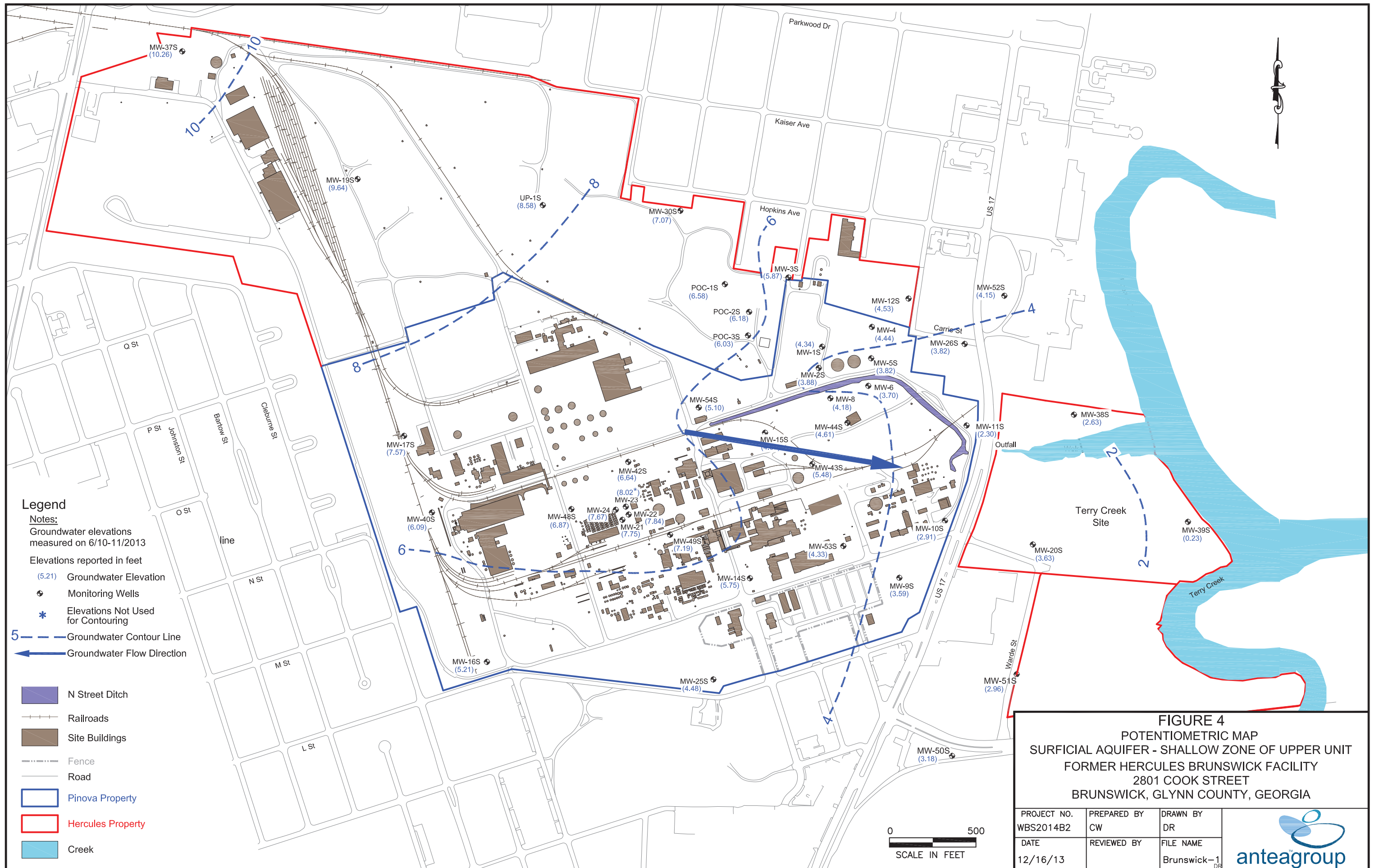




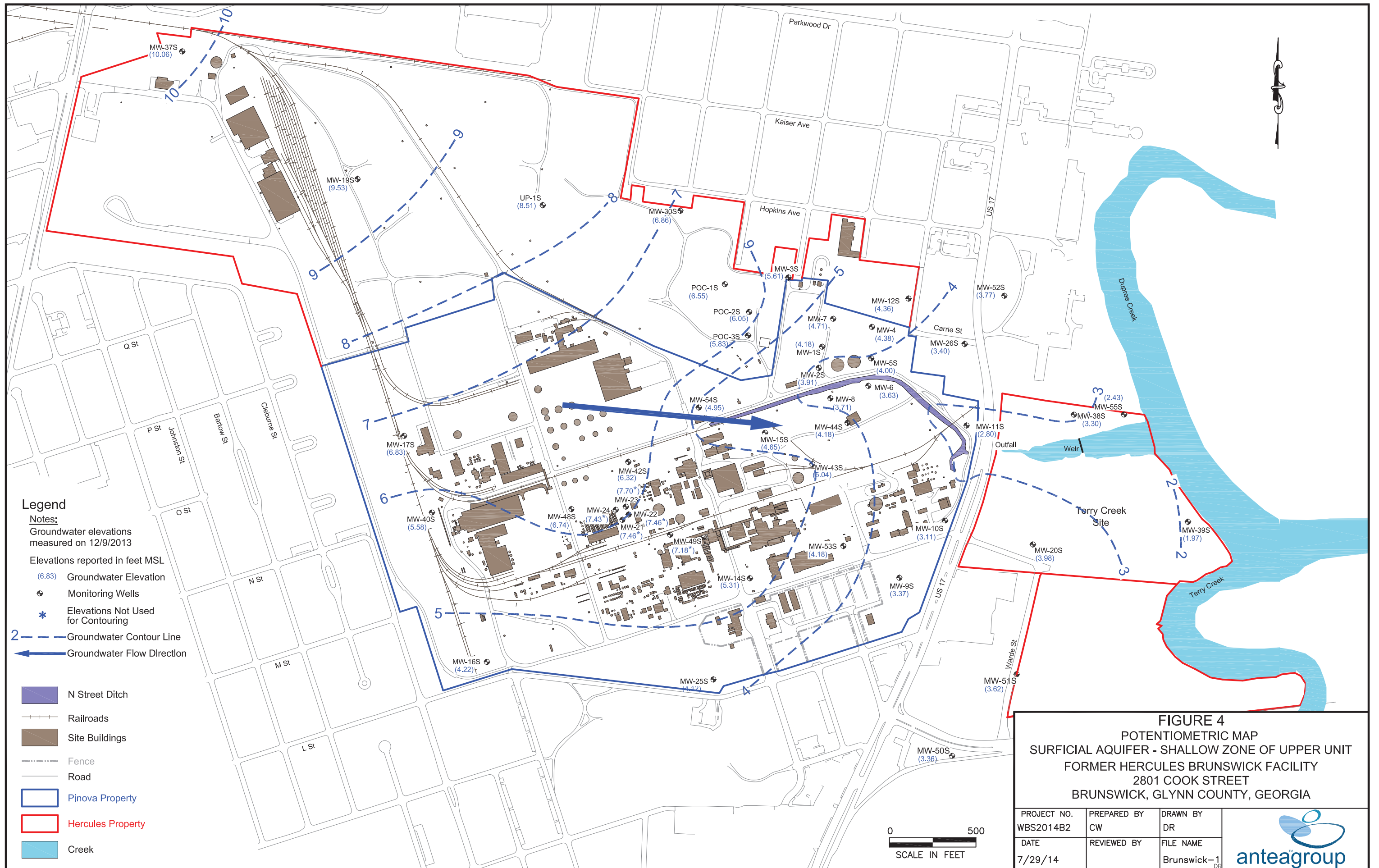




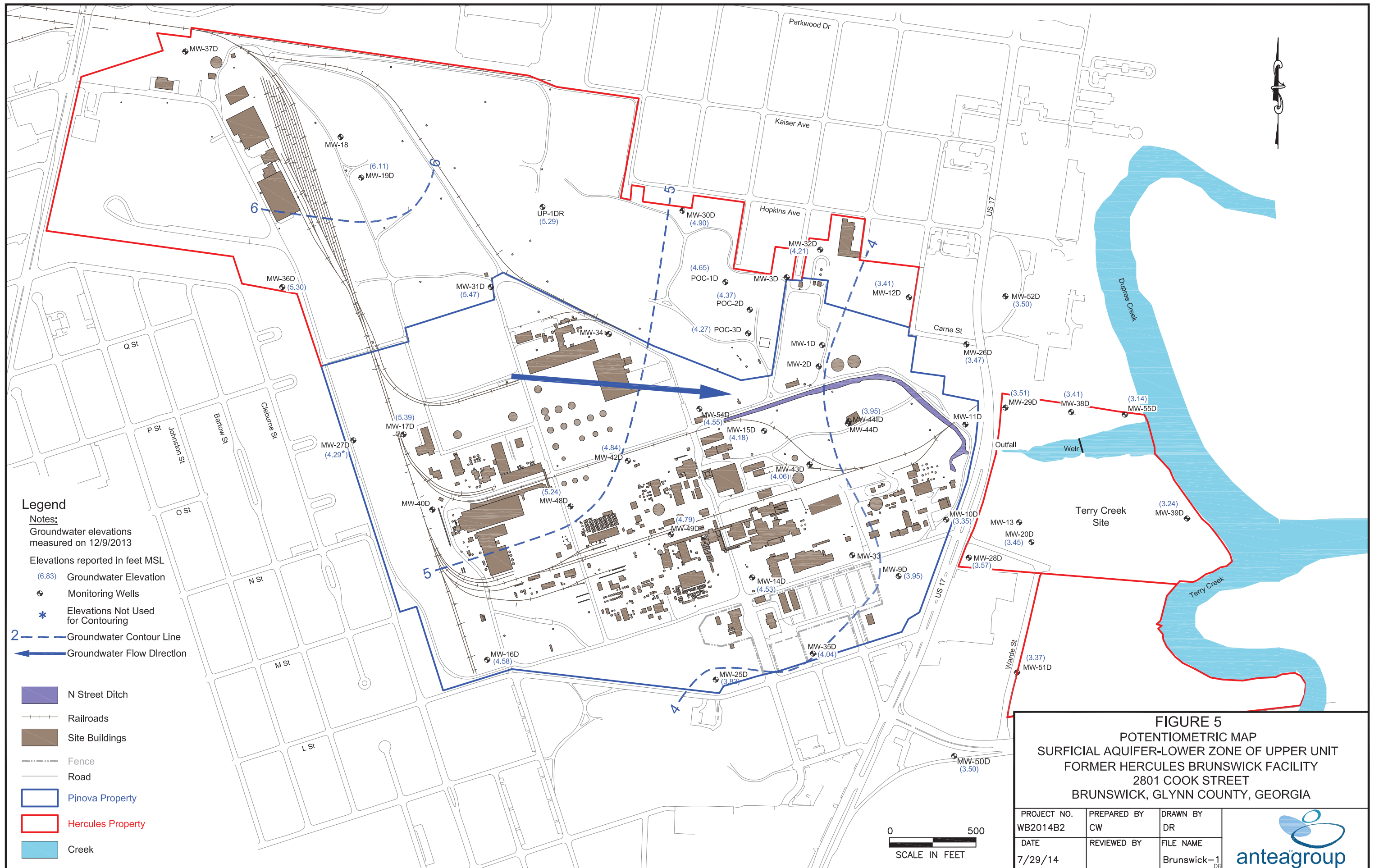














## ***Appendix F***

### ***Groundwater Gradient Calculations***





Vertical Hydraulic Gradients (Upper Unit of Surficial Aquifer) Former Hercules Brunswick Site													
Well Set			Date	Groundwater Elevation			Shallow	Intermediate		Deep	Vertical Gradient		
Shallow	Int.	Deep		Shallow	Int.	Deep	BOS Elev.	TOS Elev.	BOS Elev.	TOS Elev.	Shallow to Int.	Int. to Deep	Shallow to Deep
MW-9S		MW-9D	12/14/2009	5.02		5.30	-14.54			-70.64			-0.005
			3/9/2010	4.39		5.26							-0.016
			5/18/2010	3.86		4.58							-0.013
			7/28/2010	3.72		4.45							-0.013
			5/15/2012	3.22		2.94							0.005
			12/11/2012	2.58		3.31							-0.013
			6/10/2013	3.59		3.36							0.004
			12/9/2013	3.37		3.95							-0.010
			6/9/2014	2.95		3.84							-0.016
MW-10S		MW-10D	12/14/2009	4.13		4.48	-11.13			-81.84			-0.005
			3/9/2010	3.74		4.43							-0.010
			5/18/2010	3.36		3.73							-0.005
			7/28/2010	3.44		3.79							-0.005
			5/15/2012	2.65		2.19							0.007
			12/11/2012	2.44		2.68							-0.003
			6/10/2013	2.91		2.56							0.005
			12/9/2013	3.11		3.35							-0.003
			6/9/2014	3.18		3.14							0.001
MW-11S	MW-11D		12/14/2009	3.67	4.80	-15.14							-0.040
			3/9/2010	3.27	4.76								-0.052
			5/18/2010	2.84	4.04								-0.042
			7/28/2010	3.12	4.24								-0.039
			5/15/2012	2.14	2.51								-0.013
			12/11/2012	1.98	3.05								-0.038
			6/10/2013	2.30	2.89								-0.021
			12/9/2013	2.80	3.84								-0.036
			6/9/2014	2.67	3.57								-0.032
MW-12S		MW-12D	12/14/2009	5.99		6.58	-12.90			-87.93			-0.008
			3/9/2010	5.63		4.53							0.015
			5/18/2010	4.75		3.80							0.013
			7/28/2010	4.38		3.75							0.008
			5/15/2012	3.64		2.00							0.022
			12/11/2012	3.37		2.82							0.007
			6/10/2013	4.53		2.72							0.024
			12/9/2013	4.36		3.41							0.013
			6/9/2014	4.79		3.31							0.020
MW-14S		MW-14D	12/14/2009	4.87		4.67	-7.44			-69.69			0.003
			3/9/2010	4.32		4.58							-0.004
			5/25/2010	4.16		3.74							0.007
			7/28/2010	4.51		3.44							0.017
			5/15/2012	5.67		3.73							0.031
			12/11/2012	4.95		3.81							0.018
			6/10/2013	5.75		4.26							0.024
			12/9/2013	5.31		4.53							0.013
			6/9/2014	5.76		4.83							0.015
MW-15S		MW-15D	12/14/2009	5.08		4.39	-7.25			-72.55			0.011
			3/9/2010	4.27		4.37							-0.002
			5/25/2010	3.81		3.47							0.005
			7/28/2010	3.85		3.18							0.010
			5/15/2012	4.27		3.19							0.017
			12/11/2012	4.10		3.68							0.006
			6/10/2013	4.87		3.95							0.014
			12/9/2013	4.65		4.18							0.007
			6/9/2014	5.31		4.56							0.011
MW-16S		MW-16D	12/14/2009	7.25		5.57	-4.21			-58.87			0.031
			3/9/2010	7.13		5.60							0.028
			5/27/2010	5.97		7.59							-0.030
			7/28/2010	5.44		4.21							0.023
			5/15/2012	4.73		3.79							0.017
			12/10/2012	4.11		4.14							-0.001
			6/10/2013	5.21		4.70							0.009
			12/9/2013	4.22		4.58							-0.007
			6/9/2014	6.25		5.37							0.016
MW-17S		MW-17D	12/14/2009	6.27		4.74	-3.16			-63.18			0.025
			3/9/2010	8.61		6.45							0.036
			5/26/2010	7.06		8.28							-0.020
			7/28/2010	4.40		6.95							-0.042
			12/10/2012	6.65		5.02							0.027
			6/10/2013	7.57		5.54							0.034
			12/9/2013	6.83		5.39							0.024
			6/9/2014	9.20		6.23							0.049



Well Set			Date	Groundwater Elevation			Shallow	Intermediate		Deep	Vertical Gradient		
Shallow	Int.	Deep		Shallow	Int.	Deep	BOS Elev.	TOS Elev.	BOS Elev.	TOS Elev.	Shallow to Int.	Int. to Deep	Shallow to Deep
MW-19S	MW-19I	MW-19D	12/14/2009	11.02	7.69	6.69	3.56	-16.57	-26.57	-52.97	0.165	0.038	0.077
			3/9/2010	11.19	10.74	6.67					0.022	0.154	0.080
			5/26/2010	9.66	12.21	8.35					-0.127	0.146	0.023
			7/28/2010	9.21	8.87	4.91					0.017	0.150	0.076
			5/15/2012	7.60	7.36	4.47					0.012	0.109	0.055
			12/10/2012	8.98	8.90	5.44					0.004	0.131	0.063
			6/10/2013	9.64	9.59	5.95					0.002	0.138	0.065
			12/9/2013	9.53	9.40	6.11					0.006	0.125	0.060
			6/9/2014	11.16	11.08	6.78					0.004	0.163	0.077
MW-20S	MW-20I	MW-20D	12/14/2009	4.32	3.45	3.52	-7.10	-26.98	-36.98	-72.32	0.044	-0.002	0.012
			3/9/2010	4.37	2.61	2.67					0.089	-0.002	0.026
			5/18/2010	3.39	2.23	2.28					0.058	-0.001	0.017
			7/28/2010	3.01	1.85	1.89					0.058	-0.001	0.017
			5/14/2012	2.84	2.82	2.84					0.001	-0.001	0.000
			12/11/2012	3.02	2.65	2.68					0.019	-0.001	0.005
			6/10/2013	3.63	2.33	2.74					0.065	-0.012	0.014
			12/9/2013	3.98	3.46	3.45					0.026	0.000	0.008
			6/9/2014	4.30	3.44	3.44					0.043	0.000	0.013
MW-25S		MW-25D	12/14/2009	5.50		4.45	-3.47			-58.77			0.019
			3/9/2010	4.81		4.43							0.007
			5/25/2010	3.69		3.57							0.002
			7/28/2010	3.69		3.24							0.008
			5/15/2012	4.01		3.18							0.015
			12/10/2012	3.18		3.48							-0.005
			6/10/2013	4.48		3.76							0.013
			12/9/2013	4.12		3.83							0.005
			6/9/2014	5.54		4.39							0.021
MW-26S		MW-26D	12/14/2009	3.29		3.22	-7.57			-72.62			0.001
			3/9/2010	3.03		2.81							0.003
			5/18/2010	2.19		2.29							-0.002
			7/28/2010	1.99		1.86							0.002
			5/15/2012	3.32		2.55							0.012
			12/11/2012	2.62		2.46							0.002
			6/11/2013	3.82		2.79							0.016
			12/9/2013	3.40		3.47							-0.001
			6/9/2014	3.94		3.62							0.005
MW-30S		MW-30D	12/14/2009	7.64		4.68	-5.04			-70.60			0.045
			3/9/2010	7.46		5.08							0.036
			5/25/2010	5.86		7.07							-0.018
			7/28/2010	5.67		3.68							0.030
			5/14/2012	5.60		3.69							0.029
			12/10/2012	5.93		4.32							0.025
			6/10/2013	6.97		4.67							0.035
			12/9/2013	6.86		4.90							0.030
			6/9/2014	8.01		5.33							0.041
	MW-41I	MW-32D	5/25/2010		2.85	5.94		-28.30	-38.34	-69.73		-0.098	
			7/28/2010		2.67	2.70						-0.001	
			5/15/2012		2.82	3.01						-0.006	
			12/11/2012		3.45	3.63						-0.006	
			6/10/2013		3.60	3.75						-0.005	
			12/9/2013		4.03	4.21						-0.006	
			6/9/2014		4.05	4.22						-0.005	
MW-37S	MW-37I		5/24/2010	9.45	9.10		-10.72	-45.80	-60.83		0.010		
			7/28/2010	9.32	5.60						0.106		
			5/14/2012	7.60	4.99						0.074		
			12/10/2012	9.06	6.04						0.086		
			6/10/2013	10.26	6.70						0.101		
			12/9/2013	10.06	6.63						0.098		
			6/9/2014	11.65	7.45						0.120		
MW-38S	MW-38I	MW-38D	5/24/2010	1.49	2.81	2.85	-19.17	-34.20	-49.19	-69.24	-0.088	-0.002	-0.027
			7/28/2010	1.44	1.62	1.70					-0.012	-0.004	-0.005
			5/15/2012	3.53	2.37	2.33					0.077	0.002	0.024
			12/11/2012	2.52	2.30	2.28					0.015	0.001	0.005
			6/10/2013	2.63	2.00	1.95					0.042	0.002	0.014
			12/9/2013	3.30	3.46	3.41					-0.011	0.002	-0.002
			6/9/2014	3.05	3.60	3.56					-0.037	0.002	-0.010
MW-39S	MW-39I	MW-39D	5/24/2010	-0.01	2.70	2.61	-14.08	-38.10	-48.15	-68.14	-0.113	0.005	-0.048
			7/28/2010	0.67	0.86	0.98					-0.008	-0.006	-0.006
			5/15/2012	1.32	2.77	2.86					-0.060	-0.005	-0.028
			12/11/2012	1.59	1.44	1.59					0.006	-0.008	0.000
			6/10/2013	0.23	0.94	1.18					-0.030	-0.012	-0.018
			12/9/2013	1.97	3.07	3.24					-0.046	-0.009	-0.023
			6/9/2014	1.29	3.26	3.07					-0.082	0.010	-0.033



Well Set			Date	Groundwater Elevation			Shallow	Intermediate		Deep	Vertical Gradient		
Shallow	Int.	Deep		Shallow	Int.	Deep	BOS Elev.	TOS Elev.	BOS Elev.	TOS Elev.	Shallow to Int.	Int. to Deep	Shallow to Deep
MW-40S	MW-40I		5/25/2010	8.80	7.68		-13.35	-28.30	-43.31		0.075		
			7/28/2010	5.81	5.78						0.002		
			5/15/2012	5.19	5.04						0.010		
			12/10/2012	5.73	5.20						0.035		
			6/10/2013	6.09	5.94						0.010		
			12/9/2013	5.58	5.45						0.009		
			6/9/2014	6.97	6.73						0.016		
MW-44S	MW-44I	MW-44ID	5/25/2010	3.57	3.28	3.59	-11.82	-30.70	-45.74	-81.06	0.015	-0.009	0.000
			7/28/2010	3.58	3.18	3.48					0.021	-0.008	0.001
			5/15/2012	3.57	2.87	2.93					0.037	-0.002	0.009
			12/10/2012	3.31	3.51	3.54					-0.011	-0.001	-0.003
			6/10/2013	4.61	3.62	3.66					0.052	-0.001	0.014
			12/9/2013	4.18	3.89	3.95					0.015	-0.002	0.003
			6/9/2014	4.60	4.12	4.18					0.025	-0.002	0.006
MW-48S	MW-48I	MW-48D	5/25/2010	6.80	5.86	5.16	-16.17	-31.26	-46.26	-71.99	0.062	0.027	0.029
			7/28/2010	6.52	5.67	4.93					0.056	0.029	0.028
			5/15/2012	5.68	4.91	4.38					0.051	0.021	0.023
			12/10/2012	6.53	5.35	4.87					0.078	0.019	0.030
			6/10/2013	6.87	5.95	5.32					0.061	0.024	0.028
			12/9/2013	6.74	5.67	5.24					0.071	0.017	0.027
			6/9/2014	7.32	6.63	5.99					0.046	0.025	0.024
MW-54S	MW-54I	MW-54D	5/25/2010	7.55	7.38	7.05	-16.18	-31.22	-46.22	-71.19	0.011	0.013	0.009
			7/28/2010	4.59	4.13	3.76					0.031	0.015	0.015
			5/15/2012	4.52	3.83	3.58					0.046	0.010	0.017
			12/10/2012	4.46	4.27	4.03					0.013	0.010	0.008
			6/10/2013	5.10	4.58	4.39					0.035	0.008	0.013
			12/9/2013	4.95	4.77	4.55					0.012	0.009	0.007
			6/9/2014	5.44	5.24	4.99					0.013	0.010	0.008
MW-55S	MW-55I	MW-55D	12/9/2013	2.43	3.16	3.14	-19.72	-34.93	-49.93	-69.69	-0.048	0.001	-0.014
			6/9/2014	1.81	3.58	3.39					-0.116	0.010	-0.032
POC-1S		POC-1D	12/14/2009	8.46		3.11	-6.34			-79.94			0.073
			3/9/2010	8.34		5.96							0.032
			5/19/2010	7.31		5.26							0.028
			7/28/2010	6.89		4.88							0.027
			5/15/2012	5.45		3.41							0.028
			12/10/2012	5.62		3.95							0.023
			6/10/2013	6.58		4.30							0.031
			12/9/2013	6.55		4.56							0.027
POC-2S		POC-2D	6/9/2014	7.34		4.88	-6.45			-77.25			0.033
			12/14/2009	8.17		5.85							0.033
			3/9/2010	7.73		5.85							0.027
			5/19/2010	6.78		4.97							0.026
			7/28/2010	6.40		4.62							0.025
			5/15/2012	5.12		3.16							0.028
			12/10/2012	5.14		2.81							0.033
			6/10/2013	6.18		4.03							0.030
POC-3S		POC-3D	12/9/2013	6.05		4.37	-4.74			-72.15			0.024
			6/9/2014	6.88		4.59							0.032
			12/14/2009	8.33		5.81							0.037
			3/9/2010	7.54		5.71							0.027
			5/19/2010	6.77		4.96							0.027
			7/28/2010	6.48		4.58							0.028
			5/15/2012	5.38		3.00							0.035
			12/10/2012	4.90		3.72							0.018
UP-1S		UP-1-D-R	6/10/2013	6.03		3.97	-1.11			-69.10			0.031
			12/9/2013	5.83		4.27							0.023
			6/9/2014	6.77		4.55							0.033
			12/14/2009	11.12		6.96							0.061
			3/9/2010	10.98		9.11							0.028
			5/17/2010	9.70		6.04							0.054
			7/28/2010	8.98		5.47							0.052
			5/15/2012	7.97		4.14							0.056
			12/10/2012	7.83		4.75							0.045
			6/10/2013	8.58		5.19							0.050
			12/9/2013	8.51		5.29							0.047
			6/9/2014	10.34		5.89							0.065

Note: All groundwater elevation data are reported in feet, and hydraulic gradient data reported in ft/ft.

Vertical Gradient=dh/dz

dh=Shallow Well's Water Elevation - Deep Well's Water Elevation

dz=Shallow Well's Screen Elevation - Deep Well's Screen Elevation

TOS = Top of Screen

BOS = Bottom of Screen

Negative vertical gradients signify upward potential for flow.

Positive vertical gradients signify downward potential for flow.



**Horizontal Hydraulic Gradient Calculation  
Surficial Aquifer**

Well Set	Horizontal Distance Between Wells	Hydraulic Head Difference <sup>1</sup>		Horizontal Hydraulic Gradient
	Feet	Feet		Feet / Feet
Upper Unit - Shallow Wells MW-19S / MW-20S	4,404	6/9/14	6.86	0.0016
Upper Unit - Deep Wells MW-19D / MW-20D	4,404	6/9/14	3.34	0.0008

**Groundwater Flow Velocity Calculations  
Upper Unit of Surficial Aquifer**

		Date		
<u>Groundwater Elevations</u>		6/9/14		
	MW-19S	11.16	ft.	
	MW-20S	4.3	ft.	
		6.86	ft.	=dh
Distance between wells:		4,404	ft.	= dl
Horiz. Hydraulic gradient (i) =		0.0016		= dh/dl
<sup>1</sup> K =		6	ft/day	
n <sub>e</sub> =		0.25		
Avg. Linear Flow Velocity (V) =		0.040	ft/ day	= iK/n <sub>e</sub>

**Groundwater Flow Velocity Calculations  
Lower Unit of Surficial Aquifer**

		Date		
<u>Groundwater Elevations</u>		6/9/14		
	MW-19D	6.78	ft.	
	MW-20D	3.44	ft.	
		3.34	ft.	=dh
Distance between wells:		4,404	ft.	= dl
Horiz. Hydraulic gradient (i) =		0.0008		= dh/dl
<sup>1</sup> K =		6	ft/day	
n <sub>e</sub> =		0.25		
Avg. Linear Flow Velocity (V) =		0.019	ft/ day	= iK/n <sub>e</sub>

Notes:

1. Hydraulic conductivity value is based on reported range at the site.



**Vertical Hydraulic Gradients  
Lower Unit of Surficial Aquifer  
Former Hercules Brunswick Facility  
Brunswick, GA**

Well Set		Date	Groundwater Elevation		Upper Unit	Lower Unit	Vertical Gradient
Deep	D. Deep		Upper Unit	Lower Unit	BOS Elev.	TOS Elev.	Upper to Lower Unit
MW-9D	MW-33	6/9/2014	3.84	4.11	-77.70	-113.40	-0.008
MW-19D	MW-18	6/9/2014	6.78	2.80	-65.00	-104.40	0.101
MW-37I	MW-37D	6/9/2014	7.45	4.49	-60.80	-85.60	0.119
MW-44ID	MW-44D	6/9/2014	4.18	4.33	-91.10	-111.10	-0.008

Note: All groundwater elevation data are reported in feet, and hydraulic gradient data reported in ft/ft.

Vertical Gradient=dh/dz

dh=Shallow Well's Water Elevation - Deep Well's Water Elevation

dz=Shallow Well's Screen Elevation - Deep Well's Screen Elevation

TOS = Top of Screen

BOS = Bottom of Screen

**Negative vertical gradients signify upward flow.**

**Positive vertical gradients signify downward flow.**



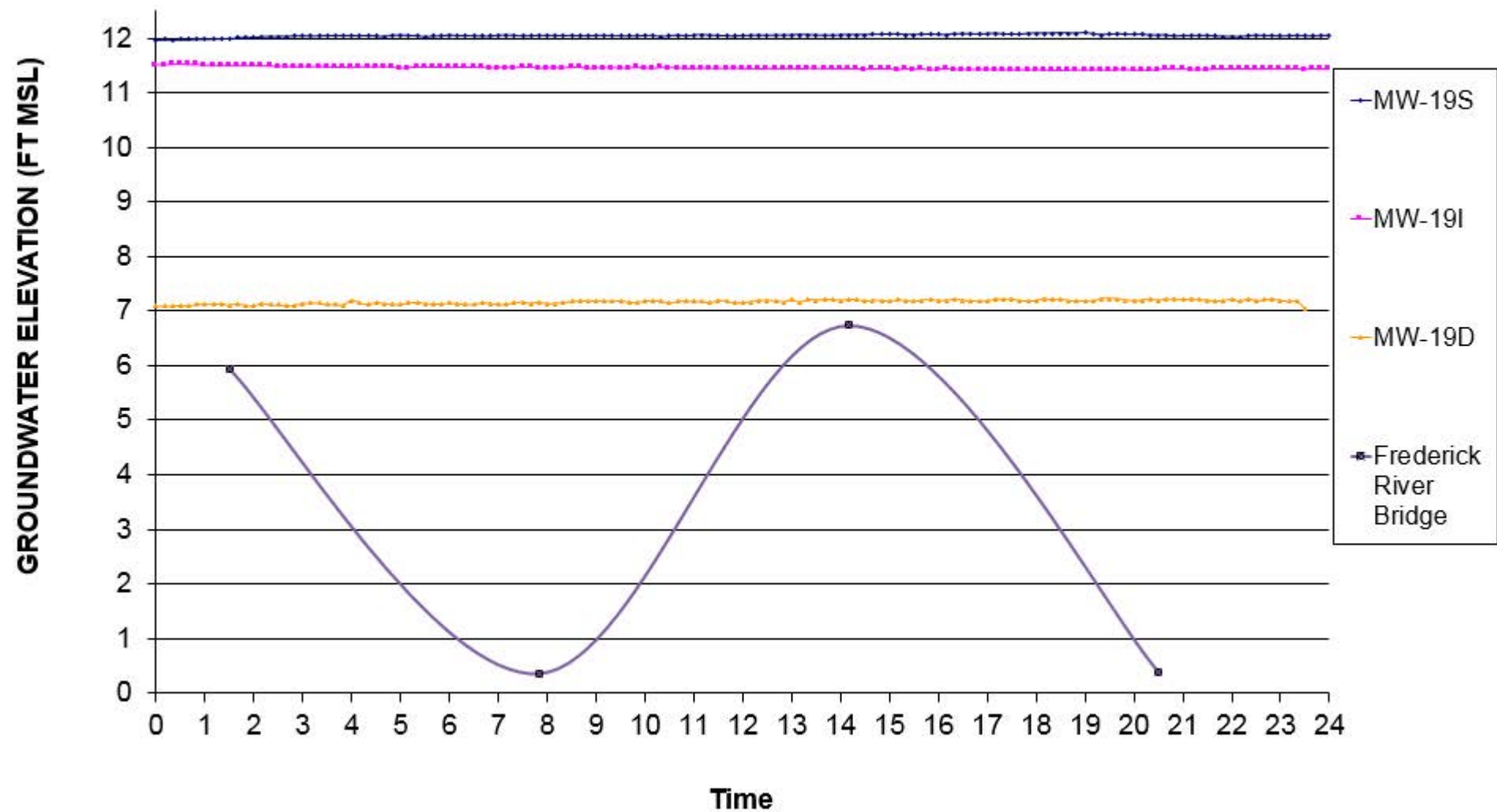
## ***Appendix G***

### ***Tidal Influence Graphs***



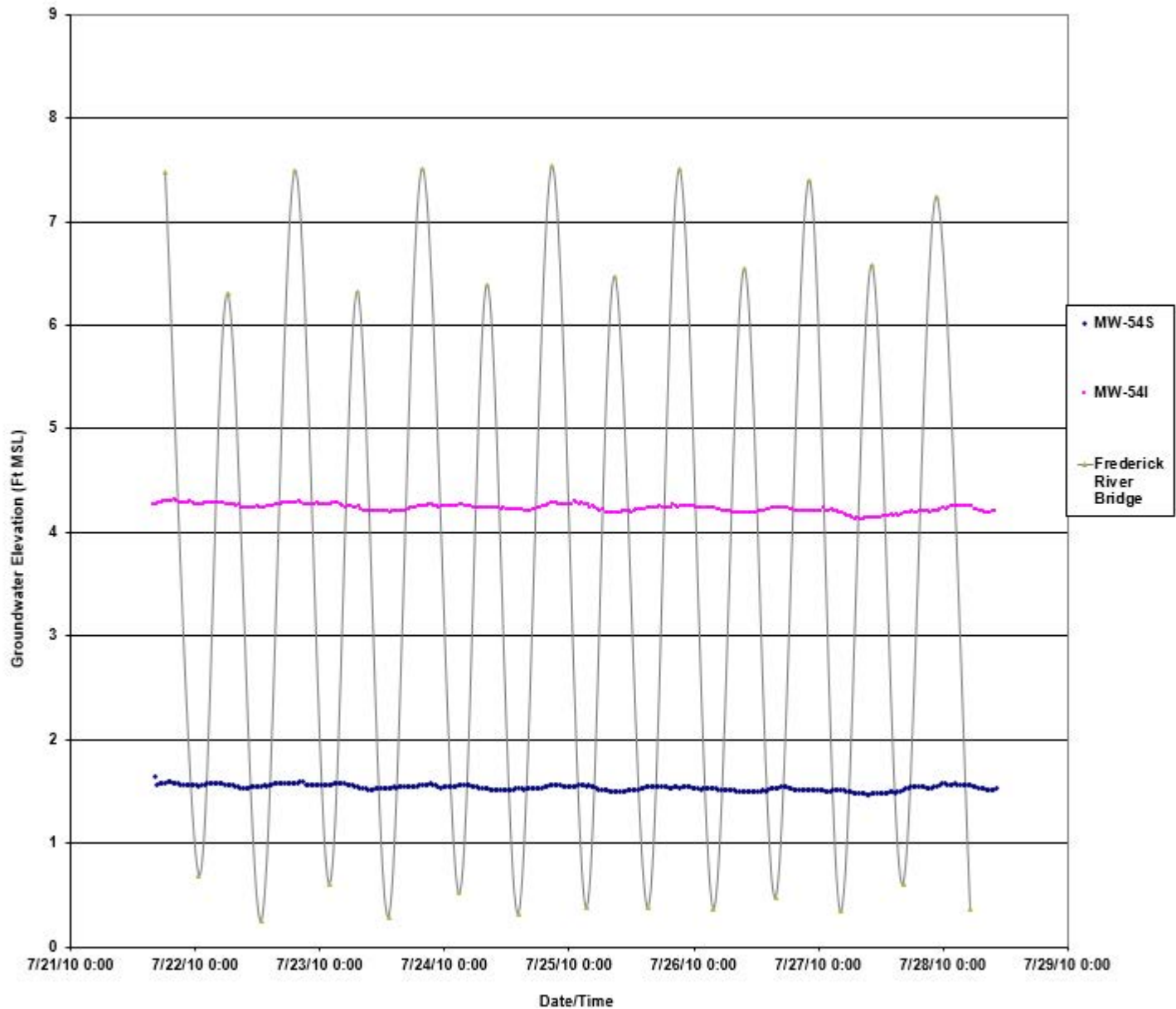


# MW-19 Well Group Groundwater Elevations



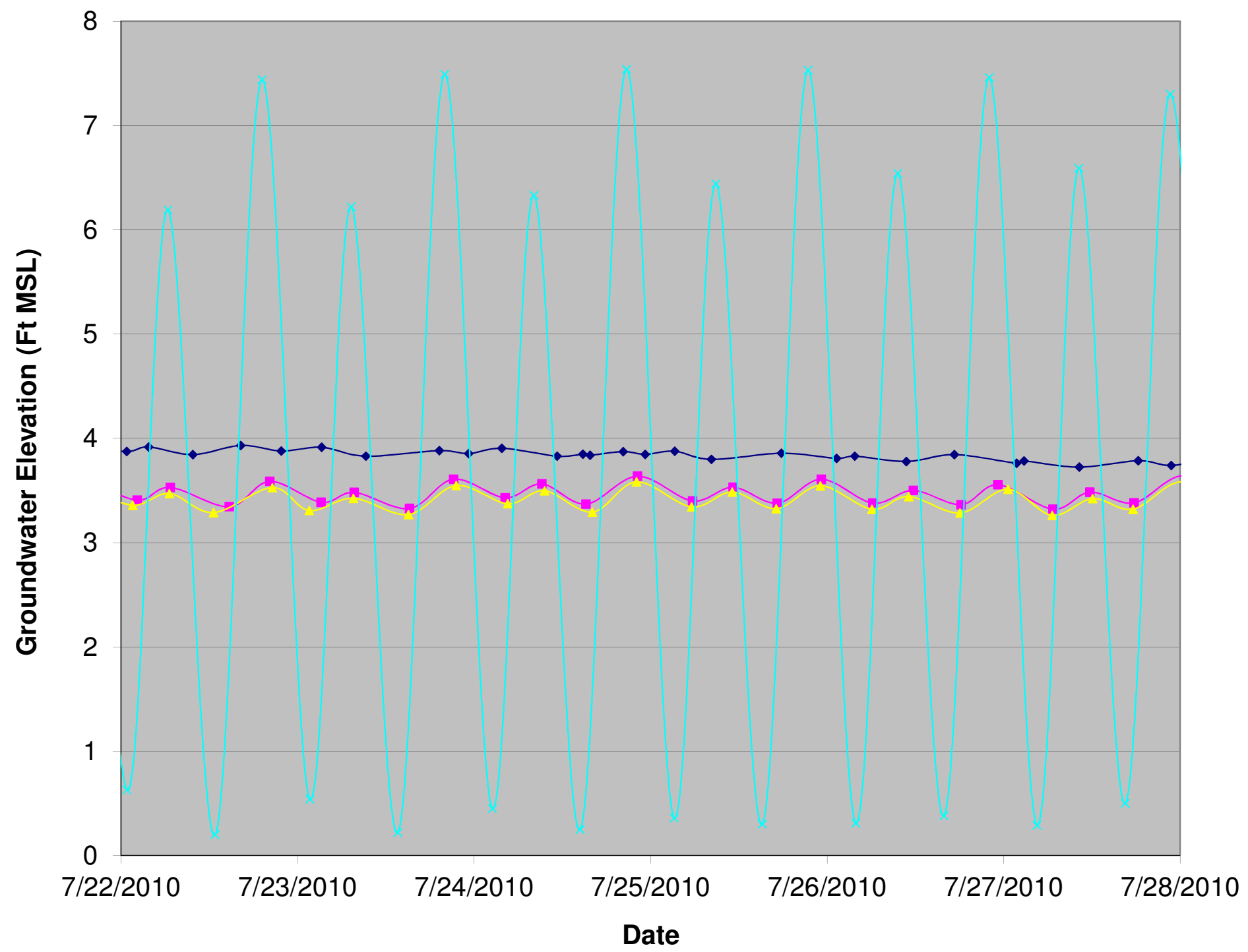


MW-54 Well Group Groundwater Elevations





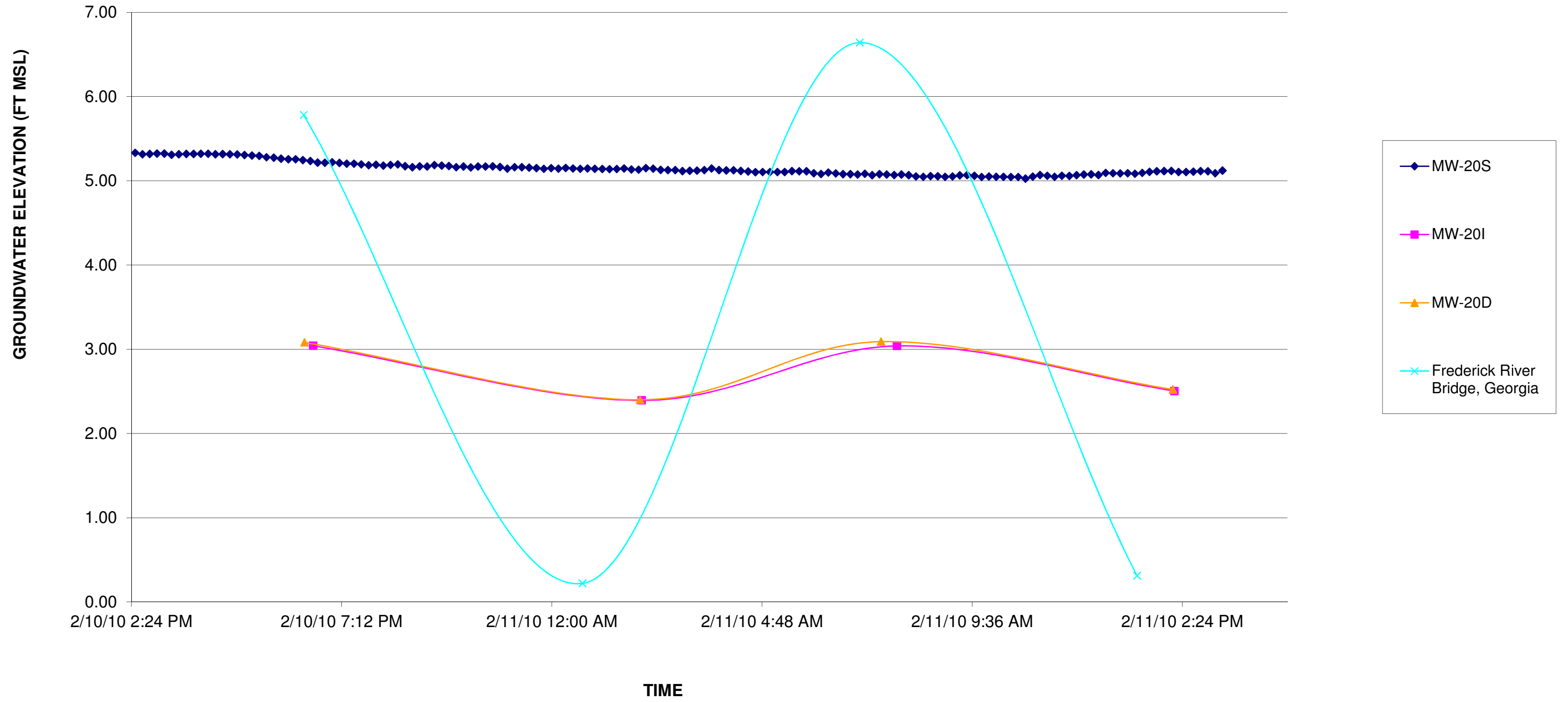
MW-44 Well Group Groundwater Elevations



—◆— MW-44 S    —■— MW-44 I    —▲— MW-44 ID    —x— Frederick River Bridge, Georgia

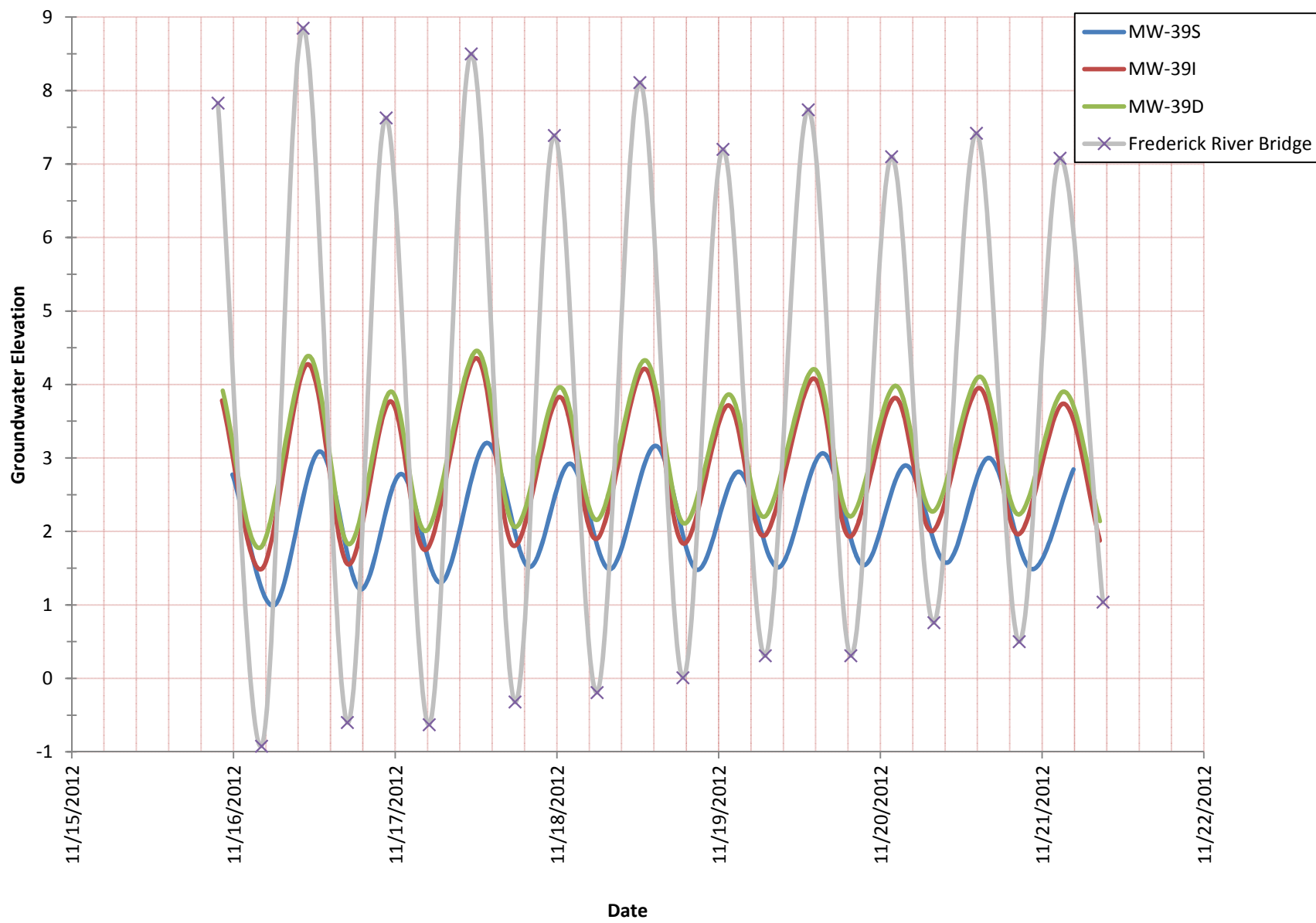


# MW-20 GROUNDWATER ELEVATIONS



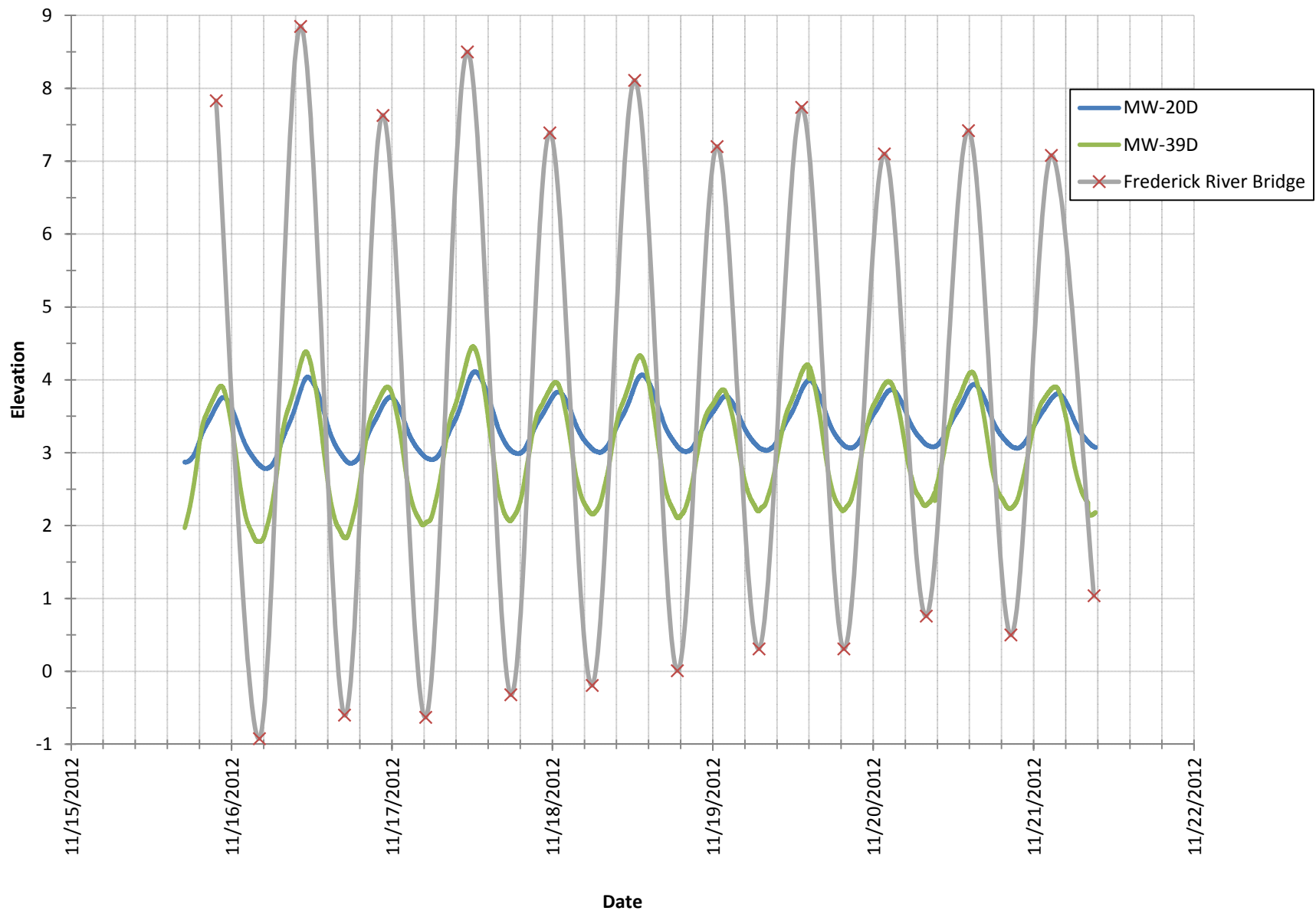


# MW-39 S, I, D



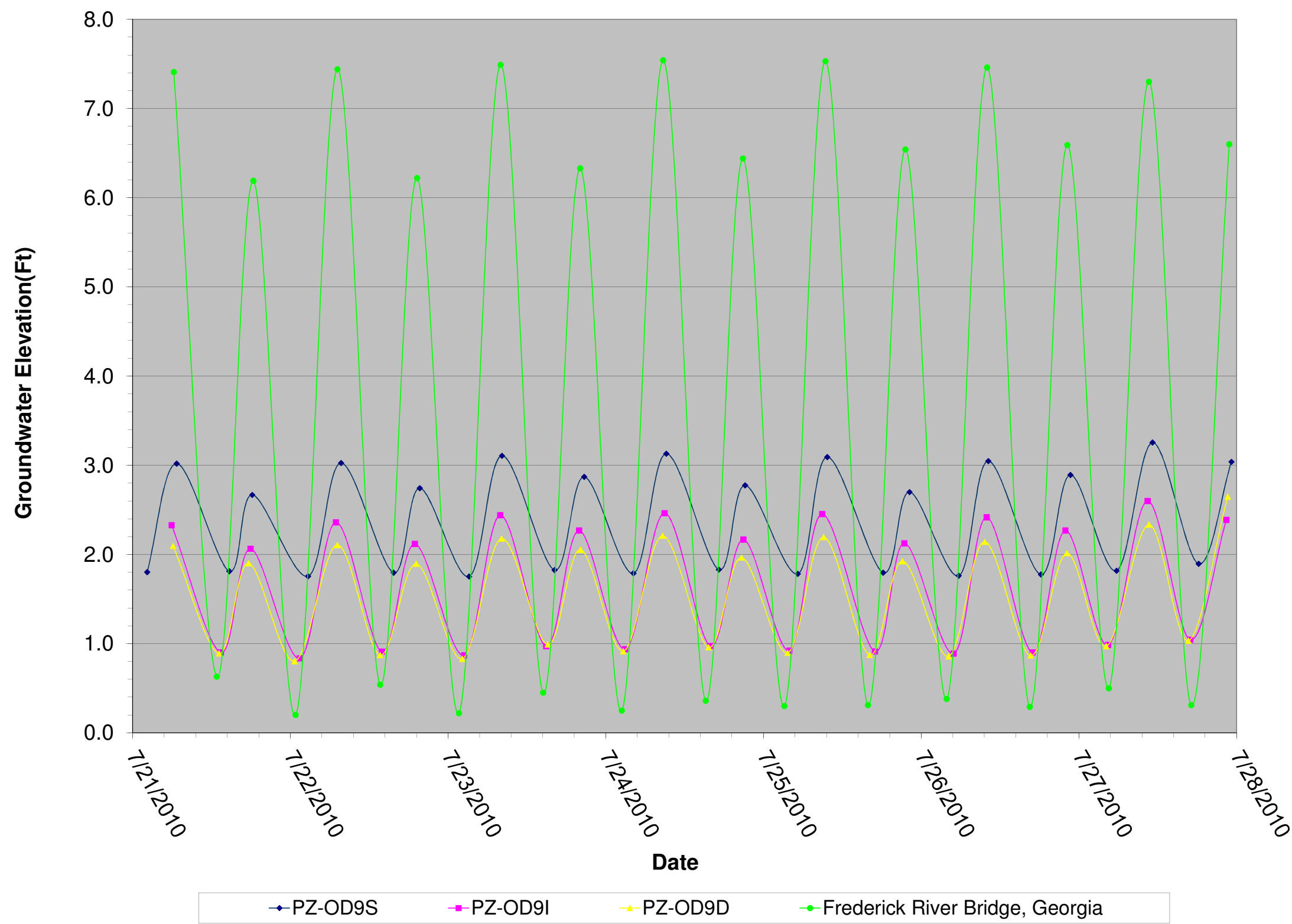


# MW-39D vs MW-20D



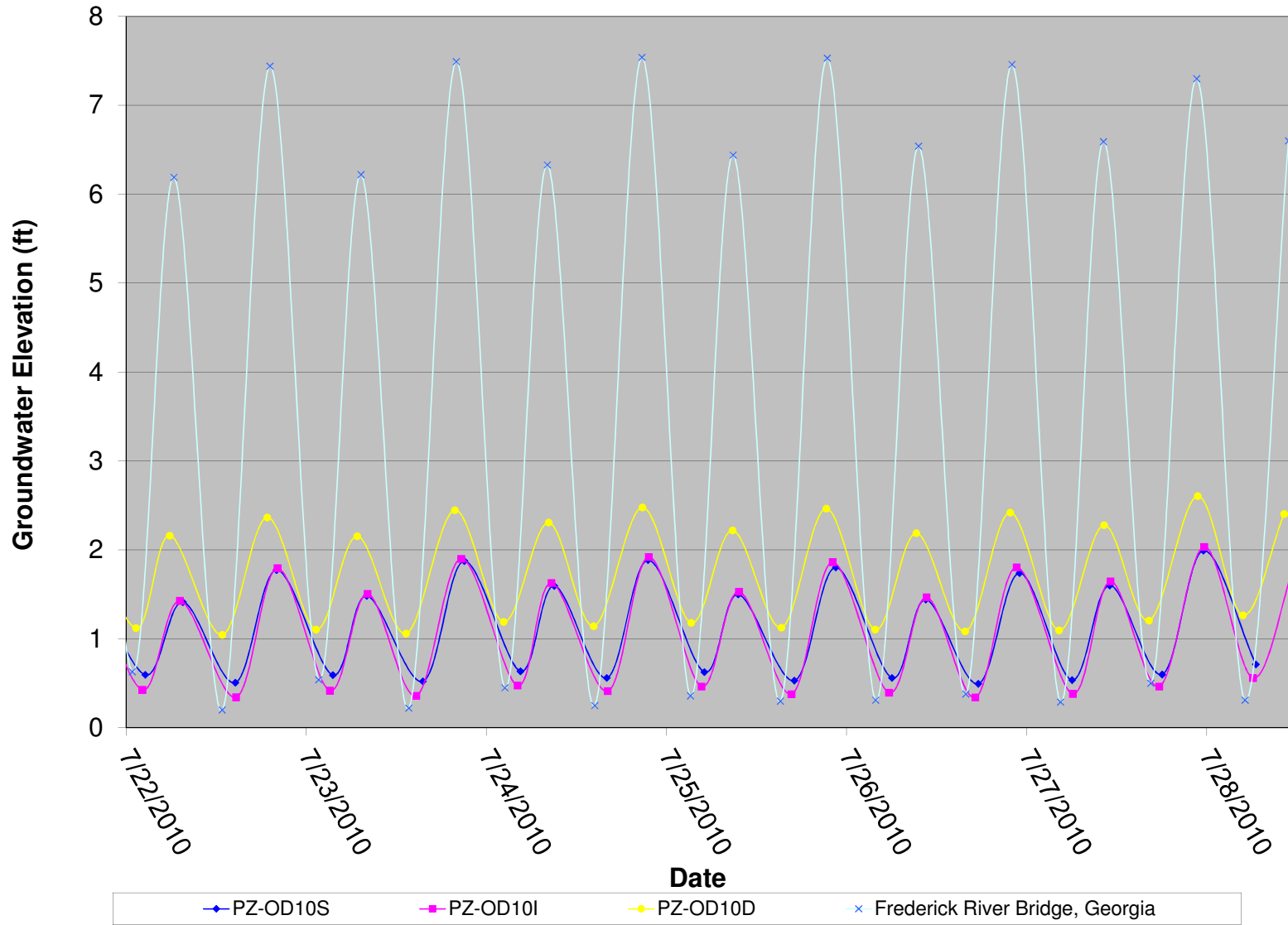


PZ-OD9 Well Group Groundwater Elevations



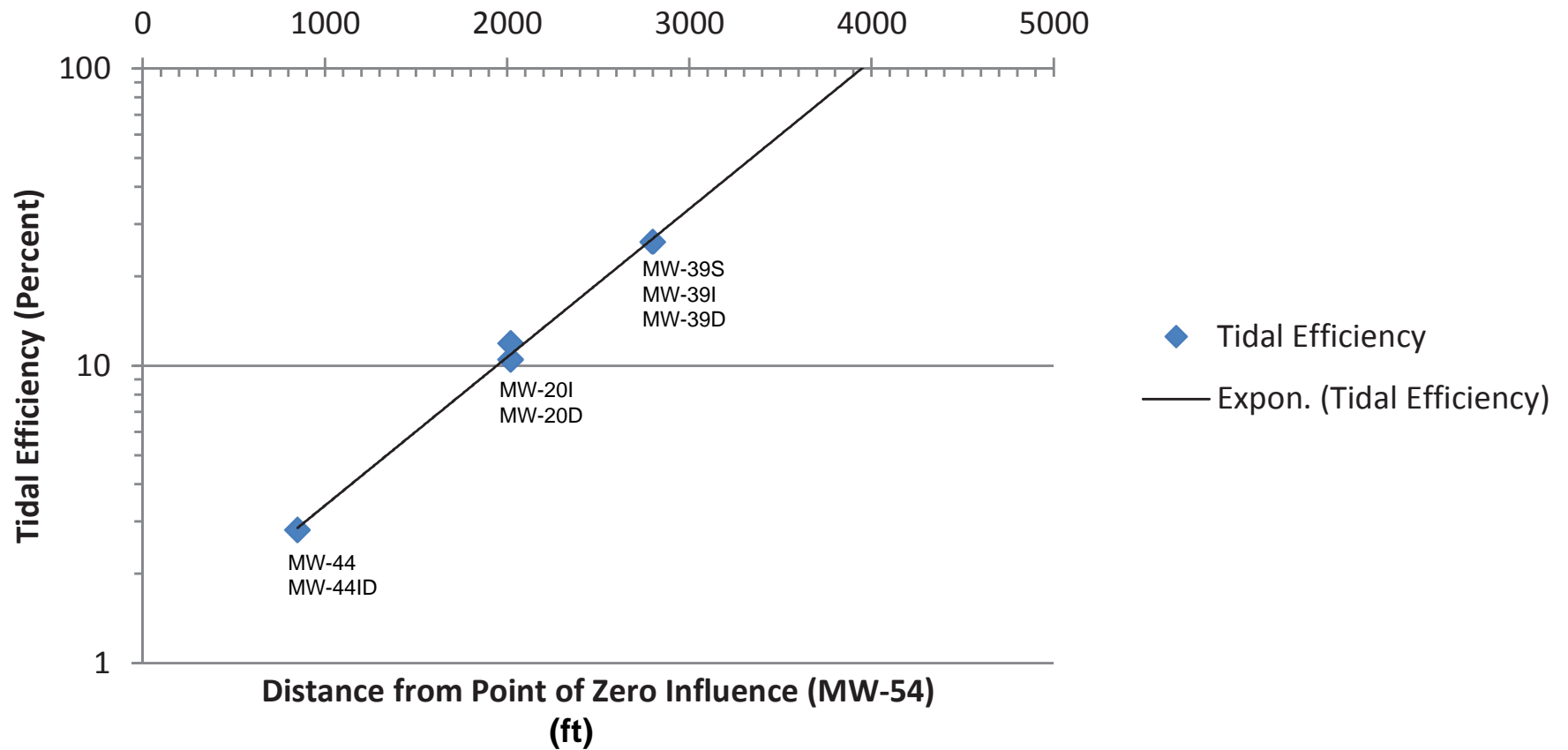


## PZ-OD10 Well Group Groundwater Elevations





## Projected Point of Discharge Based on Tidal Efficiency





## ***Appendix H***

### ***Core Photographs***







Photo 1. Core run 5 to 10 feet below ground surface at MW-55.



Photo 2. Core run 20 to 25 feet below ground surface at MW-55.





Photo 3. Core run 35 to 40 feet below ground surface at MW-55.



Photo 4. Core run 40 to 45 feet below ground surface at MW-55.





Photo 5. Core run 70 to 75 feet below ground surface at MW-55.



Photo 6. Core run 80 to 85 feet below ground surface at MW-55.



# ***Appendix I***

## ***Historic Analytical Results***



VOLATILE ORGANIC COMPOUNDS - MONITORING WELLS  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA

Chemical Name:		1,1-Dichloroethane	1,1-Dichloroethene	1,2,3-Trichloropropane	1,2-Dichloropropane	2-Butanone (MEK)	Methyl Isobutyl Ketone (MIBK)	Acetone	Benzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	Tetrachloroethene	Toluene	Vinyl chloride	Xylenes, Total
Report Result Unit: Sampling Date		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Well ID																				
UP-1S	5/17/2010	--	<0.11	<0.41	<0.13	<1	<1	9.4J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/20/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1*	<0.15	<0.33	<0.18	<0.2
	6/21/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	5.2J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	3.7JB	<0.15	<0.33	<0.18	<0.2
	12/13/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/6/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	5.2J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/11/2012	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	<0.25	<0.60	<0.50	<0.25	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	<0.20
	12/12/2013	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	<0.25	<0.60	<0.50	<0.25	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	<0.20
UP-1D(R)	5/17/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/20/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	0.16J	<0.11	<1*	<0.15	<0.33	<0.18	<0.2
	6/21/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	4.1JB	<0.15	<0.33	<0.18	<0.2
	12/13/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	0.3J	<0.6	<0.5	<0.25	<0.14	0.27J	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/6/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/11/2012	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	<0.25	<0.60	<0.50	<0.25	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	<0.20
	12/12/2013	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	<0.25	<0.60	<0.50	<0.25	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	<0.20
POC-1S	5/19/2010	--	0.73J	1.8	1.4	9.6J	6.9J	220	70	<0.6	<0.5	130	0.55J	3.7	14	<1	1.1	34	21	40
	12/20/2010	--	0.13J	1.3	0.83J	<1	<1	46	70	<0.6	<0.5	150	<0.14	5.3	20	<1*	<0.15	38	22	56
	6/21/2011	<0.25	0.27J	<0.41	0.66J	<1	<1	47	57	<0.6	<0.5	180	<0.14	3.1	18	3.7JB	<0.15	30	15	57
	12/15/2011	<0.25	<0.11	0.72J	0.49J	1.3J	<1	32	32	<0.6	<0.5	110	<0.14	1.7	14	<1	<0.15	22	11	37
	6/7/2012	<0.25	<0.11	0.52J	0.41J	<1	<1	61	22	<0.6	<0.5	87	<0.14	1.1	12	<1	<0.15	21	11	30
	12/13/2012	<2.4	<2.5	<2.3	<2.5	<26	<8.1	<27	28	<2.2	<1.8	110	3 J	<2.1	14	<1.6	<2.5	16	6.4 J	29 J
	6/11/2013	< 0.25	< 0.11	0.60 J	0.34 J	< 1.0	< 1.0	24 J	30	< 0.60	< 0.50	110	< 0.14	2.3	14	< 1.0	< 0.15	16	10	33
	12/12/2013	<0.25	<0.11	1.1	0.48 J	<1.0	<1.0	29	37	<0.60	<0.50	100	<0.14	2.1	12	<1.0	<0.15	14	14	33
	12/12/2013 - DUP-1	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	43	44	<0.60	<0.50	130	<0.14	2.8	15	<1.0	<0.15	16	17	40
	POC-1D	5/18/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	3.6	<0.6	<0.5	1	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18
12/20/2010		--	<0.11	<0.41	<0.13	<1	<1	<5	3.5	<0.6	<0.5	1.5	<0.14	0.25J	<0.11	<1*	<0.15	<0.33	<0.18	<0.2
6/21/2011		<0.25	<0.11	<0.41	<0.13	<1	<1	<5	2.4	<0.6	<0.5	0.84J	<0.14	<0.15	<0.11	4.1JB	<0.15	<0.33	<0.18	<0.2
12/15/2011		<0.25	<0.11	<0.41	<0.13	<1	<1	6.5J	3.1	<0.6	<0.5	1.2	<0.14	0.21J	<0.11	<1	<0.15	<0.33	<0.18	<0.2
6/7/2012		<0.25	<0.11	<0.41	<0.13	<1	<1	<5	3.2	<0.6	<0.5	1.5	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
12/13/2012		0.39 J	<0.25	<0.23	<0.25	<2.6	<0.81	<2.7	3.3	<0.22	<0.18	1.5	<0.23	<0.21	<0.19	<0.16	<0.25	<0.17	<0.18	0.18 J
6/11/2013		< 0.25	< 0.11	< 0.41	< 0.13	< 1.0	< 1.0	6.3 J	1.7	< 0.60	< 0.50	0.75 J	< 0.14	< 0.15	< 0.11	< 1.0	< 0.15	< 0.33	< 0.18	< 0.20
12/12/2013		<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	2.9	<0.60	<0.50	1.5	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	<0.20
POC-2S		5/19/2010	<12	<5.5	<20	<6.5	<50	<50	250J	25J	<30	<25	260	550	<7.5	4400	<50	<7.5	170	<9
	8/12/2010	<25	<11	<41	<13	<100	<100	<500	35J	<60	<50	300	300	<15	6100	<100	16J	200	<18	23000
	12/16/2010	--	10J	<20	<6.5	<50	<50	260J	32J	<30	<25	360	490	<7.5	5500	<50	12J	240	<9	21000
	2/2/2011	--	32J	<41	<13	<100	<100	<500	32J	<60	<50	420	690	<15	6100	<100	<15	180	<18	29000
	6/21/2011	<13	15J	<21	<6.5	<50	<50	370J	30J	<30	<25	350	680	8.1J	5200	210JB	8J	170	<9	23000
	12/15/2011	<13	11J	<21	<6.5	<50	<50	280J	37J	<30	49J	420	850	<7.5	7000	<50	13J	210	<9	27000
	6/8/2012	<13*	22J	<21	<6.5	<50	<50	<250	45J	<30	<25	390	940	<7.5	6200	<50	<7.5	210	<9	25000
	12/13/2012	<0.24	14	5.8	1.1	11 J	1.5 J	160 B	30	7.1	<0.18	380	970 B	3.2	8600	16	12	170	2	34000
	6/12/2013	< 63	< 28	< 100	< 33	< 250	< 250	< 1300	< 63	< 150	< 130	< 63	770	< 38	6400	< 250	< 38	170 J	< 45	29000
	12/13/2013	<63	<28	<100	<33	<250	<250	<1300	<63	<150	<130	410	780	<38	6300	<250	<38	160 J	<45	28000
POC-2D	5/19/2010	0.67J	0.38J	<0.41	<															



VOLATILE ORGANIC COMPOUNDS - MONITORING WELLS  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA

Chemical Name:		1,1-Dichloroethane	1,1-Dichloroethene	1,2,3-Trichloropropane	1,2-Dichloropropane	2-Butanone (MEK)	Methyl Isobutyl Ketone (MIBK)	Acetone	Benzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	Tetrachloroethene	Toluene	Vinyl chloride	Xylenes, Total
Well ID	Report Result Unit: Sampling Date	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
MW-3D	5/17/2010	--	0.72J	<0.82	1.1J	<2	<2	<10	77	<1.2	<1	250	<0.28	1.1J	5.3	<2	<0.3	9.1	2.7	19
	12/20/2010	--	0.43J	<0.82	0.82J	<2	<2	<10	58	<1.2	<1	200	<0.28	0.84J	4.8	<0.2*	<0.3	8.4	3.5	22
	2/1/2011	--	<0.22	<0.82	0.79J	<2	<2	<10	59	<1.2	<1	210	<0.28	<0.3	6.2	<2	<0.3	8.8	5.5	23
	6/23/2011	<0.5*	<0.22*	<0.82	<0.26	<2	<2	<10	3.8	<1.2*	<1	8.3	190	<0.3	<0.22	59*B	<0.3	<0.66	<0.36	0.42J
	12/15/2011	<0.5	<0.22	<0.82	<0.26	<2	<2	<10	40	<1.2	<1	160	<0.28	<0.3	1.4J	<2	<0.3	6.4	3.5	16
	6/6/2012	<0.5	0.39J	<0.82	1J	<2	<2	12J	65	<1.2	<1	250	<0.28	0.55J	4.8	<2	<0.3	10	3.5	21
	12/13/2012	0.58 J	<0.25	<0.23	0.46 J	<2.6	1.9 J	<2.7	14	<0.22	<0.18	51	<0.23	<0.21	0.31 J	<0.16	<0.25	1.8	0.95 J	5.4
	12/12/2013	<0.50	<0.22	<0.82	<0.26	<2.0	<2.0	<10	91	<1.2	<1.0	270	<0.28	0.85 J	5.8	<2.0	<0.30	14	6.9	22
MW-4	6/1/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-5S	6/1/2010	<0.25	<0.11	<0.41	0.17J	<1	<1	<5	0.39J	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-5I	6/1/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-6	6/2/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	5.5	<2	<1	2.3	<0.14	--	0.19J	<1	<0.15	<0.33	<0.18	0.33J
MW-7	6/1/2010	<0.25	0.19J	<0.41	0.54J	<1	<1	5.4J	22	<0.6	<0.5	74	<0.14	--	0.14J	<1	<0.15	1.1	1	8
MW-8	6/2/2010	<0.25	<0.11	<0.41	0.47J	<1	<1	9.6J	180	<0.6	<0.5	200	<0.14	--	0.66J	<1	<0.15	1.3	5	3.8
MW-9S	5/18/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/17/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/22/2011	<1.3	<0.55	<2.1	<0.65	<5	<5	<25	<1.3	<3	<2.5	<1.3	<0.7	<0.75	<0.55	16J8	<0.75	<1.7	<0.9	<1
	12/16/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/7/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-9D	5/19/2010	--	<1.1	<4.1	<1.3	<10	<10	<50	900	<6	<5	750	<1.4	<1.5	4.6J	<10	<1.5	8.1J	<1.8	13J8
	12/17/2010	--	<2.2	<8.2	<2.6	<20	<20	<100	1400	<12	<10	1100	<2.8	<3	4.6J	<20	<3	9.3J	<3.6	7.8J
	2/2/2011	--	<2.2	<8.2	<2.6	<20	<20	<100	970	<12	<10	820	37	<3	2.8J	38J	<3	8.3J	<3.6	5J
	6/22/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	8400	<0.6	<0.5	7200	<0.14	<0.15	2.9	2.8J8	<0.15	4.9	<0.18	5
	12/16/2011	<2.5	<1.1	<4.1	1.9J	<10	<10	<50	780	<6	<5	490	<1.4	1.7J	2.7J	<10	2.3J	4.1J	<1.8	2.1J
	6/7/2012	<2.5	<1.1	<4.1	<1.3	<10	<10	<50	730	<6	<5	450	<1.4	<1.5	2.5J	<10	<1.5	4.2J	<1.8	<2
	12/13/2012	<0.24	<0.25	<0.23	<0.25	<2.6	<0.81	4.4 J8	16	<0.22	<0.18	18	<0.23	<0.21	0.48 J	<0.16	<0.25	<0.17	<0.18	1.3 J
	6/13/2013	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	7.3 J	49	<0.60	<0.50	36	<0.14	<0.15	0.22 J	<1.0	<0.15	<0.33	<0.18	<0.20
	12/12/2013	<0.50	<0.22	<0.82	<0.26	<2.0	<2.0	16 J	320	<1.2	<1.0	200	<0.28	<0.30	1.0 J	<2.0	<0.30	2	<0.36	<0.40
	MW-10S	5/18/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18
12/17/2010		--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
6/23/2011		<0.25*	<0.11*	<0.41	<0.13	<1	<1	<5	<0.25	<0.6*	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
12/16/2011		<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
6/8/2012		<0.25*	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-10D	5/19/2010	--	<55	<200	<65	<500	<500	<2500	910	<300	<250	1900	44000	<75	71J	10000	<75	<160	<90	250J8
	7/29/2010	--	<11	<41	<13	<100	<100	<500	780	<60	<50	1700	41000D	<15	19J	8800	<75	70J	<18	100J
	12/17/2010	--	<55	<200	<65	<500	<500	<2500	910	<300	<250	1900	42000	<75	<55	9500	<75	<160	<90	150J
	2/2/2011	--	<55	<200	<65	<500	<500	<2500	970	<300	<250	2100	45000	<75	<55	11000	<75	<160	<90	150J
	6/23/2011**	<130*	<55*	<210	<65	<500	<500	<2500	950	<300*	<250	1900	41000	<75	<55	13000*B	<75	<170	<90	<100
	12/16/2011	<130	<55	<210	<65	<500	<500	<2500	1200	<300	<250	2300	50000	<75	<55	11000	<75	190J	<90	200J
	6/8/2012	<130	<55	<210	<65	<500	<500	<2500	1000	<300	<250	2100	46000	<75	<55	12000	<75	<170	<90	180J
	12/13/2012	<0.24	0.89 J	0.43 J	<0.25	<2.6	<0.81	14 J8	32	0.43 J	<0.18	130	20000 B	<0.21	1.1	230 J	5.6	3.1	0.22 J	7.9
	6/13/2013	<130	< 55	< 210	< 65	< 500	< 500	< 2500	1000	< 300	< 250	2300	51000	< 75	< 55	8800	< 75	< 170	< 90	140 J
	12/12/2013	<130	<55	<210	<65	<500	<500	<2500	930	<300	<									



VOLATILE ORGANIC COMPOUNDS - MONITORING WELLS  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA

Chemical Name:		1,1-Dichloroethane	1,1-Dichloroethene	1,2,3-Trichloropropane	1,2-Dichloropropane	2-Butanone (MEK)	Methyl Isobutyl Ketone (MIBK)	Acetone	Benzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	Tetrachloroethene	Toluene	Vinyl chloride	Xylenes, Total
Report Result Unit: Sampling Date		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Well ID																				
MW-14S	6/3/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	59	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/20/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.50	<0.25	<0.14	<0.15	0.56J	<1.0	<0.15	<0.33	<0.18	<0.2
	6/23/2011	<0.25*	<0.11*	<0.41	<0.13	<1	<1	<5	<0.25	<0.6*	<0.5	<0.25	<0.14	<0.15	<0.11	3.9J*8	<0.15	<0.33	<0.18	<0.2
	12/16/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-14D	6/3/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	5.2	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/20/2010	--	<0.11	<0.41	0.20J	<1.0	<1.0	<5.0	110	<0.6	<0.5	0.55J	<0.14	<0.15	0.23J	<1	<0.15	<0.33	<0.18	<0.2
	6/23/2011	<0.25*	< 0.11	<0.41	0.16J	<1	<1	<5	7.1	<0.6	<0.5	3.7	0.3J	0.18J	<0.11	3.9J*8	<0.15	<0.33	<0.18	0.61J
	12/16/2011	<0.25	<0.11	<0.41	0.18J	<1	<1	<5	120	<0.6	<0.5	0.43J	<0.14	<0.15	0.26J	<1	<0.15	<0.33	<0.18	<0.2
	6/8/2012	<0.25*	<0.11	<0.41	0.19J	<1	<1	6J	150	<0.6	<0.5	0.47J	<0.14	<0.15	0.3J	<1	<0.15	<0.33	<0.18	0.28J
	12/13/2012	<0.24	<0.25	<0.23	<0.25	<2.6	<0.81	<2.7	110	<0.22	<0.18	0.33 J	<0.23	<0.21	0.25 J	<0.16	<0.25	0.2 J	<0.18	0.22 J
	12/13/2013	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	140	<0.60	<0.50	0.62 J	<0.14	<0.15	0.28 J	<1.0	<0.15	<0.33	<0.18	<0.20
MW-15S	6/3/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	0.66J	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-15D	6/8/2010	<12	<5.5	<20	<6.5	<50	140J	310J	3000	<30	<50	1600	2500	--	380	2700	9.7J	1000	<9	1800
MW-16S	5/27/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	18J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1*	<0.15	<0.33	<0.18	<0.2
MW-16D	5/27/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1*	<0.15	<0.33	<0.18	<0.2
MW-17S	5/26/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	34	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11*	<1	<0.15	<0.33	<0.18	<0.2
MW-17D	5/26/2010	<0.25	<0.11	<0.41	<0.13	14	1.8J	91	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1*	<0.15	1.2	<0.18	<0.2
MW-18	5/26/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	150	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1*	<0.15	<0.33	<0.18	<0.2
MW-19S	5/26/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	12J	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1*	<0.15	<0.33	<0.18	<0.2
	12/15/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	5.1J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-19J	5/26/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	6.4J	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1*	<0.15	<0.33	<0.18	<0.2
	12/15/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	6.5J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-19D	5/26/2010	<1.2	<0.55	<2	<0.65	<5	<5	1100	<1.2	<3	<2.5	<1.2	<0.7	--	<0.55	<5*	<0.75	<1.6	<0.9	<1
	12/15/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	10J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	5/18/2010	--	<0.11	<0.41	<0.13	<1	<1	11J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-20S	6/2/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	21J	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/16/2010	--	<0.11	<0.41	<0.13	<1	<1	14J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/22/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	5.7J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	2.1J8	<0.15	<0.33	<0.18	<0.2
	12/14/2011	<0.25	<0.11	<0.41	<0.13	2.9J	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/6/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	23J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	5/18/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-20J	6/2/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/16/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/22/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/14/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/6/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	9.7J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/12/2012	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	<0.25	<0.60	<0.50	<0.25	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	<0.20
	12/10/2013	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	<0.25	<0.60	<0.50	<0.25	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	<0.20
MW-20D	5/18/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	48	<0.6	<0.5	46	<0.14	0.54J	0.37J	<1	<0.15	0.37J	<0.18	0.61J
	6/2/2010	<1	<0.44	<1.6	<0.52	<4	<4	<20	320	<2.4	<2	250	<0.56	--	2.2J	<4	<0.6	3J	<0.72	6.8J
	12/16/2010	--	<0.11	<0.41	0.26J	<1	<1	7J	6200	<0.6	<0.5	5200	<0.14	5.2	4.2	<1	<0.15	7.1	6.4	14
	6/22/2011	<1.3	<0.55	<2.1	<0.65	<5	<5	<25	330	<3	<2.5	300	<0.7	2.4J	2.5J	<5	<0.75	4.2J	2.6J	7.4J
	12/14/2011	<1.3	<0.55	<2.1	<0.65	<5	<5	<25	660	<3	<2.5	710	<0.7	5.3	5.8	<5	<0.75	5.4	6.4	14
	6/6/2012	<1.3	<0.55	<2.1	<0.65	<5	<5	<25	340	<3	<2.5	250	<0.7	1.9J	1.7J	<5	<0.75	3.3J	2.7J	3.9J
	12/12/2012	<1.3	<0.55	<2.1	<0.65	<5.0	<5.0	<25 *	590	<3.0	<2.5	540	<0.70	<0.75	4.4 J	<5.0	<0.75	3.2 J*	7.4	7.7 J
	6/13/2013	< 1.3	<0.55	< 2.1	<0.65	< 5.0	< 5.0	< 25	720	< 3.0	< 2.5	810	<0.70	<0.75	5.7	< 5.0	<0.75	5.2	7.8	9.2 J
	12/13/2013	<5.0	<2.2	<8.2	<2.6	<20	<20	<100	1100	<12	<10	1500	<2.8	<3.0	15 J	23 J	<3.0	28	16 J	34 J
MW-21	5/18/2010	--	<5.5	<20	<6.5	<50	<50	<250	1800	<30	<25	<12	<7	<7.5	<5.5	<50	<7.5	690	<9	<10
MW-22	5/18/2010	--	<22	<82	<26	<200	1300J	<1000	36000	<120	<100	<50	<28	<30	48J	<200	<30	6100	<36	56J
MW-23	5/18/2010	--	<5.5	<20	<6.5	<50	590	<250	4400	<30	<25	<12	<7	<7.5	24J	<50	<7.5	1100	<9	30J
MW-24	5/18/2010	--	<11	<41	<13	<100	1900	1900J	18000	<60	<50	<25	<14	<15	26J	<100	<15	3200	<18	42J
MW-25S	6/3/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	12J	<0.25	<0.6	<0.5	<0.25	<0.14	--	0.35J	<1	<0.15	0.57J	<0.18	45
MW-25D	6/3/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1	<0.15	<0.33	<0.18	<0.2



VOLATILE ORGANIC COMPOUNDS - MONITORING WELLS  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA

Chemical Name:		1,1-Dichloroethane	1,1-Dichloroethene	1,2,3-Trichloropropane	1,2-Dichloropropane	2-Butanone (MEK)	Methyl Isobutyl Ketone (MIBK)	Acetone	Benzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	Tetrachloroethene	Toluene	Vinyl chloride	Xylenes, Total
Report Result Unit: Sampling Date		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Well ID																				
MW-26S	5/18/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/16/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/23/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	3.1JB	<0.15	<0.33	<0.18	<0.2
	12/14/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/6/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	7.1J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-26D	5/18/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	9.1	<0.6	<0.5	4.6	<0.14	0.29J	0.17J	<1*	<0.15	<0.33	<0.18	9.3
	12/16/2010	--	<0.11	<0.41	0.37J	<1	<1	<5	58	<0.6	<0.5	32	<0.14	1.1	38	<1	<0.15	1.9	<0.18	200
	6/23/2011	<0.25*	<0.11*	<0.41	<0.13	<1	<1	<5	84	<0.6*	<0.5	43	<0.14	<0.15	2.8	3.8J*B	<0.15	<0.33	0.39J	2.5
	12/14/2011	<0.25	<0.11	<0.41	0.24J	<1	<1	<5	6.3	<0.6	<0.5	2.9	<0.14	0.28J	<0.11	<1	<0.15	<0.33	<0.18	7.8
	6/6/2012	<0.25	<0.11	<0.41	0.26J	<1	<1	<5	6.4	<0.6	<0.5	3	<0.14	0.17J	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/12/2012	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0 *	4.9	<0.60	<0.50	2.2	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33 *	<0.18	0.31 J
	6/11/2013	< 0.25	<0.11	< 0.41	<0.13	<1.0	<1.0	< 5.0	3.7	< 0.60	< 0.50	1.7	<0.14	< 0.15	<0.11	<1.0	< 0.15	< 0.33	< 0.18	0.25 J
	12/11/2013	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	4.2	<0.60	<0.50	1.9	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	0.81 J
	5/26/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	0.34J	<0.6	<0.5	<0.25	<0.14	--	<0.11*	<1	<0.15	<0.33	<0.18	<0.2
MW-28D	6/8/2010	<5	<2.2	<8.2	<2.6	<20	<20	<100	1200	<12	<10	2000	15000D	--	8.4J	3600	15J	88	7.2J	37J
	12/16/2010	--	<2.8	<10	<3.2	<25	<25	<120	1000	<15	<12	1500	4J	<3.8	7.6J	2800	5.9J	66	<4.5	25J
	2/2/2011	--	<2.8	<10	<3.2	<25	<25	<120	550	<15	<12	1100	3300	<3.8	5.3J	2800	5.3J	39	<4.5	19J
	6/23/2011	<13*	<5.5	<21	<6.5	<50	<50	<250	1000	<30	<25	1800	<7	<7.5	5.9J	6900B	9J	25J	<9	24J
	12/16/2011	<5	<2.2	<8.2	<2.6	<20	<20	<100	900	<12	<10	1500	<2.8	<3	7.1J	<20	<3	24	12J	35J
	6/8/2012	<2.5	<1.1	<4.1	<1.3	<10	<10	<50	790	<6	<5	1300	<1.4	<1.5	5.9J	<10	<1.5	15	<1.8	30
	12/14/2012	<0.24	<0.25	<0.23	0.28 J	4.2 JB	<0.81	3.3 JB	740	0.28 JB	<0.18	1200	<0.23	<0.21	5	<0.16	<0.25	13	0.54 J	27
	6/13/2013	< 2.5	<1.1	<4.1	<1.3	<10	<10	< 50	380	< 6.0	<5.0	690	<1.4	<1.5	2.5 J	<10	<1.5	6.4 J	<1.8	13 J
	12/13/2013	<2.5	<1.1	<4.1	<1.3	<10	<10	<50	880	<6.0	<5.0	1300	1300	5.7J	5.9J	1700	9.6J	11	5.8J	32
MW-29I	5/18/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/15/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/23/2011	<0.25*	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	3.6JB	<0.15	<0.33	<0.18	<0.2
	12/14/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/6/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/12/2012	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	<0.25	<0.60	<0.50	<0.25	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	<0.20
	12/11/2013	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	<0.25	<0.60	<0.50	<0.25	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	<0.20
	5/18/2010	--	<2.2	<8.2	<2.6	<20	<20	<100	1400	<12	<10	650	<2.8	<3	44	<20	<3	<6.6	<3.6	9.8J
MW-29D	12/15/2010	--	<2.2	<8.2	<2.6	<20	<20	<100	1400	<12	<10	710	<2.8	<3	46	<20	<3	<6.6	<3.6	29J
	2/1/2011	--	<2.2	<8.2	<2.6	<20	<20	<100	1700	<12	<10	830	<2.8	<3	90	<20	<3	23	35	97
	6/23/2011	<2.5	<1.1	<4.1	<1.3	<10	<10	<50	1600	<6	<5	780	<1.4	<1.5	62	31JB	<1.5	4.8J	7.2J	65
	12/14/2011	<5	<2.2	<8.2	<2.6	<20	<20	<100	1200	<12	<10	640	<2.8	<3	47	<20	<3	<6.6	<3.6	56
	6/6/2012	<5	<2.2	<8.2	<2.6	<20	<20	150J	1100	<12	<10	530	<2.8	<3	19J	<20	<3	<6.6	<3.6	37J
	12/12/2012	<2.5	<1.1	<4.1	<1.3	<10	<10	<50	1400	<6.0	<5.0	590	<1.4	<1.5	7.7 J	<10	<1.5	9 J	<1.8	34
	6/11/2013	< 0.50	<0.22	< 0.82	<0.26	< 2.0	< 2.0	23 J	350	<1.2	<1.0	220	<0.28	<0.30	1.1 J	<2.0	<0.30	1.4 J	<0.36	4.5
	12/11/2013	<5.0	<2.2	<8.2	<2.6	<20	<20	<100	1600	<12	<10	740	<2.8	<3.0	8.7 J	<20	<3.0	<6.6	<3.6	89
	5/27/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	30	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1*	<0.15	<0.33	<0.18	<0.2
MW-30D	5/27/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-31D	6/8/2010	2.2	1.8	<0.41	<0.13.															



VOLATILE ORGANIC COMPOUNDS - MONITORING WELLS  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA

Chemical Name:		1,1-Dichloroethane	1,1-Dichloroethene	1,2,3-Trichloropropane	1,2-Dichloropropane	2-Butanone (MEK)	Methyl Isobutyl Ketone (MIBK)	Acetone	Benzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	Tetrachloroethene	Toluene	Vinyl chloride	Xylenes, Total
Report Result Unit: Sampling Date		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Well ID																				
MW-39S	6/2/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	19J	0.34J	<0.6	<0.5	<0.25	<0.14	--	14	<1	<0.15	2	<0.18	79
	12/15/2010	--	<0.11	<0.41	<0.13	<1	<1	7.1J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	1.2	<1	<0.15	<0.33	<0.18	3.4
	6/23/2011	<0.25*	<0.11	<0.41	<0.13	<1	<1	21J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	3.6JB	<0.15	<0.33	<0.18	9.8
	12/13/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	13J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	2
	6/5/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	19J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	0.79J
	12/10/2012	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	10J	<0.25	<0.60	<0.50	<0.25	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	0.2 J
	12/10/2013	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	6.4 J	<0.25	<0.60	<0.50	<0.25	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	<0.20
MW-39I	6/2/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1	<0.15	0.57J	<0.18	<0.2
	12/15/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	0.57J	<0.6	<0.5	0.48J	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/23/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	0.36J	<0.6	<0.5	0.61J	<0.14	<0.15	<0.11	3.6JB	<0.15	<0.33	<0.18	<0.2
	12/13/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	0.77J	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/5/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	7.3J	<0.25	<0.6	<0.5	1.5	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/10/2012	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	<0.25	<0.60	<0.50	3.1	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	<0.20
	12/10/2013	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	<0.25	<0.60	<0.50	9.4	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	<0.20
MW-39D	6/2/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/15/2010	--	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/23/2011	<0.25*	<0.11*	<0.41	<0.13	<1	<1	<5	<0.25	<0.6*	<0.5	<0.25	<0.14	<0.15	<0.11	3.9J*B	<0.15	<0.33	<0.18	<0.2
	12/13/2011	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	6/5/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	6.6J	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
	12/10/2012	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	<0.25	<0.60	<0.50	<0.25	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	<0.20
	12/10/2013	<0.25	<0.11	<0.41	<0.13	<1.0	<1.0	<5.0	<0.25	<0.60	<0.50	<0.25	<0.14	<0.15	<0.11	<1.0	<0.15	<0.33	<0.18	<0.20
MW-40S	5/26/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	17J	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11*	<1	<0.15	<0.33	<0.18	<0.2
MW-40I	5/26/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	0.41J	<0.6	<0.5	0.87J	<0.14	--	<0.11*	<1	<0.15	<0.33	<0.18	<0.2
MW-40D	5/26/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	--	<0.11*	<1	<0.15	<0.33	<0.18	<0.2
MW-42I	5/16/2012	<13	11J	<21	<6.5	100J	760	3100	2800	520	8400	<13	4600	<7.5	280	280	14J	120	<9	190
MW-42D	5/16/2012	<1.3	2.9J	<2.1	<0.65	<5	<2.5	<25	200	<3	<2.5	34	350	<0.75	26	30	8.9	110	<0.9	19
MW-43S	5/16/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-43I	5/16/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	0.27J	0.35J	0.18J	<0.11	<1	<0.13	<0.33	<0.18	1J
MW-43D	5/16/2012	<13	<5.5	<21	<6.5	<50	<50	<250	270	<30	<25	410	8000	<7.5	8.3J	2100	13J	44J	<9	18J
MW-44S	6/3/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<48	<0.25	<0.6	<0.5	<0.25	<0.14	--	0.48J	<1	<0.15	3.9	<0.18	<0.2
MW-44I	6/3/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	13J	94	<0.6	<0.5	52	<0.14	--	0.3J	<1	<0.15	0.48J	<0.18	1.7J
MW-44-ID	6/3/2010	<1.2	<0.55	<2	<0.65	<5	<5	<25	220	<3	<2.5	230	580	--	220	22J	<0.75	27	<0.9	610
MW-44D	6/3/2010	<0.5	<0.22	<0.82	<0.26	<2	<2	<10	340	<1.2	<1	52	<0.28	--	2.6	<2	<0.3	8.6	<0.36	8.1
	7/29/2010	<2	<0.22	<0.82	<0.26	<2	<2	<10	5400	<1.2	<1	140	<0.28	1.1J	9.5	<2	<0.3	7.1	<0.36	4.9
MW-45I	6/8/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	--	0.19J	<1	<0.15	<0.33	<0.18	<0.2
MW-46I	6/8/2010	<0.25	<0.11	<0.41	<0.13	<1	<1	38	5.0	3.1	<0.5	1.6	<0.14	--	0.24J	<1	<0.15	<0.33	<0.18	1.6J
MW-48D	6/2/2010	<0.25	<0.11	<0.41	<0.13	1.6J	2.5J	33	27	<0.6	<0.5	<0.25	<0.14	--	4.4	<1	<0.15	12	<0.18	7.8
MW-49S	5/16/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	1.9	<0.18	<0.2
MW-49I	5/16/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	15	1.9J	<0.5	1.7	<0.14	0.18J	0.43J	<1	<0.15	<0.33	<0.18	0.91J
MW-49D	5/16/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	0.77J	<0.6	<0.5	<0.25	0.23J	<0.15	<0.11	<1	0.17J	<0.33	<0.18	0.21J
MW-50S	5/16/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	<0.6	<0.5	<0.25	<0.14	<0.15	<0.11	<1	<0.15	<0.33	<0.18	<0.2
MW-50I	5/16/2012	<0.25	<0.11	<0.41	<0.13	<1	<1	<5	<0.25	&										



**GROUNDWATER ANALYTICAL RESULTS – TOXAPHENE**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Chemical Name:		Total Toxaphene (Chlorinated Camphenes)	Toxaphene, Technical
Report Result Unit:		UG/L	UG/L
Well ID	Sampling Date		
HP-111-50A	03/30/2010	<0.5	<0.5
HP-111-50B	03/30/2010	<0.5	<0.5
HP-111-50C	03/30/2010	<0.5	<0.5
HP-111-51A	03/29/2010	0.92J	<0.5
HP-111-52A	03/29/2010	1.9J	<0.5
HP-111-52B	03/29/2010	<0.5	<0.5
HP-111-53A	03/29/2010	<0.5	<0.5
HP-111-53B	03/29/2010	<0.5	<0.5
HP-111-54A	03/30/2010	<0.5	<0.5
HP-111-54B	03/30/2010	11	<0.5
HP-111-54C	04/01/2010	37	<0.5
HP-111-57A	04/01/2010	15	<0.5
HP-111-57B	03/30/2010	37	<0.5
HP-111-57C	04/01/2010	41	<0.5
UP-1S	5/17/2010	<0.49	<0.49
	12/20/2010	<0.47	<0.47
	6/21/2011	<0.5	<0.5
	12/13/2011	1.1J	<0.51
	6/6/2012	<0.49	<0.49
	12/11/2012	<0.49	<0.49
UP-1D(R)	12/12/2013	<0.51	<0.51
	5/17/2010	<0.48	<0.48
	12/20/2010	<0.49	<0.49
	6/21/2011	<0.55	<0.55
	12/13/2011	<0.99	<0.99
	6/6/2012	<0.48	<0.48
POC-1S	12/11/2012	<0.47	<0.47
	12/12/2013	<0.50	<0.50
	5/19/2010	31	<0.49
	12/20/2010	53	<0.48
	6/21/2011	<0.5	<0.5
	12/15/2011	4.3J	<0.48
	6/7/2012	5.5J	<4.9
	12/13/2012	18	<0.48
POC-1D	6/11/2013	20	< 0.52
	12/12/2013	20	<0.50
	5/18/2010	<0.48	<0.48
	12/20/2010	<0.49	<0.49
	6/21/2011	<0.5	<0.5
	12/15/2011	<0.47	<0.47
	6/7/2012	<0.48	<0.48
	12/13/2012	<0.47	<0.47
POC-2S	6/11/2013	< 0.51	< 0.51
	12/12/2013	<0.51	<0.51
	5/19/2010	280	<5
	8/12/2010	220	<4.7
	12/16/2010	650D	<5D**
	2/2/2011	140	<0.5
	6/21/2011	150	<0.51
	12/15/2011	110	68
	6/8/2012	640	480
	12/13/2012	440 D	<19
POC-2D	6/12/2013	370	260
	12/13/2013	560 *	<13 *
	5/19/2010	<0.5	<0.5
	12/16/2010	<0.48	<0.48
	6/21/2011	<0.48	<0.48
	12/15/2011	<0.47	<0.47
	6/8/2012	<0.49	<0.49
	12/13/2012	<0.47	<0.47
POC-3S	6/12/2013	1.0 J	< 0.49
	12/13/2013	<0.51 *	<0.51 *
	5/19/2010	140	<4.9
	12/20/2010	200	<0.49
	6/23/2011	91	<2.5
	12/15/2011	5.8	1.1 J
	6/8/2012	5.7	2.9 J
	12/13/2012	76 / 72 D	<0.49
	6/12/2013	16	10 p
	12/12/2013	85	<0.49



**GROUNDWATER ANALYTICAL RESULTS – TOXAPHENE  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA**

Chemical Name:		Total Toxaphene (Chlorinated Camphenes)	Toxaphene, Technical
Report Result Unit:		UG/L	UG/L
Well ID	Sampling Date		
POC-3D	5/18/2010	1.8J	<0.49
	12/20/2010	<0.49	<0.49
	6/23/2011	1.8J	<0.5
	12/15/2011	<0.47	<0.47
	6/8/2012	0.82 J	<0.47
	12/13/2012	0.62 J	<0.47
	6/12/2013	0.99 J	0.94 J
	12/12/2013	1.0 J	<0.50
MW-3S	5/17/2010	<0.47	<0.47
	12/20/2010	<0.49	<0.49
	6/23/2011	0.56 J	<0.48
	12/15/2011	<0.5	<0.5
	6/6/2012	<0.49	<0.49
MW-3D	5/17/2010	10	<0.48
	12/20/2010	1 J	<0.48
	2/1/2011	8.5	0.59 J
	6/23/2011	3.4J	<0.5
	12/15/2011	<0.47	<0.47
	6/6/2012	3.5 J	<0.95
	12/13/2012	5.1	<0.47
	12/12/2013	4.2 J p	<0.51
MW-5I	6/1/2010	<0.5	<0.5
MW-9S	5/18/2010	<0.48	<0.48
	12/17/2010	<0.48	<0.48
	6/22/2011	<0.48	<0.48
	12/16/2011	<0.49	<0.49
	6/7/2012	<0.48	<0.48
MW-9D	5/19/2010	9.3	0.67J
	12/17/2010	4.6J	<0.49
	2/2/2011	6.4	<0.5
	6/22/2011	7.3	<0.48
	12/16/2011	100	<0.5
	6/7/2012	3.5J	<0.47
	12/13/2012	5.5	<0.47
	6/13/2013	< 11	< 11
MW-10S	12/12/2013	5.8	<0.50
	5/18/2010	<0.49	<0.49
	12/17/2010	<0.47	<0.47
	6/23/2011	0.57J	<0.48
	12/16/2011	<0.48	<0.48
MW-10D	6/8/2012	<0.48	<0.48
	5/19/2010	79	7.5
	7/29/2010	38	<0.48
	12/17/2010	27	<0.48
	2/2/2011	20	<0.5
	6/23/2011	44	<2.4
	12/16/2011	190D	<0.5
	6/8/2012	39J	<9.7
	12/13/2012	40	<2.3
MW-11S	6/13/2013	52	23
	12/12/2013	60	<0.50
	5/18/2010	<0.48	<0.48
	12/17/2010	<0.49	<0.49
	6/22/2011	<0.49	<0.49
MW-11D	12/16/2011	<0.53	<0.53
	6/6/2012	<0.48	<0.48
	5/18/2010	<0.49	<0.49
	12/17/2010	<0.48	<0.48
	6/22/2011	<0.49	<0.49
	12/16/2011	<0.51	<0.51
	6/6/2012	<0.48	<0.48
	12/12/2012	0.49 J	<0.48
	6/11/2013	2.3 J	< 0.49
	12/11/2013	1.1 J	<0.49



**GROUNDWATER ANALYTICAL RESULTS – TOXAPHENE  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA**

Chemical Name:		Total Toxaphene (Chlorinated Camphenes)	Toxaphene, Technical
Report Result Unit:		UG/L	UG/L
Well ID	Sampling Date		
MW-12S	5/18/2010	<0.48	<0.48
	12/20/2010	<0.5	<0.5
	6/22/2011	<0.48	<0.48
	12/15/2011	<0.48	<0.48
	6/7/2012	<0.48	<0.48
MW-12D	5/18/2010	1.5J	<0.5
	12/20/2010	<0.47	<0.47
	6/22/2011	0.98J	<0.49
	12/15/2011	<0.5	<0.5
	6/7/2012	<0.47	<0.47
	12/12/2012	0.57 J	<0.49
	6/11/2013	0.81 J	< 0.50
MW-14S	12/11/2013	<0.50	<0.50
	6/3/2010	--	--
	12/20/2010	<0.48	<0.48
	6/23/2011	0.64J	<0.47
MW-14D	12/16/2011	<0.49	<0.49
	6/3/2010	--	--
	12/20/2010	<0.49	<0.49
	6/23/2011	<0.47	<0.47
	12/16/2011	<0.51	<0.51
	6/8/2012	<0.48	<0.48
MW-19S	12/13/2012	<0.47	<0.47
	12/13/2013	<0.51 *	<0.51 *
	5/26/2010	--	--
MW-19I	12/15/2011	<0.49	<0.49
	5/26/2010	--	--
MW-19D	12/15/2011	<0.46	<0.46
	5/26/2010	--	--
MW-20S	12/16/2010	<0.5	<0.48
	6/22/2011	<0.48	<0.48
	12/14/2011	<0.52	<0.52
	6/6/2012	<0.61	<0.61
	5/18/2010	0.89J	<0.5
MW-20I	6/2/2010	<0.47	<0.47
	12/16/2010	<0.47	<0.47
	6/22/2011	<0.48	<0.48
	12/14/2011	<0.49	<0.49
	6/6/2012	<0.49	<0.49
	12/12/2012	<0.48	<0.48
	12/10/2013	<0.50	<0.50
MW-20D	5/18/2010	2.9J	<0.47
	6/2/2010	--	--
	12/16/2010	3.9J	<0.49
	6/22/2011	3.5J	<0.48
	12/14/2011	<0.48	<0.48
	6/6/2012	2.1J	<0.49
	12/12/2012	3.7 J	<0.47
	6/13/2013	7.5	1.9 Jp
MW-21	12/13/2013	8.2 Jp *	<2.0 *
	5/18/2010	<0.47	<0.47
MW-22	5/18/2010	4.4J	1.3J
MW-23	5/18/2010	<0.48	<0.48
MW-24	5/18/2010	7.9	<0.47
MW-25S	6/3/2010	1.1J	<0.48
MW-25D	6/3/2010	<0.47	<0.47



**GROUNDWATER ANALYTICAL RESULTS – TOXAPHENE  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA**

Chemical Name:		Total Toxaphene (Chlorinated Camphenes)	Toxaphene, Technical
Report Result Unit:		UG/L	UG/L
Well ID	Sampling Date		
MW-26S	5/18/2010	<0.48	<0.48
	12/16/2010	14	<0.49
	6/23/2011	0.75J	<0.49
	12/14/2011	<0.48	<0.48
	6/6/2012	<0.49	<0.49
MW-26D	5/18/2010	1.3J	<0.49
	12/16/2010	<0.47	<0.47
	6/23/2011	<0.47	<0.47
	12/14/2011	<0.49	<0.49
	6/6/2012	<0.47	<0.47
	12/12/2012	<0.49	<0.49
	6/11/2013	< 0.53	< 0.53
MW-27D	12/11/2013	<0.51	<0.51
	5/26/2010	<0.48	<0.48
MW-28D	6/8/2010	--	--
	12/16/2010	<0.47	<0.47
	2/2/2011	9.7	<0.47
	6/23/2011	45	<2.4
	12/16/2011	55	<0.49
	6/8/2012	<9.4	<9.4
	12/14/2012	14 p	<0.48
	6/13/2013	14 J	< 10
	12/13/2013	13 J p *	<2.0 *
	5/18/2010	<0.47	<0.47
MW-29I	12/15/2010	<0.5	<0.5
	6/23/2011	<0.48	<0.48
	12/14/2011	<0.48	<0.48
	6/6/2012	<0.49	<0.49
	12/12/2012	<0.49	<0.49
	12/11/2013	<0.51	<0.51
MW-29D	5/18/2010	9.4	<0.47
	12/15/2010	17	2.7J
	2/1/2011	8.2	<0.49
	6/23/2011	14J	<2.4
	12/14/2011	<0.48	<0.48
	6/6/2012	7.3J	<1.9
	12/12/2012	13	<0.47
	6/11/2013	16	< 0.51
	12/11/2013	11	<0.50
MW-32D	5/27/2010	<0.48	<0.48
MW-33	5/27/2010	<0.49	<0.49
MW-35D	6/8/2010	<0.5	<0.5
MW-36D	5/18/2010	<0.47	<0.47
MW-37S	5/25/2010	<0.5	<0.5
MW-37I	5/25/2010	<0.48	<0.48
MW-38S	6/2/2010	<0.48	<0.47
	12/15/2010	<0.50	<0.50
	6/22/2011	<0.48	<0.48
	12/14/2011	<0.49	<0.49
	6/5/2012	<0.47	<0.47
MW-38I	6/2/2010	<0.5	<0.5
	12/15/2010	<0.50	<0.50
	6/22/2011	<0.48	<0.48
	12/14/2011	<0.53	<0.53
	6/5/2012	<0.49	<0.49
	12/12/2012	<0.50	<0.50
	12/11/2013	<0.50	<0.50



**GROUNDWATER ANALYTICAL RESULTS – TOXAPHENE  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA**

Chemical Name:		Total Toxaphene (Chlorinated Camphenes)	Toxaphene, Technical
Report Result Unit:		UG/L	UG/L
Well ID	Sampling Date		
MW-38D	6/2/2010	8.9	<0.5
	12/15/2010	13	2.7j
	2/1/2011	7.1	<0.50
	6/22/2011	<0.49	<0.49
	12/14/2011	7	<0.51
	6/5/2012	1.8j	<0.47
	12/12/2012	5.9	<0.47
	6/11/2013	6.5	< 0.50
MW-39S	12/11/2013	5.6 p	<0.50
	12/15/2010	<0.49	<0.49
	6/23/2011	0.84j	<0.50
	12/13/2011	<0.54	<0.54
	6/5/2012	<0.47	<0.47
MW-39I	12/10/2012	0.64 jp	<0.47
	12/10/2013	1.7 j	<0.49
	12/15/2010	<0.49	<0.49
	6/23/2011	<0.48	<0.48
	12/13/2011	<0.50	<0.50
MW-39D	6/5/2012	<0.48	<0.48
	12/10/2012	<0.47	<0.47
	12/10/2013	<0.51	<0.51
	12/15/2010	<0.47	<0.47
	6/23/2011	0.60j	<0.48
MW-40S	12/13/2011	<0.50	<0.50
	6/5/2012	<0.49	<0.49
	12/10/2012	<0.47	<0.47
	12/10/2013	<0.50	<0.50
	5/26/2010	<0.49	<0.49
MW-40I	5/26/2010	<0.48	<0.48
MW-40D	5/26/2010	<0.49	<0.49
MW-42I	5/16/2012	28j	<48
MW-42D	5/16/2012	130	<48
MW-43S	5/16/2012	<4.7	<0.47
MW-43I	5/16/2012	2.4j	<0.49
MW-43D	5/16/2012	24j	<4.8
MW-44S	6/3/2010	<0.5	<0.5
MW-44I	6/3/2010	1.4j	<0.47
MW-44-ID	6/3/2010	5	<0.47
MW-44D	6/3/2010	1j	<0.48
MW-45I	6/8/2010	<0.49	<0.49
MW-46I	6/8/2010	1.5j	<0.47
MW-52S	5/15/2012	<0.49	<0.49
	8/2/2012	--	--
MW-52I	5/15/2012	<0.47	<0.47
	8/2/2012	--	--
MW-52D	5/15/2012	<0.47	<0.47
	8/2/2012	<0.47	<0.47
	12/11/2012	<0.47	<0.47
	6/11/2013	< 0.52	< 0.52
	12/11/2013	<0.51	<0.51
MW-53S	5/27/2010	<0.49	<0.49
MW-54S	5/28/2010	<0.48	<0.48
MW-54I	5/28/2010	28	<0.48
MW-54D	5/28/2010	6.9	<0.47
MW-55S	12/4/2013	<5.0	<5.0
MW-55I	12/4/2013	<4.8	<4.8
MW-55D	12/4/2013	7.2	<4.7

**Analytical Notes:**

< - Not detected at or above indicated laboratory reporting limit

UG/L - micrograms per liter

-- - No information available

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

D - Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis;  
also compounds analyzed at a dilution may be flagged with a D

E - Result exceeded instrument calibration range

\*\* - Technical toxaphene for the POC-2S sample collected on 12-16-10 was detected at 69 ug/l for the non-diluted sample.  
The result of the diluted sample was reported due to the QC results of the non-diluted analysis.

- Table does not include results for duplicate samples.

- Diluted (D) value used unless out of hold time, then non-dilute (E) value reported.

- Analyses out of hold times were not included in the table.



**METALS – GROUNDWATER SCREENING SAMPLES  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA**

Chemical Name:		Arsenic	Barium	Beryllium	Chromium	Cobalt	Copper	Lead	Nickel	Selenium	Vanadium	Zinc
Report Result Unit:		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Well ID	Sampling Date											
HP-111-50A	03/30/2010	17J	140	1.5J	50	7J	12J	11	24J	<6.4	3	6.3
HP-111-50B	03/30/2010	15J	150	1J	57	8.4J	11J	13	19J	<6.4	56	52
HP-111-50C	03/30/2010	<10	97	0.24J	28	1.5J	9.6J	<3.4	11J	<6.4	21	50
HP-111-51A	03/29/2010	410	580	8.1	360	91	100	81	190	6.6J	220	1300
HP-111-52A	03/29/2010	37	1000	6.7	89	22	12J	14	42	<6.4	130	560
HP-111-52B	03/29/2010	63	200	2.7J	150	5.9J	39	16	23J	<6.4	79	110
HP-111-53A	03/29/2010	110	500	5.9	100	37	46	28	70	<6.4	82	680
HP-111-53B	03/29/2010	27	190	1.1J	200	6.3J	130	23	36J	<6.4	46	91

**Analytical Notes:**

< - Not detected at or above indicated laboratory detection limit

UG/L - micrograms per liter

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

- Antimony was detected at trace concentrations in samples collected from HP-111-51A (7.1J), HP-111-52B (7.7J) and HP-111-53B (5.6J).

- Cadmium was detected at a trace concentration of 2.4J in the sample collected from HP-111-51A.

- Tin was detected at a trace concentration of 7.5J in the sample collected from HP-111-53B.

- Silver and thallium were not detected in any of the groundwater screening samples collected at the site.



**METALS - MONITORING WELLS**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Chemical Name:		Arsenic	Barium	Beryllium	Chromium	Cobalt	Nickel	Selenium	Vanadium	Zinc
Report Result Unit:		UG/L	UG/L	ug/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Well ID	Sampling Date									
UP-1S	5/17/2010	--	--	--	--	--	--	--	<2.4	--
	12/20/2010	<4.6	21	--	1.4J	1.1J	<2.3	<6.4	<2.4	--
	6/6/2012	<1.3	54	--	20	1.7	9.1	<1.1	<3.2	<8.4
	12/11/2012	<1.3	20	--	<2.5	0.8	<2.0	<1.1	<3.2	<8.4
	12/12/2013	<1.3	17	--	3.5 J	0.43 J	<2.0	<1.0	<3.8	13 J
UP-1D (R)	12/20/2010	<4.6	540	--	<1.2	<0.95	<2.3	<6.4	<2.4	--
	6/6/2012	<1.3	41	--	<2.5	0.14J	<2	<1.1	<3.2	<8.4
	12/11/2012	<1.3	28	--	<2.5	<0.12	<2.0	<1.1	<3.2	<8.4
	12/12/2013	<1.3	28	--	<2.5	0.15 J	2.7 J	<1.0	<3.8	16 J
POC-1S	05/19/2010	--	--	--	--	--	--	--	33	--
	12/20/2010	--	--	--	--	--	--	--	23	--
	6/7/2012	2.9	12	<0.15	5.4	0.35J	<2	3.4	26	<8.4
	12/13/2012	4.8	14	--	12.0	0.9	4.2 J	5.4	40	8.8 J
	6/11/2013	3.4	14	--	7.5	0.45 J	2.6 J	4.1	34	<8.4
POC-1D	12/12/2013	2.9	16	--	7.5	0.62	2.4 J	4.1	32	<8.3
	12/20/2010	--	--	--	--	--	--	--	<2.4	--
	6/7/2012	2.3J	580	<0.15	<2.5	0.79	<2	<1.1	<3.2	<8.4
	12/13/2012	2.7	650	--	<2.5	1.5	2.6 J	<1.1	<3.2	<8.4
	6/11/2013	2.1 J	590	--	2.5 J	1.0	3.2 J	<1.1	<3.2	<8.4
POC-2S	12/12/2013	<1.3	590	--	<2.5	1.6	<2.0	<1.0	<3.8	<8.3
	5/19/2010	4.5	47	<0.15	4.9J	0.7	4.4J	5.0	35	<8.4
	8/12/2010	4.8J	26	--	5.0J	<0.95	--	6.4J	24	--
	12/16/2010	<4.6	39	--	4.4J	<0.95	<2.3	<6.4	25	--
	6/8/2012	3.7	33	--	<2.5	0.78	<2	4.1	17	<8.4
POC-2D	12/13/2012	4.5	29	--	3.5 J	0.7	<2.0	5.3	21	<8.4
	6/12/2013	3.6	24	--	3.1 J	0.5	<2.0	5.5	18	<8.4
	12/13/2013	3.4	24	--	3.7 J	0.56	2.9 J	5.4	19	<8.3
	5/19/2010	2J	770	<0.15	4.5J	1.8	5.3	<1.1	<3.2	<8.4
	12/16/2010	<4.6	890	--	1.4J	<0.95	2.4J	<6.4	<2.4	--
POC-3S	6/8/2012	2.5	710	--	<2.5	0.97	<2	<1.1	<3.2	<8.4
	12/13/2012	3.5	860	--	4.9 J	1.9	3.6 J	<1.1	<3.2	<8.4
	6/12/2013	2.1 J	870	--	2.6 J	1.6	6.3	<1.1	<3.2	<8.4
	12/13/2013	1.3 J	820	--	<2.5	2.1	3.0 J	<1.0	<3.8	9.0 J
POC-3D	05/19/2010	--	--	--	--	--	--	--	8.9J	--
	12/20/2010	--	--	--	--	--	--	--	10	--
	6/8/2012	2.5	45	--	<2.5	0.3J	<2	<1.1	5.1J	500
	12/13/2012	2.2 J	27	--	6.0	0.15 J	<2.0	2.8	14	<8.4
	6/12/2013	1.6 J	41	--	<2.5	0.17 J	<2.0	<1.1	<3.2	140.0
MW-3S	12/12/2013	1.7 J	43	--	6.3	0.20 J	<2.0	1.9J	12	44
	12/20/2010	--	--	--	--	--	--	--	<2.4	--
	6/8/2012	2.7	750	--	<2.5	1.0	<2	<1.1	<3.2	<8.4
	12/13/2012	3.4	760	--	9.3	1.8	6.1	<1.1	<3.2	<8.4
	6/12/2013	1.7 J	710	--	7.4	1.5	13.0	<1.1	<3.2	<8.4
MW-3D	12/12/2013	1.3 J	660	--	3.6 J	2	4.6 J	<1.0	<3.8	<8.3
	05/17/2010	--	--	--	--	--	--	--	3.2J	--
	12/20/2010	--	--	--	--	--	--	--	<2.4	--
	6/6/2012	<1.3	21	--	<2.5	0.16J	<2	<1.1	6J	<8.4
MW-9S	12/20/2010	--	--	--	--	--	--	--	<2.4	--
	6/6/2012	<1.3	290	--	<2.5	0.89	<2	<1.1	<3.2	<8.4
	12/13/2012	1.6 J	240	--	<2.5	0.79	4 J	<1.1	<3.2	<8.4
	12/12/2013	<1.3	350	--	<2.5	1.3	2.2 J	<1.0	<3.8	<8.3
	5/18/2010	--	--	--	--	--	--	--	<2.4	--
MW-9D	12/17/2010	--	--	--	--	--	--	--	<2.4	--
	6/7/2012	<1.3	170	--	<2.5	0.24J	<2	<1.1	4.3J	<8.4
	12/13/2012	<1.3	170	--	<2.5	0.41 J	<2.0	<1.1	3.6 J	<8.4
	6/13/2013	<1.3	160	--	<2.5	0.30 J	<2.0	<1.1	<3.2	<8.4
	12/12/2013	<1.3	160	--	2.7 J	0.44 J	2.8 J	<1.0	<3.8	8.6 J
MW-10S	05/18/2010	--	--	--	--	--	--	--	<2.4	--
	12/17/2010	--	--	--	--	--	--	--	<2.4	--
	6/8/2012	<1.3	65	--	<2.5	<0.12	<2	<1.1	<3.2	<8.4
	12/17/2010	--	--	--	--	--	--	--	<2.4	--
MW-10D	6/8/2012	4.2	1500	--	<2.5	1.5	<2	<1.1	<3.2	<8.4
	12/13/2012	6.9	2000	--	<2.5	3.2	2.4 J	<1.1	<3.2	<8.4
	6/13/2013	3.3	1900	--	<2.5	2.5	<2.0	<1.1	<3.2	<8.4
	12/12/2013	3	1800	--	<2.5	3.6	<2.0	<1.0	<3.8	12 J
MW-11S	5/18/2010	--	--	--	--	--	--	--	<2.4	--
	12/17/2010	--	--	--	--	--	--	--	<2.4	--
	6/6/2012	<1.3	35	--	<2.5	<0.12	<2	<1.1	<3.2	<8.4
	12/17/2010	--	--	--	--	--	--	--	<2.4	--
MW-11D	6/6/2012	<1.3	91	--	<2.5	0.33J	<2	<1.1	<3.2	<8.4
	12/12/2012	1.3 J	110	--	<2.5	0.31 J	<2.0	<1.1	<3.2	<8.4
	6/11/2013	<1.3	95	--	<2.5	0.28 J	2.1 J	<1.1	<3.2	<8.4
	12/11/2013	<1.3	100	--	<2.5	0.40 J	<2.0	<1.0	<3.8	28
MW-12S	5/18/2010	--	--	--	--	--	--	--	12	--
	12/20/2010	--	--	--	--	--	--	--	10	--
	6/7/2012	<1.3	15	--	<2.5	<0.12	<2	<1.1	8.1J	<8.4



**METALS - MONITORING WELLS**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Chemical Name:		Arsenic	Barium	Beryllium	Chromium	Cobalt	Nickel	Selenium	Vanadium	Zinc
Report Result Unit:		UG/L	UG/L	ug/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Well ID	Sampling Date									
MW-12D	12/20/2010	--	--	--	--	--	--	--	<2.4	--
	6/7/2012	5.6	1200	--	<2.5	1.9	<2	<1.1	<3.2	<8.4
	12/12/2012	4.1 J	1400	--	<5.0	3.1	<4.0	<2.2	<6.4	<17
	6/11/2013	4.7	1300	--	<2.5	2.7	<2.0	<1.1	<3.2	<8.4
	12/11/2013	2.2 J	1,200	--	<2.5	3.9	2.1 J	<1.0	<3.8	22
MW-14S	12/20/2010	--	--	--	--	--	--	--	4.2J	--
MW-14D	12/20/2010	--	--	--	--	--	--	--	8.6J	--
	6/8/2012	<1.3	84	--	3.9J	0.16J	<2	<1.1	8.7J	<8.4
	12/13/2012	<1.3	77	--	4 J	0.19 J	<2.0	<1.1	9 J	<8.4
MW-18	12/21/2010	<4.6	10	--	1.7J	<0.95	<2.3	<6.4	<2.4	--
MW-19S	12/21/2010	<4.6	23	--	4.1J	<0.95	<2.3	<6.4	8.7J	--
MW-19I	12/21/2010	<4.6	130	--	2.4J	<0.95	<2.3	<6.4	2.7J	--
MW-19D	12/21/2010	<4.6	1200	--	14	<0.95	4.8J	<6.4	<2.4	--
MW-20S	05/18/2010	--	--	--	--	--	--	--	<2.4	--
	12/16/2010	--	--	--	--	--	--	--	<2.4	--
	06/06/2012	1.6J	150	--	<2.5	1.7	<2	<1.1	<3.2	<8.4
MW-20I	12/16/2010	--	--	--	--	--	--	--	2.6J	--
	06/06/2012	<1.3	38	--	6	0.7	<2	<1.1	6.2J	<8.4
	12/12/2012	<1.3	31	--	<2.5	<0.12	<2.0	<1.1	<3.2	<8.4
	12/10/2013	<1.3	33	--	6.8	0.51	<2.0	<1.0	4.8 J	<8.3
MW-20D	12/16/2010	--	--	--	--	--	--	--	<2.4	--
	06/06/2012	<1.3	120	--	<2.5	0.46J	<2	<1.1	<3.2	<8.4
	12/12/2012	1.7 J	170	--	<2.5	0.71	<2.0	<1.1	<3.2	<8.4
	06/13/2013	<1.3	170	--	<2.5	0.69	<2.0	<1.1	<3.2	<8.4
	12/13/2013	<1.3	250	--	<2.5	1.4	<2.0	<1.0	<3.8	<8.3
MW-21	05/18/2010	--	--	--	--	--	--	--	2.6J	--
MW-22	05/18/2010	--	--	--	--	--	--	--	16	--
MW-23	05/18/2010	--	--	--	--	--	--	--	7.9J	--
MW-24	05/18/2010	--	--	--	--	--	--	--	6.2J	--
MW-26S	05/18/2010	--	--	--	--	--	--	--	<2.4	--
	12/16/2010	--	--	--	--	--	--	--	<2.4	--
	06/06/2012	<1.3	6.6	--	<2.5	<0.12	<2	<1.1	<3.2	<8.4
MW 26D	12/16/2010	--	--	--	--	--	--	--	<2.4	--
	06/06/2012	<1.3	380	--	<2.5	1.2	<2	<1.1	<3.2	<8.4
	12/12/2012	2.5	410	--	<2.5	1.0	<2.0	<1.1	<3.2	11 J
	06/11/2013	1.6 J	340	--	<2.5	0.9	<2.0	<1.1	<3.2	110.0
	12/11/2013	<1.3	390	--	<2.5	1.6	<2.0	<1.0	<3.8	15 J
MW-28D	12/16/2010	--	--	--	--	--	--	--	3.2J	--
	06/08/2012	1.9J	390	--	<2.5	0.63	<2	<1.1	<3.2	<8.4
	12/14/2012	2.5	470	--	<2.5	0.84	<2.0	<1.1	<3.2	<8.4
	06/13/2013	1.3 J	380	--	<2.5	0.88	3.4 J	<1.1	<3.2	<8.4
	12/13/2013	<1.3	410	--	<2.5	1.2	<2.0	<1.0	<3.8	<8.3
MW 29I	12/15/2010	--	--	--	--	--	--	--	<2.4	--
	06/06/2012	<1.3	32	--	<2.5	0.13J	<2	<1.1	<3.2	<8.4
	12/12/2012	<1.3	35	--	<2.5	<0.12	<2.0	<1.1	<3.2	<8.4
	12/11/2013	<1.3	37	--	<2.5	0.18 J	<2.0	<1.0	<3.8	21
MW-29D	12/15/2010	--	--	--	--	--	--	--	<2.4	--
	06/06/2012	<1.3	500	--	<2.5	0.95	<2	<1.1	<3.2	<8.4
	12/12/2012	2.2 J	530	--	<2.5	0.87	<2.0	<1.1	<3.2	<8.4
	12/11/2013	<0.0013	0.53	--	<0.0025	0.0013	<0.0020	<0.0010	<0.0038	0.025
	06/11/2013	1.6 J	490	--	<2.5	0.74	<2.0	<1.1	<3.2	<8.4
	12/11/2013	<1.3	530	--	<2.5	1.30	<2.0	<1.0	<3.8	25.0
MW-31D	12/21/2010	<4.6	150	--	<1.2	<0.95	<2.3	<6.4	<2.4	--
MW-36D	12/21/2010	<4.6	16	--	<1.2	<0.95	<2.3	<6.4	<2.4	--
MW-37S	05/25/2010	<10	48	0.13J	2.7J	<1	<4.0	<6.4	5J	<6.3
	12/21/2010	<4.6	45	--	4.5J	<0.95	<2.3	<6.4	6.9J	--
MW-37I	05/25/2010	<10	55	0.34J	43	3.2J	16J	<6.4	13	19J
	12/21/2010	<4.6	57	--	2.9J	<0.95	<2.3	<6.4	<2.4	--
MW-37D	12/21/2010	<4.6	12	--	1.8J	<0.95	<2.3	<6.4	<2.4	--
MW-38S	06/02/2010	<10	260	<0.1	<2	<1	<4.0	<6.4	<3	<6.3
	12/15/2010	--	--	--	--	--	--	--	<2.4	--
	06/05/2012	1.7J	380	--	<2.5	1.1	<2	<1.1	<3.2	<8.4
MW-38I	06/02/2010	<10	41	<0.1	2.3J	<1	<4.0	<6.4	<3	6.8J
	12/15/2010	--	--	--	--	--	--	--	<2.4	--
	06/05/2012	<1.3	27	--	<2.5	<0.12	<2	<1.1	<3.2	<8.4
	12/12/2012	<1.3	27	--	<2.5	<0.12	<2.0	<1.1	<3.2	<8.4
	12/11/2013	<1.3	29	--	<2.5	<0.15	<2.0	<1.0	<3.8	18 J
MW-38D	06/02/2010	<10	440	<0.1	4.4J	<1	<4.0	<6.4	<3	20
	12/15/2010	--	--	--	--	--	--	--	<2.4	--
	06/05/2012	<1.3	160	--	<2.5	0.35J	<2	<1.1	<3.2	<8.4
	12/12/2012	1.3 J	170	--	19.0	0.6	12.0	<1.1	<3.2	<8.4
	06/11/2013	<1.3	160	--	<2.5	0.33 J	<2.0	<1.1	<3.2	<8.4
	12/11/2013	<1.3	660	--	<2.5	1.4	<2.0	<1.0	<3.8	18 J
MW-39S	06/02/2010	<10	200	<0.1	6.6J	2.3J	<4.0	<6.4	3.6J	13J
	12/15/2010	--	--	--	--	--	--	--	6J	--
	06/05/2012	2.7	250	--	5.8	2.6	<2	<1.1	<3.2	<8.4
	12/10/2012	2.1 J	250	--	7.2	2.9	<2.0	<1.1	3.2 J	<8.4
	12/10/2013	<1.3	290	--	5.8	2.3	<2.0	<1.0	<3.8	<8.3



**METALS - MONITORING WELLS**  
**FORMER HERCULES BRUNSWICK FACILITY**  
**BRUNSWICK, GA**

Chemical Name:		Arsenic	Barium	Beryllium	Chromium	Cobalt	Nickel	Selenium	Vanadium	Zinc
Report Result Unit:		UG/L	UG/L	ug/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Well ID	Sampling Date									
MW-39I	06/02/2010	<10	130	<0.1	27	<1	12J	<6.4	<3	<6.3
	12/15/2010	--	--	--	--	--	--	--	<2.4	--
	06/05/2012	1.4J	130	--	<2.5	0.15J	<2	<1.1	<3.2	<8.4
	12/10/2012	<1.3	120	--	<2.5	0.13 J	<2.0	<1.1	<3.2	<8.4
	12/10/2013	<1.3	110	--	<2.5	<0.15	<2.0	<1.0	<3.8	<8.3
MW-39D	06/02/2010	<10	76	<0.1	10	<1	6.4J	<6.4	<3	<6.3
	12/15/2010	--	--	--	--	--	--	--	<2.4	--
	06/05/2012	<1.3	17	--	<2.5	<0.12	<2	<1.1	<3.2	<8.4
	12/10/2012	<1.3	17	--	<2.5	<0.12	<2.0	<1.1	<3.2	<8.4
	12/10/2013	<1.3	18	--	2.8 J	<0.15	2.0 J	<1.0	<3.8	65
MW-40S	05/26/2010	<10	40	0.12J	3.7J	<1	<4.0	<6.4	6.7J	9.8J
MW-40I	05/26/2010	<10	110	<0.1	<2	<1	<4.0	<6.4	<3	<6.3
MW-40D	05/26/2010	<10	4.5J	<0.1	<2	<1	<4.0	<6.4	<3	<6.3
MW-41I	05/27/2010	<10	2800	0.14J	2.7J	<1	<4.0	<6.4	<3	8.2J
MW-42I	05/16/2012	<10	190	<0.1	2.6J	<1	<4	<6.4	<3	11J
MW-42D	05/16/2012	<10	1100	<0.1	<2	<1	<4	<6.4	4.4J	<6.3
MW-43S	05/16/2012	<10	83	<0.1	<2	<1	<4	<6.4	3.1J	<6.3
MW-43I	05/16/2012	<10	170	<0.1	5.4J	<1	<4	<6.4	5.9J	<6.3
MW-43D	05/16/2012	<10	440	<0.1	<2	<1	<4	<6.4	3.5J	<6.3
MW-44S	06/03/2010	<10	43	<0.1	9.5J	<1	<4	<6.4	5.5J	<6.3
MW-44I	06/03/2010	<10	140	<0.1	4.6J	<1	<4	<6.4	3.5J	7.2J
MW-44D	06/03/2010	<10	1800	<0.1	47	<1	<4	<6.4	<3	7.1J
MW-44D	06/03/2010	<10	33	<0.1	12	<1	6J	<6.4	<3	<6.3
MW-45I	06/08/2010	<10	53	0.75J	23	<1	<4	<6.4	6.7J	7.4J
MW46I	06/08/2010	<10	100	3.4J	96	1.5J	9.6J	<6.4	59	19J
MW-50S	05/16/2012	<10	30	0.16J	5.6J	<1	<4	6.5J	8.2J	<6.3
MW-50I	05/16/2012	<10	64	0.12J	7.3J	<1	<4	7.5J	8J	<6.3
MW-50D	05/16/2012	<10	33	<0.1	4.7J	<1	<4	<6.4	<3	<6.3
MW-51S	05/16/2012	<10	140	0.14J	16	<1	9.6J	8.1J	14	<6.3
MW-51I	05/16/2012	18J	56	0.51J	48	2.7J	14J	<6.4	54	21
MW-51D	05/16/2012	<10	85	<0.1	10	<1	4J	<6.4	4.3J	<6.3
MW-52S	05/15/2012	<10	25	<0.1	4.3J	<1	<4	<6.4	3.1J	<6.3
MW-52I	05/15/2012	<10	50	0.13J	9.5J	<1	<4	<6.4	9J	9.3J
MW-52D	05/15/2012	<10	450	<0.1	2.2J	<1	<4	<6.4	4.4J	<6.3
	12/11/2012	2.4 J	430	--	<2.5	1.1	<2.0	<1.1	<3.2	<8.4
	06/11/2013	<1.3	200	--	<2.5	0.55	<2.0	<1.1	<3.2	<8.4
	12/11/2013	<1.3	590	--	<2.5	2.2	<2.0	<1.0	<3.8	19 J
MW-53S	05/27/2010	<10	47	0.12J	4J	<1	<4	<6.4	<3	13J
MW-54S	05/28/2010	<10	110	0.15J	<2	<1	<4	<6.4	<3	16J
MW-54I	05/28/2010	<10	470	2.5J	<2	<1	<4	<6.4	<3	<6.3
MW-54D	05/28/2010	<10	580	0.15J	<2	<1	<4	<6.4	<3	9.1J
MW-55S	12/04/2013	2.8	100	--	<5.0	0.6	<5.0	<2.5	5.5 J	<20
MW-55I	12/04/2013	9.3	28	--	2.9 J	<0.50	<5.0	<2.5	<10	<20
MW-55D	12/04/2013	1.7 J	670	--	<5.0	1.5	<5.0	<2.5	<10	<20

Analytical Notes:

< - Not detected at or above indicated laboratory detection limit

UG/L - micrograms per liter

-- - No information available

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

- Table does not include results for duplicate samples.

- Analyses completed out of hold times were not included in the table.

- Antimony was detected at a trace concentration of 5.2J in the sample collected from monitoring well MW-41I on 5/27/10.

- Cadmium was detected at a trace concentration of 3.9J in the sample collected from MW-41I on 5/27/10.

- Copper was detected at trace concentrations in the samples collected from monitoring wells MW-41I (5.6J) on 5/27/10 and MW-51I (5.3J) on 5/16/12.

- Lead was detected at trace concentrations in the samples collected from monitoring wells MW-51I (5.3J) and MW-50S (5.8J) on 5/16/12.

- Silver, thallium, tin and mercury were not detected in any of the groundwater samples collected from the monitoring wells at the site.



**ADDITIONAL ORGANIC PARAMETERS  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA**

Chemical Name:	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,4-Dichlorobenzene	p-Cymene	3 & 4 Methylphenol	Naphthalene	Phenol	alpha-BHC	gamma-BHC (Lindane)	Formaldehyde
Report Result Unit:	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Well ID	Sampling Date									
UP-1S	06/21/2011	--	<0.59	<0.6	<0.13	<1.4	--	<0.92	<0.0057	<0.0059
	12/13/2011	<0.25	<0.21	<0.28	<0.13	<1.3	<0.7	<0.83	<0.0058	<0.006
	6/6/2012	<0.25	<0.21	<0.28	0.68J	<1.3	<0.69	<0.82	<0.0056	<0.0058
	12/11/2012	<0.25	<0.21	<0.28	<0.13	<1.3	<0.69	<0.82	<0.0055	<0.0057
	12/12/2013	<0.25	<0.21	<0.28	<0.13	<1.3	<0.69	<0.82	<0.0055	<0.0057
UP-1D(R)	6/21/2011	--	<0.5	<0.51	<0.13	<1.2	--	<0.79	<0.0062	<0.0065
	12/13/2011	<0.25	<0.21	<0.28	<0.13	<1.2	<0.66	<0.78	<0.011	<0.012
	6/6/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.66	<0.79	<0.0054	<0.0056
	12/11/2012	<0.25	<0.21	<0.28	<0.13	<1.3	<0.72	<0.85	<0.0054	<0.0056
	12/12/2013	<0.25	<0.21	<0.28	<0.13	<1.3	<1.2	<1.6	<0.022	<0.019
POC-1S	06/21/2011	--	11	14	49	<1.2	--	<0.79	4.7D	<0.0059
	12/15/2011	0.82J	14	15	42	<1.3	<0.68	<0.81	0.079	<0.0056
	6/7/2012	0.57J	9.4	11	5.9	<1.3	<6.9	<8.2	<0.055	<0.057
	12/13/2012	4.8 JB	14	15	6.3 J	<1.3	<0.70	<0.83	<0.0055	<0.0057
	6/11/2013	0.69 J	12	13	2.7	<1.5	<1.4	<1.8	<0.023	<0.019
	12/12/2013	0.57 J	10	11	2.3	<1.4	<1.3	<1.6	<0.022	<0.019
POC-1D	06/21/2011	--	<0.53	<0.54	<0.13	<1.3	--	<0.83	<0.0057	<0.0059
	12/15/2011	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0054	<0.0056
	06/07/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0055	<0.0056
	12/13/2012	<0.15	<0.19	<0.13	<0.17	<1.2	<0.67	<0.79	<0.0054	<0.0056
	06/11/2013	<0.25	<0.21	<0.28	<0.13	<1.3	<1.2	<1.5	<0.022	<0.019
	12/12/2013	<0.25	<0.21	<0.28	<0.13	<1.5	<1.4	<1.7	<0.022	<0.019
POC-2S	6/21/2011	--	12	19	47J	<1.3	--	9.1J	6.3D	3.3D
	12/15/2011	<1.3	18J	27J	71	<1.3	4.3J	<0.86	13D	2.2D
	6/8/2012	<1.3	20J	29J	64	8.9J	4.7J	<0.82	16	<0.15
	12/13/2012	5.9 B	19	29	94	<1.3	2.2 J	<0.80	18	11
	6/12/2013	<63	<53	<70	53 J	24 J	<7.0 *	38 J	15	5.2
	12/13/2013	<63	<53	<70	<33	<1.3 H	4.2 J H	18 H	14	5.1 p
POC-2D	06/21/2011	--	<0.5	<0.51	<0.13	<1.2	--	<0.78	0.033J	<0.0056
	12/15/2011	<0.25	<0.21	<0.28	0.28J	<1.2	<0.67	<0.79	<0.0054	<0.0056
	6/8/2012	<0.25	<0.21	<0.28	0.14J	<1.2	<0.66	<0.79	<0.0056	<0.0058
	12/13/2012	<0.15	<0.19	<0.13	<0.17	<1.2	<0.67	<0.79	<0.0054	<0.0056
	6/12/2013	<0.25	<0.21	<0.28	<0.13	<2.6	<1.4 *	<1.6	0.022 Jp	<0.0057
	12/13/2013	<0.25	<0.21	<0.28	<0.13	<1.4 H	<1.3 H	<1.6 H	<0.022	<0.019
POC-3S	06/23/2011	1J	2.1J	3.1J	1000	<1.3	1.3J	<0.8	1.8	<0.029
	12/15/2011	<0.5	1.9J	2.9	360	<1.5	<0.79	<0.93	1.1D	0.058
	6/8/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.80	<0.0056	<0.0058
	12/13/2012	1.5 B	4.8	6.9	410	<1.3	1.2 J	<0.81	1.9 Ep/2.3 D	0.24 p
	6/12/2013	<0.25	0.33 J	0.50 J	5.2	<1.4	<1.3 *	<1.6	0.27	<0.019
	12/12/2013	<2.5	5.9 J	8.4 J	310	<1.4	<1.3	<1.6	1.5	<0.018
POC-3D	06/23/2011	<0.53	<0.5	<0.51	0.14J	<1.2	<0.66	<0.79	<0.0057	<0.0059
	12/15/2011	<0.25	0.3J	<0.28	0.34J	<1.3	<0.7	<0.83	<0.0054	<0.0056
	6/8/2012	<0.25	0.33 J	<0.28	0.13J	<1.2	<0.67	<0.80	<0.0054	<0.0056
	12/13/2012	<0.15	0.36 J	<0.13	0.2 J	<1.2	<0.67	<0.79	<0.0054	<0.0056
	6/12/2013	<0.25	0.32 J	<0.28	0.17 J	<1.4	<1.3 *	<1.6	<0.022	<0.019
	12/12/2013	<0.25	0.56 J	0.37 J	<0.13	<1.3	<1.2	<1.5	<0.021	<0.019
MW-3S	06/23/2011	--	<0.52	<0.53	<0.13	<1.3	--	<0.81	<0.0055	<0.0057
	12/15/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.0058	<0.006
	6/6/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.66	<0.79	<0.0056	<0.0058
MW-3D	6/23/2011	--	5.4J	5.8J	1.3J	<1.2	--	<0.79	<0.0057	<0.0059
	12/15/2011	--	7.7	8.1	15	--	--	--	<0.0054	<0.0056
	6/6/2012	<0.50	10	12	21	<1.2	<0.66	<0.78	<0.011	<0.011
	12/12/2013	<0.50	12	11	17	<1.3	<1.2	<1.5	<0.022	<0.019
MW-9S	06/22/2011	--	<0.53	<0.54	<0.65	<1.3	--	<0.83	<0.0055	<0.0057
	12/16/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.0055	<0.0057
	6/7/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0055	<0.0057
MW-9D	6/22/2011	--	3J	5.3J	0.29J	<1.3	--	29	<0.0055	<0.0057
	12/16/2011	--	4J	7.7J	<1.3	--	--	--	<0.0057	<0.0059
	6/7/2012	<2.5	3.3J	7.6J	<1.3	<1.3	<0.69	16	<0.0054	<0.0056
	12/13/2012	<0.15	0.33 J	1.4	0.4 J	<1.2	<0.67	<0.79	<0.0054	<0.0056
	6/13/2013	<0.25	<0.21	1.4	<0.13	<1.3	<1.2 *	<1.5	<0.46	<0.39
MW-10S	12/12/2013	<0.50	2.4	3.9	<0.26	<1.4	<1.3	<1.6	<0.022	<0.019
	06/23/2011	--	<0.5	<0.51	<0.13	<1.2	--	<0.79	<0.0054	<0.0056
	12/16/2011	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0054	<0.0056
	6/8/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0054	<0.0056



**ADDITIONAL ORGANIC PARAMETERS  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA**

Chemical Name:		1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,4-Dichlorobenzene	p-Cymene	3 & 4 Methylphenol	Naphthalene	Phenol	alpha-BHC	gamma-BHC (Lindane)	Formaldehyde
Report Result Unit:		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Well ID	Sampling Date										
MW-10D	06/23/2011	--	18	30	330J	3.4J	--	<0.79	<0.027	0.55	<5
	12/16/2011	<130	<110	<140	730	3.5J	<0.73	<0.86	<0.0057	<0.0059	<5
	06/08/2012	<130	<110	<140	530	<1.2	1.5J	3.0J	<0.11	<0.11	11J
	12/13/2012	0.58 JB	7.3	14	0.72 J	<1.2	<0.66	<0.79	<0.027	<0.028	590 B
	06/13/2013	< 130	< 110	< 140	490 J	< 1.2	1.5 J *	< 1.4	< 0.022	< 0.019	< 5.0
	12/12/2013	<130	<110	<140	520	<1.3	<1.2	<1.5	<0.021	<0.018	13 J
MW-11S	06/22/2011	--	<0.51	<0.52	<0.13	<1.2	--	<0.79	<0.0056	<0.0058	<5
	12/16/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.0061	<0.0063	--
	6/6/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.66	<0.79	<0.0054	<0.0056	--
MW-11D	6/22/2011	--	<0.53	<0.54	<0.13	<1.3	--	<0.83	<0.0056	<0.0058	<5
	12/16/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.0059	<0.0061	--
	6/6/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.66	<0.78	<0.0054	<0.0056	--
	12/12/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0054	<0.0056	43 J
	6/11/2013	< 0.25	< 0.21	< 0.28	< 0.13	< 1.3	< 1.2	< 1.5	< 0.021	< 0.018	10 J
	12/11/2013	<0.25	<0.21	<0.28	<0.13	<1.4	<1.3 *	<1.6	<0.021	<0.018	<5.0
MW-12S	6/22/2011	--	<0.55	<0.56	<0.13	<1.4	--	<0.86	<0.0055	<0.0057	<5
	12/15/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.0055	<0.0057	--
	6/7/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0055	<0.0057	--
MW-12D	06/22/2011	--	<0.51	<0.52	0.14J	<1.3	--	<0.8	<0.0055	<0.0057	<5
	12/15/2011	--	<0.21	<0.28	0.15J	--	--	--	<0.0058	<0.006	--
	6/7/2012	<0.25	<0.21	<0.28	0.14J	<1.2	<0.66	<0.79	<0.0054	<0.0055	--
	12/12/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0055	<0.0057	49 J
	6/11/2013	< 0.25	< 0.21	< 0.28	< 0.13	< 1.2	< 1.1	< 1.4	< 0.022	< 0.019	< 5.0
	12/11/2013	<0.25	<0.21	<0.28	<0.13	<1.3	<1.2 *	<1.5	<0.022	<0.019	<5.0
MW-14S	06/23/2011	--	<0.51	<0.52	<0.13	<1.3	--	<0.8	<0.0054	<0.0056	<5
	12/16/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.0056	<0.0058	--
MW-14D	06/23/2011	--	<0.5	<0.51	<0.13	<1.2	--	<0.79	<0.0054	<0.0056	<5
	12/16/2011	--	<0.21	<0.28	0.16J	--	--	--	<0.0058	<0.006	--
	06/08/2012	<0.25	0.22J	<0.28	0.19J	<1.2	<0.67	<20	<0.0055	<0.0057	--
	12/13/2012	<0.15	<0.19	<0.13	<0.17	<1.2	<0.67	<0.79	<0.0054	<0.0056	160 B
	12/13/2013	<0.25	<0.21	<0.28	<0.13	<1.3 H	<1.2 H	30 H	<0.022	<0.019	8.9 J
MW-19S	12/15/2011	--	<0.21	<0.28	--	--	--	--	<0.0056	<0.0058	--
MW-19I	12/15/2011	--	<0.21	<0.28	--	--	--	--	<0.0056	<0.0058	--
MW-19D	12/15/2011	--	<0.21	<0.28	--	--	--	--	<0.0052	<0.0054	--
MW-20S	6/22/2011	--	<0.52	<0.53	<0.13	<1.3	--	<0.81	<0.0055	<0.0057	<5
	12/14/2011	--	<0.21	<0.28	0.15J	--	--	--	<0.0059	<0.0062	--
	6/6/2012	<0.25	<0.21	<0.28	<0.13	<1.6	<0.84	<0.99	<0.0070	<0.0072	--
MW-20I	06/22/2011	--	<0.57	<0.58	<0.13	<1.4	--	<0.88	<0.0055	<0.0057	<5
	12/14/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.0056	<0.0058	--
	6/6/2012	<0.25	<0.21	<0.28	<0.13	<1.3	<0.69	<0.81	<0.0056	<0.0058	--
	12/12/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0055	<0.0057	26 J
	12/10/2013	<0.25	<0.21	<0.28	<0.13	<1.3 *	<1.2 *	<1.5 *	<0.021	<0.019	18 J
MW-20D	06/22/2011	--	<0.51	<0.52	<0.65	<1.3	--	7.7J	<0.0055	<0.0057	<5
	12/14/2011	--	1.8J	3.4J	2.1J	--	--	--	<0.0054	<0.0056	--
	6/6/2012	<1.3	<1.1	<1.4	<0.65	<1.3	<0.69	<0.82	<0.0056	<0.0058	--
	12/12/2012	<1.3	<1.1	2.9 J	<0.65	<1.2	<0.67	<0.79	<0.0054	<0.0056	57
	6/13/2013	< 1.3	3.1 J	4.6 J	< 0.65	< 1.3	< 1.2 *	< 1.5	< 0.022	< 0.019	< 5.0
	12/13/2013	<5.0	10 J	19 J	13 J	<1.4 H	3.2 J H	12 H	<0.086	<0.075	22 J
MW-26S	06/23/2011	--	<0.52	<0.53	<0.13	<1.3	--	<0.81	<0.0056	<0.0057	<5
	12/14/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.0055	<0.0057	--
	6/6/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.66	<0.79	<0.0056	<0.0058	--
MW-26D	06/23/2011	--	<0.51	<0.52	<0.13	<1.2	--	<0.8	<0.0054	<0.0056	<5
	12/14/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.0055	<0.0057	--
	6/6/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.66	<0.78	<0.0054	<0.0056	--
	12/12/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0056	<0.0058	41 J
	6/11/2013	< 0.25	< 0.21	< 0.28	< 0.13	< 1.2	< 1.1	< 1.4	< 0.023	< 0.020	< 5.0
	12/11/2013	<0.25	<0.21	<0.28	<0.13	<1.4	<1.3 *	<1.6	<0.022	<0.019	<5.0
MW-28D	06/23/2011	--	4.4J	7.3J	44J	<1.3	--	<0.84	<0.027	1.9	<5
	12/16/2011	--	12J	22	82	--	--	--	<0.0056	<0.0058	--
	6/8/2012	<2.5	9.4J	17	41	<1.2	<0.66	2.3J	<0.11	<0.11	--
	12/14/2012	<0.15	9.1	16	2.5	<1.2	<0.67	<0.79	<0.0054	<0.0056	74
	6/13/2013	< 2.5	6.7 J	10	12	< 1.3	< 1.2 *	2.8 J	< 0.44	< 0.38	< 5.0
	12/13/2013	<2.5	9.3 J	17	31	<1.5 H	2.3 J H	7.1 J H	<0.087	<0.075	25 J
MW-29I	06/23/2011	--	<0.51	<0.52	<0.13	<1.2	--	<0.8	<0.0055	<0.0057	<5
	12/14/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.0054	<0.0056	--
	6/6/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.66	<0.78	<0.0056	<0.0058	--
	12/12/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0056	<0.0058	<5.0
	12/11/2013	<0.25	<0.21	<0.28	<0.13	<1.4	<1.3 *	<1.6	<0.022	<0.019	<5.0



**ADDITIONAL ORGANIC PARAMETERS  
FORMER HERCULES BRUNSWICK FACILITY  
BRUNSWICK, GA**

Chemical Name:		1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,4-Dichlorobenzene	p-Cymene	3 & 4 Methylphenol	Napthalene	Phenol	alpha-BHC	gamma-BHC (Lindane)	Formaldehyde
Report Result Unit:		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Well ID	Sampling Date										
MW-29D	06/23/2011	--	4.8J	8.1J	3.5J	<1.3	--	<0.84	<0.028	0.39	<5
	12/14/2011	--	7J	13J	4.9J	--	--	--	<0.0055	<0.0057	--
	6/6/2012	<5	9.5J	11J	<2.6	<1.2	<0.66	0.91J	<0.022	<0.023	--
	12/12/2012	5.1 JB	<2.1	16	3.4 J	<1.2	<0.67	<0.79	<0.0054	<0.0056	48 J
	6/11/2013	< 0.50	3.5	6.3	0.95 J	< 13	< 12	< 15	< 0.022	< 0.019	6.8 J
	12/11/2013	<5.0	<4.2	15 J	<2.6	<1.4	<1.3 *	18	<0.022	<0.019	<5.0
MW-38S	06/22/2011	--	<0.51	<0.52	<0.13	<1.3	--	<0.8	<0.0055	<0.0057	<5
	12/14/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.0056	<0.0058	--
	6/5/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0054	<0.0056	--
MW-38I	6/22/2011	--	<0.51	<0.52	<0.13	<1.2	--	<0.8	<0.0055	<0.0057	<5
	12/14/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.006	<0.0062	--
	6/5/2012	<0.25	<0.21	<0.28	<0.13	<1.3	<0.68	<0.80	<0.0056	<0.0058	--
	12/12/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0057	<0.0059	<5.0
	12/11/2013	<0.25	<0.21	<0.28	<0.13	<1.4	<1.3 *	<1.6	<0.022	<0.019	<5.0
MW-38D	6/22/2011	--	0.94J	1.8J	<1.3	<1.3	--	15	<0.0055	<0.0057	<5
	12/14/2011	--	7.2J	12	12	--	--	--	<0.0058	<0.006	--
	6/5/2012	<1.3	2.2J	3.4J	<0.65	<1.2	<0.66	2.7J	<0.0054	<0.0056	--
	12/12/2012	<1.3	<1.1	1.6 J	<0.65	<1.2	0.78 J	<0.79	<0.0054	<0.0056	48 J
	6/11/2013	< 0.25	0.88 J	1.5	0.18 J	< 1.3	< 1.2	< 1.5	< 0.022	< 0.019	8.9 J
	12/11/2013	<2.5	12	19	10	<1.4	<1.3 *	14	<0.022	<0.019	<5.0
MW-39S	6/23/2011	--	<0.56	<0.57	<0.13	<1.4	--	<0.88	<0.0056	<0.0058	13J
	12/13/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.0062	<0.0064	--
	6/5/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.8	<0.0054	<0.0056	--
	12/10/2012	<0.25	<0.21	<0.28	<0.13	<1.3	<0.72	<0.85	<0.0054	<0.0056	51
	12/10/2013	<0.25	<0.21	<0.28	<0.13	<1.4 *	<1.3 *	<1.6 *	<0.021	<0.018	70
MW-39I	06/23/2011	--	<0.51	<0.52	<0.13	<1.3	--	<0.8	<0.0055	<0.0057	<5
	12/13/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.0057	<0.0059	--
	6/5/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.66	<0.79	<0.0054	<0.0056	--
	12/10/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0054	<0.0056	5.3 J
	12/10/2013	<0.25	<0.21	<0.28	<0.13	<1.3 *	<1.2 *	<1.5 *	<0.022	<0.019	6.7 J
MW-39D	6/23/2011	--	<0.5	<0.51	<0.13	<1.2	--	<0.79	<0.0054	<0.0056	<5
	12/13/2011	--	<0.21	<0.28	<0.13	--	--	--	<0.0057	<0.0058	--
	6/5/2012	<0.25	<0.21	<0.28	<0.13	<1.2	<0.67	<0.79	<0.0056	<0.0058	--
	12/10/2012	<0.25	<0.21	<0.28	<0.13	<1.3	<0.68	<0.80	<0.0054	<0.0056	<5.0
	12/10/2013	<0.25	<0.21	<0.28	<0.13	<1.3 *	<1.2 *	<1.5 *	<0.022	<0.019	<5.0
MW-52D	12/11/2012	<0.25	<0.21	<0.28	<0.13	<1.5	<0.80	<0.95	<0.0054	0.058 p	8.8 J
	6/11/2013	< 0.25	< 0.21	< 0.28	< 0.13	< 1.3	< 1.2	< 1.5	< 0.022	< 0.019	< 5.0
	12/11/2013	<0.25	<0.21	<0.28	0.37 J	<1.4	<1.3 *	<1.6	<0.022	<0.019	<5.0
MW-55S	12/4/2013	<1.0*	<1.0	<1.0	<1.0	<2.1	<0.21 U	<1.0	<0.050	<0.050	<50
MW-55I	12/4/2013	<1.0*	<1.0	<1.0	<1.0	<1.9	<0.19 U	<0.97	<0.048	<0.048	<50
MW-55D	12/4/2013	<10	8.3 J	14	12	<19	<1.9 U	<9.5	0.090 p	<0.047	<50

**Analytical Notes:**

< - Not detected at or above indicated laboratory detection limit

UG/L - micrograms per liter

-- - No information available

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

D - Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D

p - The % RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

\* - Relative percent difference of the lab control sample and lab control sample duplicate exceeds the control limits

- Table does not include results for duplicate samples.

- Analyses completed out of hold times were not included in the table.



## ***Appendix J***

### ***Groundwater Sampling Records***





## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <i>PAH</i>	Facility <i>Furr Hercules</i>	Site ID <i>HP-111-50 A,B,C</i>
	Project No.	Date (m/d/y) <i>3/30/10</i>

**Site Description** ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☒ Probe Other:

Air Temp: *60.5* ☐ °C ☒ °F Weather: *Sunny, Breezy*

Well Locked? ☐ yes ☒ no *NA* Damaged/Repairs Needed:

☐ TOC ☐ MP Description:

TOC/MP Stickup: ☐ ft ☐ m above/below ground Well Inside Diameter (ID): ☐ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.):

**Water Level Data** Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Casing Volume: [ (TD) - (WL) ] • [ (Well ID) ]<sup>2</sup> • [ (Conversion Factor) ] = ☐ gal ☐ liters  
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Well Goes Dry While Purging ☐

<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	<i>A 25'</i>	<i>B 45'</i>	<i>C 72'</i>		(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<i>930</i>	<i>1000</i>	<i>1030</i>			<i>HI 9828</i>	
pH (Temperature Corrected? <input type="checkbox"/>	<i>6.79</i>	<i>6.10</i>	<i>6.50</i>				
Temperature °C °F	<i>20.32</i>	<i>21.70</i>	<i>22.27</i>				
Dissolved Oxygen mg/L	<i>0.00</i>	<i>0.00</i>	<i>0.11</i>				
<input type="checkbox"/> SC or <input type="checkbox"/> EC µS/cm	<i>783</i>	<i>869</i>	<i>1105</i>				
Turbidity 0-4 <input type="checkbox"/> NTU	<i>1.2</i>	<i>1.5</i>	<i>1</i>				
Color/Tint	<i>lt. grey</i>	<i>lt. grey</i>	<i>lt. grey</i>				
Odor	<i>--</i>	<i>Sulfur</i>	<i>--</i>				

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<i>HP-111-50A</i>	<i>P0</i>	<i>3/30/10</i>	<i>930</i>	<i>5</i>	<i>NA</i>				
<i>HP-111-50B</i>	<i>P0</i>	<i>3/30/10</i>	<i>1000</i>	<i>5</i>	<i>NA</i>				
<i>HP-111-50C</i>	<i>P0</i>	<i>3/30/10</i>	<i>1030</i>	<i>5</i>	<i>NA</i>				

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <i>Chad Wean</i>	Signature <i>Chad</i>
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users/forms/SampLog.doc/5/8/02 Date Entered into Database \_\_\_\_\_ By \_\_\_\_\_ Page \_\_\_\_ of \_\_\_\_



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility <u>Fur-Hercules</u>	Site ID <u>HP-111-51A</u>
	Project No.	Date (m/d/y) <u>3/29/10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☒ Probe Other:

Air Temp: <u>70.5</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <input type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Casing Volume: [_____] (TD) - [_____] (WL) • [_____] (Well ID) <sup>2</sup> • [_____] (Conversion Factor) = _____ <input type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged						(Final)	Meter Type	Remarks
<input type="checkbox"/> Pumping Rate								
Time (hh:mm; 24-hr clock)	<u>1345</u>	<u>1420</u>						
pH (Temperature Corrected? <input type="checkbox"/> )	<u>6.30</u>							
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>25.69</u>							
Dissolved Oxygen mg/L	<u>0.00</u>							
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm	<u>772</u>							
Turbidity <u>0.4</u> <input type="checkbox"/> NTU	<u>2</u>							
Color/Tint	<u>Mod Gray</u>							
Odor	<u>Sweet Sulfur</u>							

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>HP-111-51A</u>	<u>P0</u>	<u>3/29/10</u>	<u>1345</u>	<u>5</u>	<u>NA</u>				
<u>HP-111-51B</u>	<u>P0</u>	<u>3/29/10</u>	<u>1820</u>	<u>5</u>	<u>NA</u>				

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Chad Weaver</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <i>Delta</i>	Facility <i>Env. Hercules</i>	Site ID <i>HP-111-52 A, B, C</i>
	Project No.	Date (m/d/y) <i>3/29/10</i>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☒ Probe Other:

Air Temp: *70.5* ☐ °C ☒ °F Weather:

Well Locked? ☐ yes ☐ no *NA* Damaged/Repairs Needed:

☐ TOC ☐ MP Description:

TOC/MP Stickup: ☐ ft ☐ m above/below ground Well Inside Diameter (ID): ☐ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.) *Leaky Well*

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailer ☐ Pump Description:

Casing Volume: [_____] (TD) - [_____] (WL) * [_____] (Well ID) <sup>2</sup> * [_____] (Conversion Factor) = _____ <input type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	<i>A 25'</i>	<i>B</i>				(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<i>1415</i>	<i>1430</i>						
pH (Temperature Corrected? <input type="checkbox"/> )	<i>6.68</i>	<i>6.78</i>						
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<i>25.7</i>	<i>25.75</i>						
Dissolved Oxygen mg/L	<i>1.84</i>	<i>0.00</i>						
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> μS/cm	<i>1444</i>	<i>945</i>						
Turbidity <i>0.4</i> <input type="checkbox"/> NTU	<i>4</i>	<i>2</i>						
Color/Tint	<i>dark gray</i>	<i>Med gray</i>						
Odor	<i>sweet sulfur</i>	<i>NA</i>						

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (μS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (μS/cm). μS/cm = μmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailer ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 μm)	Lab ID	Case ID	SDG ID	Remarks
<i>HP-111-52 A</i>	<i>PO</i>	<i>3/29/10</i>	<i>1415</i>	<i>5</i>	<i>NA</i>				
<i>HP-111-52 B</i>	<i>PO</i>	<i>3/29/10</i>	<i>1430</i>	<i>5</i>	<i>NA</i>				

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: PO, Primary Sample; D#, Duplicate Sample; SF, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinset, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) *Chad Weaver*

Signature *[Signature]*



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <i>Former Hercules</i>	Site ID <i>HP-111-53A</i>
Other: <i>C. Weaver</i>	Project No.	Date (m/d/y) <i>3/29/10</i>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☒ Probe Other:

Air Temp: <i>70.5</i> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <i>Sunny</i>
Well Locked? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <i>NA</i>	Damaged/Repairs Needed: <i>NA</i>
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <input type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Casing Volume: [ (TD) - (WL) ] • [ (Well ID) ] <sup>2</sup> • [ (Conversion Factor) ] = <input type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate	<i>A 25</i>	<i>B 47</i>	<i>X</i>		(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)		<i>1015</i>	<i>1050</i>					
pH (Temperature Corrected? <input type="checkbox"/>		<i>6.02</i>	<i>6.89</i>					
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F		<i>25.76</i>	<i>26.09</i>					
Dissolved Oxygen mg/L		<i>0.14</i>	<i>0.00</i>					
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm		<i>299</i>	<i>852</i>					
Turbidity <i>0-4 NTU</i>		<i>4</i>	<i>2</i>					
Color/Tint		<i>dark gray</i>	<i>light gray</i>					
Odor		<i>NA</i>	<i>NA</i>					

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<i>HP-111-53A</i>	<i>P0</i>	<i>3/29/10</i>	<i>1015</i>	<i>5</i>	<i>NA</i>				
<i>HP-111-53B</i>	<i>P0</i>	<i>3/29/10</i>	<i>1050</i>	<i>5</i>	<i>NA</i>				
<i>HP-111-53C</i>									

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or maddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <i>Chad Weaver</i>	Signature
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashtand - Brannan River</u>	Site ID <u>HP-111-54A, B, C</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>3/31/10</u>

**Site Description** ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☒ Probe Other:

Air Temp: <u>78.3</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <input type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

**Water Level Data** Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Casing Volume: [____(TD) - ____ (WL)] • [____ (Well ID)] <sup>2</sup> • [____ (Conversion Factor)] = ____ <input type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate	<u>A 25'</u>	<u>B 45'</u>	<u>C 102'</u>	(Final)	Meter Type	Remarks	
Time (hh:mm; 24-hr clock)		<u>1040</u>	<u>1110</u>	<u>1330</u>				
pH (Temperature Corrected? <input checked="" type="checkbox"/> )		<u>6.62</u>	<u>6.45</u>	<u>6.78</u>				
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F		<u>25.54</u>	<u>26.39</u>	<u>27.04</u>				
Dissolved Oxygen mg/L		<u>0.00</u>	<u>0.00</u>	<u>0.00</u>				
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm		<u>943</u>	<u>4412</u>	<u>5471</u>				
Turbidity <u>0-4</u> NTU		<u>3</u>	<u>2</u>	<u>3</u>				
Color/Tint		<u>medium</u>	<u>medium</u>	<u>dark grey</u>				
Odor		<u>HA</u>	<u>yes</u>	<u>yes</u>				
<u>odor is undetectable</u>								

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

**Sample Data** Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>HP-111-54A</u>	<u>P0</u>	<u>3/31/10</u>	<u>1040</u>	<u>4</u>	<u>NA</u>				
<u>HP-111-54B</u>	<u>P0</u>	<u>3/31/10</u>	<u>1110</u>	<u>4</u>	<u>NA</u>				
<u>HP-111-54C</u>	<u>P0</u>	<u>3/31/10</u>	<u>1330</u>	<u>4</u>	<u>NA</u>				

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) Chris W... Signature [Signature]



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <i>Pur Hercules</i>	Site ID <i>AP-111-55 A, B, C</i>
Other: <i>Delta</i>	Project No.	Date (m/d/y) <i>3/30/10</i>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☒ Probe Other:

Air Temp: <i>70.5</i> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <i>Sunny</i>
Well Locked? <input type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <input type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Casing Volume: [ (TD) - (WL) ] * [ (Well ID) ] <sup>2</sup> * [ (Conversion Factor) ] = <input type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate	<i>A 25'</i>	<i>B 45'</i>	<i>C 95'</i>		(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)		<i>1530</i>	<i>1600</i>	<i>800(3/31)</i>				
pH (Temperature Corrected? <input type="checkbox"/> )		<i>9.056.52</i>	<i>12.57.28</i>	<i>6.58</i>				
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F		<i>25.05</i>	<i>25.65</i>	<i>18.16</i>				
Dissolved Oxygen mg/L		<i>0.00</i>	<i>0.00</i>	<i>0.00</i>				
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm		<i>901</i>	<i>1260</i>	<i>14720</i>				
Turbidity <i>0.4</i> <input type="checkbox"/> NTU		<i>3</i>	<i>3</i>	<i>1</i>				
Color/Tint		<i>med gray</i>	<i>med gray</i>	<i>H. gray</i>				
Odor								

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<i>HP-111-55A</i>	<i>PO</i>	<i>3/30/10</i>	<i>1530</i>	<i>3</i>	<i>NA</i>				
<i>HP-111-55B</i>	<i>PO</i>	<i>3/30/10</i>	<i>1600</i>	<i>3</i>	<i>NA</i>				
<i>HP-111-55C</i>	<i>PO</i>	<i>3/31/10</i>	<i>800</i>	<i>3</i>	<i>NA</i>				

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: PO, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <i>C. Weller</i>	Signature <i>C. Weller</i>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <i>Mehta</i>	Facility <i>Fur Hercules</i>	Site ID <i>HP-111-56A</i>
	Project No.	Date (m/d/y) <i>3/30/10</i>

**Site Description** ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☒ Probe Other:

Air Temp: *70.7* ☐ °C ☒ °F Weather: *Sunny*  
Well Locked? ☐ yes ☒ no Damaged/Repairs Needed:

☐ TOC ☐ MP Description:

TOC/MP Stickup: ☐ ft ☐ m above/below ground Well Inside Diameter (ID): ☐ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

**Water Level Data** Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Casing Volume: [_____] (TD) - [_____] (WL) • [_____] (Well ID) <sup>2</sup> • [_____] (Conversion Factor) = _____ <input type="checkbox"/> gal <input type="checkbox"/> liters Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches							Well Goes Dry While Purging <input type="checkbox"/>	
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	<i>125</i>					(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<i>1420</i>							
pH (Temperature Corrected? <input type="checkbox"/> )	<i>6.67</i>							
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<i>21.53</i>							
Dissolved Oxygen mg/L	<i>0.00</i>							
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm	<i>230</i>							
Turbidity <i>0-4</i> <input type="checkbox"/> NTU	<i>3</i>							
Color/Tint	<i>med gray</i>							
Odor	<i>direct sulfur</i>							

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<i>HP-111-56A</i>	<i>P0</i>	<i>3/30/10</i>	<i>1420</i>	<i>3</i>	<i>0</i>				

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) *Chad Weaver*

Signature *[Signature]*



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <i>Fair Hercules</i>	Site ID <i>HP-111-57AB</i>
Other: <i>De Hu</i>	Project No.	Date (m/d/y) <i>3/31/10</i>

**Site Description** ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☒ Probe Other:

Air Temp: <i>70.5</i> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather:
Well Locked? <input type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <input type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

**Water Level Data** Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Casing Volume: [_____] (TD) - [_____] (WL) • [_____] (Well ID) <sup>2</sup> • [_____] (Conversion Factor) = _____ <input type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	<i>A-25</i>	<i>B-45</i>	<i>C-</i>			(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<i>1515</i>	<i>1630</i>	<i>1700</i>					
pH (Temperature Corrected? <input type="checkbox"/> )	<i>10.68</i>	<i>8.28</i>	<i>6.16</i>					
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<i>26.01</i>	<i>26.64</i>	<i>20.57</i>					
Dissolved Oxygen mg/L	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>					
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm	<i>6070</i>	<i>3013</i>	<i>4147</i>					
Turbidity <i>0.4</i> <input type="checkbox"/> NTU	<i>4</i>	<i>2</i>	<i>2</i>					
Color/Tint	<i>dark grey</i>	<i>H. grey</i>	<i>H. grey</i>					
Odor	<i>yes</i>	<i>yes</i>	<i>yes</i>					
	<i>Strong</i>	<i>Moderate</i>	<i>Moderate</i>					

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<i>HP-111-57A</i>	<i>PO</i>	<i>3/31/10</i>	<i>1515</i>	<i>4</i>	<i>--</i>				
<i>HP-111-57B</i>	<i>PO</i>	<i>3/31/10</i>	<i>1630</i>	<i>4</i>	<i>--</i>				
<i>HP-111-57C</i>	<i>PO</i>	<i>3/31/10</i>	<i>1700</i>	<i>4</i>	<i>--</i>				
<i>HP-111-57-TW</i>	<i>PO</i>	<i>3/31/10</i>	<i>1000</i>	<i>3</i>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: PO, Primary Sample; DS, Duplicate Sample; SS, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) *Chad Weaver*

Signature *[Signature]*



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <i>Delta</i>	Facility <i>Envr. Hercules</i>	Site ID <i>HP-111-58-A/B/C</i>
	Project No.	Date (m/d/y) <i>4/1/10</i>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☒ Probe Other:

Air Temp: <i>60.5</i> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <i>Sunny</i>
Well Locked? <input type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <input type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Casing Volume: [_____] (TD) - [_____] (WL) • [_____] (Well ID) • [_____] (Conversion Factor) = _____ <input type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	<i>A-25'</i>	<i>B-45'</i>	<i>C-75'</i>			(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<i>815</i>	<i>840</i>	<i>915</i>					
pH (Temperature Corrected? <input type="checkbox"/> )	<i>5.69</i>	<i>5.83</i>	<i>5.75</i>					
Temperature <i>16°C</i> <input checked="" type="checkbox"/> <i>61°F</i>	<i>19.16</i>	<i>19.40</i>	<i>23.47</i>					
Dissolved Oxygen mg/L	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>					
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm	<i>1523</i>	<i>815</i>	<i>653</i>					
Turbidity <i>0.4</i> <input type="checkbox"/> NTU	<i>4</i>	<i>4</i>	<i>2</i>					
Color/Tint	<i>Dark grey</i>	<i>Dark grey</i>	<i>Light grey</i>					
Odor	<i>--</i>	<i>--</i>	<i>--</i>					
		<i>Chlorinated hydrocarbon</i>						

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<i>HP-111-58A</i>	<i>P0</i>	<i>4/1/10</i>	<i>815</i>	<i>3</i>	<i>--</i>				
<i>HP-111-58B</i>	<i>P0</i>	<i>4/1/10</i>	<i>840</i>	<i>3</i>	<i>--</i>				
<i>HP-111-58C</i>	<i>P0</i>	<i>4/1/10</i>	<i>915</i>	<i>3</i>	<i>--</i>				

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <i>Chad W...</i>	Signature <i>[Signature]</i>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>UP-15</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>5/17/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <input type="checkbox"/> °C <input type="checkbox"/> °F	Weather:
Well Locked? <input type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <input type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Baller ☒ Pump Description: Peristaltic Pump

Casing Volume: $[13 \text{ (TD)} - 6.78 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.041 \text{ (Conversion Factor)}] = 1.02 \text{ gal}$	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged	
<input type="checkbox"/> Pumping Rate	
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: ☐ Grab ☐ Baller ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
UP-15	P0	5/17/10	1400						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 6 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmddyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>JEFF BOONIS</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-35</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>5.17.10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>87°</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>2</u> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice, record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: Peristaltic Pump

Casing Volume: $[1.3 \text{ (TD)} - 6.12 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.41 \text{ (Conversion Factor)}] = 1.13 \text{ gal}$ <input type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches							While Purging <input type="checkbox"/>	
<input type="checkbox"/> Cum. Vol. Purged						(Final)	Meter Type	Remarks
<input type="checkbox"/> Pumping Rate	0	1.25	2.5	3.75	5.0			
Time (hh:mm; 24-hr clock)								
pH (Temperature Corrected? <input type="checkbox"/> )	6.53	6.44	6.34	6.28	6.27			
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	21.26	21.33	21.34	21.32	21.32			
Dissolved Oxygen mg/L	9.81	8.54	7.48	7.12	7.10			
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	.215	.206	.199	.196	.195			
Turbidity <input type="checkbox"/> NTU	460	176	51	29.2	9.1			
Color/Tint	lt brn	clear	clear	clear	clear			
Odor	—	—	—	—	—			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-35</u>	P0	5.17	1610						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 8). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>JEFF BODIN</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By ☐ Facility Personnel ☐ ES&TFacility Ashland Brunswick Site ID MW-3D

Other:

Project No.

Date (m/d/y) 5-17-10Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:Air Temp: 83 ☐ °C ☒ °F Weather: M. CloudyWell Locked? ☒ yes ☐ no Damaged/Repairs Needed:☒ TOC ☐ MP Description: Above groundTOC/MP Stickup: 2 ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

## Water Level Data

Measurement Units: ☐ ft ☐ m

Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>6.16</u>						
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

## Field WQ Data

Purge Depth:

☐ Grab ☐ Bailor ☒ PumpDescription: MonsieurCasing Volume:  $[35 \text{ (TD)} - 6.16 \text{ (WL)}] \cdot [2 \cdot (\text{Well ID})^2 \cdot 0.041 \text{ (Conversion Factor)}] = 4.73 \text{ gal}$  ☐ liters

Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Well Goes Dry While Purging ☐

<input type="checkbox"/> Cum. Vol. Purged <input checked="" type="checkbox"/> Pumping Rate	0.75 gal/m					(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<u>Initial</u>	<u>1540</u>	<u>1550</u>	<u>1600</u>	<u>1610</u>		<u>Handy</u>	
pH (Temperature Corrected? <input type="checkbox"/> )	<u>7.31</u>	<u>7.36</u>	<u>6.51</u>	<u>6.27</u>	<u>6.27</u>			
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>22.16</u>	<u>22.25</u>	<u>22.05</u>	<u>22.12</u>	<u>22.14</u>			
Dissolved Oxygen mg/L	<u>0.52</u>	<u>0.37</u>	<u>1.35</u>	<u>1.35</u>	<u>1.23</u>			
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	<u>8.41</u>	<u>7.72</u>	<u>9.07</u>	<u>9.55</u>	<u>9.23</u>			
Turbidity <input type="checkbox"/> NTU	<u>—</u>	<u>—</u>	<u>27.9</u>	<u>0.0</u>	<u>0.0</u>			
Color/Tint	<u>yellow</u>	<u>clear</u>	<u>clear</u>	<u>clear</u>	<u>clear</u>			
Odor	<u>slight</u>	<u>slight</u>	<u>slight</u>	<u>slight</u>	<u>slight</u>			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 imperial gallon.

## Sample Data

Sample Depth:

☐ Grab ☐ Bailor ☐ Pump

Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-3D</u>	<u>P0</u>	<u>5-17-10</u>	<u>1615</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 6 characters) and SDG ID (sample delivery group, up to 18 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Fred K... ..

Signature

R... ..



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

UP-1D(R)

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>UP-1D(R)</u>
Other: <u>FK</u>	Project No. <u>JO9848509.002</u>	Date (m/d/y) <u>5-17-10</u>

Site Description <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Irrigation Well <input type="checkbox"/> Spring <input type="checkbox"/> Borehole <input type="checkbox"/> Probe Other:	
Air Temp: <u>82</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>Rain/Clouds</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
TOC <input type="checkbox"/> MP Description: <u>Above ground</u>	
TOC/MP Stickup: <u>2</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <u>2</u> -inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data		Measurement Units: <input type="checkbox"/> ft <input type="checkbox"/> m		Well or Borehole Total Depth (TD) from MP or TOC:				
<input type="checkbox"/> E-Tape, # _____	<input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)								
Depth to Water		<u>10.00</u>						
Tape Correction								
Water Level (WL)								
Product Thickness								
Product Recovery								
<input type="checkbox"/> gallons <input type="checkbox"/> liters								

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data		Purge Depth: <u>77 ft</u>		<input type="checkbox"/> Grab <input type="checkbox"/> Baller <input checked="" type="checkbox"/> Pump		Description: <u>Monsieur</u>		
Casing Volume: $[91.5 \text{ (TD)} - 10.0 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.041 \text{ (Conversion Factor)}] = 14.35 \text{ gal}$ <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input checked="" type="checkbox"/> Cum. Vol. Purged	<u>0.954 m</u>					(Final)	Meter Type	Remarks
<input checked="" type="checkbox"/> Pumping Rate	<u>2.0</u>							
Time (hh:mm; 24-hr clock)	<u>1300</u>	<u>1315</u>	<u>1325</u>	<u>1335</u>	<u>1350</u>	<u>1405</u>	<u>Hand</u>	
pH (Temperature Corrected? <input type="checkbox"/> )	<u>8.98</u>	<u>8.02</u>	<u>7.95</u>	<u>8.39</u>	<u>8.29</u>	<u>8.24</u>		
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>22.23</u>	<u>22.34</u>	<u>22.30</u>	<u>22.37</u>	<u>22.40</u>	<u>22.36</u>		
Dissolved Oxygen mg/L	<u>4.22</u>	<u>2.21</u>	<u>0.65</u>	<u>0.42</u>	<u>0.00</u>	<u>0.00</u>		
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	<u>.794</u>	<u>.617</u>	<u>85.2</u>	<u>22.1</u>	<u>10.7</u>	<u>12.4</u>		
Turbidity <input type="checkbox"/> NTU	<u>14.3</u>	<u>11.6</u>	<u>9.4</u>	<u>9.0</u>	<u>8.5</u>	<u>8.3</u>		
Color/Tint	<u>Clear</u>	<u>Clear</u>	<u>Clear</u>	<u>Clear</u>	<u>Clear</u>	<u>Clear</u>		
Odor	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>		

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.633 Imperial gallon

Sample Data		Sample Depth:		<input type="checkbox"/> Grab <input type="checkbox"/> Baller <input type="checkbox"/> Pump		Description:			
Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>UP-1D(R)</u>	<u>P0</u>	<u>5-17-10</u>	<u>1410</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D0, Duplicate Sample; S0, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 8). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Fred Koenigbauer</u>	Signature <u>[Signature]</u>
users/forms/SampLog.doc/5/8/02	Date Entered Into Database _____ By _____
	Page ____ of ____



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-23</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>5-18-10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: ☐ °C ☒ °F Weather: 75°

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed:

☐ TOC ☐ MP Description:

TOC/MP Stickup: ☐ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth:

☐ Grab ☐ Bailor ☒ Pump

Description: Pant-His Pump

Casing Volume: $[14.18 \text{ (TD)} - 1.22 \text{ (WL)}] \times [2 \text{ (Well ID)}]^2 \times [1.041 \text{ (Conversion Factor)}] = 204$ <input type="checkbox"/> gal <input type="checkbox"/> liters						Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches							
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	2.04	4.08	6.12	8.16	(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)							
pH (Temperature Corrected? <input type="checkbox"/> )	5.26	5.35	5.35	5.35			
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	21.12	21.12	21.10	21.10			
Dissolved Oxygen mg/L	3.69	3.84	3.82	3.70			
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	0.77	0.772	0.765	0.757			
Turbidity <input type="checkbox"/> NTU	120	93.2	35.7	10			
Color/Tint	Green	Grn	Grn	Grn			
Odor	Strong						

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.633 Imperial gallon.

## Sample Data

Sample Depth:

☐ Grab ☐ Bailor ☐ Pump

Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-23</u>	<u>P0</u>	<u>5-18-10</u>	<u>20:30</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D1, Duplicate Sample; S1, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinseate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 8). Lab ID (up to 6 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) JEFF BODIAKS

Signature MR B



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-125</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>5/18/10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>87°</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>2</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Baller ☒ Pump Description: Peristaltic Pump

Casing Volume: $[2.05 \text{ (TD)} - 6.73 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.041 \text{ (Conversion Factor)}] = 2.25 \text{ gal}$	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in Inches	
<input type="checkbox"/> Cum. Vol. Purged	
<input type="checkbox"/> Pumping Rate	
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: ☐ Grab ☐ Baller ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-125</u>	<u>P0</u>	<u>5/18/10</u>	<u>1540</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 6 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or room/dy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, end/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>JEFF BORINS</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Barnswick</u>	Site ID <u>MW-24</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>5-18-10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>77°</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <input type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailer ☒ Pump Description: Peristaltic Pump

Casing Volume: $[14.87 - 3.11 (WL)] \cdot [2 (Well ID)]^2 \cdot [0.41 (Conversion Factor)] = 2.08 \text{ gal}$ <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in Inches								
<input type="checkbox"/> Cum. Vol. Purged	2.08	4.16	6.24	8.32		(Final)	Meter Type	Remarks
<input type="checkbox"/> Pumping Rate								
Time (hh:mm; 24-hr clock)								
pH (Temperature Corrected? <input type="checkbox"/> )	8.76	5.82	5.85	5.84				
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	22.76	22.71	22.68	22.67				
Dissolved Oxygen mg/L	4.92	3.14	3.07	2.95				
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	1.48	1.45	1.41	1.40				
Turbidity <input type="checkbox"/> NTU	48.1	52	14.5	9				
Color/Tint	Green	Green	Green	Green				
Odor	Strong	Strong						

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailer ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-24</u>	<u>P0</u>	<u>5-18-10</u>	<u>1935</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BFA, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>JEFF [Signature]</u>	Signature <u>[Signature]</u>
Date Entered into Database <u>5-18-10</u>	By <u>[Signature]</u>



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-22</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>5-18-10</u>

Site Description <input type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Irrigation Well <input type="checkbox"/> Spring <input type="checkbox"/> Borehole <input type="checkbox"/> Probe Other:	
Air Temp: <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>&gt; 4°</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <input type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data		Measurement Units: <input type="checkbox"/> ft <input type="checkbox"/> m		Well or Borehole Total Depth (TD) from MP or TOC:				
<input type="checkbox"/> E-Tape, # <u>      </u>	<input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)								
Depth to Water								
Tape Correction								
Water Level (WL)								
Product Thickness								
Product Recovery								
<input type="checkbox"/> gallons <input type="checkbox"/> liters								

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data		Purge Depth: <input type="checkbox"/> Grab <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Pump		Description: <u>Peristaltic P-p</u>	
Casing Volume: $[14.67 \text{ TD}] \cdot [1.81 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.041 \text{ (Conversion Factor)}] = 2.11 \text{ gal}$ <input type="checkbox"/> gal <input type="checkbox"/> liters					
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches					
<input type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate	2.11	4.22	6.33	(Final)
Time (hh:mm; 24-hr clock)					
pH (Temperature Corrected? <input type="checkbox"/> )		5.52	5.58	5.60	
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F		21.08	21.15	21.16	
Dissolved Oxygen mg/L		2.76	2.62	2.49	
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$		1.99	1.96	1.93	
Turbidity <input type="checkbox"/> NTU		29.4	14.4	6.3	
Color/Tint		Green	Grn	Grn	
Odor		Strong			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data		Sample Depth: <input type="checkbox"/> Grab <input type="checkbox"/> Bailer <input type="checkbox"/> Pump		Description:					
Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-22</u>	<u>P0</u>	<u>5/18/10</u>	<u>2120</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>JEFF BODINUS</u>	Signature <u>JB</u>
users/forms/SampLog.doc/5/8/02	Date Entered into Database _____ By _____ Page ____ of ____



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-21</u>
Project No.	Date (m/d/y) <u>5/18/10</u>	

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>80</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>36</u> <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column. Record free product presence at time of water level measurement; use "S" for free product thickness if seen.

Field WQ Data Purge Depth:

☐ Grab ☐ Bailor ☒ Pump

Description: Peristaltic Pump

Casing Volume: $[14.95 \text{ (TD)} - 2.03 \text{ (WL)}] \times [2 \text{ (Well ID)}]^2 \times [0.041 \text{ (Conversion Factor)}] = 2.12$ <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged	
<input type="checkbox"/> Pumping Rate	
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data

Sample Depth:

☐ Grab ☐ Bailor ☐ Pump

Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-21</u>	<u>P0</u>	<u>5/18/10</u>	<u>1845</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicates, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>JEFF BODIMUS</u>	Signature <u>[Signature]</u>
Date Entered Into Database	By



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Aspland Brunswick</u>	Site ID <u>MW-265</u>
	Project No.	Date (m/d/y) <u>5/18/10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>84</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>2</u> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailer ☒ Pump Description: Peristaltic Pump

Casing Volume: $[16 \text{ (TD)} - 4.64 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.04] \text{ (Conversion Factor)} = 1.86 \text{ gal}$	Well Goes Dry While Purging <input type="checkbox"/>				
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches					
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	1.86 3.72 5.58 7.44	(Final)	Meter Type	Remarks	
Time (hh:mm; 24-hr clock)					
pH (Temperature Corrected? <input type="checkbox"/> )	6.31	6.29	6.29	6.29	
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	22.74	22.72	22.73	22.72	
Dissolved Oxygen mg/L	4.06	3.03	2.91	2.99	
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	0.632	0.673	0.636	0.630	
Turbidity <input type="checkbox"/> NTU	46	33	26.5	10	
Color/Tint	colorless	colorless	colorless	colorless	
Odor	Strong				

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailer ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-265</u>	<u>P0</u>	<u>5/18/10</u>	<u>1700</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Jeff Bodinos</u>	Signature <u>[Signature]</u>
users/forms/SampLog.doc/5/18/02	Date Entered into Database _____ By _____ Page ____ of ____



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-115</u>
Project No.		Date (m/d/y) <u>5/18/10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <input type="checkbox"/> °C <input type="checkbox"/> °F	Weather:
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>2</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice, record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement, use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in 'Remarks' column.

Field WQ Data Purge Depth: ☐ Grab ☐ Baller ☒ Pump Description: Peristaltic Pump

Casing Volume: $[20.5(TD) - 6.32(WL)] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.091 \text{ (Conversion Factor)}] = 2.33$ <input type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches									
<input type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate	2.33	4.66	6.99			(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)									
pH (Temperature Corrected? <input type="checkbox"/> )		7.01	7.03	7.03					
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F		21.8	21.7	21.71					
Dissolved Oxygen mg/L		5.23	3.25	3.52					
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$		4581	518	513					
Turbidity <input type="checkbox"/> NTU		68	35.5	9.5					
Color/Tint		clear	clear	clear					
Odor		slight							

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: ☐ Grab ☐ Baller ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-115</u>	<u>P0</u>	<u>5-18-10</u>	<u>1230</u>						

Sample ID may be up to 16 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 16 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinses, spikes, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>JEFF BODINUS</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility: <u>Ashland Brewery</u>	Site ID <u>MW. 205</u>
Project No.		Date (m/d/y) <u>5-18-12</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>BB</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>2</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-Inch <input type="checkbox"/> 4-Inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Baller ☒ Pump Description: Peristaltic Pump

Casing Volume: $[15 \text{ (TD)} - 2.22 \text{ (WL)}] \times [3 \text{ (Well ID)}]^2 \times [0.041 \text{ (Conversion Factor)}] = 1.28 \text{ gal}$ <input type="checkbox"/> gal <input type="checkbox"/> liters								Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches									
<input type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate	1.28	2.56	3.84	5.12	(Final)	Meter Type	Remarks	
Time (hh:mm; 24-hr clock)									
pH (Temperature Corrected? <input type="checkbox"/> )		7.53	6.13	6.12	6.12				
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F		22.5	22.38	22.4	22.25				
Dissolved Oxygen mg/L		5.18	4.01	3.5	3.35				
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$		0.8	.799	.781	.769				
Turbidity <input type="checkbox"/> NTU		22.3	65.2	41.5	10				
Color/Tint		Green	Grn	Grn	light Grn				
Odor		strong							

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Baller ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW. 205</u>	<u>P0</u>	<u>5-18-12</u>	<u>1400</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BFA, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 8 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>JEFF BODINUS</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Asland Brunswick</u>	Site ID <u>MW-105</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>5-18-10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>B1°</u>
Well Locked? <input type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>2</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth:

☐ Grab ☐ Baller ☒ Pump

Description: Peristaltic Pump

Casing Volume: $[2.0 \text{ (TD)} - 6.02 \text{ (WL)}] \times [2 \text{ (Well ID)}]^2 \times [0.041 \text{ (Conversion Factor)}] = 2.16$ gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged	2.16
<input type="checkbox"/> Pumping Rate	4.32
Time (hh:mm; 24-hr clock)	6.48
pH (Temperature Corrected? <input type="checkbox"/> )	6.71
Temperature °C <input type="checkbox"/> °F	23.35
Dissolved Oxygen mg/L	3.7
<input type="checkbox"/> SC or <input type="checkbox"/> EC µS/cm	1.36
Turbidity <input type="checkbox"/> NTU	2.50
Color/Tint	clear
Odor	slight

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data

Sample Depth:

☐ Grab ☐ Baller ☐ Pump

Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-105</u>	<u>P0</u>	<u>5-18-10</u>	<u>1000</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D1, Duplicate Sample; S1, Split Sample (sent to second lab); B1, Field Blank; B2, Equipment Rinse; BT, Trip Blank; SF, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>JEFF BODINUS</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Ashland Brunswick</u>	Site ID <u>mw-95</u>
	Project No. <u>mw-95</u>	Date (m/d/y) <u>5/6/02</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>84°</u>
Well Locked? <input type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>2</u> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.):	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column. Record free product presence at time of water level measurement; use "S" for free product thickness if seen.

Field WQ Data Purge Depth: ☐ Grab ☐ Baller ☒ Pump Description: Peristaltic Pump

Casing Volume: $[20.15 \text{ TD} - 5.9 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.041 \text{ (Conversion Factor)}] = 2.34 \text{ gal}$ <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate	2.34	4.68	7.02	(Final)	Meter Type	Remarks	
Time (hh:mm; 24-hr clock)								
pH (Temperature Corrected? <input type="checkbox"/> )	6.15	6.08	6.08					
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	23.43	23.16	23.17					
Dissolved Oxygen mg/L	5.2	5.01	4.64					
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	0.67	0.625	0.615					
Turbidity <input type="checkbox"/> NTU	2.15	35	8					
Color/Tint	clear	clear	clear					
Odor	slight							

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: ☐ Grab ☐ Baller ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>mw-95</u>	<u>P0</u>	<u>5.10.10</u>	<u>1130</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>JEFF BORDEN</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By ☐ Facility Personnel ☐ ES&TFacility Ashland BrunswickSite ID MW-120

Other:

Project No.

Date (m/d/y) 5-18-10Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:Air Temp: 75 °C ☒ °F Weather: M. CloudyWell Locked? ☒ Yes ☐ No Damaged/Repairs Needed:☒ TOC ☐ MP Description: Above groundTOC/MP Stickup: 3 ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>6.55</u>						
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Baller ☒ Pump Description: Monsoon

Casing Volume: $[(64.5(TD) - 9.55(WL)) \cdot (2(Wall ID))^2 \cdot (0.41(Conversion Factor))] = 15.74$ gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged	
<input checked="" type="checkbox"/> Pumping Rate <u>-70 gpm</u>	
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature °C °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input type="checkbox"/> EC µS/cm	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Baller ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-120</u>	<u>P0</u>	<u>5-18-10</u>	<u>2045</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) Fred KoenigsmeyerSignature [Signature]



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Ashland Brunswick</u>	Site ID <u>PA080C-10</u>
	Project No.	Date (m/d/y) <u>5.18.10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 77 ☐ °C ☒ °F Weather: P-Sunny

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed:

☒ TOC ☐ MP Description: Above ground

TOC/MP Stickup: 3 ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☐ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>10.82</u>						
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Baller ☒ Pump Description: Monsoon

Casing Volume: $[107 \text{ (TD)} - 10.82 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.041 \text{ (Conversion Factor)}] = \underline{\hspace{2cm}}$ gal <input type="checkbox"/> liters					Well Goes Dry While Purging <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches							
<input type="checkbox"/> Cum. Vol. Purged <input checked="" type="checkbox"/> Pumping Rate	<u>-70 gpm</u>				(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<u>1920</u>	<u>1930</u>	<u>1940</u>	<u>1950</u>			
pH (Temperature Corrected? <input type="checkbox"/> )	<u>7.79</u>	<u>7.82</u>	<u>7.84</u>	<u>7.85</u>			
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	<u>26.31</u>	<u>26.30</u>	<u>26.27</u>	<u>26.25</u>			
Dissolved Oxygen mg/L	<u>0.75</u>	<u>0.72</u>	<u>0.71</u>	<u>0.68</u>			
<input type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> µS/cm	<u>10.8</u>	<u>10.7</u>	<u>10.6</u>	<u>10.5</u>			
Turbidity <input type="checkbox"/> NTU	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>			
Color/Tint	<u>Clear</u>	<u>→</u>	<u>→</u>	<u>→</u>			
Odor	<u>Slight</u>	<u>→</u>	<u>→</u>	<u>→</u>			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Baller ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>POC-10</u>	<u>P0</u>	<u>5.18.10</u>	<u>1955</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; Ds, Duplicate Sample; Sd, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or m/m/d/y. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) Fred Koenigsmeyer Signature [Signature]  
Date Entered into Database 5/18/10 By [Signature] Page 1 of 1



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-36D</u>
	Project No.	Date (m/d/y) <u>5-18-10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>83</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>M. Sunny</u>
Well Locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Damaged/Repairs Needed:
TOC <input type="checkbox"/> MP Description: <u>Above ground</u>	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>10.77</u>						
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailer ☐ Pump Description:

Casing Volume: $[91 \text{ (TD)} - 10.77 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.041 \text{ (Conversion Factor)}] = 13.16 \text{ gal}$ <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged	<input checked="" type="checkbox"/> Pumping Rate	<u>75</u> gal/m				(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<u>1805</u>	<u>1815</u>	<u>1825</u>	<u>1835</u>			<u>Herix</u>	
pH (Temperature Corrected? <input type="checkbox"/> )	<u>6.80</u>	<u>6.81</u>	<u>6.82</u>	<u>6.82</u>				
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	<u>22.37</u>	<u>22.42</u>	<u>22.51</u>	<u>22.54</u>				
Dissolved Oxygen mg/L	<u>0.48</u>	<u>0.47</u>	<u>0.46</u>	<u>0.45</u>				
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>				
Turbidity <input type="checkbox"/> NTU	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>				<u>Sensor malfunction</u>
Color/Tint	<u>Clear</u>							
Odor	<u>Slight</u>							

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailer ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-36D</u>	<u>P0</u>	<u>5-18-10</u>	<u>1846</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Fred Koenigbauer</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-26D</u>
	Project No.	Date (m/d/y) <u>5-18-10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 95 ☐ °C ☒ °F Weather: M. Cloudy

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed:

☒ TOC ☐ MP Description: Flush Mt.

TOC/MP Stickup: ☐ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>4.68</u>						
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Casing Volume: $[90 \text{ (TD)} - 4.68 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.041 \text{ (Conversion Factor)}] = 14.0 \text{ gal}$ <input type="checkbox"/> liters					Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches						
<input type="checkbox"/> Cum. Vol. Purged	<u>75 gal</u>				(Final)	Meter Type
<input checked="" type="checkbox"/> Pumping Rate						Remarks
Time (hh:mm; 24-hr clock)	<u>1640</u>	<u>1650</u>	<u>1700</u>	<u>1710</u>		
pH (Temperature Corrected? <input type="checkbox"/> )	<u>7.55</u>	<u>7.54</u>	<u>7.54</u>	<u>7.53</u>		
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	<u>23.40</u>	<u>23.40</u>	<u>23.38</u>	<u>23.37</u>		
Dissolved Oxygen mg/L	<u>1.10</u>	<u>0.99</u>	<u>0.95</u>	<u>0.90</u>		
<input type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> μS/cm	<u>9.0</u>	<u>9.0</u>	<u>9.92</u>	<u>9.7</u>		
Turbidity <input type="checkbox"/> NTU	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>		sensor maybe malfunction
Color/Tint	<u>Clear</u>	<u>7</u>				
Odor	<u>Slight</u>	<u>7</u>				

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (μS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (μS/cm). μS/cm = μmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 μm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-26D</u>	<u>P0</u>	<u>5-18-10</u>	<u>1720</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or rmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Fred Koenigsbauer

Signature

[Signature]



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-29D</u>
	Project No.	Date (m/d/y) <u>5-18-10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>85</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>M. Sunny</u>
Well Locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Damaged/Repairs Needed:
TOC <input type="checkbox"/> MP Description: <u>Above ground</u>	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>6.88</u>						
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice, record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured, D - dry, O - obstructed, P - pumping, F - flowing (artesian well), R - recently observed, C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 60 ft ☐ Grab ☐ Baller ☒ Pump Description: Monsieen

Casing Volume: $[(89.4 \text{ (TD)} - 6.88 \text{ (WL)}) \cdot (2 \text{ (Well ID)})^2 \cdot (0.041 \text{ (Conversion Factor)})] = 13.6 \text{ gal}$ <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>						
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches							
<input type="checkbox"/> Cum. Vol. Purged <input checked="" type="checkbox"/> Pumping Rate	<u>75 g/m</u>				(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<u>1530</u>	<u>1540</u>	<u>1550</u>	<u>1600</u>		<u>Handy</u>	
pH (Temperature Corrected? <input type="checkbox"/> )	<u>7.23</u>	<u>7.26</u>	<u>7.24</u>	<u>7.23</u>			
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	<u>27.66</u>	<u>22.90</u>	<u>23.10</u>	<u>23.07</u>			
Dissolved Oxygen mg/L	<u>1.13</u>	<u>1.07</u>	<u>1.04</u>	<u>1.0</u>			
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	<u>16.4</u>	<u>13.9</u>	<u>12.5</u>	<u>11.7</u>			
Turbidity <input type="checkbox"/> NTU	<u>30.0</u>	<u>8</u>	<u>8</u>	<u>8</u>			<u>Sensor malfunction</u>
Color/Tint	<u>Clear</u>	<u>Clear</u>	<u>—</u>	<u>—</u>			
Odor	<u>0</u>	<u>Slight</u>	<u>—</u>	<u>—</u>			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.633 Imperial gallon.

Sample Data Sample Depth: ☐ Grab ☐ Baller ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-29D</u>	<u>P0</u>	<u>5-18-10</u>	<u>1610</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Fred Koenigbauer</u>	Signature <u>[Signature]</u>
users/forms/SampLog.doc/5/8/02	Date Entered Into Database _____ By _____ Page ____ of ____



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-29 I</u>
Other:	Project No.	Date (m/d/y) <u>5-18-10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>85</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>M-Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description: <u>Above ground</u>	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>6.30</u>						
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 35 ft ☐ Grab ☐ Bailor ☒ Pump Description: Manganese

Casing Volume: $[50.5 (TD) - 6.30 (WL)] \times [2 (Well ID)]^2 \times [0.04] (Conversion Factor) = 7.25$ gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged	<input checked="" type="checkbox"/> Pumping Rate	<u>0.65 gpm</u>	<u>→</u>			(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<u>1445</u>	<u>1455</u>	<u>1505</u>					
pH (Temperature Corrected? <input type="checkbox"/> )	<u>7.83</u>	<u>7.79</u>	<u>7.80</u>					
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	<u>22.90</u>	<u>23.14</u>	<u>23.10</u>					
Dissolved Oxygen mg/L	<u>0.34</u>	<u>0.37</u>	<u>0.40</u>					
<input type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> μS/cm	<u>0</u>	<u>0</u>	<u>0</u>					
Turbidity <input type="checkbox"/> NTU	<u>2.5</u>	<u>2.3</u>	<u>2.1</u>					
Color/Tint	<u>clear</u>	<u>→</u>	<u>→</u>					
Odor	<u>0</u>	<u>→</u>	<u>→</u>					

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (μS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (μS/cm). μS/cm = μmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 μm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-29 I</u>	<u>P0</u>	<u>5-18-10</u>	<u>1510</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Fred Koenigbauer</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-20 D</u>
Other:	Project No.	Date (m/d/y) <u>5-18-10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 85 °C ☒ °F Weather: M. Sunny

Well Locked? ☒ Yes ☐ No Damaged/Repairs Needed:

☒ TOC ☐ MP Description: Above ground

TOC/MP Stickup: 2 ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>7.64</u>						
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Baller ☒ Pump Description: Monsieur

Casing Volume: $[90 \text{ (TD)} - 7.64 \text{ (WL)}] \times [2 \text{ (Well ID)}]^2 \times [0.04 \text{ (Conversion Factor)}] = 13.5 \text{ gal}$ <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged	<input checked="" type="checkbox"/> Pumping Rate	<u>.65 gpm</u>	<u>→</u>			(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<u>1355</u>	<u>1405</u>	<u>1415</u>					
pH (Temperature Corrected? <input type="checkbox"/> )	<u>7.64</u>	<u>7.65</u>	<u>7.65</u>					
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	<u>23.23</u>	<u>23.17</u>	<u>23.17</u>					
Dissolved Oxygen mg/L	<u>0.71</u>	<u>0.65</u>	<u>0.56</u>					
<input type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> μS/cm	<u>2.50</u>	<u>2.37</u>	<u>2.24</u>					
Turbidity <input type="checkbox"/> NTU	<u>0</u>	<u>0</u>	<u>0</u>					<u>Sensor Malfunction</u>
Color/Tint	<u>Yellow</u>	<u>→</u>	<u>→</u>					
Odor	<u>0</u>	<u>→</u>	<u>→</u>					

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (μS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (μS/cm). μS/cm = μmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Baller ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 μm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-20 D</u>	<u>P0</u>	<u>5-18-10</u>	<u>1420</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) Fred Koenigbauer Signature [Signature]



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Ashland Brunswick</u>	Site ID <u>muf-110</u>
	Project No.	Date (m/d/y) <u>5-18-10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe, Other:

Air Temp: 83 ☐ °C ☒ °F Weather: M. Sunny

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed:

TOC ☐ MP Description: Above ground

TOC/MP Stickup: 3 ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>5.86</u>						
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 35 ft ☐ Grab ☐ Baller ☒ Pump Description: Mason

Casing Volume: $[48.5 \text{ (TO)} - 5.96 \text{ (WL)}] \times [2 \text{ (Well ID)}]^2 \times [0.04 \text{ (Conversion Factor)}] = 6.99 \text{ gal}$ <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for meters and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged	<input checked="" type="checkbox"/> Pumping Rate					(Final)	Meter Type	Remarks
	<u>0.65 gpm</u>							
Time (hh:mm; 24-hr clock)	<u>1115</u>	<u>1130</u>	<u>1145</u>	<u>1200</u>				
pH (Temperature Corrected? <input type="checkbox"/> )	<u>8.11</u>	<u>7.89</u>	<u>7.75</u>	<u>7.75</u>				
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	<u>22.64</u>	<u>23.00</u>	<u>23.09</u>	<u>23.04</u>				
Dissolved Oxygen mg/L	<u>1.21</u>	<u>0.98</u>	<u>0.65</u>	<u>0.54</u>				
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	<u>2.78</u>	<u>2.39</u>	<u>2.25</u>	<u>2.18</u>				
Turbidity <input type="checkbox"/> NTU	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>				<u>sensor malfunction</u>
Color/Tint	<u>Clear</u>	<u>Clear</u>	<u>→</u>	<u>→</u>				
Odor	<u>0</u>	<u>0</u>	<u>→</u>	<u>→</u>				

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Baller ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW 110</u>	<u>P0</u>	<u>5-18-10</u>	<u>1205</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) Fred Koerigbauer Signature [Signature]



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-20 I</u>
Other:	Project No.	Date (m/d/y) <u>5-18-10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>85</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>M. Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description: <u>Above ground</u>	
TOC/MP Stickup: <u>3</u> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>8.20</u>						
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 30 ft ☐ Grab ☐ Bailer ☒ Pump Description: Manganese

Casing Volume: $[45 \text{ (TD)} - 8.20 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.04 \text{ (Conversion Factor)}] = 6.04 \text{ gal}$ <input type="checkbox"/> liters						Well Goes Dry <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches						While Purging <input type="checkbox"/>		
<input type="checkbox"/> Cum. Vol. Purged	<input checked="" type="checkbox"/> Pumping Rate					(Final)	Meter Type	Remarks
	<u>.75 gpm</u>							
Time (hh:mm; 24-hr clock)	<u>1305</u>	<u>1315</u>	<u>1325</u>	<u>1335</u>	<u>1340</u>			
pH (Temperature Corrected? <input type="checkbox"/> )	<u>8.17</u>	<u>8.14</u>	<u>8.13</u>	<u>8.11</u>	<u>8.09</u>			
Temperature °C °F	<u>22.88</u>	<u>22.89</u>	<u>22.89</u>	<u>22.88</u>	<u>22.90</u>			
Dissolved Oxygen mg/L	<u>0.89</u>	<u>0.78</u>	<u>0.76</u>	<u>0.60</u>	<u>0.57</u>			
<input type="checkbox"/> SC or <input type="checkbox"/> EC µS/cm	<u>54.5</u>	<u>11.4</u>	<u>10.5</u>	<u>3.19</u>	<u>2.96</u>			
Turbidity <input type="checkbox"/> NTU	<u>2.3</u>	<u>1.0</u>	<u>0.9</u>	<u>0</u>	<u>0</u>			<u>Sensor malfunction</u>
Color/Tint	<u>Yellow</u>	<u>→</u>	<u>→</u>	<u>→</u>	<u>→</u>			
Odor	<u>Slight</u>	<u>→</u>	<u>→</u>	<u>→</u>	<u>→</u>			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: 30 ft ☐ Grab ☐ Bailer ☒ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-20 I</u>	<u>P0</u>	<u>5-18-10</u>	<u>1340</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D1, Duplicate Sample; S1, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Fred Koenigshauer</u>	Signature <u>[Signature]</u>
users/forms/SampLog.doc/5/8/10	Date Entered into Database _____ By _____ Page ____ of ____



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>POL-3D</u>
Other:	Project No. <u>509848509-002</u>	Date (m/d/y) <u>5.18.10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>80</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>M-Sunny</u>
Well Locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Damaged/Repairs Needed: <u>NO</u>
TOC <input type="checkbox"/> MP Description: <u>Above ground</u>	
TOC/MP Stickup: <u>2</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-Inch <input type="checkbox"/> 4-Inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>7.96</u>						
Tape Correction							
Water Level (WL)	<u>7.96</u>						
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 70 ft ☐ Grab ☐ Baller ☒ Pump Description: Monsen

Casing Volume: [ <u>97</u> (TD) - <u>7.96</u> (WL) ] • [ <u>2</u> (Well ID) ] <sup>2</sup> • [ <u>.041</u> (Conversion Factor) ] = <u>14.6</u> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in Inches	
<input type="checkbox"/> Cum. Vol. Purged	<input checked="" type="checkbox"/> Pumping Rate
<u>.65 gpm</u>	
Time (hh:mm; 24-hr clock)	
<u>1000</u>	<u>1010</u>
<u>1020</u>	<u>1030</u>
<u>1040</u>	
pH (Temperature Corrected? <input type="checkbox"/> )	
<u>7.41</u>	<u>7.43</u>
<u>7.54</u>	<u>7.48</u>
<u>7.46</u>	
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	
<u>24.03</u>	<u>23.98</u>
<u>23.96</u>	<u>23.93</u>
<u>23.91</u>	
Dissolved Oxygen mg/L	
<u>1.25</u>	<u>0.87</u>
<u>0.67</u>	<u>0.49</u>
<u>0.47</u>	
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm	
<u>73.8</u>	<u>16.2</u>
<u>12.7</u>	<u>12.0</u>
<u>12.0</u>	
Turbidity <input type="checkbox"/> NTU	
<u>105</u>	<u>50.7</u>
<u>25.0</u>	<u>0</u>
<u>0</u>	
Color/Tint	
<u>Clear</u>	<u>7</u>
<u>7</u>	<u>7</u>
<u>7</u>	<u>7</u>
Odor	
<u>Slight</u>	<u>7</u>
<u>7</u>	<u>7</u>
<u>7</u>	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 70 ft ☐ Grab ☐ Baller ☒ Pump Description: Monsen

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>POL-3D</u>	<u>PO</u>	<u>5.18.10</u>	<u>1040</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: PO, Primary Sample; DU, Duplicate Sample; SF, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 6 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Fred Koelighauer</u>	Signature <u>[Signature]</u>
Date Entered Into Database <u>5/18/10</u>	Page <u>1</u> of <u>1</u>



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>POC-15</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>5-18-10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>B1</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>2</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth:

☐ Grab ☐ Bailor ☒ Pump Description: Parastatic Pump

Casing Volume: $[22 \text{ (TD)} - 9.73 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.041 \text{ (Conversion Factor)}] = 2.01 \text{ gal}$	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in Inches	
<input type="checkbox"/> Cum. Vol. Purged	
<input type="checkbox"/> Pumping Rate	
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor ORP	
Odor	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

## Sample Data

Sample Depth:

☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>POC-15</u>	<u>P0</u>	<u>5-18-10</u>	<u>930</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 8). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) JEFF BODINUS

Signature [Signature]



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility <u>Ashland/Barneswick</u>	Site ID <u>POC-25 (Dup.)</u>
	Project No.	Date (m/d/y) <u>5/19/10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>89</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>2</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Baller ☐ Pump Description: Peristaltic Pump

Casing Volume: $[25 \text{ (TD)} - 12.7 \text{ (WL)}] \times [2 \text{ (Well ID)}]^2 \times [1.04 \text{ (Conversion Factor)}] = 2.02$ <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged	
<input type="checkbox"/> Pumping Rate	
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 imperial gallon.

Sample Data Sample Depth: ☐ Grab ☐ Baller ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>POC-25</u>	<u>P0</u>	<u>5/19/10</u>	<u>1240</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or rmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>JEFF BARINKS</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Ashland Brunswick</u>	Site ID <u>POC-35</u>
	Project No.	Date (m/d/y) <u>5/19/10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>BB</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>2</u> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
E-Tape, # _____							
Steel Tape <input type="checkbox"/> Other							
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: Peristaltic Pump

Casing Volume: $[2.5 \text{ (TD)} - 5.52 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.04 \text{ (Conversion Factor)}] = 3.2$ gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>							
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate	3.2	6.4	9.6	12.8	(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)								
pH (Temperature Corrected? <input type="checkbox"/> )		5.31	5.28	5.28	5.26			
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F		22.27	22.12	22.10	22.14			
Dissolved Oxygen mg/L		4.22	4.20	4.20	4.08			
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$		2.22	2.25	2.23	2.27			
Turbidity <input type="checkbox"/> NTU		141	98	13.4	9.5			
Color/Tint		light green	light green	colorless	colorless			
Odor		-	-	-	-			
ORP		-100	-103	-105	-108			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged, cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
POC-35	PO	5/19/10	1100	JB					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: PO, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>JEFF BARINGS</u>	Signature <u>[Signature]</u>
users/forms/SampLog.doc/5/8/02	Date Entered into Database By Page ___ of ___



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-10D</u>
	Project No.	Date (m/d/y) <u>5-19-10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 80 ☐ °C ☒ °F Weather: M. Sunny

Well Locked? ☒ Yes ☐ No Damaged/Repairs Needed:

☒ TOC ☐ MP Description: Above ground

TOC/MP Stickup: 3 ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

## Water Level Data

Measurement Units: ☒ ft ☐ m

Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>7.22</u>						
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

## Field WQ Data

Purge Depth:

☐ Grab ☐ Baller ☒ Pump

Description: Monsoon

Casing Volume: $[95.4_{(TD)} - 7.22_{(WL)}] \cdot [2_{(Well ID)}]^2 \cdot [0.041_{(Conversion Factor)}] =$ _____ gal <input type="checkbox"/> liters						Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches							
<input type="checkbox"/> Cum. Vol. Purged <input checked="" type="checkbox"/> Pumping Rate					(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<u>1000</u>	<u>1010</u>	<u>1020</u>	<u>1030</u>			
pH (Temperature Corrected? <input type="checkbox"/> )	<u>7.41</u>	<u>7.42</u>	<u>7.43</u>	<u>7.41</u>			
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	<u>23.96</u>	<u>23.97</u>	<u>23.95</u>	<u>23.90</u>			
Dissolved Oxygen mg/L	<u>2.88</u>	<u>2.83</u>	<u>2.70</u>	<u>2.62</u>			
<input type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> µS/cm	<u>17.6</u>	<u>17.6</u>	<u>17.6</u>	<u>17.4</u>			
Turbidity <input type="checkbox"/> NTU	<u>120</u>	<u>119</u>	<u>117</u>	<u>128</u>			
Color/Tint	<u>Yellow/green</u>	<u>→</u>	<u>→</u>	<u>→</u>			
Odor	<u>Heavy</u>	<u>→</u>	<u>→</u>	<u>→</u>			
<u>ORP</u>	<u>-95</u>	<u>-95</u>	<u>-95</u>	<u>-94</u>			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 imperial gallon

## Sample Data

Sample Depth:

☐ Grab ☐ Baller ☐ Pump

Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-10D</u>	<u>P0</u>	<u>5-19-10</u>	<u>1036</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D1, Duplicate Sample; S1, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Fred Koentigbauer

Signature

cluyh



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other:	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-90</u>
	Project No.	Date (m/d/y) <u>5-19-10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>77</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>M. Sunny</u>
Well Locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Damaged/Repairs Needed:
TOC <input type="checkbox"/> MP Description: <u>Above ground</u>	
TOC/MP Stickup: <u>3</u> ft <input checked="" type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>5.88</u>						
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice, record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth:

☐ Grab ☐ Bailor ☒ Pump

Description: Manganese

Casing Volume: $[83.2(\text{TD}) - 5.88(\text{WL})] \cdot [\frac{2(\text{Well ID})^2 \cdot 0.04(\text{Conversion Factor})}{2}] = 12.7 \text{ gal}$	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged	
<input checked="" type="checkbox"/> Pumping Rate	
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature °C <input type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input type="checkbox"/> EC μS/cm	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (μS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (μS/cm). μS/cm = μmho/cm. 1 gallon (US) = 3.785 L = 0.833 imperial gallon

## Sample Data

Sample Depth:

☐ Grab ☐ Bailor ☐ Pump

Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 μm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-90</u>	<u>P0</u>	<u>5-19-10</u>	<u>935</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Fred Kenigbauer

Signature

AKG



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>POC-20</u>
Other:	Project No.	Date (m/d/y) <u>5-19-10</u>

Site Description <input type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Irrigation Well <input type="checkbox"/> Spring <input type="checkbox"/> Borehole <input type="checkbox"/> Probe Other:	
Air Temp: <u>85</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>M. Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description: <u>Above Ground</u>	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <u>1.5</u> 2-Inch <input type="checkbox"/> 4-Inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data		Measurement Units: <input type="checkbox"/> ft <input type="checkbox"/> m		Well or Borehole Total Depth (TD) from MP or TOC:				
<input type="checkbox"/> E-Tape, # _____	<input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)								
Depth to Water		<u>14.92</u>						
Tape Correction								
Water Level (WL)								
Product Thickness								
Product Recovery								
<input type="checkbox"/> gallons <input type="checkbox"/> liters								

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data		Purge Depth:		<input type="checkbox"/> Grab <input type="checkbox"/> Bailor <input type="checkbox"/> Pump		Description:		
Casing Volume: $[(107 \text{ (TD)} - 14.92 \text{ (WL)}) \cdot (2 \text{ (Well ID)})^2 \cdot (0.041 \text{ (Conversion Factor)})] = 15.1 \text{ gal}$ <input type="checkbox"/> liters						Well Goes Dry While Purging <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged	<input checked="" type="checkbox"/> Pumping Rate	<u>-70</u> gpm				(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)		<u>1200</u>	<u>1220</u>	<u>1230</u>	<u>1240</u>			
pH (Temperature Corrected? <input type="checkbox"/> )		<u>8.20</u>	<u>8.20</u>	<u>8.19</u>	<u>8.19</u>			
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F		<u>27.04</u>	<u>26.94</u>	<u>26.91</u>	<u>26.73</u>			
Dissolved Oxygen mg/L		<u>0.67</u>	<u>0.60</u>	<u>0.59</u>	<u>0.48</u>			
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$		<u>12.9</u>	<u>12.8</u>	<u>12.8</u>	<u>12.6</u>			
Turbidity <input type="checkbox"/> NTU		<u>7.0</u>	<u>0</u>	<u>0</u>	<u>0</u>			Sensor malfunction
Color/Tint		<u>Yellow</u>						
Odor		<u>Slight</u>						

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.633 Imperial gallon

Sample Data		Sample Depth:		<input type="checkbox"/> Grab <input type="checkbox"/> Bailor <input type="checkbox"/> Pump		Description:			
Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>POC-20</u>	<u>P0</u>	<u>5-19-10</u>	<u>1245</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank Bottle; Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Fred Koenigbauer</u>	Signature <u>[Signature]</u>
users/forms/SampLog.doc/5/8/02	Date Entered into Database <u>By</u>
	Page <u>  </u> of <u>  </u>



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-15</u>
Other: <u>ES - Derek R</u>	Project No. <u>508849509</u>	Date (m/d/y) <u>6/3/10</u>

**Site Description** ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 84 °C ☒ °F Weather: Sunny

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed: None

☐ TOC ☐ MP Description:

TOC/MP Stickup: 3 ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.) Production well near box

**Water Level Data** Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 10.49

<input type="checkbox"/> E-Taps, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>0800</u>						
Depth to Water	<u>5.81</u>		<u>8.17</u>	<u>8.47</u>	<u>8.53</u>		
Tape Correction							
Water Level (WL)	<u>5.81</u>		<u>8.17</u>	<u>8.47</u>	<u>8.53</u>		
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if when observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: peristaltic

Casing Volume: [ (TD) <u>5.81</u> (WL) ] • [ <u>2</u> (Well ID) ] • [ <u>0.0408</u> (Conversion Factor) ] = <u>0.8</u> <input type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input checked="" type="checkbox"/> Cum. Vol. Purged						(Final)	Meter Type	Remarks
<input type="checkbox"/> Pumping Rate	<u>0</u>	<u>0.8</u>	<u>1.6</u>	<u>2.4</u>	<u>3.2</u>			
Time (hh:mm; 24-hr clock)	<u>0800</u>	<u>0805</u>	<u>0810</u>	<u>0815</u>	<u>0820</u>			<u>Horriba</u>
pH (Temperature Corrected? <input type="checkbox"/> )	<u>6.97</u>	<u>6.96</u>	<u>6.94</u>	<u>6.97</u>	<u>6.95</u>			<u>W-22</u>
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	<u>22.22</u>	<u>22.20</u>	<u>22.23</u>	<u>22.32</u>	<u>22.28</u>			
Dissolved Oxygen mg/L	<u>0.47</u>	<u>0.41</u>	<u>0.36</u>	<u>0.34</u>	<u>0.30</u>			
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm	<u>0.212</u>	<u>0.460</u>	<u>0.498</u>	<u>0.512</u>	<u>0.533</u>			
Turbidity $\mu$ NTU	<u>59.6</u>	<u>18.5</u>	<u>20.0</u>	<u>12.7</u>	<u>10.4</u>			
Color/Tint	<u>cloudy</u>	<u>cloudy</u>	<u>cloudy</u>	<u>clear</u>	<u>clear</u>			
Odor	<u>ORP</u>	<u>-72</u>	<u>-73</u>	<u>-76</u>	<u>-80</u>			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm = 1mmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description: peristaltic

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-15</u>	<u>P0</u>	<u>6/3/10</u>	<u>0820</u>	<u>5</u>					
<u>(VOCs)</u>									

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D1, Duplicate Sample; S1, Split Sample (sent to second lab); B1, Field Blank; B2, Equipment Rinse; B3, Trip Blank; S2, Field Spike (N = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling date on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) Derek R. Howard Signature [Signature]



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW 1D</u>
Other: <u>Delta</u>	Project No. <u>      </u>	Date (m/d/y) <u>6/3/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Proba Other:

Air Temp: 80 ☐ °C ☒ °F Weather: Sunny

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed: No

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 30.21

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	Purging End	Purging	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>5.90</u>			<u>6.19</u>			
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice: record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: SS Mean Monsoon

Casing Volume: [ <u>      </u> (TD) - <u>      </u> (WL) ] * [ <u>      </u> (Well ID) ] <sup>2</sup> * [ <u>      </u> (Conversion Factor) ] = <u>      </u> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged	(Final)
<input type="checkbox"/> Pumping Rate	Meter Type
Time (hh:mm; 24-hr clock)	Remarks
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <u>µS/cm</u>	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Order <u>GRP</u>	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW 1D</u>	<u>P0</u>	<u>6/3/10</u>							

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D1, Duplicate Sample; S1, Split Sample (sent to second lab); BFA, Field Blank; BRN, Equipment Rinse; BTE, Trip Blank; SFA, Field Spike (# = 1 to 9). Lab ID (up to 6 characters) is name of laboratory that will analyze the sample. Case ID (up to 6 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmddyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) \_\_\_\_\_ Signature \_\_\_\_\_



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-25</u>
Other: <u>FS - Derek R</u>	Project No. <u>509849509</u>	Date (m/d/y) <u>6/3/10</u>

Site Description <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Irrigation Well <input type="checkbox"/> Spring <input type="checkbox"/> Borehole <input type="checkbox"/> Probe Other:	
Air Temp: <u>90</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>none</u>
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description: <u>—</u>	
TOC/MP Stickup: <u>3</u> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data		Measurement Units: <input checked="" type="checkbox"/> ft <input type="checkbox"/> m	Well or Borehole Total Depth (TD) from MP or TOC: <u>10.79</u>
<input type="checkbox"/> E-Tape, # <u>—</u>	<input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation
		Purging Start	During Purging
		Purging End	After Sampling
Time (hh:mm; 24-hr clock)			
Depth to Water	<u>5.48</u>	<u>7.04</u>	<u>7.11</u>
Tape Correction			
Water Level (WL)	<u>5.48</u>	<u>7.04</u>	<u>7.11</u>
Product Thickness			
Product Recovery			
<input type="checkbox"/> gallons <input type="checkbox"/> liters			

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data		Purge Depth: <input type="checkbox"/> Grab <input type="checkbox"/> Bailor <input checked="" type="checkbox"/> Pump	Description: <u>peristaltic</u>
Casing Volume: $[1.79 \text{ (ft)} - 5.48 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.0157 \text{ (Conversion Factor)}] = 0.9 \text{ gal}$	<input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>	
<input checked="" type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate		
Time (hh:mm; 24-hr clock)			
pH (Temperature Corrected? <input type="checkbox"/> )			
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F			
Dissolved Oxygen mg/L			
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$			
Turbidity <input type="checkbox"/> NTU			
Color/Tint			
Odor			
<u>ORP</u>	<u>-91</u>	<u>-101</u>	<u>-100</u>
	<u>-94</u>	<u>-98</u>	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data		Sample Depth: <input type="checkbox"/> Grab <input type="checkbox"/> Bailor <input checked="" type="checkbox"/> Pump	Description: <u>peristaltic</u>
Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)
<u>MW-25</u>	<u>P0</u>	<u>6/3/10</u>	<u>0745</u>
<u>(VOCs)</u>			

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D0, Duplicate Sample; S0, Split Sample (sent to second lab); B0, Field Blank; B1, Equipment Rinse; B2, Trip Blank; SF, Field Spike (n = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Derek Roth</u>	Signature <u>[Signature]</u>
users/forms/SampLog.doc/5/10/02	Date Entered into Database _____ By _____ Page ____ of ____



# GROUNDWATER SAMPLING RECORD

<b>Sampled By</b> <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	<b>Facility</b> <u>Ashland Drums Inc</u>	<b>Site ID</b> <u>MWD</u>
	<b>Project No.</b> <u>509849506</u>	<b>Date (m/d/y)</b> <u>6/23/16</u>

<b>Site Description</b>		<input type="checkbox"/> Monitoring Well	<input type="checkbox"/> Extraction Well	<input type="checkbox"/> Irrigation Well	<input type="checkbox"/> Spring	<input type="checkbox"/> Borehole	<input type="checkbox"/> Probe	Other:
Air Temp:	80	<input type="checkbox"/> °C	<input checked="" type="checkbox"/> °F	Weather:	Sunny			
Well Locked?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no	Damaged/Repairs Needed:	No				
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:								
TOC/MP Stickup:	3	<input checked="" type="checkbox"/> ft	<input type="checkbox"/> m	above/below ground	Well Inside Diameter (ID):	<input checked="" type="checkbox"/> 2-inch	<input type="checkbox"/> 4-inch	Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)								

Water Level Data		Measurement Units: <input checked="" type="checkbox"/> ft <input type="checkbox"/> m		Well or Borehole Total Depth (TD) from MP or TOC: 34.5			
<input checked="" type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other _____	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	5.55						
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Slickup measurement is from ground surface to nearest 0.1 ft or 0.1 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); A - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if when observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data		Purge Depth:		<input type="checkbox"/> Grab <input type="checkbox"/> Bailor <input checked="" type="checkbox"/> Pump		Description: <i>SS Mega Monsoon</i>	
Casing Volume: [_____] (ID) * [_____] (WL) * [_____] (Well ID) <sup>2</sup> * [_____] (Conversion Factor) = _____ <input type="checkbox"/> gal <input type="checkbox"/> liters Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5086 for meters and liters; Well ID in inches						Well Goes Dry While Purging <input type="checkbox"/>	
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	<i>600m/min</i>				(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<i>730</i>	<i>735</i>	<i>740</i>	<i>745</i>	<i>Hariba</i>	<i>1-22</i>	
pH (Temperature Corrected? <input type="checkbox"/> )	<i>6.0</i>	<i>6.0</i>	<i>6.0</i>	<i>6.0</i>			
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	<i>29.4</i>	<i>23.17</i>	<i>23.22</i>	<i>23.20</i>			
Dissolved Oxygen mg/L	<i>2.07</i>	<i>2.08</i>	<i>2.11</i>	<i>2.04</i>			
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC              μS/cm	<i>3.0</i>	<i>3.1</i>	<i>3.2</i>	<i>3.0</i>			
Turbidity <input type="checkbox"/> NTU	<i>82.1</i>	<i>80.1</i>	<i>78.2</i>	<i>74.6</i>			
Color/Tint							
Odor <i>ORP</i>	<i>-56</i>	<i>-52</i>	<i>-50</i>	<i>-51</i>			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S}/\text{cm}$  at  $25^{\circ}\text{C}$ ); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S}/\text{cm}$ ).  $\mu\text{S}/\text{cm} = \mu\text{mho}/\text{cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

[illegible]

Sample ID may be up to 13 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D0, Duplicate Sample; S0, Split Sample (sent to second lab); B0F, Field Blank; B0R, Equipment Rinse; B0T, Trip Blank; B0F, Field Spike (# = 1 to 9). Lab ID (up to 6 characters) is name of laboratory that will analyze the sample. Case ID (up to 6 characters) and SDG ID (sample delivery group; up to 15 characters) are required for blanks. Case ID may be the lab case request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmodity. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)	Signature
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland-Burnside</u>	Site ID <u>MW-4</u>
Other: <u>ES-Derek Rothaupt</u>	Project No. <u>50984-852-9</u>	Date (m/d/y) <u>6/1/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>92</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Damaged/Repairs Needed: <u>None</u>
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> ft <input checked="" type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.) <u>—</u>	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 22.59

<input type="checkbox"/> E-Tape, # <u>—</u> <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1505</u>						
Depth to Water	<u>6.08</u>		<u>7.04</u>	<u>7.11</u>	<u>7.19</u>		
Tape Correction:							
Water Level (WL)	<u>6.08</u>		<u>7.04</u>	<u>7.11</u>	<u>7.19</u>		
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: Peristaltic

Casing Volume: $[22.59 \text{ (TD)} - 6.08 \text{ (WL)}] \times [2 \text{ (Well ID)}]^2 \times [0.0408 \text{ (Conversion Factor)}] = 2.7$ gal <input type="checkbox"/> liters	Well Goes Dry <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	While Purging <input type="checkbox"/>
<input checked="" type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature °C <input type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input checked="" type="checkbox"/> EC $\mu\text{S/cm}$	
Turbidity $\text{NTU}$	
Color/Tint	
Odor	
<u>ORP</u>	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description: Peristaltic

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-4</u>	<u>P0</u>	<u>6/1/10</u>	<u>1540</u>	<u>3</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Derek Rothaupt</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland-Brunswick</u>	Site ID <u>MW-53</u>
Other: <u>ES-Derek Roth</u>	Project No. <u>50984-8509</u>	Date (m/d/y) <u>6/1/10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>91</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>None</u>
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 22.42

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1420</u>		<u>1430</u>	<u>1440</u>			
Depth to Water	<u>6.57</u>		<u>8.76</u>	<u>9.02</u>			
Tape Correction							
Water Level (WL)	<u>6.57</u>		<u>8.76</u>	<u>9.02</u>			
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: Peristaltic

Casing Volume: $[22.42 \text{ (ft)} - 6.57 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [ \text{Conversion Factor} ] = 2.5 \text{ gal}$	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input checked="" type="checkbox"/> Cum. Vol. Purged	
<input type="checkbox"/> Pumping Rate	
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input checked="" type="checkbox"/> EC $\mu\text{S/cm}$	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor	
<u>ORP</u>	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-5</u>	<u>P0</u>	<u>6/1/10</u>	<u>1455</u>	<u>3</u>					<u>VOCS</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Derek Roth</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility	Site ID <u>MW5I</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>6/1/10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>89</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>No</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground <u>23</u> Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:	
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 31.6

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1430</u>		<u>1440</u>	<u>1450</u>			
Depth to Water	<u>6.11</u>	<u>6.11</u>	<u>6.11</u>	<u>7.89</u>	<u>7.63</u>		
Tape Correction							
Water Level (WL)	<u>6.11</u>						
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description:

Casing Volume: <u>31.6</u> (TD) - <u>6.11</u> (WL) = <u>25.49</u> (Well ID) <sup>2</sup> * <u>0.0408</u> (Conversion Factor) = <u>2.65</u> gal <input type="checkbox"/> liters						Well Goes Dry While Purging <input type="checkbox"/>	
<input checked="" type="checkbox"/> Cum. Vol. Purged	<input checked="" type="checkbox"/> Pumping Rate	<u>1.4</u>	<u>500 mL/min</u>	<u>→</u>	(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)		<u>1440</u>	<u>1445</u>	<u>1450</u>	<u>1455</u>		<u>Horriba</u>
pH (Temperature Corrected? <input type="checkbox"/> )		<u>6.41</u>	<u>6.83</u>	<u>6.90</u>	<u>6.89</u>		<u>A-22</u>
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F		<u>27.19</u>	<u>24.81</u>	<u>24.80</u>	<u>24.63</u>		
Dissolved Oxygen mg/L		<u>3.79</u>	<u>4.01</u>	<u>3.78</u>	<u>4.01</u>		
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> S/cm		<u>2.09</u>	<u>2.10</u>	<u>2.05</u>	<u>2.03</u>		
Turbidity <input checked="" type="checkbox"/> NTU		<u>109</u>	<u>90</u>	<u>21.4</u>	<u>22.6</u>		
Color/Tint		<u>120</u>	<u>-121</u>	<u>-121</u>	<u>+129</u>		
odor <u>ORP</u>		<u>None</u>					

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW5I VOC's</u>	<u>P0</u>	<u>6/1/10</u>	<u>1500</u>	<u>3</u>	<u>-</u>				
<u>MW5I Total &amp; tech toxaphene</u>		<u>6/1/10</u>	<u>1500</u>	<u>2</u>	<u>-</u>				
			<u>1500</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Ryan McLain</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland-Bungnick</u>	Site ID <u>MW-6</u>
Other: <u>ES - Derek Rothart</u>	Project No. <u>70984-850-9</u>	Date (m/d/y) <u>6/2/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 80 °C ☒ °F Weather: Sunny

Well Locked? ☒ Yes ☐ No Damaged/Repairs Needed: None

☐ TOC ☐ MP Description:

TOC/MP Stickup: 3 ft ☐ m ☒ Above/Below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.):

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 22.57

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>0750</u>		<u>0800</u>	<u>0810</u>	<u>0820</u>		
Depth to Water	<u>6.12</u>		<u>7.17</u>	<u>7.20</u>	<u>7.28</u>		
Tape Correction							
Water Level (WL)	<u>6.12</u>		<u>7.17</u>	<u>7.20</u>	<u>7.28</u>		
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if shown observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: Peristaltic

Casing Volume:  $[22.57 \text{ (ft)} - \text{ (WL)}] \cdot [2 \text{ (well ID)}]^2 \cdot [0.0008 \text{ (Conversion Factor)}] = 2.6 \text{ gal}$  ☐ gal ☐ liters  
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<u>0750</u> <u>0800</u> <u>0810</u> <u>0820</u>	<u>Hor. Ba</u>	
pH (Temperature Corrected? <input type="checkbox"/> )	<u>8.01</u>	<u>U22</u>	
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	<u>22.93</u> <u>22.74</u> <u>22.99</u> <u>22.93</u>		
Dissolved Oxygen mg/L	<u>0.89</u> <u>0.87</u> <u>0.94</u> <u>0.90</u>		
<input type="checkbox"/> SC or <input checked="" type="checkbox"/> EC mS/cm	<u>0.418</u> <u>0.729</u> <u>0.684</u> <u>0.692</u>		
Turbidity <input checked="" type="checkbox"/> NTU	<u>10.9</u> <u>15.4</u> <u>13.7</u> <u>12.1</u>		
Color/Tint	<u>Cloudy</u> <u>Cloudy</u> <u>Cloudy</u> <u>Cloudy</u>		
Odor	<u>ORP</u> <u>-116</u> <u>-186</u> <u>-146</u>		

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = 1mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description: peristaltic

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-6</u>	<u>P0</u>	<u>6/2/10</u>	<u>0820</u>	<u>3</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SOG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) Derek Rothart Signature [Signature]



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland-Barnstable</u>	Site ID <u>MW-7</u>
Other: <u>ES-Deck R. Rott</u>	Project No. <u>50984-80-9</u>	Date (m/d/y) <u>6/1/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>85</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Damaged/Repairs Needed: <u>None</u>
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 22.57

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1305</u>						
Depth to Water	<u>5.45</u>	<u>—</u>	<u>5.71</u>	<u>5.74</u>	<u>5.77</u>		
Tape Correction							
Water Level (WL)	<u>5.45</u>	<u>—</u>	<u>5.71</u>	<u>5.74</u>	<u>5.77</u>		
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: Peristaltic

Casing Volume: $[22.57 \text{ (TD)} - 5.45 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.0098 \text{ (Conversion Factor)}] = 2.8 \text{ gal}$	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input checked="" type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input checked="" type="checkbox"/> EC $\mu\text{S/cm}$	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor <u>TOS</u>	
<u>ORP</u>	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description: Peristaltic

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-7</u>	<u>P0</u>	<u>6/1/10</u>	<u>1345</u>	<u>3</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Deek Rott</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland - Brunswick</u>	Site ID <u>MW-8</u>
Other: <u>ES - Derek Rothaupt</u>	Project No. <u>50984-850-9</u>	Date (m/d/y) <u>6/2/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>78</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>None</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 22.39

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>0715</u>						
Depth to Water	<u>6.91</u>		<u>7.38</u>	<u>7.69</u>	<u>7.74</u>		
Tape Correction							
Water Level (WL)	<u>6.91</u>		<u>7.38</u>	<u>7.69</u>	<u>7.74</u>		
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: peristaltic

Casing Volume: $[22.39 \text{ (TD)} - 6.91 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.00908 \text{ (Conversion Factor)}] = 2.5$ <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input checked="" type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input checked="" type="checkbox"/> EC <input type="checkbox"/> μS/cm	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor	
<u>orp</u>	<u>-110 -112 -118 -120</u>

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (μS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (μS/cm). μS/cm = μmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☒ Bailor ☒ Pump Description: peristaltic

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 μm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-8</u>	<u>P0</u>	<u>6/2/10</u>	<u>0740</u>	<u>3</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a color ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Derek Rothaupt</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland - Brunswick</u>	Site ID <u>MW-13</u>
Other: <u>ES - Derek Rothman</u>	Project No. <u>A-20984-850-9</u>	Date (m/d/y) <u>6/2/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 82 ☐ °C ☒ °F

Weather: Sunny

Well Locked? ☒ yes ☐ no

Damaged/Repairs Needed: None

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

## Water Level Data

Measurement Units: ☒ ft ☐ m

Well or Borehole Total Depth (TD) from MP or TOC: 127.10

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	1255		1300	1310	1320		
Depth to Water	8.67		8.99	9.09	9.13		
Tape Correction							
Water Level (WL)			8.99	9.09	9.13		
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

## Field WQ Data

Purge Depth:

☐ Grab ☐ Bailor ☒ Pump

Description:

SS Mesa Monsoon

Casing Volume: [ (TD) - (WL) ] \* [ (Well ID) ]<sup>2</sup> \* [ (Conversion Factor) ] = \_\_\_\_\_ ☐ gal ☐ liters

Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Well Goes Dry  
While Purging ☐

<input type="checkbox"/> Cum. Vol. Purged <input checked="" type="checkbox"/> Pumping Rate	(Initial)	(Final)	(Final)	(Final)	(Final)	(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	1300	1305	1310	1315	1320			
pH (Temperature Corrected? <input type="checkbox"/> )	7.79	7.92	7.89	7.88	7.87			
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	23.93	23.56	23.38	23.34	23.27			
Dissolved Oxygen mg/L	2.83	0.31	0.21	0.19	0.20			
<input type="checkbox"/> SC or <input checked="" type="checkbox"/> EC <input type="checkbox"/> mS/cm	3.29	2.16	2.10	2.13	2.09			
Turbidity <input type="checkbox"/> NTU	728	307	20.7	6.9	5.7			
Color/Tint	Cloudy	Cloudy	Cloudy	Clear	Clear			
Odor	ORP							
	-133	-140	-140	-140	-139			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

## Sample Data

Sample Depth:

☐ Grab ☐ Bailor ☒ Pump

Description:

SS Monsoon

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
MW-13	P0	6/2/10	1320	3					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Signature



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland-Brownsville</u>	Site ID <u>MW-145</u>
Other: <u>ES-Derek R</u>	Project No. <u>50981-850-9</u>	Date (m/d/y) <u>6/3/10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>82</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>2.66</u> ft <input type="checkbox"/> m above/below ground	
Well Inside Diameter (ID): <input type="checkbox"/> 2-Inch <input type="checkbox"/> 4-Inch Other:	
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 15.08

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1045</u>						
Depth to Water	<u>3.36</u>		<u>4.83</u>	<u>4.97</u>	<u>4.99</u>		
Tape Correction							
Water Level (WL)	<u>3.36</u>		<u>4.83</u>	<u>4.97</u>	<u>4.99</u>		
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: perforated

Casing Volume: <u>15.08</u> (ft) - <u>3.36</u> (WL) * [ <u>      </u> (Well ID)] <sup>2</sup> * [ <u>      </u> (Conversion Factor)] = <u>2.06</u> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input checked="" type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate
Time (hh:mm; 24-hr clock)	<u>0</u> <u>2.0</u> <u>4.0</u> <u>6.0</u>
pH (Temperature Corrected? <input type="checkbox"/> )	<u>7.38</u> <u>7.36</u> <u>7.36</u> <u>7.35</u>
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	<u>23.17</u> <u>23.20</u> <u>23.19</u> <u>23.17</u>
Dissolved Oxygen mg/L	<u>2.49</u> <u>2.28</u> <u>2.18</u> <u>2.08</u>
<input type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> μS/cm	<u>0.778</u> <u>0.784</u> <u>0.786</u> <u>0.794</u>
Turbidity <input type="checkbox"/> NTU	<u>47.3</u> <u>54.8</u> <u>46.2</u> <u>44.1</u>
Color/Tint	<u>cloudy</u> <u>cloudy</u> <u>cloudy</u> <u>cloudy</u>
Odor	<u>ORP</u> <u>-148</u> <u>-149</u> <u>-150</u>

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (μS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (μS/cm). μS/cm = 11mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description: perforated

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 μm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-145</u>	<u>P0</u>	<u>6/3/10</u>	<u>1100</u>	<u>3</u>					
<u>VOLs</u>									

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinseate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 6 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinseate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Derek Rother</u>	Signature <u>[Signature]</u>
users/forms/SampLog.doc/5/0/2	Date Entered into Database <u>      </u> By <u>      </u> Page <u>      </u> of <u>      </u>



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>ES Deck Roth</u>	Facility <u>Ashland - Brangus</u>	Site ID <u>MW-14D</u>
Project No. <u>509,84-250-9</u>	Date (m/d/y) <u>6/3/10</u>	

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>85</u> °C <input type="checkbox"/> °F Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Damaged/Repairs Needed: <u>None</u>
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:
TOC/MP Stickup: <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 90.26

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1125</u>		<u>1125</u>	<u>1140</u>	<u>1150</u>		
Depth to Water	<u>3.90</u>		<u>4.06</u>	<u>4.07</u>	<u>4.06</u>		
Tape Correction							
Water Level (WL)	<u>3.90</u>		<u>4.06</u>	<u>4.07</u>	<u>4.06</u>		
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth:        ☐ Grab ☐ Bailor ☒ Pump Description: SS Mega Mon 500

Casing Volume: [ (TD) - (WL) ] * [ (Well ID) ]^2 * [ (Conversion Factor) ] = <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged <input checked="" type="checkbox"/> Pumping Rate	
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> µS/cm	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description: SS Mega Mon 500

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-14D</u>	<u>P0</u>	<u>6/3/10</u>	<u>1150</u>	<u>3</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Sample ID may be up to 16 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 16 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Derek Roth</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> E&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-155</u>
Other: <u>ES-Roths</u>	Project No. <u>509849509</u>	Date (m/d/y) <u>6/3/10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 84 °C ☒ °FWeather: SunnyWell Locked? ☒ yes ☐ noDamaged/Repairs Needed: none☐ TOC ☐ MP Description:TOC/MP Stickup: 3 ft ☐ m above/below groundWell Inside Diameter (ID): ☐ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

## Water Level Data

Measurement Units: ☒ ft ☐ mWell or Borehole Total Depth (TD) from MP or TOC: 12.06

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1700</u>		<u>1702</u>	<u>1710</u>	<u>1720</u>		
Depth to Water	<u>6.54</u>		<u>6.94</u>	<u>7.03</u>	<u>7.08</u>		
Tape Correction							
Water Level (WL)	<u>6.54</u>		<u>6.94</u>	<u>7.03</u>	<u>7.08</u>		
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

## Field WQ Data

Purge Depth:         ☐ Grab ☐ Bailor ☒ PumpDescription: peristaltic

Casing Volume: [ (TD) - <u>6.54</u> ] * [ <u>2</u> (Well ID) ] <sup>2</sup> * [ (Conversion Factor) ] = <u>0.9</u> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5086 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Meter Type
<input type="checkbox"/> Pumping Rate	Remarks
Time (hh:mm; 24-hr clock)	<u>Horba U-22</u>
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature °C °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input type="checkbox"/> EC µS/cm	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

## Sample Data

Sample Depth:         ☐ Grab ☐ Bailor ☒ PumpDescription: peristaltic

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-155</u>	<u>P0</u>	<u>6/3/10</u>	<u>1720</u>	<u>3</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D0, Duplicate Sample; S0, Split Sample (sent to second lab); BFA, Field Blank; BFA, Equipment Rinse; BFA, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling date on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Signature

users/forms/SampLog.doc/5/8/02

Date Entered into Database \_\_\_\_\_ By \_\_\_\_\_

Page \_\_\_\_ of \_\_\_\_



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility <u>Ashland Brunson</u>	Site ID <u>MW15D</u>
Project No.		Date (m/d/y) <u>6/9/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 90 °C 8 °F Weather: Sunny

Well Locked? ☒ Yes ☐ No Damaged/Repairs Needed: None

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ☐ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-Inch ☐ 4-Inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>6.42</u>			<u>6.00</u>			
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice: record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Casing Volume: [ ( ) (TD) - ( ) (WL) ] * [ ( ) (Well ID) ] <sup>2</sup> * [ ( ) (Conversion Factor) ] = <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate <u>500ml/min</u>	(Final) Meter Type Remarks
Time (hh:mm; 24-hr clock) <u>1300</u> <u>1305</u> <u>1310</u>	
pH (Temperature Corrected? <input type="checkbox"/> ) <u>5.78</u> <u>5.77</u> <u>5.76</u>	<u>Horrida</u>
Temperature °C °F <u>24.06</u> <u>24.06</u> <u>24.10</u>	<u>U-22</u>
Dissolved Oxygen mg/L <u>5.11</u> <u>5.11</u> <u>5.11</u>	
<input type="checkbox"/> SC or <input type="checkbox"/> EC µS/cm <u>9.0</u> <u>9.0</u> <u>9.0</u>	
Turbidity NTU <u>120</u> <u>110</u> <u>105</u>	
Color/Tint	
Odor <u>ORP</u> <u>-156</u>	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = 1µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW15D</u>	<u>P0</u>	<u>6/9/10</u>	<u>1400</u>						<u>DOC</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D1, Duplicate Sample; S1, Split Sample (sent to second lab); B1, Field Blank; B2, Equipment Rinse; B3, Trip Blank; SF, Field Spike (1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mtdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Signature

users/forms/SampLog.doc/6/10/2

Date Entered into Database By

Page of



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MV-165</u>
Other: <u>Delta Consultants</u>	Project No. <u>508849509</u>	Date (m/d/y) <u>5/27/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 92 °C ☒ °F Weather: Sunny

Well Locked? ☒ Yes ☐ No Damaged/Repairs Needed: NA

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ft ☐ m (above/below ground) Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tides, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 12.00

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	Purging End	Purging	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	1025	1025	1030	1040	1050	1100	
Depth to Water	7.92	7.92	8.01	8.14	8.22	8.10	
Tape Correction	NA						
Water Level (WL)	4.92	4.92	5.01	5.14	5.22	5.10	
Product Thickness	NA						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	NA						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☒ Grab ☐ Bailor ☐ Pump Description: Peristaltic

Casing Volume: $(12.00 \text{ (TD)} - 7.92 \text{ (WL)}) \cdot [2 \text{ (Well ID)}]^2 \cdot [0.0408 \text{ (Conversion Factor)}] = 0.66 \text{ gal}$ <input type="checkbox"/> liters						Well Goes Dry While Purging <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	0	1.25	2.50	3.75	5	(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	1030	1035	1040	1045	1050			
pH (Temperature Corrected? <input type="checkbox"/> )	6.00	5.83	5.75	5.68	5.65			
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	21.57	21.72	21.58	21.54	21.61			
Dissolved Oxygen mg/L	4.02	3.18	2.75	2.70	2.68			
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <u>µS/cm</u>	0.144	0.143	0.153	0.129	0.127			
Turbidity <input checked="" type="checkbox"/> NTU	9.6	10.3	9.9	9.9	9.7			
Color/Tint	Clear							
Odor	None							
ORP	-125	-115	-108	-101	-99			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 10.0 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MV-165</u>	<u>P0</u>	<u>5/27/10</u>	<u>1055</u>	<u>3</u>					

Sample ID may be up to 18 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D1, Duplicate Sample; S1, Split Sample (sent to second lab); B1, Field Blank B1B, Equipment Blank; B1W, Trip Blank; S1W, Field Spike (1 = 1 to 5). Lab ID (up to 8 characters) is name of laboratory that will analyze the sample. Case ID (up to 8 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmd/y. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) Byron Thomas Signature Byron Thomas



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland-Burnsville</u>	Site ID <u>MW-16D</u>
Other: <u>Delta Consultants</u>	Project No. <u>50984-850 9</u>	Date (m/d/y) <u>5/27/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 85 ☐ °C ☒ °F Weather: P.C.

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed: N/A

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ☒ ft ☐ m (above/below ground) Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input checked="" type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	1025	1025	1030	1045	1055	1100	
Depth to Water	9.07	6.07	6.05	5.92	5.90	5.91	
Tape Correction	N/A						
Water Level (WL)	9.07	9.07	9.05	8.92	8.90	8.91	
Product Thickness	N/A						
Product Recovery	N/A						
<input type="checkbox"/> gallons <input type="checkbox"/> liters	N/A						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factors. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 84.00 ☒ Grab ☐ Bailor ☐ Pump Description: Monsoon w/Regulator

Field WQ Data							Purge Depth: 0.00	Crude	Salinity	Conductivity
Casing Volume: $[P1.22 (TD) - 9.07 (WL)] \cdot [2 (Well ID)]^2 \cdot [0.0408 (Conversion Factor)] = 12.75$ <input checked="" type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>			
Conversion Factor = 0.0408 for feet and gallons; 0.1644 for feet and liters; 0.5066 for meters and liters; Well ID in inches										
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	0	.50	1.25	2.25	3.25	4.25	(Final)	Meter Type	Remarks	
Time (hh:mm; 24-hr clock)	1030	1035	1040	1045	1050	1055				
pH (Temperature Corrected? <input type="checkbox"/> )	8.20	8.21	8.21	8.21	8.21	8.20				
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	23.41	23.43	23.45	23.48	23.48	23.48				
Dissolved Oxygen mg/L	1.54	1.03	0.89	0.83	0.81	0.85				
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu S/cm$	25.6	71.5	45.0	32.2	25.2	28.3				
Turbidity <input checked="" type="checkbox"/> NTU	21.4	13.1	9.5	8.9	8.2	8.5				
Color/Tint	N/A									
Odor	N/A									

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu S/cm$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu S/cm$ ).  $\mu S/cm = 1 \text{ mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 84.00 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu m$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-16D</u>	<u>P0</u>	<u>5/27/10</u>	<u>1100</u>	<u>3</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike ( $\# = 1$  to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) BW Howell Signature BW Howell



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-175</u>
Other: <u>Delta</u>	Project No. <u>509849509</u>	Date (m/d/y) <u>5/26/03</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 84 °C ☒ °F Weather: P.C.

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed: N/A

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 14.39

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1450</u>	<u>1455</u>	<u>1500</u>	<u>1510</u>	<u>1520</u>	<u>1525</u>	
Depth to Water	<u>7.33</u>	<u>7.33</u>					
Tape Correction	<u>N/A</u>						
Water Level (WL)							
Product Thickness	<u>NA</u>						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	<u>NA</u>						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 10.0 ☒ Grab ☐ Bailor ☐ Pump Description: Residual

Casing Volume: $\frac{14.39 \text{ (TD)} - 7.33 \text{ (WL)}}{2} \times \frac{1.0408 \text{ (Conversion Factor)}}{1} = 1.15$ gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	
Turbidity <input checked="" type="checkbox"/> NTU	
Color/Tint	
Odor	
<u>ORP</u>	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: 10.0 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-175</u>	<u>P0</u>	<u>5/26/03</u>	<u>1520</u>	<u>3</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; DA, Duplicate Sample; SR, Split Sample (sent to second lab); BFA, Field Blank; BRK, Equipment Rinse; BTB, Trip Blank; SFK, Field Spike (1 = 1 to 9). Lab ID (up to 6 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) BS THOMAS Signature [Signature]



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-170</u>
Other: <u>Delta</u>	Project No. <u>508849509</u>	Date (m/d/y) <u>5/26/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>85</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>P.C.</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>N/A</u>
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m (above/below ground)	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data		Measurement Units: <input checked="" type="checkbox"/> ft <input type="checkbox"/> m		Well or Borehole Total Depth (TD) from MP or TOC: <u>86.86</u>				
<input type="checkbox"/> E-Taps, #	<input checked="" type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)		<u>1455</u>	<u>1455</u>	<u>1500</u>	<u>1505</u>	<u>1510</u>		
Depth to Water		<u>6.22</u>	<u>6.22</u>	<u>6.22</u>	<u>6.15</u>	<u>6.10</u>	<u>6.12</u>	
Tape Correction		<u>N/A</u>						
Water Level (WL)		<u>9.22</u>	<u>9.22</u>	<u>9.22</u>	<u>9.15</u>	<u>9.10</u>	<u>9.12</u>	
Product Thickness		<u>N/A</u>						
Product Recovery		<u>N/A</u>						
<input type="checkbox"/> gallons <input type="checkbox"/> liters								

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 78.0 ☒ Grab ☐ Bailor ☐ Pump Description: Monsieur w/Regulator

Casing Volume: $[P.L. (ft) \times 9.22 (WL)] \times [Z (Well ID)]^2 \times [0.0008 (Conversion Factor)] =$ <u>2.0</u> gal <input type="checkbox"/> gal <input type="checkbox"/> liters						Well Goes Dry While Purging <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input checked="" type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate					(Final)	Meter Type	Remarks
		<u>.50</u>	<u>1.0</u>	<u>2.0</u>				
Time (hh:mm; 24-hr clock)		<u>1500</u>	<u>1505</u>	<u>1510</u>				
pH (Temperature Corrected) <input checked="" type="checkbox"/>		<u>12.53</u>	<u>12.55</u>	<u>12.55</u>				
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F		<u>23.49</u>	<u>23.14</u>	<u>23.14</u>				
Dissolved Oxygen mg/L		<u>5.43</u>	<u>5.19</u>	<u>5.04</u>				
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu S/cm$		<u>7.38</u>	<u>7.40</u>	<u>7.39</u>				
Turbidity <input checked="" type="checkbox"/> NTU		<u>5.1</u>	<u>5.0</u>	<u>5.2</u>				
Color/Tint		<u>N/A</u>	<u>N/A</u>	<u>N/A</u>				
Odor		<u>N/A</u>	<u>N/A</u>	<u>N/A</u>				

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu S/cm$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu S/cm$ ).  $\mu S/cm = \mu mho/cm$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: 78.0 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu m$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-170</u>	<u>P0</u>	<u>5/26/10</u>	<u>1520</u>	<u>3</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D1, Duplicate Sample; S1, Split Sample (sent to second lab); BFA, Field Blank; BAV, Equipment Rinse; BTL, Trip Blank; SP#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>BW HOWELL</u>	Signature <u>BW Howell</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-18</u>
Other: <u>Delta</u>	Project No. <u>509849509</u>	Date (m/d/y) <u>5/26/10</u>

Site Description <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Irrigation Well <input type="checkbox"/> Spring <input type="checkbox"/> Borehole <input type="checkbox"/> Probe Other:	
Air Temp: <u>82°</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>P.C.</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>4/4</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:	
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data		Measurement Units: <input checked="" type="checkbox"/> ft <input type="checkbox"/> m		Well or Borehole Total Depth (TD) from MP or TOC: <u>126.89</u>			
<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>0945</u>	<u>0945</u>	<u>0950</u>	<u>1010</u>	<u>1020</u>	<u>1025</u>	
Depth to Water	<u>14.41</u>	<u>14.41</u>	<u>14.41</u>	<u>14.22</u>	<u>14.17</u>	<u>14.14</u>	
Tape Correction	<u>N/A</u>						
Water Level (WL)	<u>17.41</u>	<u>17.41</u>	<u>17.41</u>	<u>17.22</u>	<u>17.17</u>	<u>17.14</u>	
Product Thickness	<u>N/A</u>						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	<u>N/A</u>						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if when observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

Field WQ Data		Purge Depth: <u>120.0</u>		<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Bailor <input type="checkbox"/> Pump		Description: <u>Munroe, w/Regulator</u>	
Casing Volume: $[(26.83 \text{ (TO)} - 17.41 \text{ (WL)}) \times 2 \text{ (Well ID)}]^2 \times 0.049 \text{ (Conversion Factor)} = 17.86 \text{ gal}$		<input type="checkbox"/> gal <input type="checkbox"/> liters		Well Goes Dry While Purging <input type="checkbox"/>			
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5065 for meters and liters; Well ID in inches							
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	3.0	5.0	8.0	11.0		(Final)	Meter Type
Time (hh:mm; 24-hr clock)	<u>0950</u>	<u>1000</u>	<u>1010</u>	<u>1020</u>			
pH (Temperature Corrected? <input checked="" type="checkbox"/> )	<u>10.23</u>	<u>9.96</u>	<u>9.48</u>	<u>9.24</u>			
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>22.12</u>	<u>22.68</u>	<u>22.75</u>	<u>22.97</u>			
Dissolved Oxygen mg/L	<u>2.51</u>	<u>2.36</u>	<u>2.21</u>	<u>2.18</u>			
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	<u>0.488</u>	<u>0.433</u>	<u>0.384</u>	<u>0.364</u>			
Turbidity <input checked="" type="checkbox"/> NTU	<u>31.2</u>	<u>20.7</u>	<u>15.2</u>	<u>6.9</u>			
Color/Tint	<u>Clear</u>	<u>Clear</u>	<u>Clear</u>	<u>Clear</u>			
Odor	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data		Sample Depth: <u>120.0</u>		<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Bailor <input type="checkbox"/> Pump		Description:	
Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID
<u>MW-18</u>	<u>PO</u>	<u>5/26/10</u>	<u>1025</u>				

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: PO, Primary Sample; DS, Duplicate Sample; SF, Split Sample (sent to second lab); BF, Field Blank; BR, Equipment Rinse; BT, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmsdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>BW Howell</u>	Signature <u>BW Howell</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-19S</u>
Other: <u>Delta</u>	Project No. <u>509849509</u>	Date (m/d/y) <u>5/26/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>83</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>Cloudy</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>N/A</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> ft <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 18.30

<input type="checkbox"/> E-Taps, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	1145	1145	1150	1205	1215	1220	
Depth to Water	11.09	11.09	11.12	11.66	11.65	11.62	
Tape Correction	N/A						
Water Level (WL)	8.09	8.09	8.12	8.66	8.65	8.62	
Product Thickness	N/A						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	N/A						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cased. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

Field WQ Data Purge Depth: 15.0 ☒ Grab ☐ Bailor ☐ Pump Description: Reinstalled

Casing Volume: $[18.30 \text{ (TD)} - 11.09 \text{ (WL)}] \times [2 \text{ (Well ID)}]^2 \times [0.008 \text{ (Conversion Factor)}] = 1.17 \text{ gal}$ <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	
Time (hh:mm; 24-hr clock)	0 1 2 3 4 5 (Final)
pH (Temperature Corrected? <input type="checkbox"/> )	7.92 7.97 8.05 8.06 8.04 8.09
Temperature °C <input checked="" type="checkbox"/> °F	25.44 23.79 23.86 23.75 23.77 23.76
Dissolved Oxygen mg/L	1.18 0.96 0.78 0.58 0.62 0.57
<input type="checkbox"/> SC or <input type="checkbox"/> EC µS/cm	26.1 5.23 2.86 1.50 1.54 1.50
Turbidity <input type="checkbox"/> NTU	95.6 87.9 82.5 96.7 46.9 46.5
Color/Tint	Clear Clear Clear Clear Clear Clear
Odor	None None None None None None
ORP	-102 -117 -126 -135 -139 -146

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: 15.0 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-19S</u>	<u>P0</u>	<u>5/26/10</u>	<u>1220</u>	<u>3</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D1, Duplicate Sample; S1, Split Sample (sent to second lab); B1, Field Blank; B1R, Equipment Rinse; B1E, Trip Blank; S1F, Field Spike (1 to 5). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mm/dd/yy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>R. S. THOMAS</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-19T</u>
Other: <u>Detter</u>	Project No. <u>508849509</u>	Date (m/d/y) <u>5/26/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 85 °C ☐ °F Weather: P.C.

Well Locked? ☒ Yes ☐ No Damaged/Repairs Needed: N/A

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ft ☐ m (above/below ground) Well Inside Diameter (ID): ☐ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tides, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 42.12

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	1245	1245	1250	1255	1300	1305	
Depth to Water	8.61	8.61	8.61	8.42	8.38	8.35	
Tape Correction	N/A						
Water Level (WL)	11.61	11.61	11.61	11.42	11.38	11.35	
Product Thickness	N/A						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	N/A						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 35.0 ☒ Grab ☐ Bailor ☐ Pump Description: Monsoon w/Regulator

Casing Volume: $(42.12 \text{ (TD)} - 11.61 \text{ (WL)}) \cdot [2 \text{ (Well ID)}]^2 \cdot [0.408 \text{ (Conversion Factor)}] = 4.97$ <input checked="" type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	1.5	2.75	3.75			(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	1250	1255	1300					
pH (Temperature Corrected? <input checked="" type="checkbox"/> )	6.78	6.76	6.75					
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	24.06	24.04	24.05					
Dissolved Oxygen mg/L	2.83	2.28	2.14					
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	1.29	1.29	1.31					
Turbidity <input type="checkbox"/> NTU	28.6	28.7	27.2					
Color/Tint	Clear	Clear	Clear					
Odor	N/A	N/A	N/A					

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 35.0 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
MW-19T	PO	5/26/10	1305	3					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: PO, Primary Sample; DS, Duplicate Sample; SS, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 6 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a copier ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) RW Howell Signature RW Howell



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-19D</u>
Other: <u>Delta</u>	Project No. <u>508849509</u>	Date (m/d/y) <u>5/26/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 85° ☐ °C ☒ °F Weather: P.C.

Well Locked? ☒ Yes ☐ No Damaged/Repairs Needed: N/A

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	1150	1150	1155	1205	1215	1220	
Depth to Water	12.55	12.55	12.55	12.41	12.36	12.33	
Tape Correction	N/A						
Water Level (WL)	15.55	15.55	15.55	15.41	15.36	15.33	
Product Thickness	N/A						
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters	N/A						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if when observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

Field WQ Data Purge Depth: 80.0 ☒ Grab ☐ Bailor ☐ Pump Description: Monsoon w/Regulator

Casing Volume: $[87.0(TD) - 15.55(WL)] \cdot [2(Well ID)]^2 \cdot [0.0408(Conversion Factor)] = 11.77$ <input checked="" type="checkbox"/> gal <input type="checkbox"/> liters						Well Goes Dry While Purging <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	1.5 <del>1.55</del>	2.5	3.5	4.5	5.0	(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	1155	1200	1205	1210	1215			
pH (Temperature Corrected? <input checked="" type="checkbox"/> )	11.97	12.02	12.05	12.06	12.05			
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	24.22	24.09	24.01	24.07	23.80			
Dissolved Oxygen mg/L	5.20	5.01	4.93	4.89	4.68			
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu S/cm$	3.71	3.42	3.24	3.14	3.05			
Turbidity <input checked="" type="checkbox"/> NTU	2.1	2.7	0.9	0.6	1.0			
Color/Tint	Clear	Clear	Clear	Clear	Clear			
Odor	N/A	N/A	N/A	N/A	N/A			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu S/cm$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu S/cm$ ).  $\mu S/cm = \mu mho/cm$ . 1 gallon (US) = 3.785 L = 0.833 imperial gallon.

Sample Data Sample Depth: 80.0 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu m$ )	Lab ID	Case ID	SDG ID	Remarks
MW-19D	P0	5/26/10	1225	3					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D1, Duplicate Sample; S1, Split Sample (sent to second lab); B1, Field Blank; B2, Equipment Rinse; B3, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) BW Howell Signature BW Howell



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Asphalt - Runway</u>	Site ID <u>MW-205</u>
Other: <u>IES - Derek Roth</u>	Project No. <u>J0981-850-9</u>	Date (m/d/y) <u>6/2/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>78</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>None</u>
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <input type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 12.33

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1020</u>						
Depth to Water	<u>7.39</u>	<input checked="" type="checkbox"/>	<u>8.99</u>	<u>9.08</u>	<u>9.16</u>		
Tape Correction							
Water Level (WL)	<u>7.39</u>		<u>8.99</u>	<u>9.08</u>	<u>9.16</u>		
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: peristaltic

Casing Volume: [ (TD) - (WL) ] * [ (Well ID) ] <sup>2</sup> * [ (Conversion Factor) ] = <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches		
<input checked="" type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate	(Final)
Time (hh:mm; 24-hr clock)		Meter Type
pH (Temperature Corrected? <input type="checkbox"/> )		Remarks
Temperature °C <input type="checkbox"/> °F		
Dissolved Oxygen mg/L		
<input type="checkbox"/> SC or <input type="checkbox"/> EC µS/cm		
Turbidity <input type="checkbox"/> NTU		
Color/Tint		
Odor		
<u>ORP</u>	<u>-174</u>	<u>-170</u>
	<u>-139</u>	<u>-144</u>
	<u>-152</u>	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description: peristaltic

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-205</u>	<u>P0</u>	<u>6/2/10</u>	<u>1035</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or nmddyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)	Signature
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland - Brunswick</u>	Site ID <u>Mw-20J</u>
Other: <u>ES - Derek Roth</u>	Project No. <u>A0084-8509</u>	Date (m/d/y) <u>6/2/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>82</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>None</u>
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> ft <input checked="" type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC 2.43

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1205</u>		<u>1210</u>	<u>1220</u>	<u>1230</u>		
Depth to Water	<u>5.49</u>		<u>8.07</u>	<u>8.44</u>	<u>8.49</u>		
Tape Correction							
Water Level (WL)	<u>5.49</u>		<u>8.07</u>	<u>8.44</u>	<u>8.49</u>		
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☐ Pump Description: SS Mega Monsoon

Casing Volume: [ (TD) - (WL) ] • [ (Well ID) ] <sup>2</sup> • [ (Conversion Factor) ] = <input type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged	750 ml m	750 ml m	750 ml m	→		(Final)	Meter Type	Remarks
<input type="checkbox"/> Pumping Rate								
Time (hh:mm; 24-hr clock)	1205	1210	1215	1220	1225	1230	Horiba U-22	
pH (Temperature Corrected? <input type="checkbox"/> )	7.47	7.45	7.44	7.40	7.39	7.38		
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	24.08	23.70	23.68	23.59	23.57	23.56		
Dissolved Oxygen mg/L	0.53	0.55	0.57	0.28	0.26	0.29		
<input type="checkbox"/> SC or <input checked="" type="checkbox"/> EC $\mu$ S/cm	1.23	2.17	2.11	2.00	1.97			
Turbidity <input type="checkbox"/> NTU	704	329	347	115	109	106		
Color/Tint	cloudy	cloudy	cloudy	cloud	cloud	cloudy		
Odor	0.6P	-163	-162	-163	-161	-164		

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description: SS Mega Monsoon

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>Mw-20J</u>	<u>P0</u>	<u>6/2/10</u>	<u>1230</u>	<u>5</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BBA#, Equipment Rinsate; BTH, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) \_\_\_\_\_ Signature \_\_\_\_\_



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW20P</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>6/2/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>9°</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Damaged/Repairs Needed: <u>No</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1140</u>						
Depth to Water	<u>7.67</u>			<u>7.98</u>			
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description:

Casing Volume: [ ] (TD) - [ ] (WL) * [ ] (Well ID)² * [ ] (Conversion Factor) = <u>650</u> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Meter Type
<input checked="" type="checkbox"/> Pumping Rate	Remarks
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> MS/cm	
Turbidity <input checked="" type="checkbox"/> NTU	
Color/Tint	
ORP	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is ppm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-20P</u>	<u>P0</u>	<u>6/2/10</u>	<u>1200</u>						<u>VOCs</u>
<u>Ashland</u>		<u>6/2/10</u>	<u>1200</u>						<u>TOC</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; B#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (n = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab's request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Signature



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>ES - Derek R</u>	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-255</u>
Project No.	Date (m/d/y) <u>6/3/10</u>	

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 85 °C ☐ °F Weather: Sunny

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed:

☐ TOC ☐ MP Description:

TOC/MP Stickup: ☐ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 12.80

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>6.29</u>		<u>7.45</u>	<u>7.73</u>	<u>7.90</u>		
Tape Correction							
Water Level (WL)	<u>6.29</u>		<u>7.46</u>	<u>7.73</u>	<u>7.90</u>		
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: peristaltic

Casing Volume: [ (TD) - (WL) ] * [ (Well ID) ] <sup>2</sup> * [ (Conversion Factor) ] = <u>1</u> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input checked="" type="checkbox"/> Cum. Vol. Purged <input checked="" type="checkbox"/> Pumping Rate	(Final) Meter Type Remarks
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/>	
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description: peristaltic

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-255</u>	<u>P0</u>	<u>6/3/10</u>	<u>0855</u>	<u>5</u>	<input checked="" type="checkbox"/>				
<u>VOLs + Toxaphene</u>									

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmddyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Signature

users/forms/SampLog.doc/5/8/02

Date Entered into Database \_\_\_\_\_ By \_\_\_\_\_

Page \_\_\_\_ of \_\_\_\_



# GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility	Site ID <i>MW-250</i>
Other: <i>ES - Derek Roth</i>	Project No.	Date (m/d/y) <i>10/3/12</i>

**Site Description** ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe ☐ Other:

Air Temp: ☐ °C ☐ °F Weather: Sunny  
Well Locked? ☒ yes ☐ no Damaged/Repairs Needed: None

☐ TOC ☐ MP Description:

TOC/MP Stickup: ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

**Water Level Data** Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other _____		Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	Purging During	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)		0905		0905	0920	0932		
Depth to Water		7.60		14.24	14.61	14.93		
Tape Correction		<del>7.60</del>		<del>14.24</del>				
Water Level (WL)		7.60		14.24	14.61	14.93		
Product Thickness								
Product Recovery								
<input type="checkbox"/> gallons <input type="checkbox"/> liters								

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; Record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.1 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian flow); R - recently observed; C - cased. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if when pumped. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

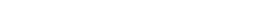
**Field WQ Data**      Purge Depth: \_\_\_\_\_      ☐ Grab    ☐ Bailor    ☐ Pump      Description: *SS mega monsoon*

Casing Volume: [ ] (YD) - [ ] (WL) * [ ] (Well ID) * [ ] (Conversion Factor) = [ ] gal □ liters							Well Goes Dry While Pumping □	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
□ Cum. Vol. Purged □ Pumping Rate	750 <i>mg</i>					(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	0905	0910	0915	0920	0925	0930		
pH (Temperature Corrected? □)	7.30	7.35	7.43	7.42	7.44	7.43		
Temperature □°C □°F	24.89	24.10	24.07	24.02	24.00	24.00		
Dissolved Oxygen mg/L	1.29	1.86	0.87	0.61	0.53	0.69	0.58	
□ SC or □ EC μS/cm	0.987	0.999	1.13	1.27	1.29	1.27		
Turbidity <input checked="" type="checkbox"/> NTU	75.2	59.7	47.3	49.2	49.8	46.3		
Color/Tint		cloudy	cloudy	cloudy	cloudy	cloudy		
Odor								
ORP	-134	-135	-138	-140	-141	-140		

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S}/\text{cm}$  at  $25^\circ\text{C}$ ); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S}/\text{cm}$ ).  $\mu\text{S}/\text{cm} = \mu\text{mho}/\text{cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data		Sample Depth:		<input type="checkbox"/> Grab <input type="checkbox"/> Bailor <input checked="" type="checkbox"/> Pump			Description: <i>monsoon</i>			
Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks	
<i>MW-25D</i>	<i>P0</i>	<i>6/3/10</i>	<i>0930</i>	<i>5</i>	<i>/</i>	<i>/</i>	<i>/</i>	<i>/</i>	<i>/</i>	
<i>VOCS &amp; Toxaplex</i>										

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; O1, Duplicate Sample; S1, Split Sample (sent to second lab); B1F, Field Blank; B1R, Equipment Rinse; B1T, Trip Blank; S1F, Field Spike (# = 1 to 9). Lab ID (up to 8 characters) is name of laboratory that will analyze the sample. Case ID (up to 8 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mm/dd/yy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)	Deck Rysh	Signature	
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-270</u>
Other: <u>Delta</u>	Project No. <u>509849509</u>	Date (m/d/y) <u>5/26/10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 85° ☐ °C ☒ °F Weather: P.C.

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed: N/A

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 88.28

<input type="checkbox"/> E-Taps, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1340</u>	<u>1340</u>	<u>1345</u>	<u>1355</u>	<u>1400</u>	<u>1405</u>	
Depth to Water	<u>8.29</u>	<u>8.29</u>	<u>8.29</u>	<u>8.26</u>	<u>8.23</u>	<u>8.19</u>	
Tape Correction	<u>N/A</u>						
Water Level (WL)	<u>11.29</u>	<u>11.29</u>	<u>11.29</u>	<u>11.26</u>	<u>11.23</u>	<u>11.19</u>	
Product Thickness	<u>N/A</u>						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	<u>N/A</u>						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 81.0 ☒ Grab ☐ Bailor ☐ Pump Description: Monitors w/Regulator

Casing Volume: [88.28 (TD) - 11.29 (WL)] * [2 (Well ID)] <sup>2</sup> * [0.0408 (Conversion Factor)] = 12.56 gal <input type="checkbox"/> gal <input type="checkbox"/> liters					Well Goes Dry While Purging <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches							
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	0.75	2.25	3.25	4.50	(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	1345	1350	1355	1400			
pH (Temperature Corrected) <input checked="" type="checkbox"/>	6.85	6.84	6.80	6.77			
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	23.34	23.21	23.24	23.20			
Dissolved Oxygen mg/L	3.17	2.21	2.07	2.02			
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	9.3	10.1	10.3	10.3			
Turbidity <input checked="" type="checkbox"/> NTU	3.4	1.6	1.0	0.9			
Color/Tint	Clear	N/A	N/A	N/A			
Odor	N/A	N/A	N/A	N/A			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = 1 \text{ mho/cm}$ , 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 81.0 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-270</u>	<u>P0</u>	<u>5/26/10</u>	<u>1405</u>	<u>5</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or maddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) BW Howell Signature BW Howell



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta Delta</u>	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-28D</u>
	Project No.	Date (m/d/y) <u>6/8/10</u>

**Site Description** ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>85</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>Clear skies</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>None</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description: <u>Above Grade</u>	
TOC/MP Stickup: <u>2</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m <u>above</u> below ground	
Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:	
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

**Water Level Data** Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 90.76

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>6.50</u>			<u>6.21</u>			
Tape Correction	<u>-</u>						
Water Level (WL)	<u>6.50</u>						
Product Thickness	<u>-</u>						
Product Recovery	<u>-</u>						
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: Submersible Monsoon

Casing Volume: [_____] (TD) - [_____] (WL) • [_____] (Well ID) • [_____] (Conversion Factor) = _____ <input type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged <input checked="" type="checkbox"/> Pumping Rate	<u>500 ml/min</u>					(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<u>Initial</u>	<u>1600</u>	<u>1603</u>	<u>1610</u>	<u>1615</u>	<u>1620</u>	<u>Handy</u>	
pH (Temperature Corrected? <input type="checkbox"/> )	<u>6.20</u>	<u>6.19</u>	<u>6.04</u>	<u>6.00</u>	<u>5.98</u>	<u>5.99</u>	<u>u-22</u>	
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>23.41</u>	<u>23.34</u>	<u>23.26</u>	<u>23.21</u>	<u>23.25</u>	<u>23.23</u>		
Dissolved Oxygen mg/L	<u>3.88</u>	<u>2.70</u>	<u>2.79</u>	<u>2.80</u>	<u>2.87</u>	<u>3.01</u>		
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm	<u>5.33</u>	<u>5.52</u>	<u>6.56</u>	<u>6.63</u>	<u>6.71</u>	<u>6.77</u>		
Turbidity <input type="checkbox"/> NTU	<u>42.3</u>	<u>14.8</u>	<u>13.3</u>	<u>12.3</u>	<u>12.7</u>	<u>13.2</u>		
Color/Tint	<u>clear</u>	<u>clear</u>	<u>clear</u>	<u>clear</u>	<u>clear</u>	<u>clear</u>		
Odor <u>TDS g/L</u>	<u>3.69</u>	<u>4.88</u>	<u>4.00</u>	<u>4.09</u>	<u>4.19</u>	<u>4.27</u>		
<u>ORP mV</u>	<u>-107</u>	<u>-112</u>	<u>-114</u>	<u>-114</u>	<u>-117</u>	<u>-115</u>		

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description: SAA

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-28D</u>	<u>P0</u>	<u>6/8/10</u>	<u>1620</u>	<u>3</u>	<u>No</u>	<u>T.A.</u>	<u>-</u>	<u>-</u>	<u>Vol.</u>
<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Signature



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-305</u>
Other: <u>Delta Consultants</u>	Project No. <u>508849509</u>	Date (m/d/y) <u>5/27/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>92</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Damaged/Repairs Needed: <u>NA</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m (above/below ground)	Well Inside Diameter (ID): <u>2</u> -inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tides, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 12.85

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1205</u>	<u>1205</u>	<u>1210</u>	<u>1220</u>	<u>1230</u>	<u>1240</u>	
Depth to Water	<u>6.30</u>	<u>6.30</u>	<u>6.42</u>	<u>6.68</u>	<u>6.71</u>	<u>6.61</u>	
Tape Correction	<u>N/A</u>						
Water Level (WL)	<u>3.30</u>	<u>3.30</u>	<u>3.42</u>	<u>3.68</u>	<u>3.71</u>	<u>3.61</u>	
Product Thickness	<u>NA</u>						
Product Recovery	<u>NA</u>						
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 11.0 ☒ Grab ☐ Baller ☐ Pump Description: Peristaltic

Casing Volume: $[17.85(\text{TD}) - 6.30(\text{WL})] \cdot [2(\text{Well ID})]^2 \cdot [0.0408(\text{Conversion Factor})] = 1.07 \text{ gal}$ <input type="checkbox"/> liters						Well Goes Dry While Purging <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	0	1.25	2.50	3.75	5.00	(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	1210	1215	1220	1225	1230			
pH (Temperature Corrected? <input type="checkbox"/> )	4.98	4.97	4.98	4.88	4.87			
Temperature °C <input checked="" type="checkbox"/> °F	21.56	21.89	22.10	22.12	22.18			
Dissolved Oxygen mg/L	4.35	3.72	2.81	2.86	2.89			
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S}/\text{cm}$	0.132	0.128	0.127	0.128	0.120			
Turbidity <input checked="" type="checkbox"/> NTU	9.3	9.5	9.5	9.2	9.4			
Color/Tint	Clear	—	—	—	—			
Odor	None	—	—	—	—			
ORP	164	164	164	144	185			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling. In gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S}/\text{cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S}/\text{cm}$ ).  $\mu\text{S}/\text{cm} = \mu\text{mho}/\text{cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 11.0 ☒ Grab ☐ Baller ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-305</u>	<u>PO</u>	<u>5/27/10</u>	<u>1235</u>	<u>5</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: PO, Primary Sample; DU, Duplicate Sample; SF, Split Sample (sent to second lab); BF, Field Blank; BR, Equipment Rinse; BT, Trip Blank; SF, Field Spike (if = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) BS THOMAS Signature [Signature]



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta Consultants</u>	Facility <u>Ashland-Burnsville</u>	Site ID <u>HLW-30D</u>
	Project No. <u>50984-850-9</u>	Date (m/d/y) <u>5/27/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>85</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>D.C.</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>N/A</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> ft <input checked="" type="checkbox"/> m <u>above</u> below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 88.02

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	1150	1150	1155	1205	1220	1225	
Depth to Water	5.11	5.11	5.10	5.01	4.72	4.70	
Tape Correction	N/A						
Water Level (WL)	8.11	8.11	8.10	8.01	7.72	7.70	
Product Thickness	N/A						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	N/A						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice: record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if shown observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 85.00 ☒ Grab ☐ Bailor ☐ Pump Description: Monsoon w/ Regulation

Casing Volume: $[88.02 \text{ (TD)} - 8.11 \text{ (WL)}] \cdot [0.0408 \text{ (Well ID)}]^2 \cdot [3.04 \text{ (Conversion Factor)}] = 23.04$ <input checked="" type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5068 for meters and liters; Well ID in inches								
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate						(Final)	Meter Type	Remarks
	0	1.50	2.50	3.75	4.15	5.75		
Time (hh:mm; 24-hr clock)	1155	1200	1205	1210	1215	1220		
pH (Temperature Corrected? <input type="checkbox"/> )	7.85	7.82	7.79	7.75	7.74	7.74		
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	22.65	22.41	22.34	22.36	22.36	22.36		
Dissolved Oxygen mg/L	0.61	0.41	0.28	0.22	0.26	0.24		
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	99.9	99.9	99.9	99.9	99.9	99.9		
Turbidity <input checked="" type="checkbox"/> NTU	24.6	16.8	12.9	9.7	7.3	8.1		
Color/Tint	N/A							
Odor	N/A							

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 85.00 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
HLW 30D	P0	5/27/10	1225	3					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (if = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>BW Howell</u>	Signature <u>BW Howell</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility <u>Ashland Brunswick</u>	Site ID <u>MW31D</u>
	Project No.	Date (m/d/y) <u>6/8/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Damaged/Repairs Needed:
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 87

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	11.0		11.49	11.41			
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 84 ☐ Grab ☐ Bailor ☒ Pump Description: SS Mega Monsoon

Casing Volume: [____(TD) - ____ (WL)] • [____ (Well ID)] <sup>2</sup> • [____ (Conversion Factor)] = ____ <input type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged	<input checked="" type="checkbox"/> Pumping Rate					(Final)	Meter Type	Remarks
		600ml	600ml	600ml/min				
Time (hh:mm; 24-hr clock)		13:15	13:20	13:25				Horrible
pH (Temperature Corrected? <input type="checkbox"/> )		6.39	6.37	6.38				U-22
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F		23.06	23.02	23.04				
Dissolved Oxygen mg/L		2.59	2.59	2.59				
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> MS/cm		150	156	159				
Turbidity <input checked="" type="checkbox"/> NTU		14.5	12.5	10.5				
Color/Tint								
Odor		-93	-90	-85				

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW31D</u>	<u>P0</u>	<u>6/8/10</u>	<u>1330</u>	<u>3</u>					<u>+330</u> <u>VOCS</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Signature



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland-Burnsville</u>	Site ID <u>MW-32D</u>
Other: <u>Delta Consultants</u>	Project No. <u>JO984-850-9</u>	Date (m/d/y) <u>5/27/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 88 ☐ °C ☒ °F Weather: P.C.

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed: N/A

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ☒ ft ☐ m (above/below ground) Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1300</u>	<u>1300</u>	<u>1305</u>	<u>1320</u>	<u>1325</u>	<u>1330</u>	
Depth to Water	<u>6.30</u>	<u>6.30</u>	<u>6.31</u>	<u>6.15</u>	<u>6.08</u>	<u>6.03</u>	
Tape Correction	<u>N/A</u>						
Water Level (WL)	<u>9.30</u>	<u>9.30</u>	<u>9.31</u>	<u>9.15</u>	<u>9.08</u>	<u>9.08</u>	
Product Thickness	<u>N/A</u>						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	<u>N/A</u>						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 85.00 ☒ Grab ☐ Bailor ☐ Pump Description:

Casing Volume: $[81.31 \text{ (TD)} - 9.31 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.0408 \text{ (Conversion Factor)}] = 12.73$ <input checked="" type="checkbox"/> gal <input type="checkbox"/> liters						Well Goes Dry While Purging <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate						(Final)	Meter Type	Remarks
	.60	1.75	2.75	3.75	4.75			
Time (hh:mm; 24-hr clock)	1305	1310	1315	1320	1325			
pH (Temperature Corrected? <input checked="" type="checkbox"/> )	8.00	7.61	7.55	7.55	7.55			
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	23.63	23.63	23.42	23.42	23.42			
Dissolved Oxygen mg/L	1.43	1.00	0.78	0.77	0.75			
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	51.8	60.7	55.2	55.5	54.8			
Turbidity <input checked="" type="checkbox"/> NTU	19.7	10.2	10.0	8.2	9.6			
Color/Tint	N/A	N/A	N/A	N/A	N/A			
Odor	↓	↓	↓	↓	↓			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 85.00 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-32D</u>	<u>P0</u>	<u>5/27/10</u>	<u>1330</u>	<u>5</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; B#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) BW Howell

Signature BW Howell



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Asiand Burnside</u>	Site ID <u>MW-33</u>
Other: <u>DELTA CONSULTANTS</u>	Project No. <u>50984-850-9</u>	Date (m/d/y) <u>5/27/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>88</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>P.C.</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>N/A</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m <input type="checkbox"/> (above/below ground)	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 127.86

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	1425	1425	1430	1445	1455	1500	
Depth to Water	2.96	2.96	2.95	2.81	2.63	2.63	
Tape Correction	N/A						
Water Level (WL)	5.96	5.96	5.95	5.81	5.63	5.63	
Product Thickness	N/A						
Product Recovery	N/A						
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 120.00 ☒ Grab ☐ Bailor ☐ Pump Description: Monsieur w/Regulator

Casing Volume: $[127.86(\text{ID}) - 5.96(\text{WU})] \cdot [2 (\text{Well ID})]^2 \cdot [0.408 (\text{Conversion Factor})] = 19.89$ <input checked="" type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input checked="" type="checkbox"/> Cum. Vol. Purged						(Final)	Meter Type	Remarks
<input type="checkbox"/> Pumping Rate	0.25	1.50	2.25	3.25	4.25	5.25		
Time (hh:mm; 24-hr clock)	1430	1435	1440	1445	1450	1455		
pH (Temperature Corrected? <input checked="" type="checkbox"/> )	7.61	8.35	8.34	8.33	8.34	8.34		
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	24.70	24.57	24.51	24.43	24.43	24.43		
Dissolved Oxygen mg/L	0.72	0.37	0.37	0.27	0.32	0.35		
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	99.9	99.9	99.9	99.9	99.9	99.9		
Turbidity <input type="checkbox"/> NTU	28.2	22.8	22.4	9.6	9.2	10.0		
Color/Tint	N/A	N/A	N/A	N/A	N/A	N/A		
Odor	↓	↓	↓	↓	↓	↓		

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 120.0 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-33</u>	<u>P0</u>	<u>5/27/10</u>	<u>1505</u>	<u>3</u>					

Sample ID may be up to 18 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) BW Howell

Signature BW Howell



# GROUNDWATER SAMPLING RECORD

<b>Sampled By</b> <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	<b>Facility</b> <u>Ashland Brunswick</u>	<b>Site ID</b> <u>MW34</u>
	<b>Project No.</b>	<b>Date (m/d/y)</b> <u>6/8/10</u>

<b>Site Description</b>		<input checked="" type="checkbox"/> Monitoring Well	<input type="checkbox"/> Extraction Well	<input type="checkbox"/> Irrigation Well	<input type="checkbox"/> Spring	<input type="checkbox"/> Borehole	<input type="checkbox"/> Probe	Other:	
Air Temp:	90	<input type="checkbox"/> °C	<input checked="" type="checkbox"/> °F	Weather:					
Well Locked?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no	Damaged/Repairs Needed:						
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:									
TOC/MP Stickup:	3	<input checked="" type="checkbox"/> ft	<input type="checkbox"/> m	above/below ground		Well Inside Diameter (ID):	<input checked="" type="checkbox"/> 2-inch	<input type="checkbox"/> 4-inch	Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)									

Water Level Data		Measurement Units: <input type="checkbox"/> ft <input type="checkbox"/> m		Well or Borehole Total Depth (TD) from MP or TOC: 127			
<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	/	/	/	/	/	/	/
Depth to Water	10.44	/	/	1060	/	/	/
Tape Correction	/	/	/	/	/	/	/
Water Level (WL)	/	/	/	/	/	/	/
Product Thickness	/	/	/	/	/	/	/
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	/	/	/	/	/	/	/

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pump-prising water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup Measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Temperature Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data		Purge Depth: 12.6		<input type="checkbox"/> Grab <input type="checkbox"/> Baller <input checked="" type="checkbox"/> Pump		Description: Mega Mmonson		
Casing Volume: [ ] (TD) - [ ] (WL) * [ ] (Well ID) <sup>2</sup> * [ ] (Conversion Factor) = [ ] <input type="checkbox"/> gal <input type="checkbox"/> liters Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches						Well Goes Dry While Purging <input type="checkbox"/>		
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	<del>600</del> mL/min →					(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)								Horribu
pH (Temperature Corrected? <input type="checkbox"/> )	7.61	7.63	7.63					u-22
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	23.69	23.49	23.49					
Dissolved Oxygen mg/L	2.05	2.26	2.24					
EPSC or <input type="checkbox"/> EC <input checked="" type="checkbox"/> µS/cm	413	418	418					
Turbidity <input checked="" type="checkbox"/> NTU	9.0	7.8	8.10					
Color/Tint								
Odor ORP	-234	-245	-244					

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc., in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S}/\text{cm}$  at  $25^\circ\text{C}$ ); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S}/\text{cm}$ ).  $\mu\text{S}/\text{cm} = \mu\text{mho}/\text{cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

[illegible]

Sample ID may be up to 18 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 6 characters) is name of laboratory that will analyze the sample. Case ID (up to 6 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mm/dd/yy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)	Signature
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility <u>Ashtland Blumwerk</u>	Site ID <u>MW-350</u>
	Project No.	Date (m/d/y) <u>6/8/10</u>

**Site Description** ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>85</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>Clear Skies</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>None</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description: <u>Above Ground</u>	
TOC/MP Stickup: <u>2</u> ft <input checked="" type="checkbox"/> ft <input type="checkbox"/> m (above/below ground) Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:	
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

**Water Level Data** Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 88.28

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water							
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: Submersible Pump

Casing Volume: [_____] (TD) - [_____] (WL) * [_____] (Well ID) * [_____] (Conversion Factor) = _____ gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged <input checked="" type="checkbox"/> Pumping Rate	500 ml/min					(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	<u>Initial</u>	<u>1605</u>	<u>1810</u>	<u>1815</u>	<u>1820</u>	<u>1825</u>	<u>Horiba</u>	
pH (Temperature Corrected? <input type="checkbox"/> )	<u>7.36</u>	<u>7.42</u>	<u>7.44</u>	<u>7.43</u>	<u>7.44</u>	<u>7.49</u>	<u>u-27</u>	
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>24.45</u>	<u>24.48</u>	<u>24.67</u>	<u>24.75</u>	<u>24.69</u>	<u>24.69</u>		
Dissolved Oxygen mg/L	<u>2.42</u>	<u>2.39</u>	<u>2.62</u>	<u>2.51</u>	<u>2.54</u>	<u>2.59</u>		
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm	<u>0.566</u>	<u>0.581</u>	<u>0.563</u>	<u>0.569</u>	<u>0.567</u>	<u>0.563</u>		
Turbidity <input checked="" type="checkbox"/> NTU	<u>32.5</u>	<u>30.9</u>	<u>34.7</u>	<u>34.1</u>	<u>33.9</u>	<u>33.7</u>		
Color/Tint	<u>Clear</u>	<u>Clear</u>	<u>Clear</u>	<u>Clear</u>	<u>Clear</u>	<u>Clear</u>		
Odor TDS g/L	<u>0.364</u>	<u>0.371</u>	<u>0.388</u>	<u>0.362</u>	<u>0.378</u>	<u>0.353</u>		
<u>ORP mV</u>	<u>-147</u>	<u>-125</u>	<u>-117</u>	<u>-112</u>	<u>-118</u>	<u>-120</u>		

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

**Sample Data** Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description: SAA

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-350</u>	<u>P0</u>	<u>6/8/10</u>	<u>1525</u>	<u>5</u>	<u>No</u>	<u>T.A.</u>	<u>-</u>	<u>-</u>	<u>VOCs</u>
									<u>Triphenyl</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Signature



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-375</u>
Other: <u>Delta</u>	Project No. <u>509849509</u>	Date (m/d/y) <u>5/25/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 85 °C ☒ °F Weather: Sunny / Partly cloudy

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed: N/A

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping (lids), stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 25.0

<input type="checkbox"/> E-Taps, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	1600	1605	1608	1610	1630	1655	
Depth to Water	7.70	7.70	7.74	7.97	7.89	7.85	
Tape Correction	N/A						
Water Level (WL)	4.70	4.70	4.74	4.97	4.89	4.85	
Product Thickness	NA	NA	NA	NA	NA	NA	
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	NA	NA	NA	NA	NA	NA	

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if shown observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

Field WQ Data Purge Depth: 20 ☒ Grab ☐ Bailor ☐ Pump Description: Peristaltic

Casing Volume: $[25_{(TD)} - 2.70_{(WL)}] \cdot [2''_{(Well ID)}]^2 \cdot [1.165_{(Conversion Factor)}] = 11.27$ gal <input checked="" type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.6066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate						(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	1600	1605	1610	1615	1620	1625		
pH (Temperature Corrected? <input type="checkbox"/> )	5.58	5.56	5.57	5.55	5.55	5.54		
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	22.96	23.08	23.08	23.08	22.84	22.87		
Dissolved Oxygen mg/L	1.86	1.74	1.68	1.60	1.56	1.52		
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	1.15	0.541	0.417	0.413	0.422	0.436		
Turbidity <input checked="" type="checkbox"/> NTU	31.9	34.0	42.3	55.6	64.0	68.1		
Color/Tint	clear							
Odor	None							
ORP	-149	-146	-147	-149	-148	-149		

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ , 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 20 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
MW-375	PO	5/25/10	1650	6					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: PO, Primary Sample; DS, Duplicate Sample; SX, Split Sample (sent to second lab); BP#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike ( $n = 1$  to 6). Lab ID (up to 6 characters) is name of laboratory that will analyze the sample. Case ID (up to 6 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or remedy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) BSTHVAS

Signature [Signature]



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland</u>	Site ID <u>MW-37E</u>
Other: <u>Delta</u>	Project No. <u>JO984-950-9</u>	Date (m/d/y)

**Site Description** ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>86°</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>P.C.</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>N/A</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m (above/below ground)	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.):	

**Water Level Data** Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 75.0

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1810</u>	<u>1810</u>	<u>1815</u>	<u>1825</u>	<u>1830</u>	<u>1835</u>	
Depth to Water	<u>7.81</u>	<u>7.81</u>	<u>7.81</u>	<u>7.75</u>	<u>7.68</u>	<u>7.60</u>	
Tape Correction	<u>N/A</u>						
Water Level (WL)	<u>10.81</u>	<u>10.81</u>	<u>10.81</u>	<u>10.75</u>	<u>10.68</u>	<u>10.60</u>	
Product Thickness	<u>N/A</u>						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	<u>N/A</u>						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** Purge Depth: 70 ☒ Grab ☐ Bailor ☐ Pump Description: Monsoon w/Regulator

Casing Volume: $[75 \text{ (TD)} - 10.81 \text{ (WL)}] \times [2 \text{ (Well ID)}]^2 \times [0.0408 \text{ (Conversion Factor)}] = 10.47 \text{ gal}$ <input type="checkbox"/> gal <input type="checkbox"/> liters						Well Goes Dry While Purging <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches						(Final)	Meter Type	Remarks
<input checked="" type="checkbox"/> Cum. Vol. Purged	<u>0</u>	<u>.75</u>	<u>1.5</u>	<u>2.25</u>				
<input type="checkbox"/> Pumping Rate								
Time (hh:mm; 24-hr clock)	<u>1815</u>	<u>1820</u>	<u>1825</u>	<u>1835</u>				
pH (Temperature Corrected? <input type="checkbox"/> )	<u>7.95</u>	<u>7.82</u>	<u>7.89</u>	<u>7.78</u>				
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>24.90</u>	<u>24.65</u>	<u>24.72</u>	<u>24.53</u>				
Dissolved Oxygen mg/L	<u>5.95</u>	<u>5.65</u>	<u>5.67</u>	<u>5.74</u>				
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	<u>0.915</u>	<u>1.15</u>	<u>1.13</u>	<u>1.28</u>				
Turbidity <input checked="" type="checkbox"/> NTU	<u>47.1</u>	<u>32.4</u>	<u>43.4</u>	<u>52.6</u>				
Color/Tint	<u>CLEAR</u>	<u>Clear</u>	<u>Clear</u>	<u>Cloudy</u>				
Odor	<u>SULFUR</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>				

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth: 70 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-37E</u>	<u>P0</u>	<u>5/25/10</u>	<u>1840</u>	<u>6</u>					

Sample ID may be up to 16 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D4, Duplicate Sample; S1, Split Sample (sent to second lab); BFA, Field Blank; BFA, Equipment Rinse; BTB, Trip Blank; SFA, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a color ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>BW Howell</u>	Signature <u>BW Howell</u>
Date Entered into Database _____	By _____
Page ____ of ____	



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland-Burnmouth</u>	Site ID <u>MW-370</u>
Other: <u>Delta</u>	Project No. <u>50984-850.9</u>	Date (m/d/y) <u>5/25/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>85</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>P.C.</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>N/A</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m <u>above</u> /below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 110.0

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	1555	1555	1600	1625	1730	1735	
Depth to Water	3.97	3.97	3.97	3.85	3.80	3.80	
Tape Correction	N/A						
Water Level (WL)	6.97	6.97	6.97	6.85	6.80	6.80	
Product Thickness	N/A						
Product Recovery	N/A						
<input type="checkbox"/> gallons <input type="checkbox"/> liters	N/A						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 108.0 ☒ Grab ☐ Bailor ☐ Pump Description: Monsoon w/Regulator

Casing Volume: $[110.0 \text{ (TD)} - 6.97 \text{ (WL)}] \cdot [0.0008] \text{ (Well ID)}^2 \cdot [0.63] \text{ (Conversion Factor)} = 16.79$ <input checked="" type="checkbox"/> gal <input type="checkbox"/> liters					Well Goes Dry While Purging <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches							
<input checked="" type="checkbox"/> Cum. Vol. Purged	5.0	10.0	15.0	20.00	(Final)	Meter Type	Remarks
<input checked="" type="checkbox"/> Pumping Rate	3.0	4.0	3.0				
Time (hh:mm; 24-hr clock)	1600	1625	1720	1730			
pH (Temperature Corrected? <input type="checkbox"/> )	7.43	8.32	8.20	8.16			
Temperature <input checked="" type="checkbox"/> °C <input checked="" type="checkbox"/> °F	27.19	25.86	25.75	25.68			
Dissolved Oxygen mg/L	5.02	3.77	3.89	3.73			
<input checked="" type="checkbox"/> SC or <input checked="" type="checkbox"/> EC $\mu\text{S/cm}$	0.433	0.496	0.444	0.465			
Turbidity <input checked="" type="checkbox"/> NTU	11.2	23.8	19.1	22.3			
Color/Tint	CLEAR	CLEAR	CLEAR	clear			
Odor	N/A	N/A	N/A	N/A			

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mhos/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 108.0 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
MW-370	P0	5/25/10	1750	3					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a color ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>BW Howell</u>	Signature <u>BW Howell</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland - Bensuek</u>	Site ID <u>MW-385</u>
Other: <u>ES- Derek Rothman</u>	Project No. <u>J0984-850-9</u>	Date (m/d/y) <u>6/2/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 80 °C ☒ °F Weather: Sunny

Well Locked? ☒ Yes ☐ No Damaged/Repairs Needed: None

☐ TOC ☐ MP Description:

TOC/MP Stickup: 3 ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP (or TOC): 25

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>10:55</u>		<u>10:58</u>	<u>11:15</u>	<u>11:25</u>		
Depth to Water	<u>7.14</u>		<u>9.63</u>	<u>10.09</u>	<u>10.27</u>		
Tape Correction							
Water Level (WL)	<u>7.14</u>		<u>9.63</u>	<u>10.09</u>	<u>10.27</u>		
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: peristaltic

Casing Volume: $[25 \text{ (TD)} - 7.14 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot 0.0108 \text{ (Conversion Factor)} = 3.0$ <input checked="" type="checkbox"/> gal <input type="checkbox"/> liters										Well Goes Dry While Purging <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches												
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	10.50	3.0	6.0	9.0						(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	10:55	11:05	11:15	11:25								Horizon U-23
pH (Temperature Corrected? <input type="checkbox"/> )	7.06	7.07	7.07	7.06								
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	24.57	24.46	23.21	23.17								
Dissolved Oxygen mg/L	1.12	1.09	0.99	0.96								
<input type="checkbox"/> SC or <input type="checkbox"/> EC <input checked="" type="checkbox"/> µS/cm	3.79	2.29										
Turbidity <input type="checkbox"/> NTU	62.4	24.4	19.7	16.2								
Color/Tint	cloudy	cloudy	SL cloudy	SL cloudy								
Odor												
ORP	-113	-119	-122	-127								

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = 1µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description: Peristaltic

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-385</u>	<u>P0</u>	<u>6/2/10</u>	<u>10:25</u>	<u>6</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>/</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; BR#, Equipment Rinset; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) Derek Rothman

Signature [Signature]



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Portsmouth</u>	Site ID <u>MW-38I</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>6/2/10</u>

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>90</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>No</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>5.91</u>	<u>/</u>	<u>/</u>	<u>6.33</u>	<u>/</u>	<u>/</u>	<u>/</u>
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description:

Casing Volume: [ (TD) - (WL) ] * [ (Well ID) ] <sup>2</sup> * [ (Conversion Factor) ] = <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged	(Final)
<input checked="" type="checkbox"/> Pumping Rate	Meter Type
Time (hh:mm; 24-hr clock)	Remarks
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Spicillo Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-38I</u>	<u>P0</u>	<u>6/2/10</u>	<u>1400</u>						<u>VOC's</u>
									<u>TOX</u>
									<u>metals</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmodity. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)	Signature
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility <u>Ashland Brunswick</u>	Site ID <u>MW38D</u>
Project No.		Date (m/d/y) <u>6/2/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>90</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Damaged/Repairs Needed: <u>No</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 85

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>7.22</u>		<u>7.58</u>				
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice: record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; O - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 80 ☐ Grab ☐ Bailor ☒ Pump Description: SS mega Moonson

Casing Volume: [_____] (TD) - [_____] (WL) * [_____] (Well ID) <sup>2</sup> * [_____] (Conversion Factor) = _____ <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches		
<input type="checkbox"/> Cum. Vol. Purged	<u>700mL</u>	<u>700mL</u>
<input checked="" type="checkbox"/> Pumping Rate	<u>700mL</u>	<u>700mL</u>
Time (hh:mm; 24-hr clock)	<u>12:45</u>	<u>12:50</u>
pH (Temperature Corrected? <input type="checkbox"/> )	<u>7.21</u>	<u>7.22</u>
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	<u>22.21</u>	<u>23.10</u>
Dissolved Oxygen mg/L	<u>2.32</u>	<u>2.25</u>
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu S/cm$	<u>5.30</u>	<u>5.28</u>
Turbidity <input checked="" type="checkbox"/> NTU	<u>&lt;10</u>	<u>&lt;10</u>
Color/Tint		
Odor	<u>-92</u>	<u>-88</u>

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu S/cm$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu S/cm$ ).  $\mu S/cm = \mu mho/cm$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu m$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW38D</u>	<u>P0</u>	<u>6/2/10</u>	<u>1300</u>						<u>VOC's</u>
									<u>Metals</u>
									<u>TOX</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Ryan McLean</u>	Signature <u>[Signature]</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashtabula-Bronson</u>	Site ID <u>MW-395</u>
Other: <u>ES - Derek Roth</u>	Project No. <u>0984-850-9</u>	Date (m/d/y) <u>6/2/10</u>

Site Description <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Irrigation Well <input type="checkbox"/> Spring <input type="checkbox"/> Borehole <input type="checkbox"/> Probe Other:	
Air Temp: <u>82</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>None</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> ft <input type="checkbox"/> m above/below ground	Well inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data		Measurement Units: <input checked="" type="checkbox"/> ft <input type="checkbox"/> m	Well or Borehole Total Depth (TD) from MP (or TOC): <u>25</u>					
<input type="checkbox"/> E-Tape, # _____	<input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)		<u>0910</u>		<u>0920</u>	<u>0925</u>	<u>0930</u>		
Depth to Water		<u>9.21</u>		<u>12.32</u>	<u>12.53</u>	<u>12.53</u>		
Tape Correction								
Water Level (WL)		<u>9.21</u>		<u>12.32</u>	<u>12.53</u>	<u>12.58</u>		
Product Thickness				<u>12</u>				
Product Recovery								
<input type="checkbox"/> gallons <input type="checkbox"/> liters								

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data		Purge Depth:	<input type="checkbox"/> Grab <input type="checkbox"/> Bailor <input checked="" type="checkbox"/> Pump	Description: <u>peristaltic</u>			
Casing Volume: $[25 \text{ (TD)} - 9.2 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.00408 \text{ (Conversion Factor)}] = 2.6 \text{ gal}$ <input type="checkbox"/> gal <input type="checkbox"/> liters							
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches							
<input checked="" type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate				(Final)	Meter Type	Remarks
		<u>0</u>	<u>2.6</u>	<u>5.2</u>	<u>7.8</u>	<u>10.4</u>	
Time (hh:mm; 24-hr clock)		<u>0910</u>	<u>0915</u>	<u>0920</u>	<u>0925</u>	<u>0930</u>	
pH (Temperature Corrected? <input type="checkbox"/> )		<u>7.80</u>	<u>7.44</u>	<u>7.49</u>	<u>7.63</u>	<u>7.60</u>	
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F		<u>23.58</u>	<u>22.99</u>	<u>22.93</u>	<u>22.91</u>	<u>22.86</u>	
Dissolved Oxygen mg/L		<u>2.14</u>	<u>1.47</u>	<u>1.12</u>	<u>1.08</u>	<u>0.99</u>	
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$		<u>0.239</u>	<u>0.471</u>	<u>0.529</u>	<u>0.547</u>	<u>0.602</u>	
Turbidity <input type="checkbox"/> NTU		<u>37.4</u>	<u>47.8</u>	<u>67.2</u>	<u>70.4</u>	<u>69.8</u>	
Color/Tint		<u>cloudy</u>	<u>cloudy</u>	<u>cloudy</u>	<u>cloudy</u>	<u>cloudy</u>	
Odor							
<u>ORP</u>		<u>-123</u>	<u>-129</u>	<u>-133</u>	<u>-133</u>	<u>-138</u>	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data		Sample Depth:	<input type="checkbox"/> Grab <input type="checkbox"/> Bailor <input checked="" type="checkbox"/> Pump	Description: <u>peristaltic</u>					
Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-395</u>	<u>P0</u>	<u>6/2/10</u>	<u>0930</u>	<u>4</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>/</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)	Signature
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW39I</u>
Other:	Project No.	Date (m/d/y) <u>6/2/10</u>

Site Description <input type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Irrigation Well <input type="checkbox"/> Spring <input type="checkbox"/> Borehole <input type="checkbox"/> Probe <input type="checkbox"/> Other:	
Air Temp: <u>90</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>No</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> ft <input type="checkbox"/> m above/below ground Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:	
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data		Measurement Units: <input checked="" type="checkbox"/> ft <input type="checkbox"/> m		Well or Borehole Total Depth (TD) from MP or TOC: <u>(TOC)</u>				
<input checked="" type="checkbox"/> Tape, # <u>      </u>	<input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)		<u>1030</u>	<u>1035</u>					
Depth to Water		<u>7.96</u>	<u>7.96</u>	<u>8.59</u>	<u>8.05</u>	<u>8.68</u>	<u>7.82</u>	
Tape Correction								
Water Level (WL)								
Product Thickness								
Product Recovery								
<input type="checkbox"/> gallons <input type="checkbox"/> liters								

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data		Purge Depth: <input type="checkbox"/> Grab <input type="checkbox"/> Bailer <input type="checkbox"/> Pump		Description:	
Casing Volume: [ (TD) - (WL) ] * [ (Well ID) ] <sup>2</sup> * [ (Conversion Factor) ] = <input type="checkbox"/> gal <input type="checkbox"/> liters					
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches					
<input type="checkbox"/> Cum. Vol. Purged	<u>600 ml</u>				(Final)
<input type="checkbox"/> Pumping Rate					Meter Type
Time (hh:mm; 24-hr clock)	<u>1035</u>	<u>1040</u>	<u>1045</u>		<u>Horrible</u>
pH (Temperature Corrected? <input type="checkbox"/> )	<u>6.89</u>	<u>6.89</u>	<u>6.84</u>		<u>U-22</u>
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	<u>23.14</u>	<u>23.10</u>	<u>23.09</u>		
Dissolved Oxygen mg/L	<u>2.26</u>	<u>2.24</u>	<u>2.26</u>		
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm	<u>2.47</u>	<u>2.48</u>	<u>2.49</u>		
Turbidity <input type="checkbox"/> NTU	<u>2.1</u>	<u>1.8</u>	<u>1.4</u>		
Color/Tint					
Odor <u>ORT</u>	<u>-125</u>	<u>-121</u>	<u>-123</u>		

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data		Sample Depth: <input type="checkbox"/> Grab <input type="checkbox"/> Bailer <input type="checkbox"/> Pump		Description:					
Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-39I</u>	<u>P0</u>	<u>6/2/10</u>	<u>1050</u>						<u>VOCs</u>
<u>MW39I</u>		<u>6/2/10</u>	<u>1050</u>						<u>Metals</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; B#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Ryan McLain</u>	Signature <u>[Signature]</u>
Date Entered into Database <u>6/2/10</u>	By <u>[Signature]</u> Page <u>1</u> of <u>1</u>



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW39D</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>6/2/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 90 °C ☒ °F Weather: Sunny

Well Locked? ☒ Yes ☐ No Damaged/Repairs Needed: NA

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 85

<input checked="" type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>7.93</u>	<u>7.93</u>	<u>7.93</u>	<u>8.62</u>	<u>8.60</u>		
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice: record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Casing Volume: [_____] (TD) - [_____] (WL) * [_____] (Well ID) <sup>2</sup> * [_____] (Conversion Factor) = _____ gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	(Final) Meter Type Remarks
<u>550ml/min</u>	<u>Horribia</u>
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	<u>7.22</u>
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
Odor <u>GRP</u>	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>MW39D</u>	<u>P0</u>	<u>6/2/10</u>	<u>1000</u>	<u>4</u>					<u>Metals</u> <u>VOCs</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; B#, Equipment Rinse; BT#, Trip Blank; S#, Field Spike (# = 1 to 9). Lab ID (up to 6 characters) is name of laboratory that will analyze the sample. Case ID (up to 6 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Signature



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-405</u>
Other: <u>Delta</u>	Project No. <u>508849509</u>	Date (m/d/y) <u>5/26/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 85 °C ☒ °F Weather: P.C.

Well Locked? ☒ Yes ☐ No Damaged/Repairs Needed: N/A

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ft ☒ m (above/below ground) Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 22.00

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	1725	1725	1730	1740	1750	1755	
Depth to Water	5.39	5.34	5.34	5.33	5.27	5.25	
Tape Correction	N/A						
Water Level (WL)	8.39	8.39	8.34	8.33	8.27	8.25	
Product Thickness	N/A						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	N/A						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 15.0 ☒ Grab ☐ Bailor ☐ Pump Description: Peristaltic

Casing Volume: $[22.00(TD) - 8.39(WL)] \times [2(Well ID)]^2 \times [0.0408(Conversion Factor)] = 2.22$ gal <input type="checkbox"/> liters										Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches											
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate						(Final)	Meter Type	Remarks			
	.50	1.25	2.00	2.75	3.50						
Time (hh:mm; 24-hr clock)	1730	1735	1740	1745	1750						
pH (Temperature Corrected? <input type="checkbox"/> )	6.17	6.16	6.12	6.15	6.14						
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	22.79	22.88	22.80	22.86	22.85						
Dissolved Oxygen mg/L	7.69	7.82	7.60	7.61	7.58						
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu S/cm$	0.295	0.310	0.315	0.317	0.315						
Turbidity <input checked="" type="checkbox"/> NTU	193.0	188.0	180.0	181.0	179.0						
Color/Tint	Cloudy	Cloudy	Cloudy	Cloudy	Cloudy						
Odor	N/A	N/A	N/A	N/A	N/A						

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu S/cm$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu S/cm$ ).  $\mu S/cm = \mu mho/cm$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 15.0 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu m$ )	Lab ID	Case ID	SDG ID	Remarks
MW-405	P0	5/26/10	1800	6					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D1, Duplicate Sample; S1, Split Sample (sent to second lab); B1, Field Blank; B1K, Equipment Blank; B1K, Trip Blank; S1K, Field Spike (1 to 6). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) BW Howen Signature BW Howen



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility <u>Ashland Brunswick</u>	Site ID <u>M61-40 I</u>
Project No. <u>508849509</u>		Date (m/d/y) <u>5/26/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 86 °C ☒ °F Weather: P.C

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed: N/A

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 52.10

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1555</u>	<u>1555</u>	<u>1600</u>	<u>1610</u>	<u>1615</u>	<u>1620</u>	
Depth to Water	<u>6.50</u>	<u>6.50</u>	<u>6.50</u>	<u>6.41</u>	<u>6.37</u>	<u>6.36</u>	
Tape Correction	<u>N/A</u>						
Water Level (WL)	<u>9.50</u>	<u>9.50</u>	<u>9.50</u>	<u>9.41</u>	<u>9.37</u>	<u>9.36</u>	
Product Thickness	<u>N/A</u>						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	<u>N/A</u>						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if levels above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement time (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if when observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

Field WQ Data Purge Depth: 48.0 ☒ Grab ☐ Bailor ☒ Pump Description: Monsoon w/Regulator

Casing Volume: $[48.10 \text{ (TD)} - 9.50 \text{ (WL)}] \times [2 \text{ (Well ID)}]^2 \times [0.0408 \text{ (Conversion Factor)}] = 6.95 \text{ gal}$ <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	<u>75</u> <u>1.75</u> <u>2.25</u> <u>3.0</u>
Time (hh:mm; 24-hr clock)	<u>1600</u> <u>1605</u> <u>1610</u> <u>1615</u>
pH (Temperature Corrected <input type="checkbox"/> )	<u>6.94</u> <u>6.87</u> <u>6.86</u> <u>6.85</u>
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>24.07</u> <u>24.08</u> <u>24.12</u> <u>24.10</u>
Dissolved Oxygen mg/L	<u>2.32</u> <u>2.14</u> <u>2.13</u> <u>2.09</u>
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	<u>0.507</u> <u>0.526</u> <u>0.530</u> <u>0.533</u>
Turbidity <input checked="" type="checkbox"/> NTU	<u>5.9</u> <u>3.4</u> <u>3.3</u> <u>3.7</u>
Color/Tint	<u>N/A</u> <u>N/A</u> <u>N/A</u> <u>N/A</u>
Odor	<u>N/A</u> <u>N/A</u> <u>N/A</u> <u>N/A</u>

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 48.0 ☒ Grab ☐ Bailor ☒ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-40I</u>	<u>PO</u>	<u>5/26/10</u>	<u>1620</u>	<u>60</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: PO, Primary Sample; DS, Duplicate Sample; SF, Split Sample (sent to second lab); BF, Field Blank; BA, Equipment Rinse; BT, Trip Blank; SF, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yymm. SDG may be the SDG, a cooler ID number, or methodology. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) Bill Howell Signature Bill Howell



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-400</u>
Other: <u>Delta</u>	Project No. <u>508849509</u>	Date (m/d/y) <u>5/26/10</u>

**Site Description** ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 85 °C ☒ °F Weather: P.C.

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed: N/A

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ☒ ft ☐ m (above/below ground) Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

**Water Level Data** Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 112.54

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1640</u>	<u>1640</u>	<u>1645</u>	<u>1655</u>	<u>1700</u>	<u>1705</u>	
Depth to Water	<u>7.26</u>	<u>7.26</u>	<u>7.26</u>	<u>7.23</u>	<u>7.19</u>	<u>7.21</u>	
Tape Correction	<u>N/A</u>						
Water Level (WL)	<u>10.26</u>	<u>10.26</u>	<u>10.26</u>	<u>10.73</u>	<u>10.19</u>	<u>10.21</u>	
Product Thickness	<u>N/A</u>						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	<u>N/A</u>						

Measure water level from third measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if when observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

**Field WQ Data** Purge Depth: 108.0 ☒ Grab ☐ Bailor ☒ Pump Description: Monsieur w/Regulator

Casing Volume: $[(112.54(\text{m}) - 10.26(\text{m})) \cdot [2(\text{Well ID})]^2 \cdot [0.408(\text{Conversion Factor})] = 16.69 \square \text{gal} \square \text{liters}$										Well Goes Dry	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches										While Purging <input type="checkbox"/>	
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate							(Final)	Meter Type	Remarks		
	.75	1.25	2.00	2.75							
Time (hh:mm; 24-hr clock)	1645	1650	1655	1700							
pH (Temperature Corrected? <input type="checkbox"/> )	7.43	7.41	7.40	7.40							
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	23.98	23.98	23.93	23.93							
Dissolved Oxygen mg/L	2.59	2.44	2.41	2.42							
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	0.413	0.412	0.412	0.413							
Turbidity <input checked="" type="checkbox"/> NTU	7.0	2.2	2.3	2.2							
Color/Tint	N/A	N/A	N/A	N/A							
Odor	↓	↓	↓	↓							

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** Sample Depth: 108 ☒ Grab ☐ Bailor ☒ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-400</u>	<u>P0</u>	<u>5/26/10</u>	<u>1710</u>	<u>6</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D0, Duplicate Sample; S0, Split Sample (sent to second lab); BFW, Field Blank; BFW, Equipment Rinse; BTW, Trip Blank; BFW, Field Spike (1 to 6). Lab ID (up to 6 characters) is name of laboratory that will analyze the sample. Case ID (up to 6 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or monthly. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, in-lab, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) BW Howell Signature BW Howell



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland-Burnsville</u>	Site ID <u>MW-41E</u>
Other: <u>Delta Consultants</u>	Project No. <u>50984-250-9</u>	Date (m/d/y) <u>5/27/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>88</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>P.C.</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>N/A</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m <input type="checkbox"/> above/below ground	
Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:	
Site Remarks (nearby wells pumping, tide, stream stage, etc.):	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 52.10

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	1335	1335	1340	1350	1400	1405	
Depth to Water	6.48	6.48	6.50	6.33	6.28	6.26	
Tape Correction	N/A						
Water Level (WL)	4.48	4.48	4.50	4.33	4.28	4.26	
Product Thickness	N/A						
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters	N/A						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 48.00 ☒ Grab ☐ Bailor ☐ Pump Description: Monsoon w/Regulator

Casing Volume: $[52.10 \text{ (TD)} - 4.50 \text{ (WL)}] \times [2 \text{ (Well ID)}]^2 \times [0.0408 \text{ (Conversion Factor)}] = 6.95 \text{ gal}$ <input type="checkbox"/> gal <input type="checkbox"/> liters						Well Goes Dry While Purging <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	Time (hh:mm; 24-hr clock)	pH (Temperature Corrected? <input checked="" type="checkbox"/> )	Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	Dissolved Oxygen mg/L	<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	Turbidity $\text{NTU}$	Color/Tint	Odor
<u>2.25</u> , <u>.50</u> , <u>4.25</u> , <u>2.00</u> , <u>2.50</u>	1340, 1345, 1350, 1355, 1400	6.10, 6.20, 6.21, 6.22, 6.22	23.10, 23.27, 23.13, 23.13, 23.13	4.86, 2.33, 2.10, 1.93, 1.90	36.3, 40.1, 42.2, 43.4, 43.4	-5.0, -5.0, -5.0, -5.0, -5.0	N/A, N/A, N/A, N/A, N/A	↓, ↓, ↓, ↓, ↓

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 48.00 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-41E</u>	<u>P0</u>	<u>5/27/10</u>	<u>1405</u>	<u>1</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (1 = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or nymddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) BW Howell

Signature BW Howell



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>ESD Rick Rothger</u>	Facility <u>Asphalt - Burnand</u> Project No. <u>50984-850-9</u>	Site ID <u>11 W-125495</u> Date (m/d/y)
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Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 88 °C ☐ °F Weather: Sunny

Well Locked? ☐ yes ☐ no Damaged/Repairs Needed: None

☐ TOC ☐ MP Description:

TOC/MP Stickup: 3 ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 21

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1335</u>		<u>1340</u>	<u>1355</u>			
Depth to Water	<u>8.45</u>		<u>8.90</u>	<u>9.39</u>			
Tape Correction							
Water Level (WL)	<u>8.45</u>		<u>8.90</u>	<u>9.39</u>			
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: peristaltic

Casing Volume: <u>21</u> (TD) <u>8.05</u> (WL) $\cdot$ <u>2</u> (Well ID) $\cdot$ <u>2.09</u> (Conversion Factor) = <u>2.09</u> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input checked="" type="checkbox"/> Cum. Vol. Purged	
<input type="checkbox"/> Pumping Rate	
Time (hh:mm; 24-hr clock)	<u>1340</u> <u>1345</u> <u>1350</u> <u>1355</u> <u>1400</u>
pH (Temperature Corrected? <input type="checkbox"/> )	<u>7.36</u> <u>7.14</u> <u>7.12</u> <u>7.09</u> <u>7.08</u>
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	<u>22.73</u> <u>22.92</u> <u>22.90</u> <u>22.82</u> <u>22.80</u>
Dissolved Oxygen mg/L	<u>3.40</u> <u>2.65</u> <u>2.58</u> <u>2.52</u> <u>2.46</u>
<input type="checkbox"/> SC or <input checked="" type="checkbox"/> EC $\mu$ S/cm	<u>0.504</u> <u>0.507</u> <u>0.517</u> <u>0.575</u> <u>0.579</u>
Turbidity <input checked="" type="checkbox"/> NTU	<u>45.5</u> <u>93.5</u> <u>34.7</u> <u>17.6</u> <u>9.4</u>
Color/Tint	<u>cloudy</u> <u>cloudy</u> <u>cloudy</u> <u>clear</u> <u>clear</u>
Odor	<u>ORP -138</u> <u>-131</u> <u>-130</u> <u>-131</u> <u>-135</u>

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description: peristaltic

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-125</u>	<u>P0</u>	<u>6/3/10</u>	<u>1400</u>	<u>6</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>/</u>
<u>VOCs + toxaphene + metals</u>									

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; DP, Duplicate Sample; SP, Split Sample (sent to second lab); BF#, Field Blank; BFR, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 6 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmddyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) Rick Rothger Signature [Signature]



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility Project No.	Site ID <u>MW44I</u> Date (m/d/y) <u>6/23/10</u>
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Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 90 °C 10 °F Weather: Sunny

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed: NO

☒ TOC ☐ MP Description:

TOC/MP Stickup: 2 ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 85.58

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)				<u>9:01</u>			
Depth to Water	<u>8.70</u>						
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Rump Description: SS Mega Monsoon

Casing Volume: [ (TD) - (WL) ] • [ (Well ID) ] <sup>2</sup> • [ (Conversion Factor) ] = <input type="checkbox"/> gal <input type="checkbox"/> liters Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches						Well Goes Dry While Purging <input type="checkbox"/>	
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	600	600	600	ML/min	(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	9:45	9:50	9:55			Horiba	
pH (Temperature Corrected? <input type="checkbox"/> )	6.56	6.55	6.53			U-27	
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F	24.38	24.48	24.48				
Dissolved Oxygen mg/L	2.35	2.31	2.29				
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> μS/cm	2.36	2.36	2.35				
Turbidity <input type="checkbox"/> NTU	143.0	135	128				
Color/Tint							
ORP	-132	-123	-121				

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (μS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (μS/cm). μS/cm = μmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 μm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-44I</u>	<u>P0</u>	<u>6/3/10</u>	<u>1000</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mnddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Signature

users/forms/SampLog.doc/6/10/2

Date Entered into Database \_\_\_\_\_ By \_\_\_\_\_

Page \_\_\_\_ of \_\_\_\_



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Baumgardner</u>	Site ID <u>MW-44-ID</u>
Other: <u>Delta</u>	Project No <u>509849509</u>	Date (m/d/y) <u>6/3/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>90</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>NO</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 100

Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)						
Depth to Water <u>8.63</u>						
Tape Correction						
Water Level (WL)						
Product Thickness						
Product Recovery						
<input type="checkbox"/> gallons <input type="checkbox"/> liters						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cased. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: SS mega Monsoon

Casing Volume: [ <u>      </u> (TD) - <u>      </u> (WL) ] * [ <u>      </u> (Well ID) ] <sup>2</sup> * [ <u>      </u> (Conversion Factor) ] = <u>      </u> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged	(Final)
<input type="checkbox"/> Pumping Rate	Meter Type
Time (hh:mm; 24-hr clock)	Remarks
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> mS/cm	
Turbidity <input type="checkbox"/> NTU	
Color/Tint	
ORP	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☒ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW44-ID</u>	<u>P0</u>	<u>6/3/10</u>	<u>1130</u>	<u>6</u>					<u>VOCs</u>
									<u>TOX</u>
									<u>Metals</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; BFR, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 6 characters) is name of laboratory that will analyze the sample. Case ID (up to 8 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling date on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) Ryan MS

Signature [Signature]

users/forms/SampLog.doc/5/0/02

Date Entered into Database

By

Page of



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility <u>Island Bruns/Wid</u>	Site ID <u>MW44D</u>
Project No.	Date (m/d/y) <u>6/3/10</u>	

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>90</u> °C <input checked="" type="checkbox"/> °F	Weather: <u>Sunny</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed:
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> ft <input type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

## Water Level Data

Measurement Units: ☒ ft ☐ mWell or Borehole Total Depth (TD) from MP or TOC: 130

<input type="checkbox"/> E-Tape, # _____ <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1340</u>			<u>8:72</u>			
Depth to Water	<u>8.47</u>			<u>8.00</u>			
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

## Field WQ Data

Purge Depth:

☐ Grab ☐ Bailor ☐ Pump

Description:

Casing Volume: [_____] (TD) - [_____] (WL) * [_____] (Well ID)² * [_____] (Conversion Factor) = _____ <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches		
<input type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate	
Time (hh:mm; 24-hr clock)	<u>500 mL/min</u>	
pH (Temperature Corrected? <input type="checkbox"/> )	<u>7.21</u>	<u>7.20</u>
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>23.78</u>	<u>23.78</u>
Dissolved Oxygen mg/L	<u>2.53</u>	<u>2.54</u>
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm	<u>1.88</u>	<u>1.82</u>
Turbidity $\Delta$ NTU	<u>210</u>	<u>200</u>
Color/Tint		
Odor		

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.633 Imperial gallon.

## Sample Data

Sample Depth:

☐ Grab ☐ Bailor ☐ Pump

Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>MW44D</u>	<u>P0</u>	<u>6/3/10</u>	<u>1400</u>						

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D1, Duplicate Sample; S1, Split Sample (sent to second lab); BFA, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmodity. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)	Signature
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW 457E</u>
Other:	Project No.	Date (m/d/y) <u>6/8/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 90 °C ☐ °F Weather: Sunny

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed: No

☒ TOC ☐ MP Description:

TOC/MP Stickup: ☒ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or (TOC):

Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)						
Depth to Water	<u>8.12</u>	<u>8.12</u>	<u>8.02</u>	<u>7.88</u>	<u>7.88</u>	
Tape Correction			<u>7.70</u>	<u>7.81</u>	<u>7.99</u>	
Water Level (WL)						
Product Thickness						
Product Recovery						
<input type="checkbox"/> gallons <input type="checkbox"/> liters						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description:

Casing Volume: [____(TD) - ____ (WL)] • [____(Well ID)] <sup>2</sup> • [____(Conversion Factor)] = ____ <input type="checkbox"/> gal <input type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input type="checkbox"/> Cum. Vol. Purged						(Final)	Meter Type	Remarks
<input checked="" type="checkbox"/> Pumping Rate	500 mL	300	500					
Time (hh:mm; 24-hr clock)	10:15	10:20	10:25	/	/	/		Horiba
pH (Temperature Corrected? <input type="checkbox"/> )	6.36	6.36	6.36	/	/	/		
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	24.43	24.43	24.38	/	/	/		u-22
Dissolved Oxygen mg/L	2.74	2.72	2.70	/	/	/		
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <input checked="" type="checkbox"/> μS/cm	1502	303	1301	/	/	/		
Turbidity <input type="checkbox"/> NTU	79.4	80.7	75.6	/	/	/		
Color/Tint				/	/	/		
Odor	-30.9	-28.1	-27.6	/	/	/		

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm).  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>MW 457E</u>	<u>P0</u>	<u>6/8/10</u>	<u>1030</u>						<u>TOX</u>
									<u>VOC's</u>
									<u>Metal</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D1, Duplicate Sample; S1, Split Sample (sent to second lab); B1, Field Blank; B1R, Equipment Rinse; B1E, Trip Blank; S1F, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Signature



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW 46-I</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>6/8/10</u>

Site Description <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Irrigation Well <input type="checkbox"/> Spring <input type="checkbox"/> Borehole <input type="checkbox"/> Probe Other:	
Air Temp: <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	Weather:
Well Locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Damaged/Repairs Needed:
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data		Measurement Units: <input checked="" type="checkbox"/> ft <input type="checkbox"/> m	Well or Borehole Total Depth (TD) from MP or TOC: <u>55</u>					
<input checked="" type="checkbox"/> E-Tape, # <u>      </u>	<input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)								
Depth to Water		<u>7.28</u>			<u>6.63</u>	<u>7.68</u>	<u>7.32</u>	
Tape Correction								
Water Level (WL)								
Product Thickness								
Product Recovery								
<input type="checkbox"/> gallons <input type="checkbox"/> liters								

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice: record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

Field WQ Data		Purge Depth: <u>50</u>	<input type="checkbox"/> Grab <input type="checkbox"/> Bailor <input checked="" type="checkbox"/> Pump	Description: <u>SS Mega Monsoon</u>	
Casing Volume: [ (TD) - (WL) ] * [ (Well ID) ] <sup>2</sup> * [ (Conversion Factor) ] = <u>      </u> gal <input type="checkbox"/> liters		Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5086 for meters and liters; Well ID in inches		Well Goes Dry While Purging <input type="checkbox"/>	
<input type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate	<u>600</u>	<u>600</u>	<u>600</u>	<u>ml/min</u>
Time (hh:mm; 24-hr clock)		<u>9:15</u>	<u>9:20</u>	<u>9:25</u>	
pH (Temperature Corrected? <input type="checkbox"/> )		<u>6.49</u>	<u>6.49</u>	<u>6.47</u>	
Temperature <input type="checkbox"/> °C <input type="checkbox"/> °F		<u>23.71</u>	<u>23.72</u>	<u>23.73</u>	
Dissolved Oxygen mg/L		<u>2.17</u>	<u>2.18</u>	<u>2.18</u>	
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <u>MS/cm</u>		<u>556</u>	<u>5.71</u>	<u>5.79</u>	
Turbidity <input checked="" type="checkbox"/> NTU		<u>500</u>	<u>4.75</u>	<u>4.62</u>	
Color/Tint					
odor. <u>ORP-</u>		<u>-336</u>	<u>-338</u>	<u>-338</u>	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data		Sample Depth: <input type="checkbox"/> Grab <input type="checkbox"/> Bailor <input checked="" type="checkbox"/> Pump	Description:						
Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW 46-I</u>	<u>P0</u>	<u>6/8/10</u>	<u>9:30</u>	<u>6</u>					<u>930</u>
									<u>TOX</u>
									<u>VOC'S</u>
									<u>Metals</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BFA, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>Ryan McLane</u>	Signature <u>[Signature]</u>
Date Entered into Database <u>      </u> By <u>      </u> Page <u>      </u> of <u>      </u>	



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility <u>Ashland Branswick</u>	Site ID <u>MW48D</u>
Project No.	Date (m/d/y) <u>6/2/10</u>	

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 90 °C ☒ °F Weather: Sunny

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed:

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ft ☒ m above/below ground Well Inside Diameter (ID): ☒ 2-Inch ☐ 4-Inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 91

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>5.96</u>	<u>5.96</u>		<u>6.35</u>			
Tape Correction							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

Field WQ Data Purge Depth: 87 ☐ Grab ☐ Bailer ☒ Pump Description: SS Mega Monsoon

Casing Volume: [ (TD) - (WL) ] * [ (Well ID) ] <sup>2</sup> * [ (Conversion Factor) ] = <input type="checkbox"/> gal <input type="checkbox"/> liters Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	Well Goes Dry While Purging <input type="checkbox"/>
<input type="checkbox"/> Cum. Vol. Purged <input checked="" type="checkbox"/> Pumping Rate	
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected) <input type="checkbox"/>	
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <input type="checkbox"/> NA <input type="checkbox"/> S/cm	
Turbidity <input checked="" type="checkbox"/> NTU	
Color/Tint	
Odor - ORP	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailer ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW48D</u>	<u>P0</u>	<u>6/2/10</u>	<u>1530</u>						<u>VOCs</u>

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D0, Duplicate Sample; S0, Split Sample (sent to second lab); BFA, Field Blank; BR#, Equipment Rinse; BTE, Trip Blank; SFA, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling date on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print)

Signature

users/forms/SampLog.doc/5/8/02

Date Entered into Database \_\_\_\_\_ By \_\_\_\_\_

Page \_\_\_\_ of \_\_\_\_



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Highland-Burnsville</u>	Site ID <u>MW-535</u>
Other: <u>DELTA CONSULTANTS</u>	Project No. <u>50984-050-9</u>	Date (m/d/y) <u>5/27/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>88</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>P.C</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>N/A</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m (above/below ground)	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tides, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 24.30

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1510</u>	<u>1510</u>	<u>1515</u>	<u>1525</u>	<u>1535</u>	<u>1540</u>	
Depth to Water	<u>3.48</u>	<u>3.48</u>	<u>3.47</u>	<u>3.31</u>	<u>3.15</u>	<u>3.10</u>	
Tape Correction	<u>N/A</u>						
Water Level (WL)	<u>6.48</u>	<u>6.48</u>	<u>6.47</u>	<u>6.31</u>	<u>6.15</u>	<u>6.10</u>	
Product Thickness	<u>N/A</u>						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	<u>N/A</u>						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 19.0 ☒ Grab ☐ Bailer ☐ Pump Description: Automatic

Casing Volume: $[24.30 \text{ (TD)} - 6.48 \text{ (WL)}] \cdot [2 \text{ (Well ID)}]^2 \cdot [0.0469 \text{ (Conversion Factor)}] = 2.90$ gal <input type="checkbox"/> liters						Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5086 for meters and liters; Well ID in inches							
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate					(Final)	Meter Type	Remarks
	<u>.25</u>	<u>.75</u>	<u>1.25</u>	<u>2.0</u>	<u>2.75</u>		
Time (hh:mm; 24-hr clock)	<u>1515</u>	<u>1520</u>	<u>1525</u>	<u>1530</u>	<u>1535</u>		
pH (Temperature Corrected? <input type="checkbox"/> )	<u>6.70</u>	<u>6.68</u>	<u>6.69</u>	<u>6.68</u>	<u>6.69</u>		
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>25.13</u>	<u>24.88</u>	<u>24.71</u>	<u>24.71</u>	<u>24.70</u>		
Dissolved Oxygen mg/L	<u>5.30</u>	<u>4.58</u>	<u>4.81</u>	<u>4.91</u>	<u>4.81</u>		
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu\text{S/cm}$	<u>1.87</u>	<u>1.68</u>	<u>1.64</u>	<u>1.62</u>	<u>1.65</u>		
Turbidity <input checked="" type="checkbox"/> NTU	<u>23.2</u>	<u>13.5</u>	<u>10.0</u>	<u>8.3</u>	<u>8.9</u>		
Color/Tint	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>		
Odor	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>		

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S/cm}$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S/cm}$ ).  $\mu\text{S/cm} = \mu\text{mho/cm}$ . 1 gallon (US) = 3.785 L = 0.833 imperial gallon

Sample Data Sample Depth: 19.0 ☒ Grab ☐ Bailer ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu\text{m}$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-535</u>	<u>P0</u>	<u>5/27/10</u>	<u>1540</u>	<u>6</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmd/y. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>BW Howell</u>	Signature <u>BW Howell</u>
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## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input checked="" type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MLP-545</u>
Other: <u>Delta Consultants</u>	Project No. <u>508849509</u>	Date (m/d/y) <u>5/28/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 41 °C ☒ °F Weather: Clear

Well Locked? ☒ Yes ☐ No Damaged/Repairs Needed: N/A

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 25.50

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1045</u>	<u>1045</u>	<u>1050</u>	<u>1105</u>	<u>1115</u>	<u>1120</u>	
Depth to Water	<u>3.69</u>	<u>3.69</u>	<u>3.69</u>	<u>2.48</u>	<u>3.41</u>	<u>3.39</u>	
Tape Correction	<u>N/A</u>						
Water Level (WL)	<u>6.69</u>	<u>6.69</u>	<u>6.69</u>	<u>6.48</u>	<u>6.41</u>	<u>6.39</u>	
Product Thickness	<u>N/A</u>						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	<u>N/A</u>						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if chosen observed. If free product removed from well, record volume removed in gallons or liters. List product type in "Remarks" column.

Field WQ Data Purge Depth: 20.00 ☐ Grab ☐ Bailor ☐ Pump Description: Peristaltic

Casing Volume: $[25.50(TD) - 6.64(WL)] \cdot [2(Well ID)]^2 \cdot [0.0408(Conversion Factor)] = 3.06$ gal <input checked="" type="checkbox"/> liters							Well Goes Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	0	.50	1.0	1.5	2.0	2.50 (Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	1050	1055	1100	1105	1110	1115		
pH (Temperature Corrected? <input type="checkbox"/> )	6.14	6.10	6.08	6.06	6.04	6.04		
Temperature °C <input checked="" type="checkbox"/> °F	22.48	23.33	23.24	23.24	23.24	23.24		
Dissolved Oxygen mg/L	4.97	4.33	4.17	3.76	3.61	3.59		
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu S/cm$	0.828	0.517	0.484	0.411	0.395	0.394		
Turbidity <input checked="" type="checkbox"/> NTU	36.1	22.3	15.8	9.9	8.7	7.4		
Color/Tint	N/A							
Odor	N/A							

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu S/cm$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu S/cm$ ).  $\mu S/cm = \mu mho/cm$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: 20.00 ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu m$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MLP-545</u>	<u>PO</u>	<u>5/28/10</u>	<u>1120</u>	<u>6</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: PO, Primary Sample; DS, Duplicate Sample; SS, Split Sample (sent to second lab); BFA, Field Blank; BR, Equipment Rinse; BT, Trip Blank; SF, Field Spike (N = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, in-line, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) B ST THOMAS

Signature B. Thomas

useat/forms/SampLog.doc/5/10/02

Date Entered into Database By

Page of



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland-Burnsville</u>	Site ID <u>MW-54I</u>
Other: <u>Delta Consultants</u>	Project No. <u>50984-850-9</u>	Date (m/d/y) <u>5/28/10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>92</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>Clear</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>N/A</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description:	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m <u>above</u> /below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-Inch <input type="checkbox"/> 4-Inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 57.25

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1240</u>	<u>1240</u>	<u>1245</u>	<u>1255</u>	<u>1305</u>	<u>1310</u>	
Depth to Water	<u>3.85</u>	<u>3.85</u>	<u>3.85</u>	<u>3.72</u>	<u>3.52</u>	<u>3.50</u>	
Tape Correction	<u>N/A</u>						
Water Level (WL)	<u>6.85</u>	<u>6.85</u>	<u>6.85</u>	<u>6.72</u>	<u>6.52</u>	<u>6.50</u>	
Product Thickness	<u>N/A</u>						
Product Recovery	<u>N/A</u>						
<input type="checkbox"/> gallons <input type="checkbox"/> liters	<u>N/A</u>						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 50.00 ☒ Grab ☐ Bailor ☐ Pump Description: Monsoon w/Regulator

Casing Volume: $[57.25(TD) - 6.85(WL)] \cdot [2(Well ID)]^2 \cdot [0.468(Conversion Factor)] = 8.22$ gal <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1644 for feet and liters; 0.5068 for meters and liters; Well ID in inches	
<input checked="" type="checkbox"/> Cum. Vol. Purged	
<input type="checkbox"/> Pumping Rate	
Time (hh:mm; 24-hr clock)	
pH (Temperature Corrected? <input type="checkbox"/> )	
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	
Dissolved Oxygen mg/L	
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu S/cm$	
Turbidity $\mu NTU$	
Color/Tint	
Odor	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu S/cm$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu S/cm$ ).  $\mu S/cm = \mu mho/cm$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 50.00 ☒ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu m$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-54I</u>	<u>P0</u>	<u>5/28/10</u>	<u>1315</u>	<u>6</u>					

Sample ID may be up to 15 characters. Sample Result Codes, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; B#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) BW Howell

Signature BW Howell



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Business</u>	Site ID <u>MW-54D</u>
Other: <u>Delta Consultants</u>	Project No. <u>30984-850-4</u>	Date (m/d/y) <u>5/28/16</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: 92 ☐ °C ☒ °F Weather: Clear

Well Locked? ☒ yes ☐ no Damaged/Repairs Needed: N/A

☒ TOC ☐ MP Description:

TOC/MP Stickup: 3 ☒ ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other:

Site Remarks (nearby wells pumping, tide, stream stage, etc.)

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: 86.75

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input checked="" type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>1045</u>	<u>1045</u>	<u>1050</u>	<u>1100</u>	<u>1110</u>	<u>1115</u>	
Depth to Water	<u>4.15</u>	<u>4.15</u>	<u>4.08</u>	<u>4.06</u>	<u>3.98</u>	<u>3.99</u>	
Tape Correction	<u>N/A</u>						
Water Level (WL)	<u>7.15</u>	<u>7.15</u>	<u>7.15</u>	<u>7.06</u>	<u>6.98</u>	<u>6.99</u>	
Product Thickness	<u>N/A</u>						
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters	<u>N/A</u>						

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if shown observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 80.00 ☒ Grab ☐ Bailer ☐ Pump Description: Monsoon w/Regulator

Casing Volume: $[86.15 (TD) - 7.15 (WL)] \cdot [2 (Well ID)]^2 \cdot [0.0408 (Conversion Factor)] = 12.99$ <input checked="" type="checkbox"/> gal <input type="checkbox"/> liters						Well Goes Dry While Purging <input type="checkbox"/>		
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
<input checked="" type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	0	.75	1.50	2.25	3.0	(Final)	Meter Type	Remarks
Time (hh:mm; 24-hr clock)	1050	1055	1100	1105	1110			
pH (Temperature Corrected? <input type="checkbox"/> )	8.61	8.46	8.37	8.40	8.40			
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	24.18	24.42	24.48	24.48	24.48			
Dissolved Oxygen mg/L	1.30	0.48	0.35	0.38	0.42			
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu S/cm$	99.9	99.9	99.9	99.9	99.9			
Turbidity <input checked="" type="checkbox"/> NTU	32.8	20.7	10.2	9.8	8.4			
Color/Tint	N/A							
Odor	N/A							

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu S/cm$  at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu S/cm$ ).  $\mu S/cm = \mu mho/cm$ . 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 80.00 ☒ Grab ☐ Bailer ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu m$ )	Lab ID	Case ID	SDG ID	Remarks
<u>MW-54D</u>	<u>P0</u>	<u>5/28/16</u>	<u>1115</u>	<u>6</u>					

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; BAK, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mundry. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) BW Howell Signature BW Howell



# DELTA CONSULTANTS

# GROUNDWATER SAMPLING RECORD

**Sampled By** ☐ Facility Personnel ☐ ES&T **Facility** Ashland Bannock **Site ID** MW-44D  
**Other:** Delta **Project No.**  **Date (m/d/y)** 7-29-10

**Site Description** ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe **Other:**  
**Air Temp:** 95 °C ☐ °F **Weather:** Clear  
**Well Locked?** ☒ yes ☐ no **Damaged/Repairs Needed:** none  
☐ TOC ☐ MP **Description:** Stickup  
**TOC/MP Stickup:** 3 ft ☐ m above/below ground **Well Inside Diameter (ID):** ☒ 2-inch ☐ 4-inch **Other:**  
**Site Remarks** (nearby wells pumping, tide, stream stage, etc.)

**Water Level Data** **Measurement Units:** ☐ ft ☐ m **Well or Borehole Total Depth (TD) from MP or TOC:**  
☐ E-Tape, #  ☐ Steel Tape ☐ Other   

Time (hh:mm; 24-hr clock)	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
	<u>Initial</u>						
Depth to Water	<u>8.99</u>						<u>DTB =</u>
Tape Correction							<u>2100'</u>
Water Level (WL)	<u>8.99</u>						<u>(100' tape)</u>
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data** **Purge Depth:** ☐ Grab ☐ Bailor ☐ Pump **Description:**  
**Casing Volume:** [ (TD) - (WL) ] \* [ (Well ID) ]<sup>2</sup> \* [ (Conversion Factor) ] =  gal ☐ liters  
**Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches**  
☐ Cum. Vol. Purged ☐ Pumping Rate 250m **Well Goes Dry While Purging** ☐  

Time (hh:mm; 24-hr clock)	Initial	1316	1321	1326	1331	1336	Meter Type	Remarks
pH (Temperature Corrected? <input type="checkbox"/> )	<u>6.73</u>	<u>6.78</u>	<u>6.90</u>	<u>6.91</u>	<u>6.92</u>	<u>6.93</u>	<u>Hor. Ion U-22</u>	
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>24.55</u>	<u>24.42</u>	<u>24.56</u>	<u>24.53</u>	<u>24.44</u>	<u>24.49</u>		
Dissolved Oxygen mg/L	<u>6.45</u>	<u>5.93</u>	<u>5.66</u>	<u>2.57</u>	<u>5.35</u>	<u>5.28</u>		
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <u>µS/cm</u>	<u>2.65</u>	<u>2.55</u>	<u>2.58</u>	<u>2.51</u>	<u>2.61</u>	<u>2.62</u>		
Turbidity <u>NTU</u>	<u>62.4</u>	<u>28.0</u>	<u>12.6</u>	<u>8.9</u>	<u>8.0</u>	<u>8.3</u>		
Color/Tint water level	<u>gray 10.11</u>	<u>10.17</u>	<u>10.17</u>	<u>8.9</u>	<u>10.17</u>	<u>10.17</u>		
Odor <u>TDS</u>	<u>914</u>	<u>1.68</u>	<u>1.62</u>	<u>1.65</u>	<u>1.67</u>	<u>1.68</u>		
<u>ORP mV</u>	<u>-201</u>	<u>-210</u>	<u>-210</u>	<u>-209</u>	<u>-207</u>	<u>-207</u>		

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data** **Sample Depth:** ☐ Grab ☐ Bailor ☐ Pump **Description:**  

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-44D</u>	<u>P0</u>	<u>7/29/10</u>	<u>1336</u>	<u>5</u>	<u>ND</u>	<u>T.D.</u>	<u></u>	<u></u>	

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

**Sampler's Name (print)** Wes Bersfield / C.W. **Signature** W. Bersfield  
**Date Entered into Database**  **By**  **Page** 1 **of** 1



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-10D</u>
	Project No.	Date (m/d/y) <u>7-29-10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>95</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>Clear</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>None</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description: <u>Stickup</u>	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>Initial 1449</u>						<u>TD = 95 ft</u>
Depth to Water	<u>7.26</u>						
Tape Correction	<u>—</u>						
Water Level (WL)	<u>7.26</u>						
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice, record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: Mega Medusa

Casing Volume: [ (TD) - (WL) ] * [ (Well ID) ] <sup>2</sup> * [ (Conversion Factor) ] = <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate
Time (hh:mm; 24-hr clock)	pH (Temperature Corrected? <input type="checkbox"/> )
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	Dissolved Oxygen mg/L
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <input checked="" type="checkbox"/> µS/cm	Turbidity <input checked="" type="checkbox"/> NTU
Color/Tint <input checked="" type="checkbox"/> water level	Odor <input checked="" type="checkbox"/> TDS <input checked="" type="checkbox"/> g/L
<u>DR1 mV</u>	

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-10</u>	<u>P0</u>	<u>7-29-10</u>		<u>5</u>	<u>no</u>	<u>T.A.</u>			

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) W. Berfeld / CW

Signature W. Berfeld



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-10D</u>
Other: <u>Delta</u>	Project No.	Date (m/d/y) <u>7-29-10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>95</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>Clear</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>None</u>
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description: <u>stickup</u>	
TOC/MP Stickup: <u>2</u> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)							
Depth to Water	<u>7.26</u>						
Tape Correction	<u>—</u>						
Water Level (WL)	<u>7.26</u>						
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice: record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Casing Volume: [ (TD) - (WL) ] • [ (Well ID) ] <sup>2</sup> • [ (Conversion Factor) ] = <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged	<input type="checkbox"/> Pumping Rate
Time (hh:mm; 24-hr clock)	pH (Temperature Corrected? <input type="checkbox"/>
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	Dissolved Oxygen mg/L
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC $\mu$ S/cm	Turbidity <input checked="" type="checkbox"/> NTU
Color/Tint	Odor
<u>0.6</u>	<u>12.6</u>

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu$ S/cm at 25°C); EC: Electrical Conductivity not corrected for temperature ( $\mu$ S/cm)  $\mu$ S/cm =  $\mu$ mho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 $\mu$ m)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-10</u>	<u>P0</u>	<u>7-29-10</u>	<u>1602</u>	<u>5</u>	<u>—</u>	<u>J.A.</u>			

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmddyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) W. Barfield / CW

Signature W. Barfield



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW-505	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER (inches):	2	WELL SCREEN INTERVAL DEPTH: 10 feet to 20 feet	STATIC DEPTH TO WATER (feet):	4.86	PURGE PUMP TYPE OR BAILER:	PP				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 1.1 liters + (.0217 liters/foot X 25 feet) = 1.1 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
847	1.1	1.4	0.1	4.91	7.30	23.14	1143	2.18	52.4	228.6
850	0.3	1.7	.1	4.92	7.30	23.15	1143	2.18	50.6	227.0
852	.3	2.0	.1	4.93	7.30	23.15	1143	2.13	49.8	228.1
856	.3	2.3	.1	4.93	7.30	23.15	1140	2.15	47.0	228.1
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1.

### STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

**Turbidity:** <10 NTU

Temp.: &lt;0.5 Degrees C

pH: <0.1 SU

**Specific Conductance:** 10%

Drawdown: <0.5 ft from Initial

Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW50 I	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER 2 (inches):		WELL SCREEN INTERVAL DEPTH: 36 feet to 46 feet			STATIC DEPTH TO WATER (feet): 5.79		PURGE PUMP TYPE OR BAILER: SS monsoon			
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.046 liters + ( 0.0217 liters/foot X 50 feet) + 0.5 liters = 1.6 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
931	1.6	1.6	0.1	5.72	7.32	23.51	2674	0.06	310	-220.2
934	0.3	1.9	0.1	5.72	7.32	23.51	2674	0.07	168	-214.8
937	0.3	2.2	0.1	5.70	7.31	23.51	2674	0.07	160	-214.1
940	0.3	2.5	0.1	5.70	7.31	23.51	2674	0.07	160	-214.0
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: <u>Former Hercules Facility</u>	SITE LOCATION: <u>Brunswick, GA</u>
WELL ID: <u>MW 50 D</u>	DATE: <u>5/16/12</u>

## PURGING DATA

WELL DIAMETER (inches): <u>2</u>	WELL SCREEN INTERVAL DEPTH: <u>78</u> feet to <u>88</u> feet	STATIC DEPTH TO WATER (feet): <u>5.76</u>	PURGE PUMP TYPE OR BAILER: <u>SS Monsoon</u>							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)										
$= 0.046 \text{ liters} + (0.0217 \text{ liters/foot} \times 90 \text{ feet}) + 0.5 \text{ liters} = 2.5 \text{ liters}$										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
911	2.5	2.5	0.1	5.48	8.26	23.22	578	0.93	52.4	-167.1
914	0.3	2.8	0.1	5.50	7.72	23.22	578	0.93	48.4	-185.1
917	0.3	3.1	0.1	5.50	7.72	23.22	578	0.93	48.0	-185.1
920	0.3	3.4	0.1	5.50	7.72	23.22	578	0.93	48.1	-185.1
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURE: <u>[Signature]</u>		SAMPLING TIME: <u>925</u>	
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N		FIELD FILTERED: <input checked="" type="radio"/> Y <input type="radio"/> N FILTER SIZE: _____ µm Filtration Equipment Type: _____		DUPLICATE: <input type="radio"/> Y <input checked="" type="radio"/> N	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
1	250	Nitric acid		Metals	
<del>2</del>	<del>1 L</del>	<del>None</del>		<del>TOX RM</del>	
REMARKS:					

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

- Turbidity: <10 NTU
- Temp.: <0.5 Degrees C
- pH: <0.1 SU
- Specific Conductance: 10%
- Drawdown: <0.5 ft from Initial
- Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: MW 515	DATE: 5/16/12

## PURGING DATA

WELL DIAMETER 2 (Inches):	WELL SCREEN INTERVAL DEPTH: 10 feet to 20 feet	STATIC DEPTH TO WATER 3.79 (feet):	PURGE PUMP TYPE OR BAILER: PP							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 16 liters + ( 0.0217 liters/foot X 25 feet ) + 0.5 liters = 1 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1041	1	1	0.1	4.64	5.91	24.31	5555	0.02	47.5	-250.9
1044	0.3	1.3	0.1	4.65	5.92	24.72	5554	0.02	44.2	-256.1
1047	0.3	1.6	0.1	4.65	5.92	24.32	5554	0.01	44.1	-256.2
1050	0.3	1.9	0.1	4.65	5.92	24.32	5554	0.01	45.6	-256.3
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES: 		SAMPLING TIME: 1055	
FIELD DECONTAMINATION: Y <input checked="" type="radio"/> N		FIELD-FILTERED: Y <input checked="" type="radio"/> N		FILTER SIZE: _____ µm	
FIELD DECONTAMINATION: Y <input checked="" type="radio"/> N		Filtration Equipment Type: _____		DUPLICATE: Y <input checked="" type="radio"/> N	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
1	250	Nitric acid		Metals	
<del>2</del>	<del>1L</del>	<del>None</del>		<del>TOX</del>	
REMARKS:					

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

Turbidity: <10 NTU  
 Temp.: <0.5 Degrees C  
 pH: <0.1 SU  
 Specific Conductance: 10%  
 Drawdown: <0.5 ft from Initial  
 Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: MW 51 I	DATE: 5/16/12

## PURGING DATA

WELL DIAMETER (inches): 2	WELL SCREEN INTERVAL DEPTH: 40 feet to 50 feet	STATIC DEPTH TO WATER (feet): 4.54	PURGE PUMP TYPE OR BAILER: SS Monsoon							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)										
= 0.046 liters + ( 0.0217 liters/foot X 50 feet ) + 0.5 liters = 1.6 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1036	1.6	1.6	0.1	3.39	7.01	23.54	1048	1.37	221	-121.9
1039	0.2	1.9	0.1	3.37	7.00	23.55	1048	1.37	219	-121.0
1042	0.3	2.1	0.1	3.37	6.99	23.55	1048	1.35	217	-122.2
1045	0.3	2.4	0.1	3.37	6.99	23.56	1048	1.35	216	-122.3
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES:		SAMPLING TIME: 1050	
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N		FIELD-FILTERED: <input checked="" type="radio"/> Y <input type="radio"/> N		FILTER SIZE: _____ µm	
FILTRATION EQUIPMENT TYPE: _____		DUPLICATE: <input type="radio"/> Y <input checked="" type="radio"/> N		INTENDED ANALYSIS AND/OR METHOD	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
1	250	Nitric acid		Metals	
<del>2</del>	<del>1 L</del>	<del>None</del>		<del>TOX</del>	
REMARKS:					

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

Turbidity: <10 NTU  
 Temp.: <0.5 Degrees C  
 pH: <0.1 SU  
 Specific Conductance: 10%  
 Drawdown: <0.5 ft from Initial  
 Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: <u>MW51D</u>	DATE: 5/16/12

## PURGING DATA

WELL DIAMETER (inches): <u>2</u>	WELL SCREEN INTERVAL DEPTH: <u>76</u> feet to <u>86</u> feet	STATIC DEPTH TO WATER (feet): <u>4.43</u>	PURGE PUMP TYPE OR BAILER: <u>SS monsoon</u>							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)										
$= 0.046 \text{ liters} + (0.0217 \text{ liters/foot} \times 90 \text{ feet}) + 0.5 \text{ liters} = 2.5 \text{ liters}$										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1031	2.5	2.5	0.1	5.01	7.42	23.34	1221	0.67	20.1	-175.6
1034	0.3	2.8	0.1	5.00	7.40	22.31	1532	0.66	15.2	-175.5
1037	0.3	3.1	0.1	5.00	7.40	22.63	1509	0.52	12.3	-175.6
1030	0.3	3.4	0.1	4.99	7.40	22.61	1469	0.48	9.66	-174.8

TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES: 		SAMPLING TIME: <u>1035</u>	
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N		FIELD FILTERED: <input checked="" type="radio"/> Y <input type="radio"/> N		FILTER SIZE: _____ µm	
INTENDED ANALYSIS AND/OR METHOD		DUPLICATE: <input checked="" type="radio"/> Y <input type="radio"/> N			
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
1	250	Nitric acid		Metals	
2	1 L	None		TOX	

REMARKS:

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

- Turbidity: <10 NTU
- Temp.: <0.5 Degrees C
- pH: <0.1 SU
- Specific Conductance: 10%
- Drawdown: <0.5 ft from Initial
- Dissolved Oxygen: <0.5 mg/L




# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: MW 42I	DATE: 5/16/12

## PURGING DATA

WELL DIAMETER (inches): 2	WELL SCREEN INTERVAL DEPTH: 40 feet to 50 feet	STATIC DEPTH TO WATER (feet): 6.91	PURGE PUMP TYPE OR BAILER: SSmanson							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = .046 liters + ( 0.0217 liters/foot X 50 feet ) + 0.5 liters = 1.6 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1536	1.6	1.6	0.1	6.48	5.87	24.33	482	1.29	2.66	-185.7
1539	0.3	1.9	0.1	6.49	5.87	24.34	482	1.30	3.10	-188.7
1542	0.3	2.2	0.1	6.49	5.88	24.35	482	1.30	3.22	-188.7
1545	0.3	2.5	0.1	6.49	5.88	24.35	482	1.30	2.88	-189.8
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES: 		SAMPLING TIME: 1550	
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N		FIELD FILTERED: <input checked="" type="radio"/> Y <input type="radio"/> N Filtration Equipment Type: _____		FILTER SIZE: _____ µm	
DUPLICATE: <input type="radio"/> Y <input checked="" type="radio"/> N					
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
1	250	Nitric acid		Metals	
2	1 L	None		TOX	
REMARKS:					

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

Turbidity: <10 NTU  
 Temp.: <0.5 Degrees C  
 pH: <0.1 SU  
 Specific Conductance: 10%  
 Drawdown: <0.5 ft from Initial  
 Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: MW42D	DATE: 5/16/12

## PURGING DATA

WELL DIAMETER (inches): 2	WELL SCREEN INTERVAL DEPTH: 88 feet to 98 feet	STATIC DEPTH TO WATER (feet): 7.58	PURGE PUMP TYPE OR BAILER: SSmonsoon							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)										
= 1.046 liters + ( 0.0217 liters/foot X 100 feet ) + 0.5 liters = 2.7 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1516	2.7	2.7	0.1	7.32	7.47	23.51	2319	0.38	3.14	-208.1
1519	0.3	3.0	0.1	7.34	7.46	23.30	2399	0.33	5.66	-212.2
1522	0.3	3.3	0.1	7.34	7.56	23.39	2400	0.32	2.74	-212.8
1525	0.3	3.6	0.1	7.34	7.56	23.39	2400	0.32	3.01	-212.8
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES: 		SAMPLING TIME: 1530	
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N		FIELD-FILTERED: <input checked="" type="radio"/> Y <input type="radio"/> N		FILTER SIZE: _____ µm	
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N		Filtration Equipment Type: _____		DUPLICATE: <input type="radio"/> Y <input checked="" type="radio"/> N	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
1	250	Nitric acid		Metals	
2	1 L	None		TOX	
REMARKS:					

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

- Turbidity: <10 NTU
- Temp.: <0.5 Degrees C
- pH: <0.1 SU
- Specific Conductance: 10%
- Drawdown: <0.5 ft from Initial
- Dissolved Oxygen: <0.5 mg/L



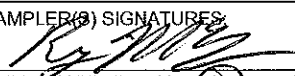
# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: MW435	DATE: 5/16/12

## PURGING DATA

WELL DIAMETER (inches): 2	WELL SCREEN INTERVAL DEPTH: 10 feet to 20 feet	STATIC DEPTH TO WATER (feet): 5104	PURGE PUMP TYPE OR BAILER: PP							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = NA liters + (0.0217 liters/foot X 25 feet) + 0.5 liters = 1 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1316	1	1	0.1	3.51	6.67	25.29	1491	1.75	6.06	-234.2
1319	0.3	1.3	0.1	3.51	6.64	24.66	1491	1.74	3.14	-248.2
1322	0.3	1.6	0.1	3.57	6.64	24.66	1494	1.71	3.10	-251.2
1325	0.3	1.9	0.1	3.57	6.64	24.63	1494	1.70	3.08	-252.6
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES: 		SAMPLING TIME: 1330	
FIELD DECONTAMINATION: Y <input checked="" type="radio"/> N		FIELD FILTERED: Y <input checked="" type="radio"/> N Filtration Equipment Type: _____		FILTER SIZE: _____ µm	
DUPLICATE: Y <input checked="" type="radio"/> N					
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
1	250	Nitric acid		Metals	
2	1 L	None		TOX	
REMARKS:					

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

Turbidity: <10 NTU  
 Temp.: <0.5 Degrees C  
 pH: <0.1 SU  
 Specific Conductance: 10%  
 Drawdown: <0.5 ft from Initial  
 Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW43I	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER 2 (inches):		WELL SCREEN INTERVAL DEPTH: 40 feet to 50 feet			STATIC DEPTH TO WATER (feet): 6.82		PURGE PUMP TYPE OR BAILER: SS monsoon			
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 1.046 liters + ( 0.0217 liters/foot X 50 feet) + 0.5 liters = 1.6 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1306	1.6	1.6	0.1	6.70	7.67	25.38	2249	1.04	3.55	-216.8
1309	0.3	1.9	0.1	6.71	7.67	25.39	2249	1.04	4.11	-209.4
1312	0.3	2.2	0.1	6.71	7.67	25.39	2249	1.04	4.07	-200.0
1315	0.3	2.5	0.1	6.71	7.67	25.39	2249	1.04	4.02	-188.6
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW43D	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER 2 (inches):	WELL SCREEN INTERVAL DEPTH: 89 feet to 99 feet	STATIC DEPTH TO WATER 6.89 (feet):	PURGE PUMP TYPE OR BAILER: SS monsoon							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = .046 liters + ( 0.0217 liters/foot X 100 feet) + 0.5 liters = 2.7 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1246	2.7	2.7	0.1	6.51	7.62	24.87	2195	1.40	5.32	-224.0
1249	0.3	3.0	0.1	6.52	7.65	25.04	2195	1.38	5.66	-208.1
1252	0.3	3.3	0.1	6.52	7.65	25.04	2200	1.35	4.72	-204.2
1255	0.3	3.6	0.1	6.52	7.65	25.04	2214	1.39	4.58	-204.1
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



## GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW 495	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER 2 (inches):		WELL SCREEN INTERVAL DEPTH: 10 feet to 20 feet			STATIC DEPTH TO WATER 3.66 (feet):		PURGE PUMP TYPE OR BAILER: PP			
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = Na liters + ( 0.0217 liters/foot X 25 feet) + 0.5 liters = 1.0 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1436	1.0	1.0	0.1	4.56	7.20	23.85	8	6.19	5.70	-132.6
1439	0.3	1.3	0.1	4.55	7.20	23.85	8	6.19	5.79	-132.1
1442	0.3	1.6	0.1	4.56	7.20	23.85	8	6.19	5.08	-132.9
1445	0.3	1.9	0.1	4.56	7.20	23.85	8	6.19	5.12	-132.8
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

**NOTES:** 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW 49 I	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER 2 (inches):		WELL SCREEN INTERVAL DEPTH: 57 feet to 67 feet		STATIC DEPTH TO WATER 5.86 (feet):		PURGE PUMP TYPE OR BAILER: SS monsoon				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = .046 liters + ( 0.0217 liters/foot X 70 feet) + 0.5 liters = 2.1 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1426	2.1	2.1	0.1	5.47	5.64	24.67	954	0.23	1.38	-234.7
1429	0.3	2.4	0.1	5.47	5.64	24.66	954	0.21	1.11	-235.9
1432	0.3	2.7	0.1	5.47	5.64	24.66	954	0.21	1.59	-235.1
1435	0.3	3.0	0.1	5.47	5.64	24.66	954	0.21	1.20	-235.4
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



## GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW49D	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER        2 (inches):		WELL SCREEN INTERVAL DEPTH:  86 feet to 96 feet				STATIC DEPTH TO WATER     5,92 (feet):		PURGE PUMP TYPE OR BAILER:  SSmonsoon			
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)  = 1.046 liters + ( 0.0217 liters/foot X 100 feet ) + 0.5 liters = 2.7 liters											
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)	
1406	2.7	2.7	0.1	5.60	6.82	24.35	1259	0.60	15.1	-144.4	
1409	0.3	3.0	0.1	5.61	6.82	24.35	1258	0.58	12.2	-144.6	
1412	0.3	3.3	0.1	5.61	6.79	24.35	1258	0.56	10.12	-144.9	
1415	0.3	3.6	0.1	5.61	6.79	24.35	1258	0.54	9.04	-144.9	
TUBING INSIDE DIA. CAPACITY (Liters/Ft.):    1/8" = 0.0024;    3/16" = 0.0054;    1/4" = 0.0097;    5/16" = 0.0151;    3/8" = 0.0217;    1/2" = 0.0386;    5/8" = 0.0603											

## SAMPLING DATA

[illegible]

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	mw52s		DATE: 5/10/12 <i>5/15/12</i>

## PURGING DATA

WELL DIAMETER 2 (inches):		WELL SCREEN INTERVAL DEPTH: 16 feet to 20 feet		STATIC DEPTH TO WATER 4.08 (feet):		PURGE PUMP TYPE OR BAILER: PP				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)								= Na liters + ( 0.0217 liters/foot X 25 feet ) + 0.5 liters = 1.0 liters		
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1651	1.0	1.0	0.1	4.03	6.91	24.06	447	1.53	33.8	-69.9
1654	0.3	1.3	0.1	4.04	6.49	23.16	440	1.50	18.8	-62.5
1657	0.3	1.6	0.1	4.05	6.47	23.16	439	1.45	14.7	-62.5
1700	0.3	1.9	0.1	4.06	6.47	23.16	438	1.40	12.2	-62.5
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW 52 I	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER 2 (inches):		WELL SCREEN INTERVAL DEPTH: 40 feet to 50 feet			STATIC DEPTH TO WATER 4.43 (feet):		PURGE PUMP TYPE OR BAILER: SS Monsoon			
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = .046 liters + ( 0.0217 liters/foot X 50 feet) + 0.5 liters = 1.6 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1620	1.6	1.6	0.1	4.69	7.02	24.06	681	0.27	629	-119.2
1623	0.3	1.9	0.1	4.69	7.05	24.02	680	0.37	629	-118.5
1626	0.3	2.2	0.1	4.69	7.07	23.86	678	0.19	574	-119.0
1629	0.3	2.5	0.1	4.69	7.10	24.01	679	0.37	372	-123.0
1632	0.3	2.8	0.1	4.69	7.15	24.53	687	0.29	350	-125.5
1635	0.3	3.1	0.1	4.69	7.15	24.54	687	0.27	321	-126.6
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: MW 52 D	DATE: 5/16/12 5/15/12

## PURGING DATA

WELL DIAMETER 2 (inches):	WELL SCREEN INTERVAL DEPTH: 79 feet to 89 feet	STATIC DEPTH TO WATER 4.49 (feet):	PURGE PUMP TYPE OR BAILER: SS monsoon
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)			
= 1.046 liters + ( 0.0217 liters/foot X 100 feet ) + 0.5 liters = 2.7 liters			

TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1624	2.7	2.7	0.1	4.42	6.60	23.72	8567	1.06	136	-147.9
1627	0.3	3.0	0.1	4.42	6.58	23.81	8602	1.00	68.1	-147.0
1630	0.3	3.3	0.1	4.42	6.58	23.79	8837	0.97	32.2	-145.6
1633	0.3	3.6	0.1	4.42	6.57	23.78	8829	0.96	20.2	-145.3
1636	0.3	3.9	0.1	4.42	6.56	23.68	8957	0.92	15.6	-143.8
1639	0.3	4.2	0.1	4.42	6.61	23.51	9080	0.87	12.8	-128.7
1642	0.3	4.5	0.1	4.42	6.53	23.46	9244	0.81	10.9	-132.1
1645	0.3	4.8	0.1	4.42	6.53	23.50	9196	0.80	9.8	-134.4

TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES: 		SAMPLING TIME: 1650	
FIELD DECONTAMINATION: Y N		FIELD-FILTERED: Y N FILTER SIZE: µm		DUPLICATE: Y N	

SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION	INTENDED ANALYSIS AND/OR METHOD
# CONTAINERS	VOLUME	PRESERVATIVE USED	
3	40ml	None	VOC's
1	250	Nitric acid	Metals
2	1 L	None	TOX

REMARKS:

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

Turbidity: <10 NTU  
 Temp.: <0.5 Degrees C  
 pH: <0.1 SU  
 Specific Conductance: 10%  
 Drawdown: <0.5 ft from Initial  
 Dissolved Oxygen: <0.5 mg/L



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By ☐ Facility Personnel ☐ ES&T Other: Delta Facility Ashland Bunker Site ID MW-44D  
 Project No. \_\_\_\_\_ Date (m/d/y) 7-29-10

Site Description ☐ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other: \_\_\_\_\_  
 Air Temp: 95 °C ☐ °F Weather: Clear  
 Well Locked? ☒ yes ☐ no Damaged/Repairs Needed: none  
☐ TOC ☐ MP Description: Stickup  
 TOC/MP Stickup: 3 ft ☐ m above/below ground Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other: \_\_\_\_\_  
 Site Remarks (nearby wells pumping, tide, stream stage, etc.): \_\_\_\_\_

Water Level Data Measurement Units: ☐ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC: \_\_\_\_\_  
☐ E-Tape, # \_\_\_\_\_ ☐ Steel Tape ☐ Other \_\_\_\_\_  

Time (hh:mm; 24-hr clock)	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
	<u>Initial</u>						
Depth to Water	<u>8.99</u>						<u>DTB =</u>
Tape Correction							<u>&gt; 100'</u>
Water Level (WL)	<u>8.99</u>						<u>(100' tape)</u>
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if seen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: \_\_\_\_\_ ☐ Grab ☐ Bailor ☐ Pump Description: \_\_\_\_\_  
 Casing Volume: [ (TD) - (WL) ] \* [ (Well ID) ]<sup>2</sup> \* [ (Conversion Factor) ] = \_\_\_\_\_ gal ☐ liters  
 Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches  
☐ Cum. Vol. Purged ☐ Pumping Rate 250 gpm Well Goes Dry While Purging ☐  

Time (hh:mm; 24-hr clock)	Initial	1316	1321	1326	1331	1336	Meter Type	Remarks
pH (Temperature Corrected? <input type="checkbox"/> )	<u>6.73</u>	<u>6.78</u>	<u>6.90</u>	<u>6.91</u>	<u>6.92</u>	<u>6.93</u>	<u>Horizon U-22</u>	
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>24.55</u>	<u>24.42</u>	<u>24.56</u>	<u>24.53</u>	<u>24.44</u>	<u>24.49</u>		
Dissolved Oxygen mg/L	<u>6.45</u>	<u>5.93</u>	<u>5.66</u>	<u>2.57</u>	<u>5.35</u>	<u>5.28</u>		
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <u>µS/cm</u>	<u>2.65</u>	<u>2.55</u>	<u>2.58</u>	<u>2.57</u>	<u>2.61</u>	<u>2.62</u>		
Turbidity <u>NTU</u>	<u>62.4</u>	<u>28.0</u>	<u>12.6</u>	<u>8.9</u>	<u>8.0</u>	<u>8.3</u>		
Color/Tint water level	<u>gray 10.11</u>	<u>10.17</u>	<u>10.17</u>	<u>8.9</u>	<u>10.17</u>	<u>10.17</u>		
Odor TDS	<u>914</u>	<u>1.68</u>	<u>1.62</u>	<u>1.65</u>	<u>1.67</u>	<u>1.68</u>		
<u>ORP mV</u>	<u>-201</u>	<u>-210</u>	<u>-210</u>	<u>-209</u>	<u>-207</u>	<u>-207</u>		

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: \_\_\_\_\_ ☐ Grab ☐ Bailor ☐ Pump Description: \_\_\_\_\_  

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-44D</u>	<u>P0</u>	<u>7/29/10</u>	<u>1336</u>	<u>5</u>	<u>ND</u>	<u>T.D.</u>			

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) Wes Bersfield / C.W. Signature W. Bersfield  
 Date Entered into Database \_\_\_\_\_ By \_\_\_\_\_ Page 1 of 1



## DELTA CONSULTANTS

## GROUNDWATER SAMPLING RECORD

Sampled By <input type="checkbox"/> Facility Personnel <input type="checkbox"/> ES&T Other: <u>Delta</u>	Facility <u>Ashland Brunswick</u>	Site ID <u>MW-10D</u>
	Project No.	Date (m/d/y) <u>7-29-10</u>

Site Description ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe Other:

Air Temp: <u>95</u> <input type="checkbox"/> °C <input checked="" type="checkbox"/> °F	Weather: <u>Clear</u>
Well Locked? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Damaged/Repairs Needed: <u>None</u>
<input checked="" type="checkbox"/> TOC <input type="checkbox"/> MP Description: <u>Sticking</u>	
TOC/MP Stickup: <u>3</u> <input checked="" type="checkbox"/> ft <input type="checkbox"/> m above/below ground	Well Inside Diameter (ID): <input checked="" type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other:
Site Remarks (nearby wells pumping, tide, stream stage, etc.)	

Water Level Data Measurement Units: ☒ ft ☐ m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>Initial 1449</u>						<u>TD = 95 ft</u>
Depth to Water	<u>7.26</u>						
Tape Correction	<u>—</u>						
Water Level (WL)	<u>7.26</u>						
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice, record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: ☐ Grab ☐ Bailor ☒ Pump Description: Mega Medusa

Casing Volume: [ (TD) - (WL) ] * [ (Well ID) ] <sup>2</sup> * [ (Conversion Factor) ] = <input type="checkbox"/> gal <input type="checkbox"/> liters	Well Goes Dry While Purging <input type="checkbox"/>
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches	
<input type="checkbox"/> Cum. Vol. Purged <input type="checkbox"/> Pumping Rate	<u>250</u> <u>400-4</u> <u>500</u> <u>Final</u>
Time (hh:mm; 24-hr clock)	<u>Initial 1456</u> <u>1459</u> <u>1502</u> <u>1505</u> <u>1508</u> <u>22</u>
pH (Temperature Corrected? <input type="checkbox"/> )	<u>5.89</u> <u>5.77</u> <u>5.75</u> <u>5.80</u> <u>5.80</u> <u>5.93</u>
Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	<u>27.78</u> <u>26.41</u> <u>26.07</u> <u>25.33</u> <u>25.35</u> <u>24.86</u>
Dissolved Oxygen mg/L	<u>5.44</u> <u>4.78</u> <u>5.04</u> <u>5.64</u> <u>5.62</u> <u>5.85</u>
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC <u>µS/cm</u>	<u>16.3</u> <u>18.2</u> <u>19.0</u> <u>21.1</u> <u>21.2</u> <u>20.9</u>
Turbidity <u>NTU</u>	<u>98.6</u> <u>18.283</u> <u>167.0</u> <u>34.3</u> <u>26.8</u> <u>34.4</u>
Color/Tint <u>Water Level</u>	<u>7.31</u> <u>7.31</u> <u>7.34</u> <u>7.40</u> <u>7.40</u> <u>7.96</u>
Odor <u>TDS</u> <u>g/L</u>	<u>11.4</u> <u>11.3</u> <u>11.7</u> <u>13.1</u> <u>13.1</u> <u>13.0</u>
<u>DR1</u> <u>mV</u>	<u>-59</u> <u>-75</u> <u>-98</u> <u>-93</u> <u>-101</u> <u>-124</u>

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon.

Sample Data Sample Depth: ☐ Grab ☐ Bailor ☐ Pump Description:

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<u>MW-10</u>	<u>P0</u>	<u>7-29-10</u>		<u>5</u>	<u>NO</u>	<u>T.A.</u>	<u>—</u>	<u>—</u>	

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdyyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampler's Name (print) <u>W. Berfeld</u> <u>LCW</u>	Signature <u>W. Berfeld</u>
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# GROUNDWATER SAMPLING RECORD

**Site Description** ☒ Monitoring Well ☐ Extraction Well ☐ Irrigation Well ☐ Spring ☐ Borehole ☐ Probe ☐ Other:

**Water Level Data**      Measurement Units:   ☐ ft   ☐ m      Well or Borehole Total Depth (TD) from MP or TOC:

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Suckup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

**Field WQ Data**      Purge Depth: \_\_\_\_\_      ☐ Grab    ☐ Bailer    ☐ Pump      Description: \_\_\_\_\_

Record time purging starts and ends in "Purging Start" and "Purging End" columns in Water Level Data section. Cum. Vol. Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature ( $\mu\text{S}/\text{cm}$  at  $25^\circ\text{C}$ ); EC: Electrical Conductivity not corrected for temperature ( $\mu\text{S}/\text{cm}$ )  $\mu\text{S}/\text{cm} = \mu\text{mho}/\text{cm}$  1 gallon (US) = 3.785 L = 0.833 Imperial gallon

**Sample Data**      Sample Depth:      ☐ Grab    ☐ Bailer    ☐ Pump      Description:

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); B#, Field Blank; B#N, Equipment Rinseater; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmmddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinseate, spike, and/or blank sample collection/handling in daily field notes.

users/forms/SampLog.doc/5/8/02



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW-505	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER (inches):	2	WELL SCREEN INTERVAL DEPTH: 10 feet to 20 feet	STATIC DEPTH TO WATER (feet):	4.86	PURGE PUMP TYPE OR BAILER:	PP				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 1.1 liters + (.0217 liters/foot X 25 feet) = 1.1 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
847	1.1	1.4	0.1	4.91	7.30	23.14	1143	2.18	52.4	228.6
850	0.3	1.7	.1	4.92	7.30	23.15	1143	2.18	50.6	227.0
852	.3	2.0	.1	4.93	7.30	23.15	1143	2.13	49.8	228.1
856	.3	2.3	.1	4.93	7.30	23.15	1140	2.15	47.0	228.1
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1.

### STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

Turbidity:	<10 NTU
Temp.:	<0.5 Degrees C
pH:	<0.1 SU
Specific Conductance:	10%
Drawdown:	<0.5 ft from Initial
Dissolved Oxygen:	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW50 I	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER 2 (inches):		WELL SCREEN INTERVAL DEPTH: 36 feet to 46 feet			STATIC DEPTH TO WATER (feet): 5.79		PURGE PUMP TYPE OR BAILER: SS monsoon			
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.046 liters + ( 0.0217 liters/foot X 50 feet) + 0.5 liters = 1.6 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
931	1.6	1.6	0.1	5.72	7.32	23.51	2674	0.06	310	-220.2
934	0.3	1.9	0.1	5.72	7.32	23.51	2674	0.07	168	-214.8
937	0.3	2.2	0.1	5.70	7.31	23.51	2674	0.07	160	-214.1
940	0.3	2.5	0.1	5.70	7.31	23.51	2674	0.07	160	-214.0
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: <u>Former Hercules Facility</u>	SITE LOCATION: <u>Brunswick, GA</u>
WELL ID: <u>MW 50 D</u>	DATE: <u>5/16/12</u>

## PURGING DATA

WELL DIAMETER (inches): <u>2</u>	WELL SCREEN INTERVAL DEPTH: <u>78</u> feet to <u>88</u> feet	STATIC DEPTH TO WATER (feet): <u>5.76</u>	PURGE PUMP TYPE OR BAILER: <u>SS Monsoon</u>							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)										
$= 0.046 \text{ liters} + (0.0217 \text{ liters/foot} \times 90 \text{ feet}) + 0.5 \text{ liters} = 2.5 \text{ liters}$										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
911	2.5	2.5	0.1	5.48	8.26	23.22	578	0.93	52.4	-167.1
914	0.3	2.8	0.1	5.50	7.72	23.22	578	0.93	48.4	-185.1
917	0.3	3.1	0.1	5.50	7.72	23.22	578	0.93	48.0	-185.1
920	0.3	3.4	0.1	5.50	7.72	23.22	578	0.93	48.1	-185.1
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURE: <u>[Signature]</u>		SAMPLING TIME: <u>925</u>	
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N		FIELD FILTERED: <input checked="" type="radio"/> Y <input type="radio"/> N		FILTER SIZE: _____ µm	
Filtration Equipment Type: _____		DUPLICATE: <input type="radio"/> Y <input checked="" type="radio"/> N		INTENDED ANALYSIS AND/OR METHOD	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
1	250	Nitric acid		Metals	
<del>2</del>	<del>1 L</del>	<del>None</del>		<del>TOX RM</del>	
REMARKS:					

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

- Turbidity: <10 NTU
- Temp.: <0.5 Degrees C
- pH: <0.1 SU
- Specific Conductance: 10%
- Drawdown: <0.5 ft from Initial
- Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: MW 515	DATE: 5/16/12

## PURGING DATA

WELL DIAMETER 2 (Inches):	WELL SCREEN INTERVAL DEPTH: 10 feet to 20 feet	STATIC DEPTH TO WATER 3.79 (feet):	PURGE PUMP TYPE OR BAILER: PP							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 16 liters + ( 0.0217 liters/foot X 25 feet ) + 0.5 liters = 1 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1041	1	1	0.1	4.64	5.91	24.31	5555	0.02	47.5	-250.9
1044	0.3	1.3	0.1	4.65	5.92	24.72	5554	0.02	44.2	-256.1
1047	0.3	1.6	0.1	4.65	5.92	24.32	5554	0.01	44.1	-256.2
1050	0.3	1.9	0.1	4.65	5.92	24.32	5554	0.01	45.6	-256.3
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES: 		SAMPLING TIME: 1055	
FIELD DECONTAMINATION: Y <input checked="" type="radio"/> N		FIELD-FILTERED: Y <input checked="" type="radio"/> N		FILTER SIZE: _____ µm	
FIELD DECONTAMINATION: Y <input checked="" type="radio"/> N		Filtration Equipment Type: _____		DUPLICATE: Y <input checked="" type="radio"/> N	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
1	250	Nitric acid		Metals	
<del>2</del>	<del>1L</del>	<del>None</del>		<del>TOX</del>	
REMARKS:					

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

Turbidity: <10 NTU  
 Temp.: <0.5 Degrees C  
 pH: <0.1 SU  
 Specific Conductance: 10%  
 Drawdown: <0.5 ft from Initial  
 Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: MW 51 I	DATE: 5/16/12

## PURGING DATA

WELL DIAMETER (inches): 2	WELL SCREEN INTERVAL DEPTH: 40 feet to 50 feet	STATIC DEPTH TO WATER (feet): 4.54	PURGE PUMP TYPE OR BAILER: SS Monsoon							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)										
= 0.046 liters + ( 0.0217 liters/foot X 50 feet ) + 0.5 liters = 1.6 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1036	1.6	1.6	0.1	3.39	7.01	23.54	1048	1.37	221	-121.9
1039	0.2	1.9	0.1	3.37	7.00	23.55	1048	1.37	219	-121.0
1042	0.3	2.1	0.1	3.37	6.99	23.55	1048	1.35	217	-122.2
1045	0.3	2.4	0.1	3.37	6.99	23.56	1048	1.35	216	-122.3

TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES:		SAMPLING TIME: 1050	
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N		FIELD-FILTERED: <input checked="" type="radio"/> Y <input type="radio"/> N		FILTER SIZE: _____ µm	
Filtration Equipment Type: _____		DUPLICATE: <input type="radio"/> Y <input checked="" type="radio"/> N		INTENDED ANALYSIS AND/OR METHOD	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
1	250	Nitric acid		Metals	
<del>2</del>	<del>1 L</del>	<del>None</del>		<del>TOX</del>	

REMARKS:

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

- Turbidity: <10 NTU
- Temp.: <0.5 Degrees C
- pH: <0.1 SU
- Specific Conductance: 10%
- Drawdown: <0.5 ft from Initial
- Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: <u>MW51D</u>	DATE: 5/16/12

## PURGING DATA

WELL DIAMETER (inches): <u>2</u>	WELL SCREEN INTERVAL DEPTH: <u>76</u> feet to <u>86</u> feet	STATIC DEPTH TO WATER (feet): <u>4.43</u>	PURGE PUMP TYPE OR BAILER: <u>SS monsoon</u>							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = <u>0.046</u> liters + ( <u>0.0217</u> liters/foot X <u>90</u> feet) + <u>0.5</u> liters = <u>2.5</u> liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1031	2.5	2.5	0.1	5.01	7.42	23.34	1221	0.67	20.1	-175.6
1034	0.3	2.8	0.1	5.00	7.40	22.31	1532	0.66	15.2	-175.5
1037	0.3	3.1	0.1	5.00	7.40	22.63	1509	0.52	12.3	-175.6
1030	0.3	3.4	0.1	4.99	7.40	22.61	1469	0.48	9.66	-174.8
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES: 		SAMPLING TIME: <u>1035</u>	
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N		FIELD FILTERED: <input checked="" type="radio"/> Y <input type="radio"/> N		FILTER SIZE: _____ µm	
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N		FILTRATION EQUIPMENT TYPE: _____		DUPLICATE: <input checked="" type="radio"/> Y <input type="radio"/> N	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
1	250	Nitric acid		Metals	
2	1 L	None		TOX	
REMARKS:					

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

- Turbidity: <10 NTU
- Temp.: <0.5 Degrees C
- pH: <0.1 SU
- Specific Conductance: 10%
- Drawdown: <0.5 ft from Initial
- Dissolved Oxygen: <0.5 mg/L




# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: MW 42I	DATE: 5/16/12

## PURGING DATA

WELL DIAMETER (inches): 2	WELL SCREEN INTERVAL DEPTH: 40 feet to 50 feet	STATIC DEPTH TO WATER (feet): 6.91	PURGE PUMP TYPE OR BAILER: SSmanson							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = .046 liters + ( 0.0217 liters/foot X 50 feet ) + 0.5 liters = 1.6 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1536	1.6	1.6	0.1	6.48	5.87	24.33	482	1.29	2.66	-185.7
1539	0.3	1.9	0.1	6.49	5.87	24.34	482	1.30	3.10	-188.7
1542	0.3	2.2	0.1	6.49	5.88	24.35	482	1.30	3.22	-188.7
1545	0.3	2.5	0.1	6.49	5.88	24.35	482	1.30	2.88	-189.8
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES: 		SAMPLING TIME: 1550	
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N		FIELD FILTERED: <input checked="" type="radio"/> Y <input type="radio"/> N Filtration Equipment Type: _____		FILTER SIZE: _____ µm	
DUPLICATE: <input type="radio"/> Y <input checked="" type="radio"/> N					
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
1	250	Nitric acid		Metals	
2	1 L	None		TOX	
REMARKS:					

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

Turbidity: <10 NTU  
 Temp.: <0.5 Degrees C  
 pH: <0.1 SU  
 Specific Conductance: 10%  
 Drawdown: <0.5 ft from Initial  
 Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: MW42D	DATE: 5/16/12

## PURGING DATA

WELL DIAMETER (inches): 2	WELL SCREEN INTERVAL DEPTH: 88 feet to 98 feet	STATIC DEPTH TO WATER (feet): 7.58	PURGE PUMP TYPE OR BAILER: SSmonsoon							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)										
= 1.046 liters + ( 0.0217 liters/foot X 100 feet ) + 0.5 liters = 2.7 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1516	2.7	2.7	0.1	7.32	7.47	23.51	2319	0.38	3.14	-208.1
1519	0.3	3.0	0.1	7.34	7.46	23.30	2399	0.33	5.66	-212.2
1522	0.3	3.3	0.1	7.34	7.56	23.39	2400	0.32	2.74	-212.8
1525	0.3	3.6	0.1	7.34	7.56	23.39	2400	0.32	3.01	-212.8

TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES: 		SAMPLING TIME: 1530	
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N		FIELD-FILTERED: <input checked="" type="radio"/> Y <input type="radio"/> N		FILTER SIZE: _____ µm	
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N		Filtration Equipment Type: _____		DUPLICATE: <input type="radio"/> Y <input checked="" type="radio"/> N	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
1	250	Nitric acid		Metals	
2	1 L	None		TOX	

REMARKS:

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

- Turbidity: <10 NTU
- Temp.: <0.5 Degrees C
- pH: <0.1 SU
- Specific Conductance: 10%
- Drawdown: <0.5 ft from Initial
- Dissolved Oxygen: <0.5 mg/L



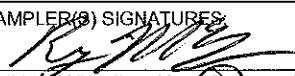
# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: MW435	DATE: 5/16/12

## PURGING DATA

WELL DIAMETER (inches): 2	WELL SCREEN INTERVAL DEPTH: 10 feet to 20 feet	STATIC DEPTH TO WATER (feet): 5104	PURGE PUMP TYPE OR BAILER: PP							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = NA liters + (0.0217 liters/foot X 25 feet) + 0.5 liters = 1 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1316	1	1	0.1	3.51	6.67	25.29	1491	1.75	6.06	-234.2
1319	0.3	1.3	0.1	3.51	6.64	24.66	1491	1.74	3.14	-248.2
1322	0.3	1.6	0.1	3.57	6.64	24.66	1494	1.71	3.10	-251.2
1325	0.3	1.9	0.1	3.57	6.64	24.63	1494	1.70	3.08	-252.6
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES: 		SAMPLING TIME: 1330	
FIELD DECONTAMINATION: Y <input checked="" type="radio"/> N		FIELD FILTERED: Y <input checked="" type="radio"/> N Filtration Equipment Type: _____		FILTER SIZE: _____ µm	
DUPLICATE: Y <input checked="" type="radio"/> N					
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
1	250	Nitric acid		Metals	
2	1 L	None		TOX	
REMARKS:					

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

Turbidity: <10 NTU  
 Temp.: <0.5 Degrees C  
 pH: <0.1 SU  
 Specific Conductance: 10%  
 Drawdown: <0.5 ft from Initial  
 Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW43I	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER 2 (inches):		WELL SCREEN INTERVAL DEPTH: 40 feet to 50 feet			STATIC DEPTH TO WATER (feet): 6.82		PURGE PUMP TYPE OR BAILER: SS monsoon			
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 1.046 liters + ( 0.0217 liters/foot X 50 feet) + 0.5 liters = 1.6 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1306	1.6	1.6	0.1	6.70	7.67	25.38	2249	1.04	3.55	-216.8
1309	0.3	1.9	0.1	6.71	7.67	25.39	2249	1.04	4.11	-209.4
1312	0.3	2.2	0.1	6.71	7.67	25.39	2249	1.04	4.07	-200.0
1315	0.3	2.5	0.1	6.71	7.67	25.39	2249	1.04	4.02	-188.6
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW43D	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER 2 (inches):		WELL SCREEN INTERVAL DEPTH: 89 feet to 99 feet		STATIC DEPTH TO WATER 6.89 (feet):		PURGE PUMP TYPE OR BAILER: SS monsoon				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)										
= .046 liters + ( 0.0217 liters/foot X 100 feet) + 0.5 liters = 2.7 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1246	2.7	2.7	0.1	6.51	7.62	24.87	2195	1.40	5.32	-224.0
1249	0.3	3.0	0.1	6.52	7.65	25.04	2195	1.38	5.66	-208.1
1252	0.3	3.3	0.1	6.52	7.65	25.04	2200	1.35	4.72	-204.2
1255	0.3	3.6	0.1	6.52	7.65	25.04	2214	1.39	4.58	-204.1
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



## GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW 495	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER 2 (inches):		WELL SCREEN INTERVAL DEPTH: 10 feet to 20 feet		STATIC DEPTH TO WATER 3.66 (feet):		PURGE PUMP TYPE OR BAILER: PP				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = Na liters + ( 0.0217 liters/foot X 25 feet) + 0.5 liters = 1.0 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1436	1.0	1.0	0.1	4.56	7.20	23.85	8	6.19	5.70	-132.6
1439	0.3	1.3	0.1	4.55	7.20	23.85	8	6.19	5.79	-132.1
1442	0.3	1.6	0.1	4.56	7.20	23.85	8	6.19	5.08	-132.9
1445	0.3	1.9	0.1	4.56	7.20	23.85	8	6.19	5.12	-132.8
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

**NOTES:** 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW 49 I	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER 2 (inches):		WELL SCREEN INTERVAL DEPTH: 57 feet to 67 feet		STATIC DEPTH TO WATER 5.86 (feet):		PURGE PUMP TYPE OR BAILER: SS monsoon				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = .046 liters + ( 0.0217 liters/foot X 70 feet) + 0.5 liters = 2.1 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1426	2.1	2.1	0.1	5.47	5.64	24.67	954	0.23	1.38	-234.7
1429	0.3	2.4	0.1	5.47	5.64	24.66	954	0.21	1.11	-235.9
1432	0.3	2.7	0.1	5.47	5.64	24.66	954	0.21	1.59	-235.1
1435	0.3	3.0	0.1	5.47	5.64	24.66	954	0.21	1.20	-235.4
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

**NOTES:** 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: MW 49D	DATE: 5/16/12

## PURGING DATA

WELL DIAMETER 2 (inches):	WELL SCREEN INTERVAL DEPTH: 86 feet to 96 feet	STATIC DEPTH TO WATER 5.92 (feet):	PURGE PUMP TYPE OR BAILER: SSmonsoon							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)										
= 1.046 liters + ( 0.0217 liters/foot X 100 feet ) + 0.5 liters = 2.7 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1406	2.7	2.7	0.1	5.60	6.82	24.35	1259	0.60	15.1	-144.4
1409	0.3	3.0	0.1	5.61	6.82	24.35	1258	0.58	12.2	-144.6
1412	0.3	3.3	0.1	5.61	6.79	24.35	1258	0.56	10.12	-144.9
1415	0.3	3.6	0.1	5.61	6.79	24.35	1258	0.54	9.04	-144.9
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES: 		SAMPLING TIME: 1420	
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N		FIELD-FILTERED: <input type="radio"/> Y <input checked="" type="radio"/> N		FILTER SIZE: _____ µm	
Filtration Equipment Type: _____		DUPLICATE: <input type="radio"/> Y <input checked="" type="radio"/> N		INTENDED ANALYSIS AND/OR METHOD	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
3	40ml	None		VOC's	
<del>1</del>	<del>250</del>	<del>Nitric acid</del>		<del>Metals</del>	
<del>2</del>	<del>1 L</del>	<del>None</del>		<del>TOX</del>	
REMARKS:					

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

Turbidity: <10 NTU  
 Temp.: <0.5 Degrees C  
 pH: <0.1 SU  
 Specific Conductance: 10%  
 Drawdown: <0.5 ft from Initial  
 Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	mw52s		DATE: 5/10/12 <i>5/15/12</i>

## PURGING DATA

<b>WELL</b>		<b>SCREEN INTERVAL DEPTH:</b>				<b>STATIC DEPTH TO WATER</b>		<b>PURGE PUMP TYPE OR BAILER:</b>		
<b>DIAMETER</b>	<b>2</b>					(feet): <b>4.08</b>		<b>PP</b>		
(inches):										
<b>EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME</b> (only fill out if applicable) <div style="text-align: right;">= <u>Na</u> liters + (<u>0.0217</u> liters/foot X <u>25</u> feet) + <u>0.5</u> liters = <u>1.0</u> liters</div>										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1651	1.0	1.0	0.1	4.03	6.91	24.06	447	1.53	33.8	-69.9
1654	0.3	1.3	0.1	4.04	6.49	23.16	440	1.50	18.8	-62.5
1657	0.3	1.6	0.1	4.05	6.47	23.16	439	1.45	14.7	-62.5
1700	0.3	1.9	0.1	4.06	6.47	23.16	438	1.40	12.2	-62.5
TUBING INSIDE DIA. CAPACITY (Liters/Ft.):    1/8" = 0.0024;      3/16" = 0.0054;      1/4" = 0.0097;      5/16" = 0.0151;      3/8" = 0.0217;      1/2" = 0.0386;      5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW 52 I	DATE:	5/16/12

## PURGING DATA

WELL DIAMETER 2 (inches):		WELL SCREEN INTERVAL DEPTH: 40 feet to 50 feet			STATIC DEPTH TO WATER 4.43 (feet):		PURGE PUMP TYPE OR BAILER: SS Monsoon			
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = .046 liters + ( .00217 liters/foot X 50 feet) + 0.5 liters = 1.6 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1620	1.6	1.6	0.1	4.69	7.02	24.06	681	0.27	629	-119.2
1623	0.3	1.9	0.1	4.69	7.05	24.02	680	0.37	629	-118.5
1626	0.3	2.2	0.1	4.69	7.07	23.86	678	0.19	574	-119.0
1629	0.3	2.5	0.1	4.69	7.10	24.01	679	0.37	372	-123.0
1632	0.3	2.8	0.1	4.69	7.15	24.53	687	0.29	350	-125.5
1635	0.3	3.1	0.1	4.69	7.15	24.54	687	0.27	321	-126.6
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ryan McLain, Marty Mullis/ Antea Group		SAMPLER(S) SIGNATURES: 	SAMPLING TIME: 1640
FIELD DECONTAMINATION: Y N		FIELD FILTERED: Y N Filtration Equipment Type:	Duplicate: Y N
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION	INTENDED ANALYSIS AND/OR METHOD
# CONTAINERS	VOLUME	PRESERVATIVE USED	
3	40ml	None	
1	250	Nitric acid	
2	1 L	None	
REMARKS:			

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW 52D	DATE:	5/15/12

## PURGING DATA

WELL DIAMETER 2 (inches):		WELL SCREEN INTERVAL DEPTH: 79 feet to 89 feet		STATIC DEPTH TO WATER 4.49 (feet):		PURGE PUMP TYPE OR BAILER: SS monsoon				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.046 liters + (0.0217 liters/foot X 100 feet) + 0.5 liters = 2.7 liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1624	2.7	2.7	0.1	4.42	6.60	23.72	8567	1.06	136	-147.9
1627	0.3	3.0	0.1	4.42	6.58	23.81	8602	1.00	68.1	-147.0
1630	0.3	3.3	0.1	4.42	6.58	23.79	8837	0.97	32.2	-145.6
1633	0.3	3.6	0.1	4.42	6.57	23.78	8829	0.96	20.2	-145.3
1636	0.3	3.9	0.1	4.42	6.56	23.68	8957	0.92	15.6	-143.8
1639	0.3	4.2	0.1	4.42	6.61	23.51	9080	0.87	12.8	-128.7
1642	0.3	4.5	0.1	4.42	6.53	23.46	9244	0.81	10.9	-132.1
1645	0.3	4.8	0.1	4.42	6.53	23.50	9196	0.80	9.8	-134.4
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

<b>Turbidity:</b>	<10 NTU
<b>Temp.:</b>	<0.5 Degrees C
<b>pH:</b>	<0.1 SU
<b>Specific Conductance:</b>	10%
<b>Drawdown:</b>	<0.5 ft from Initial
<b>Dissolved Oxygen:</b>	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Brunswick	SITE LOCATION: Brunswick, GA
WELL ID: HP-111-59	DATE: 1/29/2013

## PURGING DATA

WELL DIAMETER (inches): 4	WELL SCREEN INTERVAL DEPTH: 89 feet to 99 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER: pump							
<b>EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME</b> (only fill out if applicable) = _____ liters + ( _____ liters/foot X _____ feet) + _____ liters = _____ liters										
TIME	VOLUME PURGED (Gal.)	CUMUL. VOLUME PURGED (Gal)	PURGE RATE (Gal/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1725	5	5	1		6.46	27.01	7381	0.08		-219.4
1730	5	10			6.76	26.68	2742	6.89		-99.2
1735	5	15			6.87	26.34	2026	7.48		-88.2
1740	5	20			6.86	26.24	2037	7.61		-89.2
1745	5	25			6.76	26.77	2338	11.49		-94.9
1750	5	30			6.77	26.62	2022	13.55		-82.7
1755	5	35			6.78	26.58	1930	13.57		-80.7
<b>TUBING INSIDE DIA. CAPACITY (Liters/Ft.):</b> 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Hartford Hight / Antea Group		SAMPLER(S) SIGNATURES: 		SAMPLING TIME: 1800	
FIELD DECONTAMINATION: Y		FIELD-FILTERED: N      FILTER SIZE: _____ µm Filtration Equipment Type: _____		DUPLICATE: N	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
		HCL		VOCs 8260B	
				Toxaphene, total toxaphene 8081B	
				Alpha and Gamma BHC 8081B	
REMARKS:					

**NOTES:** 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

**Turbidity:** <10 NTU  
**Temp.:** <0.5 Degrees C  
**pH:** <0.1 SU  
**Specific Conductance:** 10%  
**Drawdown:** <0.5 ft from Initial  
**Dissolved Oxygen:** <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Brunswick	SITE LOCATION: Brunswick, GA
WELL ID: HP-111-60A	DATE: 1/30/2013

## PURGING DATA

WELL DIAMETER (inches): 4	WELL SCREEN INTERVAL DEPTH: 20 feet to 26 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER: pump							
<b>EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME</b> (only fill out if applicable) = _____ liters + ( _____ liters/foot X _____ feet) + _____ liters = _____ liters										
TIME	VOLUME PURGED (Gal.)	CUMUL. VOLUME PURGED (Gal)	PURGE RATE (Gal/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1125	5	5	1		7.28	23.59	6648	2.61		-180.8
1130	5	10			6.89	24.97	14121	0.16		-173.2
1135	5	15			6.90	25.50	14151	0.16		-147.1
1140	5	20			6.91	26.30	14200	0.13		-144.2
1145	5	25			6.84	24.93	15360	0.17		-161.4
1150	5	30			6.84	25.48	15416	0.16		-146.4
<b>TUBING INSIDE DIA. CAPACITY (Liters/Ft.):</b> 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Hartford Hight / Antea Group	SAMPLER(S) SIGNATURES: 	SAMPLING TIME: 1152
FIELD DECONTAMINATION: Y	FIELD-FILTERED: N      FILTER SIZE: _____ µm Filtration Equipment Type: _____	DUPLICATE: N
SAMPLE CONTAINER SPECIFICATION		INTENDED ANALYSIS AND/OR METHOD
# CONTAINERS	VOLUME	
SAMPLE PRESERVATION		Apdx IX VOCs 8260B  Tech. Toxaphene, total toxaphene 8081B
PRESERVATIVE USED		
REMARKS:		

**NOTES:** 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

**Turbidity:** <10 NTU  
**Temp.:** <0.5 Degrees C  
**pH:** <0.1 SU  
**Specific Conductance:** 10%  
**Drawdown:** <0.5 ft from Initial  
**Dissolved Oxygen:** <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Brunswick	SITE LOCATION: Brunswick, GA
WELL ID: HP-111-60B	DATE: 1/30/2013

## PURGING DATA

WELL DIAMETER 4 (inches):	WELL SCREEN INTERVAL DEPTH: 50 feet to 56 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER: pump							
<b>EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME</b> (only fill out if applicable)										
= _____ liters + ( _____ liters/foot X _____ feet) + _____ liters = _____ liters										
TIME	VOLUME PURGED (Gal.)	CUMUL. VOLUME PURGED (Gal)	PURGE RATE (Gal/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1250	5	5	1		7.71	25.37	1453	3.64		-189.7
1255	5	10			7.71	25.23	1477	3.79		-161.0
1300	5	15			7.52	24.67	1441	6.38		-146.2
1305	5	20			7.32	24.31	1363	5.45		-144.3
1315	5	25			7.04	22.95	807	1.45		-149.7
1320	5	30			7.0	22.86	794	1.8		-140.1
1325	5	35			7.0	22.83	791	1.84		-136.3
<b>TUBING INSIDE DIA. CAPACITY (Liters/Ft.):</b> 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Hartford Hight / Antea Group		SAMPLER(S) SIGNATURES:  <div style="text-align: center;"><i>Hartford W. Hight</i></div>		SAMPLING TIME: 1327	
FIELD DECONTAMINATION: Y		FIELD-FILTERED: N      FILTER SIZE: _____ µm Filtration Equipment Type: _____		DUPLICATE: N	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
				Apdx IX Vocs 8260B	
				Tech. toxaphene, total toxaphene 8081B	
REMARKS:					

**NOTES:** 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

**Turbidity:** <10 NTU  
**Temp.:** <0.5 Degrees C  
**pH:** <0.1 SU  
**Specific Conductance:** 10%  
**Drawdown:** <0.5 ft from Initial  
**Dissolved Oxygen:** <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Brunswick	SITE LOCATION: Brunswick, GA
WELL ID: HP-111-60C	DATE: 1/30/2013

## PURGING DATA

WELL DIAMETER 4 (inches):	WELL SCREEN INTERVAL DEPTH: 78 feet to 86 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER: pump							
<b>EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME</b> (only fill out if applicable)										
= _____ liters + ( _____ liters/foot X _____ feet) + _____ liters = _____ liters										
TIME	VOLUME PURGED (Gal.)	CUMUL. VOLUME PURGED (Gal)	PURGE RATE (Gal/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1455	5	10	1		6.95	30.77	2211	0.29		-194.6
1500	5	15			9.75	30.56	2196	9.99		-101.2
1505	5	20			6.7	30.35	2362	7.15		-107.1
1510	5	25			6.73	30.01	2414	4.60		-101.3
1515	5	30			6.34	29.5	2414	4.35		-97.8
1520	5	35			6.49	32.76	4867	2.68		-126.3
1525	5	40			6.63	32.29	2675	7.35		-117.9
					5.41	27.94	4778	6.69		-121.2
<b>TUBING INSIDE DIA. CAPACITY (Liters/Ft.):</b> 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Hartford Hight / Antea Group	SAMPLER(S) SIGNATURES:  	SAMPLING TIME: 1532																																	
FIELD DECONTAMINATION: Y	FIELD-FILTERED: N      FILTER SIZE: _____ µm Filtration Equipment Type: _____	DUPLICATE: N																																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">SAMPLE CONTAINER SPECIFICATION</th> <th>SAMPLE PRESERVATION</th> </tr> <tr> <th># CONTAINERS</th> <th>VOLUME</th> <th>PRESERVATIVE USED</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>		SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION	# CONTAINERS	VOLUME	PRESERVATIVE USED																												INTENDED ANALYSIS AND/OR METHOD  Apdx IX VOCs 8260B  Tech. Toxaphene, total toxaphene 8081B  Alpha and Gamma BHC 8081B
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION																																	
# CONTAINERS	VOLUME	PRESERVATIVE USED																																	
REMARKS:																																			

**NOTES:** 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

**Turbidity:** <10 NTU  
**Temp.:** <0.5 Degrees C  
**pH:** <0.1 SU  
**Specific Conductance:** 10%  
**Drawdown:** <0.5 ft from Initial  
**Dissolved Oxygen:** <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW-55 S	DATE:	12-4-13

## PURGING DATA

WELL DIAMETER (inches): 2 in.		WELL SCREEN INTERVAL DEPTH: 10 feet to 75 feet		STATIC DEPTH TO WATER (feet): 61.50		PURGE PUMP TYPE OR BAILER: Purge Pump				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)								= _____ liters + 0.0017 liters/foot X 30 feet + 0.5 liters = 1.15 liters		
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1230	1.5	1.5	0.1	6.62	6.95	24.00	13.9	4.41	7.9	5
1233	0.3	1.53	0.1	6.64	6.96	24.01	14.1	4.22	7.7	7
1236	0.3	1.56	0.1	6.66	6.97	24.07	14.1	3.93	7.4	8
1239	0.3	1.59	0.1	6.68	7.00	23.99	14.0	3.66	6.6	3
1242	0.3	1.62	0.1	6.70	7.01	24.04	14.0	3.41	6.0	-5
1245	0.3	1.65	0.1	6.72	7.02	24.09	14.0	3.33	5.8	-12
1248	0.3	1.68	0.1							
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1.

### STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

Turbidity:	<10 NTU
Temp.:	<0.5 Degrees C
pH:	<0.1 SU
Specific Conductance:	10%
Drawdown:	<0.5 ft from Initial
Dissolved Oxygen:	<0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA
WELL ID: MW-55 <b>I</b>	DATE: 12-4-13

## PURGING DATA

WELL DIAMETER: 2 in. (inches)	WELL SCREEN INTERVAL DEPTH: 40 feet to <del>40</del> 55 feet	STATIC DEPTH TO WATER: 397 feet	PURGE PUMP TYPE OR BAILER: Purge Pump
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.25 liters + (0.0217 liters/foot X 60 feet) + 0.5 liters = 2.05 liters			

TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1138	4.8	4.8	0.1	4.33	7.80	23.59	0.567	0.89	49.7	-253
1141	0.3	5.1	0.1	4.36	7.77	23.65	0.591	0.84	47.0	-248
1144	0.3	5.4	0.1	4.38	7.65	23.66	0.596	0.82	35.1	-249
1147	0.3	5.7	0.1	4.40	7.63	23.86	0.620	0.80	29.7	-184
1150	0.3	6.0	0.1	4.42	7.59	23.96	0.613	0.82	31.5	-208
1153	0.3	6.3	0.1	4.45	7.57	23.81	0.614	0.84	29.3	-220

TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Andy F. Jones Antea	SAMPLER(S) SIGNATURES: <i>[Signature]</i>	SAMPLING TIME: 1155
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y <input type="radio"/> N	FIELD-FILTERED: <input checked="" type="radio"/> Y <input type="radio"/> N FILTER SIZE: _____ µm Filtration Equipment Type: _____	DUPLICATE: <input type="radio"/> Y <input checked="" type="radio"/> N

SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION	INTENDED ANALYSIS AND/OR METHOD
# CONTAINERS	VOLUME	PRESERVATIVE USED	
2	125mL	None	8315 - 8315 FORM
1	250mL	Nitric Acid	6020 - 6020 Select Metals
2	1 L	None	8270C - 8270 Select SVOC
2	1 L	None	8081A_8082 - 8081 PST-TOX
3	40mL	Hydrochloric Acid	8260B - 8260 Select VOC

REMARKS:

NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

Turbidity: <10 NTU  
 Temp.: <0.5 Degrees C  
 pH: <0.1 SU  
 Specific Conductance: 10%  
 Drawdown: <0.5 ft from Initial  
 Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: Former Hercules Facility	SITE LOCATION: Brunswick, GA	DATE: 12-4-13
WELL ID: MW-55 0		

## PURGING DATA

WELL DIAMETER 2 in. (inches)		WELL SCREEN INTERVAL DEPTH: 75 feet to 85 feet				STATIC DEPTH TO WATER (feet) 3.8'		PURGE PUMP TYPE OR BAILER: Purge Pump		
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.75 liters + (0.0217 liters/foot X 90 feet) + 6.5 liters = 2.7 liters										
TIME	VOLUME PURGED (liters)	CUMUL VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. ( $\mu$ S/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
9:54	3	3	0.2	3.76	6.35	22.91	6.82	2.15	11.4	-137
9:58	0.8	3.8	0.2	3.76	6.34	22.91	6.80	2.07	10.3	-136
10:02	0.8	4.6	0.2	3.75	6.34	22.91	6.82	1.96	9.8	-135
10:05	0.6	5.2	0.2	3.75	6.34	22.93	6.87	1.90	9.7	-135
10:08	0.6	5.8	0.2	3.75	6.34	22.93	6.86	1.83	9.2	-133
TUBING INSIDE DIA. CAPACITY (Liters/Ft) 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

[illegible]

NOTES: 1.

### STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

Turbidity: <10 NTU

Temp.: &lt;0.5 Degrees C

pH: <0.1 SU

Specific Conductance: 10%

Drawdown: <0.5 ft from Initial

Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME:	Former Hercules Facility	SITE LOCATION:	Brunswick, GA
WELL ID:	MW-1100	DATE:	7/16/14

## PURGING DATA

<b>WELL DIAMETER</b>	<b>2</b>	<b>WELL SCREEN INTERVAL DEPTH:</b>						<b>STATIC DEPTH TO WATER</b>		<b>PURGE PUMP TYPE OR BAILER:</b>	
(inches):		feet to <b>81</b>		feet <b>91</b>		(feet): <b>5.37</b>				Peristaltic / <u>Stainless Submersible</u>	
<b>EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME</b> (only fill out if applicable) = <b>0.3</b> liters + ( <b>0.0217</b> liters/foot X <b>97</b> feet) + <b>0.5</b> liters = <b>3.0</b> liters											
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or S/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)	
<b>1124</b>	<b>3</b>	<b>3</b>	<b>.5</b>	<b>5.39</b>	<b>6.81</b>	<b>24.38</b>	<b>15.8</b>	<b>1.68</b>	<b>85.6</b>	<b>-126</b>	
<b>1134</b>	<b>5</b>	<b>8</b>	<b>.5</b>	<b>5.39</b>	<b>6.65</b>	<b>25.06</b>	<b>15.6</b>	<b>.80</b>	<b>613</b>	<b>-160</b>	
<b>1139</b>	<b>2.5</b>	<b>10.5</b>	<b>.5</b>	<b>5.39</b>	<b>6.56</b>	<b>26.11</b>	<b>15.4</b>	<b>.71</b>	<b>4.1</b>	<b>-165</b>	
<del><b>1144</b></del>	<b>2.5</b>	<b>13</b>	<b>.5</b>	<b>5.39</b>	<b>6.57</b>	<b>25.84</b>	<b>15.3</b>	<b>.69</b>	<b>3.3</b>	<b>-169</b>	
<del><b>1149</b></del>	<b>1.5</b>	<b>14.5</b>	<b>.5</b>	<b>5.39</b>	<b>6.57</b>	<b>25.84</b>	<b>15.3</b>	<b>.69</b>	<b>3.1</b>	<b>-171</b>	
<b>TUBING INSIDE DIA. CAPACITY (Liters/Ft.):   1/8" = 0.0024;     3/16" = 0.0054;     1/4" = 0.0097;     5/16" = 0.0151;     3/8" = 0.0217;     1/2" = 0.0386;     5/8" = 0.0603</b>											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <i>Eaton &amp; Zick</i>		SAMPLER(S) SIGNATURES: <i>EJZ / AH</i>		SAMPLING TIME: 1149
FIELD DECONTAMINATION: <input checked="" type="radio"/> Y N		FIELD-FILTERED: Y <input checked="" type="radio"/> N Filtration Equipment Type:		FILTER SIZE: _____ µm
				DUPLICATE: Y <input checked="" type="radio"/> N
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD
# CONTAINERS	VOLUME	PRESERVATIVE USED		
2	125mL	None		8315 - 8315 FORM
1	250mL	Nitric Acid		6020 - 6020 Select Metals
2	125 <del>250</del> mL	None		8270C - 8270 Select SVOC
2	125 <del>250</del> mL	None		8081A, 8082 - 8081 PST-TOX
3	40mL	Hydrochloric Acid		8260B - 8260 Select VOC
REMARKS:	* 1124 High turbidity will continue to affect readings when within range			

NOTES: 1 STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

- |                       |  |
|-----------------------|--|
| Turbidity:            | <10 NTU or 3 Consecutive readings within 10% of each other |
| Temp.:                | <0.5 Degrees C   |
| pH:                   | <0.1 SU  |
| Specific Conductance: | 10%  |
| Drawdown:             | <0.5 ft from Initial                                       |
| Dissolved Oxygen:     | <0.5 mg/L  |



# GROUNDWATER SAMPLING LOG

SITE NAME: <u>Former Hercules Facility</u>	SITE LOCATION: <u>Brunswick, GA</u>
WELL ID: <u>MW-56D</u>	DATE: <u>7/16/14</u>

## PURGING DATA

WELL DIAMETER (inches): <u>2</u>	WELL SCREEN INTERVAL DEPTH: <u>93</u> feet to <u>103</u> feet	STATIC DEPTH TO WATER (feet): <u>2.89</u>	PURGE PUMP TYPE OR BAILER: Peristaltic / <u>Stainless Submersible</u>							
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = <u>0.3</u> liters + ( <u>0.0217</u> liters/foot X <u>108</u> feet) + <u>0.5</u> liters = <u>3.25</u> liters										
TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
1028	3.25	3.25	.5	2.93	7.22	23.89	11.3	1.38	8.2	-193
1033	2.5	5.75	.5	2.94	7.25	23.95	13.7	0.98	6.4	-168
1038	2.5	8.25	.5	2.94	7.17	24.03	14.6	0.88	2.5	-153
1043	2.5	10.75	.5	2.94	7.08	24.07	14.6	0.83	1.4	-152
TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603										

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <u>Anten Green</u>		SAMPLER(S) SIGNATURES: <u>EAG AH</u>		SAMPLING TIME: <u>1046</u>	
FIELD DECONTAMINATION: <u>(Y)</u> N		FIELD FILTERED: Y <u>(N)</u> FILTER SIZE: _____ µm Filtration Equipment Type: _____		DUPLICATE: Y <u>(N)</u>	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	VOLUME	PRESERVATIVE USED			
2	125mL	None		8315 - 8315 FORM	
1	250mL	Nitric Acid		6020 - 6020 Select Metals	
<u>2</u>	<u>125</u> <del>250</del> mL	None		8270C - 8270 Select SVOC	
2	<u>125</u> <del>250</del> mL	None		8081A_8082 - 8081 PST-TOX	
3	40mL	Hydrochloric Acid		8260B - 8260 Select VOC	
REMARKS:					

### NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

- Turbidity: <10 NTU or 3 Consecutive readings within 10% of each other
- Temp.: <0.5 Degrees C
- pH: <0.1 SU
- Specific Conductance: 10%
- Drawdown: <0.5 ft from Initial
- Dissolved Oxygen: <0.5 mg/L



# GROUNDWATER SAMPLING LOG

SITE NAME: <b>Former Hercules Facility</b>	SITE LOCATION: <b>Brunswick, GA</b>	DATE: <b>7/16/14</b>
WELL ID: <b>MW-57D</b>		

## PURGING DATA

WELL DIAMETER (inches): <b>2</b>	WELL SCREEN INTERVAL DEPTH: feet to <b>82</b> feet <b>92</b>	STATIC DEPTH TO WATER (feet): <b>4.34</b>	PURGE PUMP TYPE OR BAILER: Peristaltic / <u>Stainless Submersible</u>
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)			
= <b>0.3</b> liters + ( <b>0.0217</b> liters/foot X <b>97</b> feet) + <b>0.5</b> liters = <b>3.0</b> liters			

TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (L/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm)	DISS. OXYGEN (mg/L)	TURBIDITY (NTUs)	OXYGEN REDUCTION POTENTIAL (mV)
0935	3	3	0.5	4.39	8.55	24.60	2.67	2.02	9.1	-210
0940	2.5	5.5	0.5	4.39	8.04	24.33	6.77	1.39	17.3	-224
0945	2.5	8	0.5	4.39	7.95	24.29	8.21	1.12	6.9	-212
0950	2.5	10.5	0.5	4.39	7.84	24.29	8.35	1.03	5.0	-211
0955	2.5		0.5	4.39	7.82	24.30	8.36	1.09	5.9	-209

TUBING INSIDE DIA. CAPACITY (Liters/Ft.): 1/8" = 0.0024; 3/16" = 0.0054; 1/4" = 0.0097; 5/16" = 0.0151; 3/8" = 0.0217; 1/2" = 0.0386; 5/8" = 0.0603

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <b>Alex Harrison / Antea</b>	SAMPLER(S) SIGNATURES:	SAMPLING TIME: <b>0957</b>
FIELD DECONTAMINATION: <u>Y</u> N	FIELD-FILTERED: Y <u>N</u> FILTER SIZE: _____ µm <small>Filtration Equipment Type:</small>	DUPLICATE: Y <u>N</u>

SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION	INTENDED ANALYSIS AND/OR METHOD
# CONTAINERS	VOLUME	PRESERVATIVE USED	
2	125mL	None	8315 - 8315 FORM
1	250mL	Nitric Acid	6020 - 6020 Select Metals
2	<b>125</b> <del>250</del> mL	None	<b>1</b> 8270C - 8270 Select SVOC
2	<b>125</b> <del>250</del> mL	None	8081A_ 8082 - 8081 PST-TOX
3	40mL	Hydrochloric Acid	8260B - 8260 Select VOC

REMARKS:

### NOTES: 1. STABILIZATION CRITERIA FOR THREE CONSECUTIVE WATER QUALITY READINGS

- Turbidity: <10 NTU or 3 Consecutive readings within 10% of each other
- Temp.: <0.5 Degrees C
- pH: <0.1 SU
- Specific Conductance: 10%
- Drawdown: <0.5 ft from Initial
- Dissolved Oxygen: <0.5 mg/L



## ***Appendix K***

### ***Laboratory Analytical Results***



## ANALYTICAL REPORT

Job Number: 680-56360-1

Job Description: Brunswick Phase 3 RFI 3/31-4/1/10

For:  
Ashland Inc.  
500 Hercules Road  
Wilmington, DE 19894  
Attention: Timothy Hassett



Approved for release.  
Lidya Gulizia  
Project Manager I  
4/6/2010 6:05 PM

---

Lidya Gulizia  
Project Manager I  
lidya.gulizia@testamericainc.com  
04/06/2010

cc: Mr. Tony Mancini  
Mr. John D Reuscher  
Ms. Charlene Rivard  
Mr. Derek Rothaupt  
Mr. Dean Salisbury

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; AZ: AZ0741; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

**TestAmerica Laboratories, Inc.**

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404  
Tel (912) 354-7858 Fax (912) 352-0165 [www.testamericainc.com](http://www.testamericainc.com)





**Job Narrative**  
**680-56360-1**

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

Method(s) 8260B: The following sample(s) was diluted due to the nature of the sample matrix: HP-111-58A (680-56360-9), HP-111-58B (680-56360-10). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The following sample was diluted due to the abundance of non-target analytes: HP-111-57-TW (680-56360-8). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

**GC Semi VOA**

Method(s) 8081A\_8082: Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample(s) contained an allowable number of surrogate compounds outside limits: HP-111-54B (680-56360-2), HP-111-54C (680-56360-3), HP-111-57B (680-56360-6), HP-111-57C (680-56360-7). These results have been reported and qualified.

No other analytical or quality issues were noted.

**Comments**

No additional comments.



## METHOD SUMMARY

Client: Ashland Inc.

Job Number: 680-56360-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030B
Organochlorine Pesticides & PCBs (GC)	TAL SAV	SW846 8081A_8082	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	TAL SAV	SW846 8081B/8082A	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C

### Lab References:

TAL SAV = TestAmerica Savannah

### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.



## METHOD / ANALYST SUMMARY

Client: Ashland Inc.

Job Number: 680-56360-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB
SW846 8081A_8082	Kellar, Joshua	JK
SW846 8081B/8082A	Kellar, Joshua	JK



## SAMPLE SUMMARY

Client: Ashland Inc.

Job Number: 680-56360-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-56360-1	HP-111-54A	Water	03/31/2010 1040	04/01/2010 1510
680-56360-2	HP-111-54B	Water	03/31/2010 1110	04/01/2010 1510
680-56360-3	HP-111-54C	Water	03/31/2010 1330	04/01/2010 1510
680-56360-4	HP-111-55C	Water	03/31/2010 0800	04/01/2010 1510
680-56360-5	HP-111-57A	Water	03/31/2010 1515	04/01/2010 1510
680-56360-6	HP-111-57B	Water	03/31/2010 1630	04/01/2010 1510
680-56360-7	HP-111-57C	Water	03/31/2010 1700	04/01/2010 1510
680-56360-8	HP-111-57-TW	Water	04/01/2010 1000	04/01/2010 1510
680-56360-9	HP-111-58A	Water	04/01/2010 0815	04/01/2010 1510
680-56360-10	HP-111-58B	Water	04/01/2010 0840	04/01/2010 1510
680-56360-11	HP-111-58C	Water	04/01/2010 0915	04/01/2010 1510
680-56360-12	Trip Blank 031010	Water	04/01/2010 0000	04/01/2010 1510
680-56360-13	HP-11-FB-2	Water	04/01/2010 1100	04/01/2010 1510



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-54A

Lab Sample ID: 680-56360-1

Date Sampled: 03/31/2010 1040

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0405.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1259		Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1259			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	8.1	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	29		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.7		0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	2.3		0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.53	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-54A

Lab Sample ID: 680-56360-1

Date Sampled: 03/31/2010 1040

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0405.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1259		Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1259			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	0.91	J	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	106		75 - 120
Dibromofluoromethane	114		75 - 121
Toluene-d8 (Surr)	103		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID: HP-111-54B**

Lab Sample ID: 680-56360-2

Date Sampled: 03/31/2010 1110

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0389.d
Dilution:	10		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1715		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1715			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	160	J	50	250
Acetonitrile	400	U	100	400
Acrolein	200	U	74	200
Acrylonitrile	200	U	72	200
Benzene	5500	E	2.5	10
Bromoform	10	U	5.0	10
Bromomethane	10	U	8.0	10
2-Butanone (MEK)	14	J	10	100
Carbon disulfide	20	U	6.0	20
Carbon tetrachloride	10	U	5.0	10
Chlorobenzene	690		2.5	10
2-Chloro-1,3-butadiene	10	U	3.0	10
Chlorodibromomethane	10	U	1.0	10
Chloroethane	10	U	10	10
Chloroform	420		1.4	10
Chloromethane	10	U	3.3	10
3-Chloro-1-propene	10	U	2.0	10
cis-1,3-Dichloropropene	10	U	1.1	10
1,2-Dibromo-3-Chloropropane	10	U	4.4	10
Dibromomethane	10	U	2.0	10
Dichlorobromomethane	10	U	2.5	10
Dichlorodifluoromethane	10	U	2.5	10
1,1-Dichloroethane	10	U	2.5	10
1,2-Dichloroethane	10	U	1.0	10
1,1-Dichloroethene	2.9	J	1.1	10
1,2-Dichloropropane	10	U	1.3	10
Ethylbenzene	270		1.1	10
Ethylene Dibromide	10	U	2.5	10
Ethyl methacrylate	10	U	2.5	10
2-Hexanone	100	U	10	100
Iodomethane	50	U	10	50
Isobutyl alcohol	400	U	110	400
Methacrylonitrile	200	U	33	200
Methylene Chloride	65		10	50
Methyl methacrylate	10	U	4.8	10
4-Methyl-2-pentanone (MIBK)	67	J	10	100
Pentachloroethane	50	U	12	50
Propionitrile	200	U	46	200
Styrene	10	U	1.1	10
1,1,1,2-Tetrachloroethane	10	U	3.3	10
1,1,2,2-Tetrachloroethane	10	U	1.8	10
Tetrachloroethene	2.5	J	1.5	10
Toluene	470		3.3	10
trans-1,4-Dichloro-2-butene	20	U	5.0	20
trans-1,2-Dichloroethene	10	U	2.0	10
trans-1,3-Dichloropropene	10	U	2.1	10



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID: HP-111-54B**

Lab Sample ID: 680-56360-2

Date Sampled: 03/31/2010 1110

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0389.d
Dilution:	10		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1715		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1715			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	10	U	5.0	10
1,1,2-Trichloroethane	10	U	1.3	10
Trichloroethene	10	U	1.3	10
Trichlorofluoromethane	10	U	2.5	10
1,2,3-Trichloropropane	10	U	4.1	10
Vinyl acetate	20	U	2.8	20
Vinyl chloride	8.8	J	1.8	10
Xylenes, Total	44		2.0	20

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	109		75 - 120
Dibromofluoromethane	102		75 - 121
Toluene-d8 (Surr)	105		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID: HP-111-54B**

Lab Sample ID: 680-56360-2

Date Sampled: 03/31/2010 1110

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0411.d
Dilution:	50		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1427	Run Type: DL	Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1427			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	270	J D	250	1200
Acetonitrile	2000	U	500	2000
Acrolein	1000	U	370	1000
Acrylonitrile	1000	U	360	1000
Benzene	8400	D	12	50
Bromoform	50	U	25	50
Bromomethane	50	U	40	50
2-Butanone (MEK)	500	U	50	500
Carbon disulfide	100	U	30	100
Carbon tetrachloride	50	U	25	50
Chlorobenzene	650	D	12	50
2-Chloro-1,3-butadiene	50	U	15	50
Chlorodibromomethane	50	U	5.0	50
Chloroethane	50	U	50	50
Chloroform	320	D	7.0	50
Chloromethane	50	U	16	50
3-Chloro-1-propene	50	U	10	50
cis-1,3-Dichloropropene	50	U	5.5	50
1,2-Dibromo-3-Chloropropane	50	U	22	50
Dibromomethane	50	U	10	50
Dichlorobromomethane	50	U	12	50
Dichlorodifluoromethane	50	U	12	50
1,1-Dichloroethane	50	U	12	50
1,2-Dichloroethane	50	U	5.0	50
1,1-Dichloroethene	50	U	5.5	50
1,2-Dichloropropane	50	U	6.5	50
Ethylbenzene	270	D	5.5	50
Ethylene Dibromide	50	U	12	50
Ethyl methacrylate	50	U	12	50
2-Hexanone	500	U	50	500
Iodomethane	250	U	50	250
Isobutyl alcohol	2000	U	550	2000
Methacrylonitrile	1000	U	160	1000
Methylene Chloride	71	J D	50	250
Methyl methacrylate	50	U	24	50
4-Methyl-2-pentanone (MIBK)	57	J D	50	500
Pentachloroethane	250	U	60	250
Propionitrile	1000	U	230	1000
Styrene	50	U	5.5	50
1,1,1,2-Tetrachloroethane	50	U	16	50
1,1,2,2-Tetrachloroethane	50	U	9.0	50
Tetrachloroethene	50	U	7.5	50
Toluene	380	D	16	50
trans-1,4-Dichloro-2-butene	100	U	25	100
trans-1,2-Dichloroethene	50	U	10	50
trans-1,3-Dichloropropene	50	U	10	50



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID: HP-111-54B**

Lab Sample ID: 680-56360-2

Date Sampled: 03/31/2010 1110

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0411.d
Dilution:	50		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1427	Run Type: DL	Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1427			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	50	U	25	50
1,1,2-Trichloroethane	50	U	6.5	50
Trichloroethene	50	U	6.5	50
Trichlorofluoromethane	50	U	12	50
1,2,3-Trichloropropane	50	U	20	50
Vinyl acetate	100	U	14	100
Vinyl chloride	50	U	9.0	50
Xylenes, Total	54	J D	10	100

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	104		75 - 120
Dibromofluoromethane	110		75 - 121
Toluene-d8 (Surr)	104		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-54C

Lab Sample ID: 680-56360-3

Date Sampled: 03/31/2010 1330

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0391.d
Dilution:	100		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1744		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1744			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	6900		500	2500
Acetonitrile	4000	U	1000	4000
Acrolein	2000	U	740	2000
Acrylonitrile	2000	U	720	2000
Benzene	4800		25	100
Bromoform	100	U	50	100
Bromomethane	100	U	80	100
2-Butanone (MEK)	1000	U	100	1000
Carbon disulfide	92	J	60	200
Carbon tetrachloride	100	U	50	100
Chlorobenzene	4500		25	100
2-Chloro-1,3-butadiene	100	U	30	100
Chlorodibromomethane	100	U	10	100
Chloroethane	100	U	100	100
Chloroform	20000		14	100
Chloromethane	100	U	33	100
3-Chloro-1-propene	100	U	20	100
cis-1,3-Dichloropropene	100	U	11	100
1,2-Dibromo-3-Chloropropane	100	U	44	100
Dibromomethane	100	U	20	100
Dichlorobromomethane	100	U	25	100
Dichlorodifluoromethane	100	U	25	100
1,1-Dichloroethane	100	U	25	100
1,2-Dichloroethane	100	U	10	100
1,1-Dichloroethene	100	U	11	100
1,2-Dichloropropane	100	U	13	100
Ethylbenzene	110		11	100
Ethylene Dibromide	100	U	25	100
Ethyl methacrylate	100	U	25	100
2-Hexanone	1000	U	100	1000
Iodomethane	500	U	100	500
Isobutyl alcohol	4000	U	1100	4000
Methacrylonitrile	2000	U	330	2000
Methylene Chloride	19000		100	500
Methyl methacrylate	100	U	48	100
4-Methyl-2-pentanone (MIBK)	470	J	100	1000
Pentachloroethane	500	U	120	500
Propionitrile	2000	U	460	2000
Styrene	100	U	11	100
1,1,1,2-Tetrachloroethane	100	U	33	100
1,1,2,2-Tetrachloroethane	100	U	18	100
Tetrachloroethene	100	U	15	100
Toluene	790		33	100
trans-1,4-Dichloro-2-butene	200	U	50	200
trans-1,2-Dichloroethene	100	U	20	100
trans-1,3-Dichloropropene	100	U	21	100



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-54C

Lab Sample ID: 680-56360-3

Date Sampled: 03/31/2010 1330

Client Matrix: Water

Date Received: 04/01/2010 1510

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**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0391.d
Dilution:	100		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1744		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1744			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	100	U	50	100
1,1,2-Trichloroethane	100	U	13	100
Trichloroethene	100	U	13	100
Trichlorofluoromethane	100	U	25	100
1,2,3-Trichloropropane	100	U	41	100
Vinyl acetate	200	U	28	200
Vinyl chloride	100	U	18	100
Xylenes, Total	200	U	20	200

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	105		75 - 120
Dibromofluoromethane	109		75 - 121
Toluene-d8 (Surr)	105		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-55C

Lab Sample ID: 680-56360-4

Date Sampled: 03/31/2010 0800

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0409.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1358		Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1358			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	20	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	99		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	2.4	J	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	83		0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	0.40	J	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	0.71	J	0.13	1.0
Ethylbenzene	46		0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	7.0		0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-55C

Lab Sample ID: 680-56360-4

Date Sampled: 03/31/2010 0800

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0409.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1358		Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1358			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	67		0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		75 - 120
Dibromofluoromethane	110		75 - 121
Toluene-d8 (Surr)	102		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57A

Lab Sample ID: 680-56360-5

Date Sampled: 03/31/2010 1515

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0395.d
Dilution:	50		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1843		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1843			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1200	J	250	1200
Acetonitrile	2000	U	500	2000
Acrolein	1000	U	370	1000
Acrylonitrile	1000	U	360	1000
Benzene	560		12	50
Bromoform	50	U	25	50
Bromomethane	50	U	40	50
2-Butanone (MEK)	180	J	50	500
Carbon disulfide	35	J	30	100
Carbon tetrachloride	50	U	25	50
Chlorobenzene	20	J	12	50
2-Chloro-1,3-butadiene	50	U	15	50
Chlorodibromomethane	50	U	5.0	50
Chloroethane	50	U	50	50
Chloroform	50	U	7.0	50
Chloromethane	50	U	16	50
3-Chloro-1-propene	50	U	10	50
cis-1,3-Dichloropropene	50	U	5.5	50
1,2-Dibromo-3-Chloropropane	50	U	22	50
Dibromomethane	50	U	10	50
Dichlorobromomethane	50	U	12	50
Dichlorodifluoromethane	50	U	12	50
1,1-Dichloroethane	50	U	12	50
1,2-Dichloroethane	50	U	5.0	50
1,1-Dichloroethene	50	U	5.5	50
1,2-Dichloropropane	50	U	6.5	50
Ethylbenzene	540		5.5	50
Ethylene Dibromide	50	U	12	50
Ethyl methacrylate	50	U	12	50
2-Hexanone	500	U	50	500
Iodomethane	250	U	50	250
Isobutyl alcohol	2000	U	550	2000
Methacrylonitrile	1000	U	160	1000
Methylene Chloride	250	U	50	250
Methyl methacrylate	50	U	24	50
4-Methyl-2-pentanone (MIBK)	1400		50	500
Pentachloroethane	250	U	60	250
Propionitrile	1000	U	230	1000
Styrene	50	U	5.5	50
1,1,1,2-Tetrachloroethane	50	U	16	50
1,1,2,2-Tetrachloroethane	50	U	9.0	50
Tetrachloroethene	50	U	7.5	50
Toluene	16000	E	16	50
trans-1,4-Dichloro-2-butene	100	U	25	100
trans-1,2-Dichloroethene	50	U	10	50
trans-1,3-Dichloropropene	50	U	10	50



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57A

Lab Sample ID: 680-56360-5

Date Sampled: 03/31/2010 1515

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0395.d
Dilution:	50		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1843		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1843			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	50	U	25	50
1,1,2-Trichloroethane	50	U	6.5	50
Trichloroethene	50	U	6.5	50
Trichlorofluoromethane	50	U	12	50
1,2,3-Trichloropropane	50	U	20	50
Vinyl acetate	100	U	14	100
Vinyl chloride	50	U	9.0	50
Xylenes, Total	190		10	100

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	103		75 - 120
Dibromofluoromethane	105		75 - 121
Toluene-d8 (Surr)	106		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57A

Lab Sample ID: 680-56360-5

Date Sampled: 03/31/2010 1515

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0413.d
Dilution:	200		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1456	Run Type: DL	Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1456			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1500	J D	1000	5000
Acetonitrile	8000	U	2000	8000
Acrolein	4000	U	1500	4000
Acrylonitrile	4000	U	1400	4000
Benzene	570	D	50	200
Bromoform	200	U	100	200
Bromomethane	200	U	160	200
2-Butanone (MEK)	2000	U	200	2000
Carbon disulfide	400	U	120	400
Carbon tetrachloride	200	U	100	200
Chlorobenzene	200	U	50	200
2-Chloro-1,3-butadiene	200	U	60	200
Chlorodibromomethane	200	U	20	200
Chloroethane	200	U	200	200
Chloroform	200	U	28	200
Chloromethane	200	U	66	200
3-Chloro-1-propene	200	U	40	200
cis-1,3-Dichloropropene	200	U	22	200
1,2-Dibromo-3-Chloropropane	200	U	88	200
Dibromomethane	200	U	40	200
Dichlorobromomethane	200	U	50	200
Dichlorodifluoromethane	200	U	50	200
1,1-Dichloroethane	200	U	50	200
1,2-Dichloroethane	200	U	20	200
1,1-Dichloroethene	200	U	22	200
1,2-Dichloropropane	200	U	26	200
Ethylbenzene	560	D	22	200
Ethylene Dibromide	200	U	50	200
Ethyl methacrylate	200	U	50	200
2-Hexanone	2000	U	200	2000
Iodomethane	1000	U	200	1000
Isobutyl alcohol	8000	U	2200	8000
Methacrylonitrile	4000	U	660	4000
Methylene Chloride	1000	U	200	1000
Methyl methacrylate	200	U	96	200
4-Methyl-2-pentanone (MIBK)	1200	J D	200	2000
Pentachloroethane	1000	U	240	1000
Propionitrile	4000	U	920	4000
Styrene	200	U	22	200
1,1,1,2-Tetrachloroethane	200	U	66	200
1,1,2,2-Tetrachloroethane	200	U	36	200
Tetrachloroethene	200	U	30	200
Toluene	17000	D	66	200
trans-1,4-Dichloro-2-butene	400	U	100	400
trans-1,2-Dichloroethene	200	U	40	200
trans-1,3-Dichloropropene	200	U	42	200



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57A

Lab Sample ID: 680-56360-5

Date Sampled: 03/31/2010 1515

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0413.d
Dilution:	200		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1456	Run Type: DL	Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1456			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	200	U	100	200
1,1,2-Trichloroethane	200	U	26	200
Trichloroethene	200	U	26	200
Trichlorofluoromethane	200	U	50	200
1,2,3-Trichloropropane	200	U	82	200
Vinyl acetate	400	U	56	400
Vinyl chloride	200	U	36	200
Xylenes, Total	200	J D	40	400

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	105		75 - 120
Dibromofluoromethane	111		75 - 121
Toluene-d8 (Surr)	106		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID: HP-111-57B**

Lab Sample ID: 680-56360-6

Date Sampled: 03/31/2010 1630

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0397.d
Dilution:	100		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1913		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1913			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10000		500	2500
Acetonitrile	4000	U	1000	4000
Acrolein	2000	U	740	2000
Acrylonitrile	2000	U	720	2000
Benzene	7000		25	100
Bromoform	100	U	50	100
Bromomethane	100	U	80	100
2-Butanone (MEK)	270	J	100	1000
Carbon disulfide	200	U	60	200
Carbon tetrachloride	100	U	50	100
Chlorobenzene	1300		25	100
2-Chloro-1,3-butadiene	100	U	30	100
Chlorodibromomethane	100	U	10	100
Chloroethane	100	U	100	100
Chloroform	66000	E	14	100
Chloromethane	100	U	33	100
3-Chloro-1-propene	100	U	20	100
cis-1,3-Dichloropropene	100	U	11	100
1,2-Dibromo-3-Chloropropane	100	U	44	100
Dibromomethane	100	U	20	100
Dichlorobromomethane	100	U	25	100
Dichlorodifluoromethane	100	U	25	100
1,1-Dichloroethane	100	U	25	100
1,2-Dichloroethane	100	U	10	100
1,1-Dichloroethene	27	J	11	100
1,2-Dichloropropane	100	U	13	100
Ethylbenzene	110		11	100
Ethylene Dibromide	100	U	25	100
Ethyl methacrylate	100	U	25	100
2-Hexanone	1000	U	100	1000
Iodomethane	500	U	100	500
Isobutyl alcohol	4000	U	1100	4000
Methacrylonitrile	2000	U	330	2000
Methylene Chloride	9600		100	500
Methyl methacrylate	100	U	48	100
4-Methyl-2-pentanone (MIBK)	4300		100	1000
Pentachloroethane	500	U	120	500
Propionitrile	2000	U	460	2000
Styrene	100	U	11	100
1,1,1,2-Tetrachloroethane	100	U	33	100
1,1,2,2-Tetrachloroethane	100	U	18	100
Tetrachloroethene	100	U	15	100
Toluene	690		33	100
trans-1,4-Dichloro-2-butene	200	U	50	200
trans-1,2-Dichloroethene	100	U	20	100
trans-1,3-Dichloropropene	100	U	21	100



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57B

Lab Sample ID: 680-56360-6

Date Sampled: 03/31/2010 1630

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0397.d
Dilution:	100		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1913		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1913			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	100	U	50	100
1,1,2-Trichloroethane	100	U	13	100
Trichloroethene	100	U	13	100
Trichlorofluoromethane	100	U	25	100
1,2,3-Trichloropropane	100	U	41	100
Vinyl acetate	200	U	28	200
Vinyl chloride	100	U	18	100
Xylenes, Total	52	J	20	200

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	103		75 - 120
Dibromofluoromethane	103		75 - 121
Toluene-d8 (Surr)	105		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-56360-1

Client Sample ID: HP-111-57B

Lab Sample ID: 680-56360-6

Client Matrix: Water

Date Sampled: 03/31/2010 1630

Date Received: 04/01/2010 1510

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	680-164831	Instrument ID:	MSO
Preparation:	5030B			Lab File ID:	o0415.d
Dilution:	1000			Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1526	Run Type:	DL	Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1526				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	9400	J D	5000	25000
Acetonitrile	40000	U	10000	40000
Acrolein	20000	U	7400	20000
Acrylonitrile	20000	U	7200	20000
Benzene	7000	D	250	1000
Bromoform	1000	U	500	1000
Bromomethane	1000	U	800	1000
2-Butanone (MEK)	10000	U	1000	10000
Carbon disulfide	2000	U	600	2000
Carbon tetrachloride	1000	U	500	1000
Chlorobenzene	1300	D	250	1000
2-Chloro-1,3-butadiene	1000	U	300	1000
Chlorodibromomethane	1000	U	100	1000
Chloroethane	1000	U	1000	1000
Chloroform	82000	D	140	1000
Chloromethane	1000	U	330	1000
3-Chloro-1-propene	1000	U	200	1000
cis-1,3-Dichloropropene	1000	U	110	1000
1,2-Dibromo-3-Chloropropane	1000	U	440	1000
Dibromomethane	1000	U	200	1000
Dichlorobromomethane	1000	U	250	1000
Dichlorodifluoromethane	1000	U	250	1000
1,1-Dichloroethane	1000	U	250	1000
1,2-Dichloroethane	1000	U	100	1000
1,1-Dichloroethene	1000	U	110	1000
1,2-Dichloropropane	1000	U	130	1000
Ethylbenzene	150	J D	110	1000
Ethylene Dibromide	1000	U	250	1000
Ethyl methacrylate	1000	U	250	1000
2-Hexanone	10000	U	1000	10000
Iodomethane	5000	U	1000	5000
Isobutyl alcohol	40000	U	11000	40000
Methacrylonitrile	20000	U	3300	20000
Methylene Chloride	9500	D	1000	5000
Methyl methacrylate	1000	U	480	1000
4-Methyl-2-pentanone (MIBK)	3500	J D	1000	10000
Pentachloroethane	5000	U	1200	5000
Propionitrile	20000	U	4600	20000
Styrene	1000	U	110	1000
1,1,1,2-Tetrachloroethane	1000	U	330	1000
1,1,2,2-Tetrachloroethane	1000	U	180	1000
Tetrachloroethene	1000	U	150	1000
Toluene	780	J D	330	1000
trans-1,4-Dichloro-2-butene	2000	U	500	2000
trans-1,2-Dichloroethene	1000	U	200	1000
trans-1,3-Dichloropropene	1000	U	210	1000



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57B

Lab Sample ID: 680-56360-6

Date Sampled: 03/31/2010 1630

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0415.d
Dilution:	1000		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1526	Run Type: DL	Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1526			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1000	U	500	1000
1,1,2-Trichloroethane	1000	U	130	1000
Trichloroethene	1000	U	130	1000
Trichlorofluoromethane	1000	U	250	1000
1,2,3-Trichloropropane	1000	U	410	1000
Vinyl acetate	2000	U	280	2000
Vinyl chloride	1000	U	180	1000
Xylenes, Total	2000	U	200	2000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	102		75 - 120
Dibromofluoromethane	108		75 - 121
Toluene-d8 (Surr)	104		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57C

Lab Sample ID: 680-56360-7

Date Sampled: 03/31/2010 1700

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0399.d
Dilution:	100		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1943		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1943			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	6100		500	2500
Acetonitrile	4000	U	1000	4000
Acrolein	2000	U	740	2000
Acrylonitrile	2000	U	720	2000
Benzene	3400		25	100
Bromoform	100	U	50	100
Bromomethane	100	U	80	100
2-Butanone (MEK)	180	J	100	1000
Carbon disulfide	200	U	60	200
Carbon tetrachloride	100	U	50	100
Chlorobenzene	4300		25	100
2-Chloro-1,3-butadiene	100	U	30	100
Chlorodibromomethane	100	U	10	100
Chloroethane	100	U	100	100
Chloroform	42000	E	14	100
Chloromethane	100	U	33	100
3-Chloro-1-propene	100	U	20	100
cis-1,3-Dichloropropene	100	U	11	100
1,2-Dibromo-3-Chloropropane	100	U	44	100
Dibromomethane	100	U	20	100
Dichlorobromomethane	100	U	25	100
Dichlorodifluoromethane	100	U	25	100
1,1-Dichloroethane	100	U	25	100
1,2-Dichloroethane	100	U	10	100
1,1-Dichloroethene	100	U	11	100
1,2-Dichloropropane	100	U	13	100
Ethylbenzene	100	U	11	100
Ethylene Dibromide	100	U	25	100
Ethyl methacrylate	100	U	25	100
2-Hexanone	1000	U	100	1000
Iodomethane	500	U	100	500
Isobutyl alcohol	4000	U	1100	4000
Methacrylonitrile	2000	U	330	2000
Methylene Chloride	28000	E	100	500
Methyl methacrylate	100	U	48	100
4-Methyl-2-pentanone (MIBK)	800	J	100	1000
Pentachloroethane	500	U	120	500
Propionitrile	2000	U	460	2000
Styrene	100	U	11	100
1,1,1,2-Tetrachloroethane	100	U	33	100
1,1,2,2-Tetrachloroethane	100	U	18	100
Tetrachloroethene	100	U	15	100
Toluene	170		33	100
trans-1,4-Dichloro-2-butene	200	U	50	200
trans-1,2-Dichloroethene	100	U	20	100
trans-1,3-Dichloropropene	100	U	21	100



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57C

Lab Sample ID: 680-56360-7

Date Sampled: 03/31/2010 1700

Client Matrix: Water

Date Received: 04/01/2010 1510

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**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0399.d
Dilution:	100		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1943		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1943			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	100	U	50	100
1,1,2-Trichloroethane	100	U	13	100
Trichloroethene	100	U	13	100
Trichlorofluoromethane	100	U	25	100
1,2,3-Trichloropropane	100	U	41	100
Vinyl acetate	200	U	28	200
Vinyl chloride	100	U	18	100
Xylenes, Total	200	U	20	200

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	103		75 - 120
Dibromofluoromethane	105		75 - 121
Toluene-d8 (Surr)	105		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

Client Sample ID: HP-111-57C

Lab Sample ID: 680-56360-7

Date Sampled: 03/31/2010 1700

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0417.d
Dilution:	500		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1555	Run Type: DL	Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1555			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	6100	J D	2500	12000
Acetonitrile	20000	U	5000	20000
Acrolein	10000	U	3700	10000
Acrylonitrile	10000	U	3600	10000
Benzene	4000	D	120	500
Bromoform	500	U	250	500
Bromomethane	500	U	400	500
2-Butanone (MEK)	5000	U	500	5000
Carbon disulfide	1000	U	300	1000
Carbon tetrachloride	500	U	250	500
Chlorobenzene	4800	D	120	500
2-Chloro-1,3-butadiene	500	U	150	500
Chlorodibromomethane	500	U	50	500
Chloroethane	500	U	500	500
Chloroform	51000	D	70	500
Chloromethane	500	U	160	500
3-Chloro-1-propene	500	U	100	500
cis-1,3-Dichloropropene	500	U	55	500
1,2-Dibromo-3-Chloropropane	500	U	220	500
Dibromomethane	500	U	100	500
Dichlorobromomethane	500	U	120	500
Dichlorodifluoromethane	500	U	120	500
1,1-Dichloroethane	500	U	120	500
1,2-Dichloroethane	500	U	50	500
1,1-Dichloroethene	500	U	55	500
1,2-Dichloropropane	500	U	65	500
Ethylbenzene	500	U	55	500
Ethylene Dibromide	500	U	120	500
Ethyl methacrylate	500	U	120	500
2-Hexanone	5000	U	500	5000
Iodomethane	2500	U	500	2500
Isobutyl alcohol	20000	U	5500	20000
Methacrylonitrile	10000	U	1600	10000
Methylene Chloride	31000	D	500	2500
Methyl methacrylate	500	U	240	500
4-Methyl-2-pentanone (MIBK)	840	J D	500	5000
Pentachloroethane	2500	U	600	2500
Propionitrile	10000	U	2300	10000
Styrene	500	U	55	500
1,1,1,2-Tetrachloroethane	500	U	160	500
1,1,2,2-Tetrachloroethane	500	U	90	500
Tetrachloroethene	500	U	75	500
Toluene	260	J D	160	500
trans-1,4-Dichloro-2-butene	1000	U	250	1000
trans-1,2-Dichloroethene	500	U	100	500
trans-1,3-Dichloropropene	500	U	100	500



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57C

Lab Sample ID: 680-56360-7

Date Sampled: 03/31/2010 1700

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0417.d
Dilution:	500		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1555	Run Type: DL	Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1555			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	500	U	250	500
1,1,2-Trichloroethane	500	U	65	500
Trichloroethene	500	U	65	500
Trichlorofluoromethane	500	U	120	500
1,2,3-Trichloropropane	500	U	200	500
Vinyl acetate	1000	U	140	1000
Vinyl chloride	500	U	90	500
Xylenes, Total	1000	U	100	1000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	106		75 - 120
Dibromofluoromethane	105		75 - 121
Toluene-d8 (Surr)	105		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-56360-1

Client Sample ID: HP-111-57-TW

Lab Sample ID: 680-56360-8

Client Matrix: Water

Date Sampled: 04/01/2010 1000

Date Received: 04/01/2010 1510

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-164873	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0441.d
Dilution:	500		Initial Weight/Volume:	5 mL
Date Analyzed:	04/05/2010 1436		Final Weight/Volume:	5 mL
Date Prepared:	04/05/2010 1436			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	12000	U	2500	12000
Acetonitrile	20000	U	5000	20000
Acrolein	10000	U	3700	10000
Acrylonitrile	10000	U	3600	10000
Benzene	3600		120	500
Bromoform	500	U	250	500
Bromomethane	500	U	400	500
2-Butanone (MEK)	5000	U	500	5000
Carbon disulfide	1000	U	300	1000
Carbon tetrachloride	500	U	250	500
Chlorobenzene	500	U	120	500
2-Chloro-1,3-butadiene	500	U	150	500
Chlorodibromomethane	500	U	50	500
Chloroethane	500	U	500	500
Chloroform	500	U	70	500
Chloromethane	500	U	160	500
3-Chloro-1-propene	500	U	100	500
cis-1,3-Dichloropropene	500	U	55	500
1,2-Dibromo-3-Chloropropane	500	U	220	500
Dibromomethane	500	U	100	500
Dichlorobromomethane	500	U	120	500
Dichlorodifluoromethane	500	U	120	500
1,1-Dichloroethane	500	U	120	500
1,2-Dichloroethane	500	U	50	500
1,1-Dichloroethene	500	U	55	500
1,2-Dichloropropane	500	U	65	500
Ethylbenzene	640		55	500
Ethylene Dibromide	500	U	120	500
Ethyl methacrylate	500	U	120	500
2-Hexanone	5000	U	500	5000
Iodomethane	2500	U	500	2500
Isobutyl alcohol	20000	U	5500	20000
Methacrylonitrile	10000	U	1600	10000
Methylene Chloride	2500	U	500	2500
Methyl methacrylate	500	U	240	500
4-Methyl-2-pentanone (MIBK)	5000	U	500	5000
Pentachloroethane	2500	U	600	2500
Propionitrile	10000	U	2300	10000
Styrene	500	U	55	500
1,1,1,2-Tetrachloroethane	500	U	160	500
1,1,2,2-Tetrachloroethane	500	U	90	500
Tetrachloroethene	230	J	75	500
Toluene	530		160	500
trans-1,4-Dichloro-2-butene	1000	U	250	1000
trans-1,2-Dichloroethene	500	U	100	500
trans-1,3-Dichloropropene	500	U	100	500



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57-TW

Lab Sample ID: 680-56360-8

Date Sampled: 04/01/2010 1000

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164873	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0441.d
Dilution:	500		Initial Weight/Volume:	5 mL
Date Analyzed:	04/05/2010 1436		Final Weight/Volume:	5 mL
Date Prepared:	04/05/2010 1436			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	500	U	250	500
1,1,2-Trichloroethane	500	U	65	500
Trichloroethene	500	U	65	500
Trichlorofluoromethane	500	U	120	500
1,2,3-Trichloropropane	500	U	200	500
Vinyl acetate	1000	U	140	1000
Vinyl chloride	500	U	90	500
Xylenes, Total	130	J	100	1000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	106		75 - 120
Dibromofluoromethane	108		75 - 121
Toluene-d8 (Surr)	105		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-56360-1

Client Sample ID: HP-111-58A

Lab Sample ID: 680-56360-9

Client Matrix: Water

Date Sampled: 04/01/2010 0815

Date Received: 04/01/2010 1510

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0421.d
Dilution:	2.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1654		Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1654			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	17	J	10	50
Acetonitrile	80	U	20	80
Acrolein	40	U	15	40
Acrylonitrile	40	U	14	40
Benzene	1.0	J	0.50	2.0
Bromoform	2.0	U	1.0	2.0
Bromomethane	2.0	U	1.6	2.0
2-Butanone (MEK)	20	U	2.0	20
Carbon disulfide	6.1		1.2	4.0
Carbon tetrachloride	2.0	U	1.0	2.0
Chlorobenzene	0.57	J	0.50	2.0
2-Chloro-1,3-butadiene	2.0	U	0.60	2.0
Chlorodibromomethane	2.0	U	0.20	2.0
Chloroethane	2.0	U	2.0	2.0
Chloroform	0.63	J	0.28	2.0
Chloromethane	2.0	U	0.66	2.0
3-Chloro-1-propene	2.0	U	0.40	2.0
cis-1,3-Dichloropropene	2.0	U	0.22	2.0
1,2-Dibromo-3-Chloropropane	2.0	U	0.88	2.0
Dibromomethane	2.0	U	0.40	2.0
Dichlorobromomethane	2.0	U	0.50	2.0
Dichlorodifluoromethane	2.0	U	0.50	2.0
1,1-Dichloroethane	2.0	U	0.50	2.0
1,2-Dichloroethane	2.0	U	0.20	2.0
1,1-Dichloroethene	2.0	U	0.22	2.0
1,2-Dichloropropane	2.0	U	0.26	2.0
Ethylbenzene	0.29	J	0.22	2.0
Ethylene Dibromide	2.0	U	0.50	2.0
Ethyl methacrylate	2.0	U	0.50	2.0
2-Hexanone	20	U	2.0	20
Iodomethane	10	U	2.0	10
Isobutyl alcohol	80	U	22	80
Methacrylonitrile	40	U	6.6	40
Methylene Chloride	10	U	2.0	10
Methyl methacrylate	2.0	U	0.96	2.0
4-Methyl-2-pentanone (MIBK)	20	U	2.0	20
Pentachloroethane	10	U	2.4	10
Propionitrile	40	U	9.2	40
Styrene	2.0	U	0.22	2.0
1,1,1,2-Tetrachloroethane	2.0	U	0.66	2.0
1,1,2,2-Tetrachloroethane	2.0	U	0.36	2.0
Tetrachloroethene	2.0	U	0.30	2.0
Toluene	0.73	J	0.66	2.0
trans-1,4-Dichloro-2-butene	4.0	U	1.0	4.0
trans-1,2-Dichloroethene	2.0	U	0.40	2.0
trans-1,3-Dichloropropene	2.0	U	0.42	2.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID: HP-111-58A**

Lab Sample ID: 680-56360-9

Date Sampled: 04/01/2010 0815

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0421.d
Dilution:	2.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1654		Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1654			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	2.0	U	1.0	2.0
1,1,2-Trichloroethane	2.0	U	0.26	2.0
Trichloroethene	2.0	U	0.26	2.0
Trichlorofluoromethane	2.0	U	0.50	2.0
1,2,3-Trichloropropane	2.0	U	0.82	2.0
Vinyl acetate	4.0	U	0.56	4.0
Vinyl chloride	2.0	U	0.36	2.0
Xylenes, Total	4.0	U	0.40	4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	107		75 - 120
Dibromofluoromethane	99		75 - 121
Toluene-d8 (Surr)	107		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-58B

Lab Sample ID: 680-56360-10

Date Sampled: 04/01/2010 0840

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0423.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1723		Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1723			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	33	J	25	120
Acetonitrile	200	U	50	200
Acrolein	100	U	37	100
Acrylonitrile	100	U	36	100
Benzene	5.0	U	1.2	5.0
Bromoform	5.0	U	2.5	5.0
Bromomethane	5.0	U	4.0	5.0
2-Butanone (MEK)	50	U	5.0	50
Carbon disulfide	3.8	J	3.0	10
Carbon tetrachloride	5.0	U	2.5	5.0
Chlorobenzene	5.0	U	1.2	5.0
2-Chloro-1,3-butadiene	5.0	U	1.5	5.0
Chlorodibromomethane	5.0	U	0.50	5.0
Chloroethane	5.0	U	5.0	5.0
Chloroform	3.3	J	0.70	5.0
Chloromethane	5.0	U	1.6	5.0
3-Chloro-1-propene	5.0	U	1.0	5.0
cis-1,3-Dichloropropene	5.0	U	0.55	5.0
1,2-Dibromo-3-Chloropropane	5.0	U	2.2	5.0
Dibromomethane	5.0	U	1.0	5.0
Dichlorobromomethane	5.0	U	1.2	5.0
Dichlorodifluoromethane	5.0	U	1.2	5.0
1,1-Dichloroethane	5.0	U	1.2	5.0
1,2-Dichloroethane	5.0	U	0.50	5.0
1,1-Dichloroethene	5.0	U	0.55	5.0
1,2-Dichloropropane	5.0	U	0.65	5.0
Ethylbenzene	5.0	U	0.55	5.0
Ethylene Dibromide	5.0	U	1.2	5.0
Ethyl methacrylate	5.0	U	1.2	5.0
2-Hexanone	50	U	5.0	50
Iodomethane	25	U	5.0	25
Isobutyl alcohol	200	U	55	200
Methacrylonitrile	100	U	16	100
Methylene Chloride	25	U	5.0	25
Methyl methacrylate	5.0	U	2.4	5.0
4-Methyl-2-pentanone (MIBK)	50	U	5.0	50
Pentachloroethane	25	U	6.0	25
Propionitrile	100	U	23	100
Styrene	5.0	U	0.55	5.0
1,1,1,2-Tetrachloroethane	5.0	U	1.6	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.90	5.0
Tetrachloroethene	5.0	U	0.75	5.0
Toluene	5.0	U	1.6	5.0
trans-1,4-Dichloro-2-butene	10	U	2.5	10
trans-1,2-Dichloroethene	5.0	U	1.0	5.0
trans-1,3-Dichloropropene	5.0	U	1.0	5.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-58B

Lab Sample ID: 680-56360-10

Date Sampled: 04/01/2010 0840

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0423.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1723		Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1723			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	5.0	U	2.5	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.65	5.0
Trichlorofluoromethane	5.0	U	1.2	5.0
1,2,3-Trichloropropane	5.0	U	2.0	5.0
Vinyl acetate	10	U	1.4	10
Vinyl chloride	5.0	U	0.90	5.0
Xylenes, Total	8.6	J	1.0	10

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	105		75 - 120
Dibromofluoromethane	105		75 - 121
Toluene-d8 (Surr)	106		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-58C

Lab Sample ID: 680-56360-11

Date Sampled: 04/01/2010 0915

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0407.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1329		Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1329			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	7.0	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	25		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	4.0		0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.7		0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.1		0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	0.55	J	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-58C

Lab Sample ID: 680-56360-11

Date Sampled: 04/01/2010 0915

Client Matrix: Water

Date Received: 04/01/2010 1510

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**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0407.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1329		Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1329			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.5		0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	104		75 - 120
Dibromofluoromethane	112		75 - 121
Toluene-d8 (Surr)	102		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** Trip Blank 031010

Lab Sample ID: 680-56360-12

Date Sampled: 04/01/2010 0000

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0401.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1201		Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1201			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** Trip Blank 031010

Lab Sample ID: 680-56360-12

Date Sampled: 04/01/2010 0000

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0401.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1201		Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1201			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	101		75 - 120
Dibromofluoromethane	113		75 - 121
Toluene-d8 (Surr)	103		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-56360-1

Client Sample ID: HP-11-FB-2

Lab Sample ID: 680-56360-13

Client Matrix: Water

Date Sampled: 04/01/2010 1100

Date Received: 04/01/2010 1510

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0403.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1230		Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1230			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	7.5	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-11-FB-2

Lab Sample ID: 680-56360-13

Date Sampled: 04/01/2010 1100

Client Matrix: Water

Date Received: 04/01/2010 1510

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164831	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0403.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/04/2010 1230		Final Weight/Volume:	5 mL
Date Prepared:	04/04/2010 1230			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	105		75 - 120
Dibromofluoromethane	114		75 - 121
Toluene-d8 (Surr)	104		75 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-56360-1

Client Sample ID: HP-111-54A

Lab Sample ID: 680-56360-1

Client Matrix: Water

Date Sampled: 03/31/2010 1040

Date Received: 04/01/2010 1510

### 8081A\_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-164905	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-164757	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/05/2010 1455		Injection Volume:	2 uL
Date Prepared:	04/02/2010 1514		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	18		14 - 115
Tetrachloro-m-xylene	49		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-54B

Lab Sample ID: 680-56360-2

Date Sampled: 03/31/2010 1110

Client Matrix: Water

Date Received: 04/01/2010 1510

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-164905	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-164757	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/05/2010 1515		Injection Volume:	2 uL
Date Prepared:	04/02/2010 1514		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	11		0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	11	X	14 - 115
Tetrachloro-m-xylene	78		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID: HP-111-54C**

Lab Sample ID: 680-56360-3

Date Sampled: 03/31/2010 1330

Client Matrix: Water

Date Received: 04/01/2010 1510

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-164905	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-164757	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/05/2010 1534		Injection Volume:	2 uL
Date Prepared:	04/02/2010 1514		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	37		0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	12	X	14 - 115
Tetrachloro-m-xylene	57		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57A

Lab Sample ID: 680-56360-5

Date Sampled: 03/31/2010 1515

Client Matrix: Water

Date Received: 04/01/2010 1510

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-164905	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-164757	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/05/2010 1553		Injection Volume:	2 uL
Date Prepared:	04/02/2010 1514		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	15		0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	33		14 - 115
Tetrachloro-m-xylene	93		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57B

Lab Sample ID: 680-56360-6

Date Sampled: 03/31/2010 1630

Client Matrix: Water

Date Received: 04/01/2010 1510

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-164905	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-164757	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/05/2010 1624		Injection Volume:	2 uL
Date Prepared:	04/02/2010 1514		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	37		0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	11	X	14 - 115
Tetrachloro-m-xylene	75		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57C

Lab Sample ID: 680-56360-7

Date Sampled: 03/31/2010 1700

Client Matrix: Water

Date Received: 04/01/2010 1510

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-164905	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-164757	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/05/2010 1643		Injection Volume:	2 uL
Date Prepared:	04/02/2010 1514		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	41		0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	11	X	14 - 115
Tetrachloro-m-xylene	81		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-54A

Lab Sample ID: 680-56360-1

Date Sampled: 03/31/2010 1040

Client Matrix: Water

Date Received: 04/01/2010 1510

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-164903	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-164757	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/05/2010 1455		Injection Volume:	2 uL
Date Prepared:	04/02/2010 1514		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	16		14 - 115
Tetrachloro-m-xylene	53		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID: HP-111-54B**

Lab Sample ID: 680-56360-2

Date Sampled: 03/31/2010 1110

Client Matrix: Water

Date Received: 04/01/2010 1510

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-164903	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-164757	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/05/2010 1515		Injection Volume:	2 uL
Date Prepared:	04/02/2010 1514		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	11	X	14 - 115
Tetrachloro-m-xylene	74		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID: HP-111-54C**

Lab Sample ID: 680-56360-3

Date Sampled: 03/31/2010 1330

Client Matrix: Water

Date Received: 04/01/2010 1510

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-164903	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-164757	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/05/2010 1534		Injection Volume:	2 uL
Date Prepared:	04/02/2010 1514		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	17		14 - 115
Tetrachloro-m-xylene	68		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57A

Lab Sample ID: 680-56360-5

Date Sampled: 03/31/2010 1515

Client Matrix: Water

Date Received: 04/01/2010 1510

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-164903	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-164757	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/05/2010 1553		Injection Volume:	2 uL
Date Prepared:	04/02/2010 1514		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	25		14 - 115
Tetrachloro-m-xylene	103		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57B

Lab Sample ID: 680-56360-6

Date Sampled: 03/31/2010 1630

Client Matrix: Water

Date Received: 04/01/2010 1510

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-164903	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-164757	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/05/2010 1624		Injection Volume:	2 uL
Date Prepared:	04/02/2010 1514		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	11	X	14 - 115
Tetrachloro-m-xylene	110		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56360-1

**Client Sample ID:** HP-111-57C

Lab Sample ID: 680-56360-7

Date Sampled: 03/31/2010 1700

Client Matrix: Water

Date Received: 04/01/2010 1510

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-164903	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-164757	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/05/2010 1643		Injection Volume:	2 uL
Date Prepared:	04/02/2010 1514		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	14		14 - 115
Tetrachloro-m-xylene	56		35 - 120



## DATA REPORTING QUALIFIERS

Client: Ashland Inc.

Job Number: 680-56360-1

Lab Section	Qualifier	Description
GC/MS VOA	U	Indicates the analyte was analyzed for but not detected.
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
GC Semi VOA	U	Indicates the analyte was analyzed for but not detected.
	X	Surrogate is outside control limits



# QUALITY CONTROL RESULTS



Client: Ashland Inc.

Job Number: 680-56360-1

## Surrogate Recovery Report

### 8260B Volatile Organic Compounds (GC/MS)

#### Client Matrix: Water

LOI 60: pb 6D	Client Wam4le I2	BFB %Rec	DBFM %Rec	TOL %Rec
680-56360-1	HP-111-54A	106	114	103
680-56360-2	HP-111-54B	109	102	105
680-56360-2 DL	HP-111-54B DL	104	110	104
680-56360-3	HP-111-54C	105	109	105
680-56360-4	HP-111-55C	99	110	102
680-56360-5	HP-111-57A	103	105	106
680-56360-5 DL	HP-111-57A DL	105	111	106
680-56360-6	HP-111-57B	103	103	105
680-56360-6 DL	HP-111-57B DL	102	108	104
680-56360-7	HP-111-57C	103	105	105
680-56360-7 DL	HP-111-57C DL	106	105	105
680-56360-8	HP-111-57-TW	106	108	105
680-56360-9	HP-111-58A	107	99	107
680-56360-10	HP-111-58B	105	105	106
680-56360-11	HP-111-58C	104	112	102
680-56360-12	Trip Blank 031010	101	113	103
680-56360-13	HP-11-FB-2	105	114	104
MB 680-164798/9		102	114	103
MB 680-164831/12		105	116	103
MB 680-164873/7		104	115	104
LCS 680-164798/6		98	119	104
LCS 680-164831/9		106	118	103
LCS 680-164873/4		102	114	102
LCSD 680-164798/7		101	116	102
LCSD 680-164831/10		109	120	105
LCSD 680-164873/5		89	115	98

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120



Client: Ashland Inc.

Job Number: 680-56360-1

## Surrogate Recovery Report

### 8081A 8082 Organochlorine Pesticides & PCBs (GC)

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	TCX1 %Rec
680-56360-1	HP-111-54A	18	49
680-56360-2	HP-111-54B	11X	78
680-56360-3	HP-111-54C	12X	57
680-56360-5	HP-111-57A	33	93
680-56360-6	HP-111-57B	11X	75
680-56360-7	HP-111-57C	11X	81
MB 680-164757/11-A		51	57
LCS 680-164757/16-A		56	63
LCSD 680-164757/17-A		58	60

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



Client: Ashland Inc.

Job Number: 680-56360-1

## Surrogate Recovery Report

### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec	TCX1 %Rec	TCX2 %Rec
680-56360-1	HP-111-54A	16			53
680-56360-2	HP-111-54B	11X		74	
680-56360-3	HP-111-54C	17		68	
680-56360-5	HP-111-57A	25		103	
680-56360-6	HP-111-57B	11X		110	
680-56360-7	HP-111-57C	14		56	
MB 680-164757/11-A			52		60
LCS 680-164757/16-A			57		68
LCSD			58		64
680-164757/17-A					

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

### Method Blank - Batch: 680-164798

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-164798/9

Analysis Batch: 680-164798

Instrument ID: MSO

Client Matrix: Water

Prep Batch: N/A

Lab File ID: oq305.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 04/02/2010 1122

Final Weight/Volume: 5 mL

Date Prepared: 04/02/2010 1122

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

### Method Blank - Batch: 680-164798

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-164798/9

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 04/02/2010 1122

Date Prepared: 04/02/2010 1122

Analysis Batch: 680-164798

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO

Lab File ID: oq305.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	102	75 - 120
Dibromofluoromethane	114	75 - 121
Toluene-d8 (Surr)	103	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-164798**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164798/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 0925  
Date Prepared: 04/02/2010 0925

Analysis Batch: 680-164798  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq297.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-164798/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 0954  
Date Prepared: 04/02/2010 0954

Analysis Batch: 680-164798  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq299.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	104	108	17 - 175	4	50		
Benzene	102	101	77 - 119	1	30		
Bromoform	91	94	62 - 133	3	30		
Bromomethane	91	111	12 - 184	19	50		
2-Butanone (MEK)	107	111	33 - 157	4	30		
Carbon disulfide	113	109	55 - 131	3	30		
Carbon tetrachloride	114	111	71 - 135	3	30		
Chlorobenzene	99	100	85 - 116	1	30		
Chlorodibromomethane	109	113	75 - 133	3	30		
Chloroethane	73	91	40 - 165	22	50		
Chloroform	113	111	82 - 120	2	30		
Chloromethane	89	89	48 - 142	0	50		
cis-1,3-Dichloropropene	110	107	76 - 126	3	30		
1,2-Dibromo-3-Chloropropane	95	99	49 - 140	3	30		
Dibromomethane	98	99	78 - 119	1	30		
Dichlorobromomethane	100	101	78 - 127	1	30		
Dichlorodifluoromethane	122	120	34 - 154	2	30		
1,1-Dichloroethane	112	108	74 - 127	4	30		
1,2-Dichloroethane	92	91	66 - 132	2	30		
1,1-Dichloroethene	119	115	62 - 141	3	30		
1,2-Dichloropropane	100	94	73 - 124	6	30		
Ethylbenzene	100	101	86 - 116	1	30		
Ethylene Dibromide	102	102	80 - 121	0	30		
2-Hexanone	95	99	34 - 161	5	30		
Methylene Chloride	115	115	70 - 125	0	30		
4-Methyl-2-pentanone (MIBK)	99	101	40 - 151	2	30		
Styrene	100	102	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	89	89	81 - 128	0	30		
1,1,2,2-Tetrachloroethane	101	102	69 - 129	1	30		
Tetrachloroethene	102	102	76 - 126	0	30		
Toluene	101	101	81 - 117	0	30		
trans-1,2-Dichloroethene	112	108	72 - 131	4	30		
trans-1,3-Dichloropropene	113	111	73 - 128	2	30		
1,1,1-Trichloroethane	105	103	76 - 127	1	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-164798**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164798/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 0925  
Date Prepared: 04/02/2010 0925

Analysis Batch: 680-164798  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq297.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-164798/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 0954  
Date Prepared: 04/02/2010 0954

Analysis Batch: 680-164798  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq299.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	99	97	75 - 121	2	30		
Trichloroethene	103	102	84 - 115	1	30		
Trichlorofluoromethane	94	90	58 - 149	4	50		
1,2,3-Trichloropropane	91	100	70 - 130	9	30		
Vinyl acetate	134	131	10 - 217	2	30		
Vinyl chloride	83	81	59 - 144	2	50		
Xylenes, Total	100	100	84 - 118	0	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	98		101		75 - 120		
Dibromofluoromethane	119		116		75 - 121		
Toluene-d8 (Surr)	104		102		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-164798**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164798/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 0925  
Date Prepared: 04/02/2010 0925

Units: ug/L

LCSD Lab Sample ID: LCSD 680-164798/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 0954  
Date Prepared: 04/02/2010 0954

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	104	108
Benzene	50.0	50.0	51.2	50.5
Bromoform	50.0	50.0	45.6	47.2
Bromomethane	50.0	50.0	45.7	55.4
2-Butanone (MEK)	100	100	107	111
Carbon disulfide	50.0	50.0	56.4	54.7
Carbon tetrachloride	50.0	50.0	57.0	55.3
Chlorobenzene	50.0	50.0	49.6	50.2
Chlorodibromomethane	50.0	50.0	54.6	56.3
Chloroethane	50.0	50.0	36.3	45.3
Chloroform	50.0	50.0	56.7	55.6
Chloromethane	50.0	50.0	44.4	44.4
cis-1,3-Dichloropropene	50.0	50.0	55.0	53.4
1,2-Dibromo-3-Chloropropane	50.0	50.0	47.7	49.4
Dibromomethane	50.0	50.0	49.2	49.6
Dichlorobromomethane	50.0	50.0	50.2	50.7
Dichlorodifluoromethane	50.0	50.0	60.8	59.9
1,1-Dichloroethane	50.0	50.0	56.2	54.2
1,2-Dichloroethane	50.0	50.0	46.2	45.5
1,1-Dichloroethene	50.0	50.0	59.4	57.5
1,2-Dichloropropane	50.0	50.0	49.9	47.2
Ethylbenzene	50.0	50.0	50.0	50.5
Ethylene Dibromide	50.0	50.0	51.1	51.1
2-Hexanone	100	100	94.7	99.3
Methylene Chloride	50.0	50.0	57.6	57.6
4-Methyl-2-pentanone (MIBK)	100	100	98.9	101
Styrene	50.0	50.0	50.2	50.9
1,1,1,2-Tetrachloroethane	50.0	50.0	44.5	44.5
1,1,2,2-Tetrachloroethane	50.0	50.0	50.6	50.9
Tetrachloroethene	50.0	50.0	51.0	51.2
Toluene	50.0	50.0	50.5	50.6
trans-1,2-Dichloroethene	50.0	50.0	55.9	53.8
trans-1,3-Dichloropropene	50.0	50.0	56.6	55.6
1,1,1-Trichloroethane	50.0	50.0	52.3	51.6
1,1,2-Trichloroethane	50.0	50.0	49.6	48.6
Trichloroethene	50.0	50.0	51.4	50.8
Trichlorofluoromethane	50.0	50.0	47.2	45.2
1,2,3-Trichloropropane	50.0	50.0	45.5	49.8
Vinyl acetate	100	100	134	131
Vinyl chloride	50.0	50.0	41.4	40.5
Xylenes, Total	150	150	149	150



**Quality Control Results**

Client: Ashland Inc.

Job Number: 680-56360-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

### Method Blank - Batch: 680-164831

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-164831/12

Analysis Batch: 680-164831

Instrument ID: MSO

Client Matrix: Water

Prep Batch: N/A

Lab File ID: oq327.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 04/04/2010 1132

Final Weight/Volume: 5 mL

Date Prepared: 04/04/2010 1132

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

### Method Blank - Batch: 680-164831

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-164831/12

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 04/04/2010 1132

Date Prepared: 04/04/2010 1132

Analysis Batch: 680-164831

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO

Lab File ID: oq327.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	105	75 - 120
Dibromofluoromethane	116	75 - 121
Toluene-d8 (Surr)	103	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-164831**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164831/9  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/04/2010 0935  
Date Prepared: 04/04/2010 0935

Analysis Batch: 680-164831  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq319.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-164831/10  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/04/2010 1004  
Date Prepared: 04/04/2010 1004

Analysis Batch: 680-164831  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq321.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	103	101	17 - 175	2	50		
Benzene	103	104	77 - 119	1	30		
Bromoform	97	103	62 - 133	6	30		
Bromomethane	97	116	12 - 184	18	50		
2-Butanone (MEK)	105	107	33 - 157	2	30		
Carbon disulfide	115	115	55 - 131	0	30		
Carbon tetrachloride	113	114	71 - 135	1	30		
Chlorobenzene	106	107	85 - 116	1	30		
Chlorodibromomethane	118	122	75 - 133	4	30		
Chloroethane	95	99	40 - 165	4	50		
Chloroform	113	114	82 - 120	1	30		
Chloromethane	92	92	48 - 142	1	50		
cis-1,3-Dichloropropene	111	113	76 - 126	1	30		
1,2-Dibromo-3-Chloropropane	102	91	49 - 140	12	30		
Dibromomethane	99	101	78 - 119	3	30		
Dichlorobromomethane	104	106	78 - 127	2	30		
Dichlorodifluoromethane	126	127	34 - 154	1	30		
1,1-Dichloroethane	112	113	74 - 127	0	30		
1,2-Dichloroethane	93	94	66 - 132	0	30		
1,1-Dichloroethene	120	112	62 - 141	7	30		
1,2-Dichloropropane	101	98	73 - 124	4	30		
Ethylbenzene	106	108	86 - 116	1	30		
Ethylene Dibromide	105	106	80 - 121	1	30		
2-Hexanone	100	103	34 - 161	2	30		
Methylene Chloride	115	117	70 - 125	2	30		
4-Methyl-2-pentanone (MIBK)	98	99	40 - 151	1	30		
Styrene	107	110	82 - 122	2	30		
1,1,1,2-Tetrachloroethane	96	97	81 - 128	1	30		
1,1,2,2-Tetrachloroethane	104	108	69 - 129	5	30		
Tetrachloroethene	109	111	76 - 126	2	30		
Toluene	99	101	81 - 117	2	30		
trans-1,2-Dichloroethene	110	110	72 - 131	0	30		
trans-1,3-Dichloropropene	114	114	73 - 128	0	30		
1,1,1-Trichloroethane	106	106	76 - 127	0	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-164831**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164831/9  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/04/2010 0935  
Date Prepared: 04/04/2010 0935

Analysis Batch: 680-164831  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq319.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-164831/10  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/04/2010 1004  
Date Prepared: 04/04/2010 1004

Analysis Batch: 680-164831  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq321.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	99	100	75 - 121	1	30		
Trichloroethene	103	105	84 - 115	2	30		
Trichlorofluoromethane	79	79	58 - 149	1	50		
1,2,3-Trichloropropane	96	100	70 - 130	4	30		
Vinyl acetate	132	131	10 - 217	1	30		
Vinyl chloride	84	86	59 - 144	3	50		
Xylenes, Total	106	107	84 - 118	1	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	106		109		75 - 120		
Dibromofluoromethane	118		120		75 - 121		
Toluene-d8 (Surr)	103		105		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-164831**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164831/9  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/04/2010 0935  
Date Prepared: 04/04/2010 0935

Units: ug/L

LCSD Lab Sample ID: LCSD 680-164831/10  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/04/2010 1004  
Date Prepared: 04/04/2010 1004

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	103	101
Benzene	50.0	50.0	51.5	51.8
Bromoform	50.0	50.0	48.6	51.5
Bromomethane	50.0	50.0	48.7	58.1
2-Butanone (MEK)	100	100	105	107
Carbon disulfide	50.0	50.0	57.3	57.4
Carbon tetrachloride	50.0	50.0	56.6	57.0
Chlorobenzene	50.0	50.0	53.0	53.6
Chlorodibromomethane	50.0	50.0	58.9	61.2
Chloroethane	50.0	50.0	47.3	49.4
Chloroform	50.0	50.0	56.4	56.8
Chloromethane	50.0	50.0	45.8	46.1
cis-1,3-Dichloropropene	50.0	50.0	55.7	56.5
1,2-Dibromo-3-Chloropropane	50.0	50.0	51.2	45.6
Dibromomethane	50.0	50.0	49.4	50.7
Dichlorobromomethane	50.0	50.0	51.8	52.8
Dichlorodifluoromethane	50.0	50.0	62.9	63.5
1,1-Dichloroethane	50.0	50.0	56.1	56.4
1,2-Dichloroethane	50.0	50.0	46.6	46.8
1,1-Dichloroethene	50.0	50.0	60.0	55.8
1,2-Dichloropropane	50.0	50.0	50.7	48.8
Ethylbenzene	50.0	50.0	53.2	53.8
Ethylene Dibromide	50.0	50.0	52.3	52.9
2-Hexanone	100	100	100	103
Methylene Chloride	50.0	50.0	57.7	58.6
4-Methyl-2-pentanone (MIBK)	100	100	97.8	99.2
Styrene	50.0	50.0	53.7	55.0
1,1,1,2-Tetrachloroethane	50.0	50.0	48.0	48.3
1,1,2,2-Tetrachloroethane	50.0	50.0	51.8	54.2
Tetrachloroethene	50.0	50.0	54.3	55.5
Toluene	50.0	50.0	49.7	50.6
trans-1,2-Dichloroethene	50.0	50.0	55.2	55.0
trans-1,3-Dichloropropene	50.0	50.0	57.0	57.0
1,1,1-Trichloroethane	50.0	50.0	53.1	53.2
1,1,2-Trichloroethane	50.0	50.0	49.3	49.8
Trichloroethene	50.0	50.0	51.5	52.4
Trichlorofluoromethane	50.0	50.0	39.4	39.7
1,2,3-Trichloropropane	50.0	50.0	48.1	50.1
Vinyl acetate	100	100	132	131
Vinyl chloride	50.0	50.0	42.0	43.1
Xylenes, Total	150	150	159	161



**Quality Control Results**

Client: Ashland Inc.

Job Number: 680-56360-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

### Method Blank - Batch: 680-164873

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-164873/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 1210  
Date Prepared: 04/05/2010 1210

Analysis Batch: 680-164873  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq343.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

### Method Blank - Batch: 680-164873

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-164873/7

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 04/05/2010 1210

Date Prepared: 04/05/2010 1210

Analysis Batch: 680-164873

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO

Lab File ID: oq343.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	104	75 - 120
Dibromofluoromethane	115	75 - 121
Toluene-d8 (Surr)	104	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-164873**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164873/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 0943  
Date Prepared: 04/05/2010 0943

Analysis Batch: 680-164873  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq333.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-164873/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 1012  
Date Prepared: 04/05/2010 1012

Analysis Batch: 680-164873  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq335.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	115	112	17 - 175	3	50		
Benzene	101	97	77 - 119	3	30		
Bromoform	95	95	62 - 133	0	30		
Bromomethane	88	90	12 - 184	3	50		
2-Butanone (MEK)	112	113	33 - 157	1	30		
Carbon disulfide	111	106	55 - 131	4	30		
Carbon tetrachloride	108	102	71 - 135	5	30		
Chlorobenzene	101	100	85 - 116	2	30		
Chlorodibromomethane	114	112	75 - 133	2	30		
Chloroethane	82	68	40 - 165	18	50		
Chloroform	110	108	82 - 120	2	30		
Chloromethane	87	87	48 - 142	1	50		
cis-1,3-Dichloropropene	109	104	76 - 126	4	30		
1,2-Dibromo-3-Chloropropane	82	80	49 - 140	2	30		
Dibromomethane	97	95	78 - 119	2	30		
Dichlorobromomethane	102	97	78 - 127	5	30		
Dichlorodifluoromethane	116	118	34 - 154	1	30		
1,1-Dichloroethane	110	105	74 - 127	5	30		
1,2-Dichloroethane	92	88	66 - 132	4	30		
1,1-Dichloroethene	113	108	62 - 141	4	30		
1,2-Dichloropropane	96	94	73 - 124	2	30		
Ethylbenzene	100	98	86 - 116	2	30		
Ethylene Dibromide	106	102	80 - 121	4	30		
2-Hexanone	102	104	34 - 161	1	30		
Methylene Chloride	113	107	70 - 125	5	30		
4-Methyl-2-pentanone (MIBK)	102	101	40 - 151	2	30		
Styrene	103	101	82 - 122	2	30		
1,1,1,2-Tetrachloroethane	92	90	81 - 128	2	30		
1,1,2,2-Tetrachloroethane	104	95	69 - 129	9	30		
Tetrachloroethene	103	100	76 - 126	3	30		
Toluene	99	96	81 - 117	4	30		
trans-1,2-Dichloroethene	106	101	72 - 131	4	30		
trans-1,3-Dichloropropene	113	107	73 - 128	5	30		
1,1,1-Trichloroethane	102	98	76 - 127	4	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-164873**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164873/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 0943  
Date Prepared: 04/05/2010 0943

Analysis Batch: 680-164873  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq333.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-164873/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 1012  
Date Prepared: 04/05/2010 1012

Analysis Batch: 680-164873  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq335.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	99	95	75 - 121	4	30		
Trichloroethene	101	97	84 - 115	3	30		
Trichlorofluoromethane	80	86	58 - 149	7	50		
1,2,3-Trichloropropane	97	93	70 - 130	5	30		
Vinyl acetate	131	127	10 - 217	3	30		
Vinyl chloride	79	78	59 - 144	2	50		
Xylenes, Total	101	98	84 - 118	2	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	102		89		75 - 120		
Dibromofluoromethane	114		115		75 - 121		
Toluene-d8 (Surr)	102		98		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-164873**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164873/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 0943  
Date Prepared: 04/05/2010 0943

Units: ug/L

LCSD Lab Sample ID: LCSD 680-164873/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 1012  
Date Prepared: 04/05/2010 1012

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	115	112
Benzene	50.0	50.0	50.3	48.7
Bromoform	50.0	50.0	47.6	47.5
Bromomethane	50.0	50.0	43.8	45.2
2-Butanone (MEK)	100	100	112	113
Carbon disulfide	50.0	50.0	55.3	53.0
Carbon tetrachloride	50.0	50.0	54.0	51.2
Chlorobenzene	50.0	50.0	50.5	49.8
Chlorodibromomethane	50.0	50.0	57.0	56.0
Chloroethane	50.0	50.0	41.2	34.2
Chloroform	50.0	50.0	55.1	54.1
Chloromethane	50.0	50.0	43.5	43.3
cis-1,3-Dichloropropene	50.0	50.0	54.3	52.2
1,2-Dibromo-3-Chloropropane	50.0	50.0	40.8	39.8
Dibromomethane	50.0	50.0	48.6	47.7
Dichlorobromomethane	50.0	50.0	51.2	48.7
Dichlorodifluoromethane	50.0	50.0	58.2	59.0
1,1-Dichloroethane	50.0	50.0	55.2	52.7
1,2-Dichloroethane	50.0	50.0	46.0	44.2
1,1-Dichloroethene	50.0	50.0	56.4	54.2
1,2-Dichloropropane	50.0	50.0	48.0	47.2
Ethylbenzene	50.0	50.0	50.2	49.2
Ethylene Dibromide	50.0	50.0	52.8	50.8
2-Hexanone	100	100	102	104
Methylene Chloride	50.0	50.0	56.5	53.6
4-Methyl-2-pentanone (MIBK)	100	100	102	101
Styrene	50.0	50.0	51.5	50.6
1,1,1,2-Tetrachloroethane	50.0	50.0	45.9	44.8
1,1,2,2-Tetrachloroethane	50.0	50.0	52.0	47.3
Tetrachloroethene	50.0	50.0	51.4	50.2
Toluene	50.0	50.0	49.6	47.8
trans-1,2-Dichloroethene	50.0	50.0	52.8	50.6
trans-1,3-Dichloropropene	50.0	50.0	56.3	53.4
1,1,1-Trichloroethane	50.0	50.0	50.8	48.9
1,1,2-Trichloroethane	50.0	50.0	49.4	47.5
Trichloroethene	50.0	50.0	50.3	48.6
Trichlorofluoromethane	50.0	50.0	40.1	42.9
1,2,3-Trichloropropane	50.0	50.0	48.7	46.4
Vinyl acetate	100	100	131	127
Vinyl chloride	50.0	50.0	39.7	39.0
Xylenes, Total	150	150	151	148



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

### Method Blank - Batch: 680-164757

**Method: 8081A\_8082**  
**Preparation: 3520C**

Lab Sample ID: MB 680-164757/11-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 1240  
Date Prepared: 04/02/2010 1514

Analysis Batch: 680-164905  
Prep Batch: 680-164757  
Units: ug/L

Instrument ID: SGM  
Lab File ID: md05013.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	51	14 - 115
Tetrachloro-m-xylene	57	35 - 120

### Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 680-164757

**Method: 8081A\_8082**  
**Preparation: 3520C**

LCS Lab Sample ID: LCS 680-164757/16-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 1417  
Date Prepared: 04/02/2010 1514

Analysis Batch: 680-164905  
Prep Batch: 680-164757  
Units: ug/L

Instrument ID: SGM  
Lab File ID: md05018.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

LCS Lab Sample ID: LCSD	Analysis Batch: 680-164905	Instrument ID: SGM
Client Matrix: Water	Prep Batch: 680-164757	Lab File ID: md05019.d
Dilution: 1.0	Units: ug/L	Initial Weight/Volume: 1000 mL
Date Analyzed: 04/05/2010 1436		Final Weight/Volume: 10 mL
Date Prepared: 04/02/2010 1514		Injection Volume: 2 uL
		Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Toxaphene, Total	72	74	30 - 120	2	40		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
DCB Decachlorobiphenyl	56		58		14 - 115		
Tetrachloro-m-xylene	63		60		35 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-164757**

**Method: 8081A\_8082  
Preparation: 3520C**

LCS Lab Sample ID: LCS 680-164757/16-A      Units: ug/L  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 1417  
Date Prepared: 04/02/2010 1514

LCSD Lab Sample ID: LCSD 680-164757/17-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 1436  
Date Prepared: 04/02/2010 1514

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Toxaphene, Total	10.0	10.0	7.18	7.36



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

### Method Blank - Batch: 680-164757

**Method: 8081B/8082A**  
**Preparation: 3520C**

Lab Sample ID: MB 680-164757/11-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 1240  
Date Prepared: 04/02/2010 1514

Analysis Batch: 680-164903  
Prep Batch: 680-164757  
Units: ug/L

Instrument ID: SGM  
Lab File ID: md05013.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	52	14 - 115
Tetrachloro-m-xylene	60	35 - 120

### Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 680-164757

**Method: 8081B/8082A**  
**Preparation: 3520C**

LCS Lab Sample ID: LCS 680-164757/16-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 1417  
Date Prepared: 04/02/2010 1514

Analysis Batch: 680-164903  
Prep Batch: 680-164757  
Units: ug/L

Instrument ID: SGM  
Lab File ID: md05018.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

LCS Lab Sample ID: LCSD	Analysis Batch: 680-164903	Instrument ID: SGM
Client Matrix: Water	Prep Batch: 680-164757	Lab File ID: md05019.d
Dilution: 1.0	Units: ug/L	Initial Weight/Volume: 1000 mL
Date Analyzed: 04/05/2010 1436		Final Weight/Volume: 10 mL
Date Prepared: 04/02/2010 1514		Injection Volume: 2 uL
		Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Toxaphene, Technical	72	80	30 - 120	11	40		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
DCB Decachlorobiphenyl	57		58		14 - 115		
Tetrachloro-m-xylene	68		64		35 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-164757**

**Method: 8081B/8082A  
Preparation: 3520C**

LCS Lab Sample ID: LCS 680-164757/16-A      Units: ug/L  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 1417  
Date Prepared: 04/02/2010 1514

LCSD Lab Sample ID: LCSD 680-164757/17-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2010 1436  
Date Prepared: 04/02/2010 1514

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Toxaphene, Technical	10.0	10.0	7.18	7.99



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

### Laboratory Chronicle

Lab ID: 680-56360-1

Client ID: HP-111-54A

Sample Date/Time: 03/31/2010 10:40

Received Date/Time: 04/01/2010 15:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56360-B-1		680-164831		04/04/2010 12:59	1	TAL SAV	RB
A:8260B	680-56360-B-1		680-164831		04/04/2010 12:59	1	TAL SAV	RB
P:3520C	680-56360-D-1-A		680-164905	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081A_8082	680-56360-D-1-A		680-164905	680-164757	04/05/2010 14:55	1	TAL SAV	JK
P:3520C	680-56360-D-1-A		680-164903	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081B/8082A	680-56360-D-1-A		680-164903	680-164757	04/05/2010 14:55	1	TAL SAV	JK

Lab ID: 680-56360-2

Client ID: HP-111-54B

Sample Date/Time: 03/31/2010 11:10

Received Date/Time: 04/01/2010 15:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56360-A-2		680-164798		04/02/2010 17:15	10	TAL SAV	RB
A:8260B	680-56360-A-2		680-164798		04/02/2010 17:15	10	TAL SAV	RB
P:5030B	680-56360-B-2	DL	680-164831		04/04/2010 14:27	50	TAL SAV	RB
A:8260B	680-56360-B-2	DL	680-164831		04/04/2010 14:27	50	TAL SAV	RB
P:3520C	680-56360-D-2-A		680-164905	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081A_8082	680-56360-D-2-A		680-164905	680-164757	04/05/2010 15:15	1	TAL SAV	JK
P:3520C	680-56360-D-2-A		680-164903	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081B/8082A	680-56360-D-2-A		680-164903	680-164757	04/05/2010 15:15	1	TAL SAV	JK

Lab ID: 680-56360-3

Client ID: HP-111-54C

Sample Date/Time: 03/31/2010 13:30

Received Date/Time: 04/01/2010 15:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56360-A-3		680-164798		04/02/2010 17:44	100	TAL SAV	RB
A:8260B	680-56360-A-3		680-164798		04/02/2010 17:44	100	TAL SAV	RB
P:3520C	680-56360-D-3-A		680-164905	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081A_8082	680-56360-D-3-A		680-164905	680-164757	04/05/2010 15:34	1	TAL SAV	JK
P:3520C	680-56360-D-3-A		680-164903	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081B/8082A	680-56360-D-3-A		680-164903	680-164757	04/05/2010 15:34	1	TAL SAV	JK

Lab ID: 680-56360-4

Client ID: HP-111-55C

Sample Date/Time: 03/31/2010 08:00

Received Date/Time: 04/01/2010 15:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56360-B-4		680-164831		04/04/2010 13:58	1	TAL SAV	RB
A:8260B	680-56360-B-4		680-164831		04/04/2010 13:58	1	TAL SAV	RB



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

### Laboratory Chronicle

Lab ID: 680-56360-5

Client ID: HP-111-57A

Sample Date/Time: 03/31/2010 15:15

Received Date/Time: 04/01/2010 15:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56360-C-5		680-164798		04/02/2010 18:43	50	TAL SAV	RB
A:8260B	680-56360-C-5		680-164798		04/02/2010 18:43	50	TAL SAV	RB
P:5030B	680-56360-A-5	DL	680-164831		04/04/2010 14:56	200	TAL SAV	RB
A:8260B	680-56360-A-5	DL	680-164831		04/04/2010 14:56	200	TAL SAV	RB
P:3520C	680-56360-D-5-A		680-164905	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081A_8082	680-56360-D-5-A		680-164905	680-164757	04/05/2010 15:53	1	TAL SAV	JK
P:3520C	680-56360-D-5-A		680-164903	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081B/8082A	680-56360-D-5-A		680-164903	680-164757	04/05/2010 15:53	1	TAL SAV	JK

Lab ID: 680-56360-6

Client ID: HP-111-57B

Sample Date/Time: 03/31/2010 16:30

Received Date/Time: 04/01/2010 15:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56360-A-6		680-164798		04/02/2010 19:13	100	TAL SAV	RB
A:8260B	680-56360-A-6		680-164798		04/02/2010 19:13	100	TAL SAV	RB
P:5030B	680-56360-B-6	DL	680-164831		04/04/2010 15:26	1000	TAL SAV	RB
A:8260B	680-56360-B-6	DL	680-164831		04/04/2010 15:26	1000	TAL SAV	RB
P:3520C	680-56360-D-6-A		680-164905	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081A_8082	680-56360-D-6-A		680-164905	680-164757	04/05/2010 16:24	1	TAL SAV	JK
P:3520C	680-56360-D-6-A		680-164903	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081B/8082A	680-56360-D-6-A		680-164903	680-164757	04/05/2010 16:24	1	TAL SAV	JK

Lab ID: 680-56360-7

Client ID: HP-111-57C

Sample Date/Time: 03/31/2010 17:00

Received Date/Time: 04/01/2010 15:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56360-B-7		680-164798		04/02/2010 19:43	100	TAL SAV	RB
A:8260B	680-56360-B-7		680-164798		04/02/2010 19:43	100	TAL SAV	RB
P:5030B	680-56360-C-7	DL	680-164831		04/04/2010 15:55	500	TAL SAV	RB
A:8260B	680-56360-C-7	DL	680-164831		04/04/2010 15:55	500	TAL SAV	RB
P:3520C	680-56360-D-7-A		680-164905	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081A_8082	680-56360-D-7-A		680-164905	680-164757	04/05/2010 16:43	1	TAL SAV	JK
P:3520C	680-56360-D-7-A		680-164903	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081B/8082A	680-56360-D-7-A		680-164903	680-164757	04/05/2010 16:43	1	TAL SAV	JK

Lab ID: 680-56360-8

Client ID: HP-111-57-TW

Sample Date/Time: 04/01/2010 10:00

Received Date/Time: 04/01/2010 15:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56360-B-8		680-164873		04/05/2010 14:36	500	TAL SAV	RB
A:8260B	680-56360-B-8		680-164873		04/05/2010 14:36	500	TAL SAV	RB



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

### Laboratory Chronicle

Lab ID: 680-56360-9

Client ID: HP-111-58A

Sample Date/Time: 04/01/2010 08:15

Received Date/Time: 04/01/2010 15:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56360-A-9		680-164831		04/04/2010 16:54	2	TAL SAV	RB
A:8260B	680-56360-A-9		680-164831		04/04/2010 16:54	2	TAL SAV	RB

Lab ID: 680-56360-10

Client ID: HP-111-58B

Sample Date/Time: 04/01/2010 08:40

Received Date/Time: 04/01/2010 15:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56360-B-10		680-164831		04/04/2010 17:23	5	TAL SAV	RB
A:8260B	680-56360-B-10		680-164831		04/04/2010 17:23	5	TAL SAV	RB

Lab ID: 680-56360-11

Client ID: HP-111-58C

Sample Date/Time: 04/01/2010 09:15

Received Date/Time: 04/01/2010 15:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56360-B-11		680-164831		04/04/2010 13:29	1	TAL SAV	RB
A:8260B	680-56360-B-11		680-164831		04/04/2010 13:29	1	TAL SAV	RB

Lab ID: 680-56360-12

Client ID: Trip Blank 031010

Sample Date/Time: 04/01/2010 00:00

Received Date/Time: 04/01/2010 15:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56360-B-12		680-164831		04/04/2010 12:01	1	TAL SAV	RB
A:8260B	680-56360-B-12		680-164831		04/04/2010 12:01	1	TAL SAV	RB

Lab ID: 680-56360-13

Client ID: HP-11-FB-2

Sample Date/Time: 04/01/2010 11:00

Received Date/Time: 04/01/2010 15:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56360-B-13		680-164831		04/04/2010 12:30	1	TAL SAV	RB
A:8260B	680-56360-B-13		680-164831		04/04/2010 12:30	1	TAL SAV	RB



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

### Laboratory Chronicle

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 680-164798/9		680-164798		04/02/2010 11:22	1	TAL SAV	RB
A:8260B	MB 680-164798/9		680-164798		04/02/2010 11:22	1	TAL SAV	RB
P:5030B	MB 680-164831/12		680-164831		04/04/2010 11:32	1	TAL SAV	RB
A:8260B	MB 680-164831/12		680-164831		04/04/2010 11:32	1	TAL SAV	RB
P:5030B	MB 680-164873/7		680-164873		04/05/2010 12:10	1	TAL SAV	RB
A:8260B	MB 680-164873/7		680-164873		04/05/2010 12:10	1	TAL SAV	RB
P:3520C	MB 680-164757/11-A		680-164905	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081A_8082	MB 680-164757/11-A		680-164905	680-164757	04/05/2010 12:40	1	TAL SAV	JK
P:3520C	MB 680-164757/11-A		680-164903	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081B/8082A	MB 680-164757/11-A		680-164903	680-164757	04/05/2010 12:40	1	TAL SAV	JK

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 680-164798/6		680-164798		04/02/2010 09:25	1	TAL SAV	RB
A:8260B	LCS 680-164798/6		680-164798		04/02/2010 09:25	1	TAL SAV	RB
P:5030B	LCS 680-164831/9		680-164831		04/04/2010 09:35	1	TAL SAV	RB
A:8260B	LCS 680-164831/9		680-164831		04/04/2010 09:35	1	TAL SAV	RB
P:5030B	LCS 680-164873/4		680-164873		04/05/2010 09:43	1	TAL SAV	RB
A:8260B	LCS 680-164873/4		680-164873		04/05/2010 09:43	1	TAL SAV	RB
P:3520C	LCS 680-164757/16-A		680-164905	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081A_8082	LCS 680-164757/16-A		680-164905	680-164757	04/05/2010 14:17	1	TAL SAV	JK
P:3520C	LCS 680-164757/16-A		680-164903	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081B/8082A	LCS 680-164757/16-A		680-164903	680-164757	04/05/2010 14:17	1	TAL SAV	JK



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56360-1

### Laboratory Chronicle

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCSD 680-164798/7		680-164798		04/02/2010 09:54	1	TAL SAV	RB
A:8260B	LCSD 680-164798/7		680-164798		04/02/2010 09:54	1	TAL SAV	RB
P:5030B	LCSD 680-164831/10		680-164831		04/04/2010 10:04	1	TAL SAV	RB
A:8260B	LCSD 680-164831/10		680-164831		04/04/2010 10:04	1	TAL SAV	RB
P:5030B	LCSD 680-164873/5		680-164873		04/05/2010 10:12	1	TAL SAV	RB
A:8260B	LCSD 680-164873/5		680-164873		04/05/2010 10:12	1	TAL SAV	RB
P:3520C	LCSD 680-164757/17-A		680-164905	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081A_8082	LCSD 680-164757/17-A		680-164905	680-164757	04/05/2010 14:36	1	TAL SAV	JK
P:3520C	LCSD 680-164757/17-A		680-164903	680-164757	04/02/2010 15:14	1	TAL SAV	RBS
A:8081B/8082A	LCSD 680-164757/17-A		680-164903	680-164757	04/05/2010 14:36	1	TAL SAV	JK

#### Lab References:

TAL SAV = TestAmerica Savannah



# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

## TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Website: [www.testamericainc.com](http://www.testamericainc.com)  
 Phone: (912) 354-7858  
 Fax: (912) 352-0165

TestAmerica Savannah  
 5102 LaRoche Avenue  
 Savannah, GA 31404

Alternate Laboratory Name/Location

Phone:  
 Fax:

PROJECT REFERENCE <i>Ashtland Brunswick TFG</i>		PROJECT NO. <i>4501306047</i>	PROJECT LOCATION (STATE) <i>GA</i>		MATRIX TYPE	REQUIRED ANALYSIS		PAGE <i>1</i> OF <i>2</i>
TAL (LAB) PROJECT MANAGER <i>Lidia Galizia</i>		P.O. NUMBER <i>4501306047</i>	CONTRACT NO.		NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	STANDARD REPORT DELIVERY		DATE DUE <i>48 hr</i>
CLIENT (SITE) PM <i>Tim Bassett</i>		CLIENT PHONE	CLIENT FAX			EXPEDITED REPORT DELIVERY (SURCHARGE)		
CLIENT NAME <i>Ashtland-Hercules</i>		CLIENT E-MAIL			AIR			NUMBER OF COOLERS SUBMITTED PER SHIPMENT:
CLIENT ADDRESS					SOLID OR SEMISOLID			
COMPANY CONTRACTING THIS WORK (if applicable) <i>Ashtland</i>								
SAMPLE		SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS SUBMITTED		REMARKS		
DATE	TIME							
<i>8/31/10</i>	<i>1040</i>	<i>HP-111-54 A</i>		<i>3</i>				
<i>84</i>	<i>1110</i>	<i>HP-111-54 B</i>		<i>3</i>				
<i>1330</i>		<i>HP-111-54 C</i>		<i>3</i>				
<i>800</i>		<i>HP-111-55 C</i>		<i>3</i>				
<i>1515</i>		<i>HP-111-57 A</i>		<i>3</i>				
<i>1630</i>		<i>HP-111-57 B</i>		<i>3</i>				
<i>1700</i>		<i>HP-111-57 C</i>		<i>3</i>				
<i>4/1/10</i>	<i>1000</i>	<i>HP-111-57-TW</i>		<i>3</i>				
<i>815</i>		<i>HP-111-58-A</i>		<i>3</i>				
<i>840</i>		<i>HP-111-58-B</i>		<i>3</i>				
<i>915</i>		<i>HP-111-58-C</i>		<i>3</i>				
		<i>Trip Back 031010</i>		<i>2</i>				
RELINQUISHED BY: (SIGNATURE) <i>Chad Wean</i>		DATE <i>9/1/10</i>	TIME <i>1505</i>	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	DATE	TIME
RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	DATE	TIME

RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>Dustin Daugherty</i>		DATE <i>4/1/10</i>	TIME <i>1510</i>	LABORATORY USE ONLY	
CUSTODY SEAL NO.	CUSTODY INTACT YES <input type="radio"/> NO <input type="radio"/>	SAVANNAH LOG NO. <i>51360</i>	LABORATORY REMARKS: <i>Temp 0.2/0.2</i>		



TAL8240-680 (1207)



## Login Sample Receipt Check List

Client: Ashland Inc.

Job Number: 680-56360-1

**Login Number: 56360**  
**Creator: Daughtry, Beth**  
**List Number: 1**

**List Source: TestAmerica Savannah**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	2 coolers rec'd on ice
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2 and 0.8 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	MS/MSD not requested (no additional volume provided).
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	False	
Sample Preservation Verified	True	



## ANALYTICAL REPORT

Job Number: 680-56303-1

Job Description: Ashland Brunswick Ph 3 RFI GW 3/29-20/10

For:  
Ashland Inc.  
500 Hercules Road  
Wilmington, DE 19894  
Attention: Timothy Hassett



Approved for release.  
Lidya Gulizia  
Project Manager I  
4/9/2010 8:06 AM

---

Lidya Gulizia  
Project Manager I  
lidya.gulizia@testamericainc.com  
04/09/2010

cc: Mr. Tony Mancini  
Mr. John D Reuscher  
Ms. Charlene Rivard  
Mr. Derek Rothaupt

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; AZ: AZ0741; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

**TestAmerica Laboratories, Inc.**

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404  
Tel (912) 354-7858 Fax (912) 352-0165 [www.testamericainc.com](http://www.testamericainc.com)





**Job Narrative**  
**680-56303-1**

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

No analytical or quality issues were noted.

**GC Semi VOA**

No analytical or quality issues were noted.

**Metals**

No analytical or quality issues were noted.

**Comments**

The metals target list was revised to full Appendix IX analytes post sample delivery.

No additional comments.



## METHOD SUMMARY

Client: Ashland Inc.

Job Number: 680-56303-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030B
Organochlorine Pesticides & PCBs (GC)	TAL SAV	SW846 8081A_8082	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	TAL SAV	SW846 8081B/8082A	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Metals (ICP)	TAL SAV	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL SAV		SW846 3005A
Mercury (CVAA)	TAL SAV	SW846 7470A	
Preparation, Mercury	TAL SAV		SW846 7470A

### Lab References:

TAL SAV = TestAmerica Savannah

### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.



## METHOD / ANALYST SUMMARY

Client: Ashland Inc.

Job Number: 680-56303-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB
SW846 8081A_8082	Kellar, Joshua	JK
SW846 8081B/8082A	Kellar, Joshua	JK
SW846 6010B	Bland, Brian	BCB
SW846 7470A	Eaton, Cliff	CE



## SAMPLE SUMMARY

Client: Ashland Inc.

Job Number: 680-56303-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-56303-1	HP-111-50A	Water	03/30/2010 0930	03/31/2010 1333
680-56303-2	HP-111-50B	Water	03/30/2010 1000	03/31/2010 1333
680-56303-3	HP-111-50C	Water	03/30/2010 1030	03/31/2010 1333
680-56303-4	HP-111-51A	Water	03/29/2010 1545	03/31/2010 1333
680-56303-5	HP-111-52A	Water	03/29/2010 1415	03/31/2010 1333
680-56303-6	HP-111-52B	Water	03/29/2010 1430	03/31/2010 1333
680-56303-7	HP-111-53A	Water	03/29/2010 1015	03/31/2010 1333
680-56303-8	HP-111-53B	Water	03/29/2010 1050	03/31/2010 1333
680-56303-9	HP-111-55A	Water	03/30/2010 1530	03/31/2010 1333
680-56303-10	HP-111-55B	Water	03/30/2010 1600	03/31/2010 1333
680-56303-11	HP-111-56A	Water	03/30/2010 1420	03/31/2010 1333
680-56303-12TB	Trip Blank Lot 031010	Water	03/30/2010 0000	03/31/2010 1333
680-56303-13FB	HP-111-FB-1	Water	03/30/2010 1755	03/31/2010 1333



# **SAMPLE RESULTS**



# Analytical Data

Client: Ashland Inc.

Job Number: 680-56303-1

Client Sample ID: HP-111-50A

L8l 68t po eDm 680-56303-1

Client Matrix: Water

Date Sampled: 03/30/2010 0930

Date Received: 03/31/2010 1333

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0367.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1151		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1151			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-50A

Lab Sample ID: 680-56303-1

Date Sampled: 03/30/2010 0930

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0367.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1151		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1151			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	101		75 - 120
Dibromofluoromethane	111		75 - 121
Toluene-d8 (Surr)	104		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-50B**

Lab Sample ID: 680-56303-2

Date Sampled: 03/30/2010 1000

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164684	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0365.d
Dilution:	10		Initial Weight/Volume:	5 mL
Date Analyzed:	04/01/2010 1956		Final Weight/Volume:	5 mL
Date Prepared:	04/01/2010 1956			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	250	U	50	250
Acetonitrile	400	U	100	400
Acrolein	200	U	74	200
Acrylonitrile	200	U	72	200
Benzene	1700		2.5	10
Bromoform	10	U	5.0	10
Bromomethane	10	U	8.0	10
2-Butanone (MEK)	100	U	10	100
Carbon disulfide	7.5	J	6.0	20
Carbon tetrachloride	10	U	5.0	10
Chlorobenzene	10	U	2.5	10
2-Chloro-1,3-butadiene	10	U	3.0	10
Chlorodibromomethane	10	U	1.0	10
Chloroethane	10	U	10	10
Chloroform	10	U	1.4	10
Chloromethane	10	U	3.3	10
3-Chloro-1-propene	10	U	2.0	10
cis-1,3-Dichloropropene	10	U	1.1	10
1,2-Dibromo-3-Chloropropane	10	U	4.4	10
Dibromomethane	10	U	2.0	10
Dichlorobromomethane	10	U	2.5	10
Dichlorodifluoromethane	10	U	2.5	10
1,1-Dichloroethane	10	U	2.5	10
1,2-Dichloroethane	10	U	1.0	10
1,1-Dichloroethene	10	U	1.1	10
1,2-Dichloropropane	10	U	1.3	10
Ethylbenzene	1.8	J	1.1	10
Ethylene Dibromide	10	U	2.5	10
Ethyl methacrylate	10	U	2.5	10
2-Hexanone	100	U	10	100
Iodomethane	50	U	10	50
Isobutyl alcohol	400	U	110	400
Methacrylonitrile	200	U	33	200
Methylene Chloride	50	U	10	50
Methyl methacrylate	10	U	4.8	10
4-Methyl-2-pentanone (MIBK)	100	U	10	100
Pentachloroethane	50	U	12	50
Propionitrile	200	U	46	200
Styrene	10	U	1.1	10
1,1,1,2-Tetrachloroethane	10	U	3.3	10
1,1,2,2-Tetrachloroethane	10	U	1.8	10
Tetrachloroethene	10	U	1.5	10
Toluene	10	U	3.3	10
trans-1,4-Dichloro-2-butene	20	U	5.0	20
trans-1,2-Dichloroethene	10	U	2.0	10
trans-1,3-Dichloropropene	10	U	2.1	10



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-50B**

Lab Sample ID: 680-56303-2

Date Sampled: 03/30/2010 1000

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164684	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0365.d
Dilution:	10		Initial Weight/Volume:	5 mL
Date Analyzed:	04/01/2010 1956		Final Weight/Volume:	5 mL
Date Prepared:	04/01/2010 1956			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	10	U	5.0	10
1,1,2-Trichloroethane	10	U	1.3	10
Trichloroethene	10	U	1.3	10
Trichlorofluoromethane	10	U	2.5	10
1,2,3-Trichloropropane	10	U	4.1	10
Vinyl acetate	20	U	2.8	20
Vinyl chloride	10	U	1.8	10
Xylenes, Total	2.9	J	2.0	20

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	105		75 - 120
Dibromofluoromethane	107		75 - 121
Toluene-d8 (Surr)	103		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-50C

Lab Sample ID: 680-56303-3

Date Sampled: 03/30/2010 1030

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0369.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1221		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1221			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	34		5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	17		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	4.0	J	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.39	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	2.0	J	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	0.56	J	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-50C

Lab Sample ID: 680-56303-3

Date Sampled: 03/30/2010 1030

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0369.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1221		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1221			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.1		0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	101		75 - 120
Dibromofluoromethane	94		75 - 121
Toluene-d8 (Surr)	104		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-56303-1

Client Sample ID: HP-111-51A

Lab Sample ID: 680-56303-4

Client Matrix: Water

Date Sampled: 03/29/2010 1545

Date Received: 03/31/2010 1333

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0371.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1250		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1250			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	7.6	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	16		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.1		0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.25	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-51A

Lab Sample ID: 680-56303-4

Date Sampled: 03/29/2010 1545

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0371.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1250		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1250			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	1.1	J	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	102		75 - 120
Dibromofluoromethane	112		75 - 121
Toluene-d8 (Surr)	103		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-56303-1

Client Sample ID: HP-111-52A

Lab Sample ID: 680-56303-5

Client Matrix: Water

Date Sampled: 03/29/2010 1415

Date Received: 03/31/2010 1333

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0373.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1319		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1319			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	3.2		0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	0.28	J	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.85	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-52A

Lab Sample ID: 680-56303-5

Date Sampled: 03/29/2010 1415

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0373.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1319		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1319			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	1.4	J	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	103		75 - 120
Dibromofluoromethane	114		75 - 121
Toluene-d8 (Surr)	103		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-52B**

Lab Sample ID: 680-56303-6

Date Sampled: 03/29/2010 1430

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0375.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1349		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1349			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	7.9	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.20	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-52B**

Lab Sample ID: 680-56303-6

Date Sampled: 03/29/2010 1430

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0375.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1349		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1349			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	1.1	J	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	101		75 - 120
Dibromofluoromethane	111		75 - 121
Toluene-d8 (Surr)	105		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-53A

Lab Sample ID: 680-56303-7

Date Sampled: 03/29/2010 1015

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0377.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1418		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1418			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	7.6	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	1.1	J	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.23	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-53A

Lab Sample ID: 680-56303-7

Date Sampled: 03/29/2010 1015

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0377.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1418		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1418			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	1.2	J	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		75 - 120
Dibromofluoromethane	114		75 - 121
Toluene-d8 (Surr)	104		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-53B

Lab Sample ID: 680-56303-8

Date Sampled: 03/29/2010 1050

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0379.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1448		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1448			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	9.2	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.15	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-53B**

Lab Sample ID: 680-56303-8

Date Sampled: 03/29/2010 1050

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0379.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1448		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1448			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	0.81	J	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		75 - 120
Dibromofluoromethane	110		75 - 121
Toluene-d8 (Surr)	105		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-55A

Lab Sample ID: 680-56303-9

Date Sampled: 03/30/2010 1530

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0381.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1517		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1517			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	0.31	J	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-55A**

Lab Sample ID: 680-56303-9

Date Sampled: 03/30/2010 1530

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0381.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1517		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1517			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	0.38	J	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	102		75 - 120
Dibromofluoromethane	111		75 - 121
Toluene-d8 (Surr)	105		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-55B**

Lab Sample ID: 680-56303-10

Date Sampled: 03/30/2010 1600

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0383.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1546		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1546			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	8.8	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	1.1	J	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.16	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-55B**

Lab Sample ID: 680-56303-10

Date Sampled: 03/30/2010 1600

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0383.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1546		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1546			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	0.56	J	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		75 - 120
Dibromofluoromethane	107		75 - 121
Toluene-d8 (Surr)	104		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-56303-1

Client Sample ID: HP-111-56A

Lab Sample ID: 680-56303-11

Client Matrix: Water

Date Sampled: 03/30/2010 1420

Date Received: 03/31/2010 1333

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0385.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1616		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1616			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	1.8	J	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-56A**

Lab Sample ID: 680-56303-11

Date Sampled: 03/30/2010 1420

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164798	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0385.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 1616		Final Weight/Volume:	5 mL
Date Prepared:	04/02/2010 1616			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		75 - 120
Dibromofluoromethane	111		75 - 121
Toluene-d8 (Surr)	107		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** Trip Blank Lot 031010

Lab Sample ID: 680-56303-12TB

Date Sampled: 03/30/2010 0000

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164684	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0343.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/01/2010 1430		Final Weight/Volume:	5 mL
Date Prepared:	04/01/2010 1430			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** Trip Blank Lot 031010

Lab Sample ID: 680-56303-12TB

Date Sampled: 03/30/2010 0000

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164684	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0343.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/01/2010 1430		Final Weight/Volume:	5 mL
Date Prepared:	04/01/2010 1430			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	102		75 - 120
Dibromofluoromethane	112		75 - 121
Toluene-d8 (Surr)	105		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-FB-1

Lab Sample ID: 680-56303-13FB

Date Sampled: 03/30/2010 1755

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164684	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0345.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/01/2010 1500		Final Weight/Volume:	5 mL
Date Prepared:	04/01/2010 1500			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	7.6	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-FB-1

Lab Sample ID: 680-56303-13FB

Date Sampled: 03/30/2010 1755

Client Matrix: Water

Date Received: 03/31/2010 1333

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-164684	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0345.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	04/01/2010 1500		Final Weight/Volume:	5 mL
Date Prepared:	04/01/2010 1500			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	102		75 - 120
Dibromofluoromethane	111		75 - 121
Toluene-d8 (Surr)	106		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-50A**

Lab Sample ID: 680-56303-1

Date Sampled: 03/30/2010 0930

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-164810	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2059		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	55		14 - 115
Tetrachloro-m-xylene	70		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-50B**

Lab Sample ID: 680-56303-2

Date Sampled: 03/30/2010 1000

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-164810	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2122		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	25		14 - 115
Tetrachloro-m-xylene	47		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-50C**

Lab Sample ID: 680-56303-3

Date Sampled: 03/30/2010 1030

Client Matrix: Water

Date Received: 03/31/2010 1333

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**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-164810	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2146		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	22		14 - 115
Tetrachloro-m-xylene	53		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-51A

Lab Sample ID: 680-56303-4

Date Sampled: 03/29/2010 1545

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-164810	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2209		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	0.92	J	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	29		14 - 115
Tetrachloro-m-xylene	50		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-52A**

Lab Sample ID: 680-56303-5

Date Sampled: 03/29/2010 1415

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-164810	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2232		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	1.9	J	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	35		14 - 115
Tetrachloro-m-xylene	107		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-52B

Lab Sample ID: 680-56303-6

Date Sampled: 03/29/2010 1430

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-164810	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2255		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	39		14 - 115
Tetrachloro-m-xylene	45		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-53A

Lab Sample ID: 680-56303-7

Date Sampled: 03/29/2010 1015

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-164810	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2320		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	28		14 - 115
Tetrachloro-m-xylene	67		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-53B**

Lab Sample ID: 680-56303-8

Date Sampled: 03/29/2010 1050

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-164810	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2344		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	33		14 - 115
Tetrachloro-m-xylene	61		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-50A

Lab Sample ID: 680-56303-1

Date Sampled: 03/30/2010 0930

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2059		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	51	p	14 - 115
Tetrachloro-m-xylene	66		35 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-56303-1

Client Sample ID: HP-111-50A

Lab Sample ID: 680-56303-1

Date Sampled: 03/30/2010 0930

Client Matrix: Water

Date Received: 03/31/2010 1333

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### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2059		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	89		14 - 115
Tetrachloro-m-xylene	64		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-50B**

Lab Sample ID: 680-56303-2

Date Sampled: 03/30/2010 1000

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2122		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	36		14 - 115
Tetrachloro-m-xylene	47		35 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-56303-1

Client Sample ID: HP-111-50B

Lab Sample ID: 680-56303-2

Date Sampled: 03/30/2010 1000

Client Matrix: Water

Date Received: 03/31/2010 1333

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### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2122		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	29		14 - 115
Tetrachloro-m-xylene	42		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-50C

Lab Sample ID: 680-56303-3

Date Sampled: 03/30/2010 1030

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2146		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	19	p	14 - 115
Tetrachloro-m-xylene	50		35 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-56303-1

Client Sample ID: HP-111-50C

Lab Sample ID: 680-56303-3

Client Matrix: Water

Date Sampled: 03/30/2010 1030

Date Received: 03/31/2010 1333

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### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2146		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	33		14 - 115
Tetrachloro-m-xylene	45		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-51A**

Lab Sample ID: 680-56303-4

Date Sampled: 03/29/2010 1545

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2209		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	37		14 - 115
Tetrachloro-m-xylene	67		35 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-56303-1

Client Sample ID: HP-111-51A

Lab Sample ID: 680-56303-4

Date Sampled: 03/29/2010 1545

Client Matrix: Water

Date Received: 03/31/2010 1333

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### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2209		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	30		14 - 115
Tetrachloro-m-xylene	48		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-52A

Lab Sample ID: 680-56303-5

Date Sampled: 03/29/2010 1415

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2232		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	35	p	14 - 115
Tetrachloro-m-xylene	76		35 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-56303-1

Client Sample ID: HP-111-52A

Lab Sample ID: 680-56303-5

Client Matrix: Water

Date Sampled: 03/29/2010 1415

Date Received: 03/31/2010 1333

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### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2232		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	54		14 - 115
Tetrachloro-m-xylene	73		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-52B

Lab Sample ID: 680-56303-6

Date Sampled: 03/29/2010 1430

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2255		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	40	p	14 - 115
Tetrachloro-m-xylene	51		35 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-56303-1

Client Sample ID: HP-111-52B

Lab Sample ID: 680-56303-6

Date Sampled: 03/29/2010 1430

Client Matrix: Water

Date Received: 03/31/2010 1333

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### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2255		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	65		14 - 115
Tetrachloro-m-xylene	45		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-53A

Lab Sample ID: 680-56303-7

Date Sampled: 03/29/2010 1015

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2320		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	27	p	14 - 115
Tetrachloro-m-xylene	59		35 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-56303-1

Client Sample ID: HP-111-53A

Lab Sample ID: 680-56303-7

Client Matrix: Water

Date Sampled: 03/29/2010 1015

Date Received: 03/31/2010 1333

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### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2320		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	51		14 - 115
Tetrachloro-m-xylene	53		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-53B**

Lab Sample ID: 680-56303-8

Date Sampled: 03/29/2010 1050

Client Matrix: Water

Date Received: 03/31/2010 1333

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2344		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	57		14 - 115
Tetrachloro-m-xylene	59		35 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-56303-1

Client Sample ID: HP-111-53B

Lab Sample ID: 680-56303-8

Date Sampled: 03/29/2010 1050

Client Matrix: Water

Date Received: 03/31/2010 1333

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### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-164809	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-164624	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	04/02/2010 2344		Injection Volume:	2 uL
Date Prepared:	04/01/2010 1309		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	39		14 - 115
Tetrachloro-m-xylene	52		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-50A**

Lab Sample ID: 680-56303-1

Date Sampled: 03/30/2010 0930

Client Matrix: Water

Date Received: 03/31/2010 1333

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-165174	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-164645	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/07/2010 1806		Final Weight/Volume:	50 mL
Date Prepared:	04/01/2010 1134			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	17	J	10	20
Barium	140		2.0	10
Beryllium	1.5	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	50		2.0	10
Cobalt	7.0	J	1.0	10
Copper	12	J	5.0	20
Lead	11		3.4	10
Nickel	24	J	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	66		3.0	10
Zinc	200		6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-164779	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-164726	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/02/2010 1626		Final Weight/Volume:	50 mL
Date Prepared:	04/02/2010 0954			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-50B**

Lab Sample ID: 680-56303-2

Date Sampled: 03/30/2010 1000

Client Matrix: Water

Date Received: 03/31/2010 1333

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-165174	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-164645	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/07/2010 1811		Final Weight/Volume:	50 mL
Date Prepared:	04/01/2010 1134			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	15	J	10	20
Barium	150		2.0	10
Beryllium	1.0	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	57		2.0	10
Cobalt	8.4	J	1.0	10
Copper	11	J	5.0	20
Lead	13		3.4	10
Nickel	19	J	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	56		3.0	10
Zinc	52		6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-164779	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-164726	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/02/2010 1634		Final Weight/Volume:	50 mL
Date Prepared:	04/02/2010 0954			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-50C

Lab Sample ID: 680-56303-3

Client Matrix: Water

Date Sampled: 03/30/2010 1030

Date Received: 03/31/2010 1333

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-165174	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-164645	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/07/2010 1816		Final Weight/Volume:	50 mL
Date Prepared:	04/01/2010 1134			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	97		2.0	10
Beryllium	0.24	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	28		2.0	10
Cobalt	1.5	J	1.0	10
Copper	9.6	J	5.0	20
Lead	10	U	3.4	10
Nickel	11	J	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	21		3.0	10
Zinc	50		6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-164779	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-164726	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/02/2010 1637		Final Weight/Volume:	50 mL
Date Prepared:	04/02/2010 0954			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-51A**

Lab Sample ID: 680-56303-4

Date Sampled: 03/29/2010 1545

Client Matrix: Water

Date Received: 03/31/2010 1333

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-165174	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-164645	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/07/2010 1852		Final Weight/Volume:	50 mL
Date Prepared:	04/01/2010 1134			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	7.1	J	5.2	20
Arsenic	410		10	20
Barium	580		2.0	10
Beryllium	8.1		0.10	4.0
Cadmium	2.4	J	2.0	5.0
Chromium	360		2.0	10
Cobalt	91		1.0	10
Copper	100		5.0	20
Lead	81		3.4	10
Nickel	190		4.0	40
Selenium	6.6	J	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	220		3.0	10
Zinc	1300		6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-164779	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-164726	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/02/2010 1640		Final Weight/Volume:	50 mL
Date Prepared:	04/02/2010 0954			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.11	J	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-52A

Lab Sample ID: 680-56303-5

Date Sampled: 03/29/2010 1415

Client Matrix: Water

Date Received: 03/31/2010 1333

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-165174	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-164645	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/07/2010 1858		Final Weight/Volume:	50 mL
Date Prepared:	04/01/2010 1134			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	37		10	20
Barium	1000		2.0	10
Beryllium	6.7		0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	89		2.0	10
Cobalt	22		1.0	10
Copper	12	J	5.0	20
Lead	14		3.4	10
Nickel	42		4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	130		3.0	10
Zinc	560		6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-164779	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-164726	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/02/2010 1643		Final Weight/Volume:	50 mL
Date Prepared:	04/02/2010 0954			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-52B**

Lab Sample ID: 680-56303-6

Date Sampled: 03/29/2010 1430

Client Matrix: Water

Date Received: 03/31/2010 1333

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-165174	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-164645	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/07/2010 1903		Final Weight/Volume:	50 mL
Date Prepared:	04/01/2010 1134			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	7.7	J	5.2	20
Arsenic	63		10	20
Barium	200		2.0	10
Beryllium	2.7	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	150		2.0	10
Cobalt	5.9	J	1.0	10
Copper	39		5.0	20
Lead	16		3.4	10
Nickel	23	J	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	79		3.0	10
Zinc	110		6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-164779	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-164726	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/02/2010 1646		Final Weight/Volume:	50 mL
Date Prepared:	04/02/2010 0954			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID:** HP-111-53A

Lab Sample ID: 680-56303-7

Date Sampled: 03/29/2010 1015

Client Matrix: Water

Date Received: 03/31/2010 1333

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-165174	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-164645	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/07/2010 1908		Final Weight/Volume:	50 mL
Date Prepared:	04/01/2010 1134			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	110		10	20
Barium	500		2.0	10
Beryllium	5.9		0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	100		2.0	10
Cobalt	37		1.0	10
Copper	46		5.0	20
Lead	28		3.4	10
Nickel	70		4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	82		3.0	10
Zinc	680		6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-164779	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-164726	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/02/2010 1655		Final Weight/Volume:	50 mL
Date Prepared:	04/02/2010 0954			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-56303-1

**Client Sample ID: HP-111-53B**

Lab Sample ID: 680-56303-8

Date Sampled: 03/29/2010 1050

Client Matrix: Water

Date Received: 03/31/2010 1333

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-165174	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-164645	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/07/2010 1913		Final Weight/Volume:	50 mL
Date Prepared:	04/01/2010 1134			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	5.6	J	5.2	20
Arsenic	27		10	20
Barium	190		2.0	10
Beryllium	1.1	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	200		2.0	10
Cobalt	6.3	J	1.0	10
Copper	130		5.0	20
Lead	23		3.4	10
Nickel	36	J	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	7.5	J	5.4	50
Vanadium	46		3.0	10
Zinc	91		6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-164779	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-164726	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	04/02/2010 1657		Final Weight/Volume:	50 mL
Date Prepared:	04/02/2010 0954			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



## DATA REPORTING QUALIFIERS

Client: Ashland Inc.

Job Number: 680-56303-1

Lab Section	Qualifier	Description
GC/MS VOA	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
	p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
Metals	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.



# QUALITY CONTROL RESULTS



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:680-164684</b>					
LCS 680-164684/7	Lab Control Sample	T	W8u A	8260B	
LCSD 680-164684/8	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-164684/10	Method Blank	T	Water	8260B	
680-56303-2	HP-111-50B	T	Water	8260B	
680-56303-12TB	Trip Blank Lot 031010	T	Water	8260B	
680-56303-13FB	HP-111-FB-1	T	Water	8260B	
<b>Analysis Batch:680-164798</b>					
LCS 680-164798/6	Lab Control Sample	T	Water	8260B	
LCSD 680-164798/7	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-164798/9	Method Blank	T	Water	8260B	
680-56303-1	HP-111-50A	T	Water	8260B	
680-56303-3	HP-111-50C	T	Water	8260B	
680-56303-4	HP-111-51A	T	Water	8260B	
680-56303-5	HP-111-52A	T	Water	8260B	
680-56303-6	HP-111-52B	T	Water	8260B	
680-56303-7	HP-111-53A	T	Water	8260B	
680-56303-8	HP-111-53B	T	Water	8260B	
680-56303-9	HP-111-55A	T	Water	8260B	
680-56303-10	HP-111-55B	T	Water	8260B	
680-56303-11	HP-111-56A	T	Water	8260B	

#### Report Basis

T = Total



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC Semi VOA</b>					
<b>Prep Batch: 680-164624</b>					
LCS 680-164624/25-A	Lab Control Sample	T	W8u A	3520C	
LCSD 680-164624/26-A	Lab Control Sample Duplicate	T	Water	3520C	
MB 680-164624/18-A	Method Blank	T	Water	3520C	
680-56303-1	HP-111-50A	T	Water	3520C	
680-56303-2	HP-111-50B	T	Water	3520C	
680-56303-3	HP-111-50C	T	Water	3520C	
680-56303-4	HP-111-51A	T	Water	3520C	
680-56303-5	HP-111-52A	T	Water	3520C	
680-56303-6	HP-111-52B	T	Water	3520C	
680-56303-7	HP-111-53A	T	Water	3520C	
680-56303-8	HP-111-53B	T	Water	3520C	
<b>Analysis Batch: 680-164809</b>					
LCS 680-164624/25-A	Lab Control Sample	T	Water	8081B/8082A	680-164624
LCSD 680-164624/26-A	Lab Control Sample Duplicate	T	Water	8081B/8082A	680-164624
MB 680-164624/18-A	Method Blank	T	Water	8081B/8082A	680-164624
680-56303-1	HP-111-50A	T	Water	8081B/8082A	680-164624
680-56303-2	HP-111-50B	T	Water	8081B/8082A	680-164624
680-56303-3	HP-111-50C	T	Water	8081B/8082A	680-164624
680-56303-4	HP-111-51A	T	Water	8081B/8082A	680-164624
680-56303-5	HP-111-52A	T	Water	8081B/8082A	680-164624
680-56303-6	HP-111-52B	T	Water	8081B/8082A	680-164624
680-56303-7	HP-111-53A	T	Water	8081B/8082A	680-164624
680-56303-8	HP-111-53B	T	Water	8081B/8082A	680-164624
<b>Analysis Batch: 680-164810</b>					
LCS 680-164624/25-A	Lab Control Sample	T	Water	8081A_8082	680-164624
LCSD 680-164624/26-A	Lab Control Sample Duplicate	T	Water	8081A_8082	680-164624
MB 680-164624/18-A	Method Blank	T	Water	8081A_8082	680-164624
680-56303-1	HP-111-50A	T	Water	8081A_8082	680-164624
680-56303-2	HP-111-50B	T	Water	8081A_8082	680-164624
680-56303-3	HP-111-50C	T	Water	8081A_8082	680-164624
680-56303-4	HP-111-51A	T	Water	8081A_8082	680-164624
680-56303-5	HP-111-52A	T	Water	8081A_8082	680-164624
680-56303-6	HP-111-52B	T	Water	8081A_8082	680-164624
680-56303-7	HP-111-53A	T	Water	8081A_8082	680-164624
680-56303-8	HP-111-53B	T	Water	8081A_8082	680-164624

#### Report Basis

T = Total



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 680-164645</b>					
LCS 680-164645/11-A	Lab Control Sample	R	W8u A	3005A	
MB 680-164645/10-A	Method Blank	R	Water	3005A	
680-56303-1	HP-111-50A	R	Water	3005A	
680-56303-2	HP-111-50B	R	Water	3005A	
680-56303-3	HP-111-50C	R	Water	3005A	
680-56303-3MS	Matrix Spike	R	Water	3005A	
680-56303-3MSD	Matrix Spike Duplicate	R	Water	3005A	
680-56303-4	HP-111-51A	R	Water	3005A	
680-56303-5	HP-111-52A	R	Water	3005A	
680-56303-6	HP-111-52B	R	Water	3005A	
680-56303-7	HP-111-53A	R	Water	3005A	
680-56303-8	HP-111-53B	R	Water	3005A	
<b>Prep Batch: 680-164726</b>					
LCS 680-164726/12-A	Lab Control Sample	T	Water	7470A	
MB 680-164726/11-A	Method Blank	T	Water	7470A	
680-56303-1	HP-111-50A	T	Water	7470A	
680-56303-1MS	Matrix Spike	T	Water	7470A	
680-56303-1MSD	Matrix Spike Duplicate	T	Water	7470A	
680-56303-2	HP-111-50B	T	Water	7470A	
680-56303-3	HP-111-50C	T	Water	7470A	
680-56303-4	HP-111-51A	T	Water	7470A	
680-56303-5	HP-111-52A	T	Water	7470A	
680-56303-6	HP-111-52B	T	Water	7470A	
680-56303-7	HP-111-53A	T	Water	7470A	
680-56303-8	HP-111-53B	T	Water	7470A	
<b>Analysis Batch: 680-164779</b>					
LCS 680-164726/12-A	Lab Control Sample	T	Water	7470A	680-164726
MB 680-164726/11-A	Method Blank	T	Water	7470A	680-164726
680-56303-1	HP-111-50A	T	Water	7470A	680-164726
680-56303-1MS	Matrix Spike	T	Water	7470A	680-164726
680-56303-1MSD	Matrix Spike Duplicate	T	Water	7470A	680-164726
680-56303-2	HP-111-50B	T	Water	7470A	680-164726
680-56303-3	HP-111-50C	T	Water	7470A	680-164726
680-56303-4	HP-111-51A	T	Water	7470A	680-164726
680-56303-5	HP-111-52A	T	Water	7470A	680-164726
680-56303-6	HP-111-52B	T	Water	7470A	680-164726
680-56303-7	HP-111-53A	T	Water	7470A	680-164726
680-56303-8	HP-111-53B	T	Water	7470A	680-164726

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## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Analysis Batch: 680-165174</b>					
LCS 680-164645/11-A	Lab Control Sample	R	W8u A	6010B	680-164645
MB 680-164645/10-A	Method Blank	R	Water	6010B	680-164645
680-56303-1	HP-111-50A	R	Water	6010B	680-164645
680-56303-2	HP-111-50B	R	Water	6010B	680-164645
680-56303-3	HP-111-50C	R	Water	6010B	680-164645
680-56303-3MS	Matrix Spike	R	Water	6010B	680-164645
680-56303-3MSD	Matrix Spike Duplicate	R	Water	6010B	680-164645
680-56303-4	HP-111-51A	R	Water	6010B	680-164645
680-56303-5	HP-111-52A	R	Water	6010B	680-164645
680-56303-6	HP-111-52B	R	Water	6010B	680-164645
680-56303-7	HP-111-53A	R	Water	6010B	680-164645
680-56303-8	HP-111-53B	R	Water	6010B	680-164645

#### Report Basis

R = Total Recoverable

T = Total



Client: Ashland Inc.

Job Number: 680-56303-1

## Surrogate Recovery Report

### 8260B Volatile Organic Compounds (GC/MS)

#### Client Matrix: Water

LOI 60: pb 6D	Client Vam4le I2	BFB %Rec	DBFM %Rec	TOL %Rec
680-56303-1	HP-111-50A	101	111	104
680-56303-2	HP-111-50B	105	107	103
680-56303-3	HP-111-50C	101	94	104
680-56303-)	HP-111-51A	102	112	103
680-56303-5	HP-111-52A	103	114	103
680-56303-6	HP-111-52B	101	111	105
680-56303-7	HP-111-53A	99	114	104
680-56303-8	HP-111-53B	98	110	105
680-56303-9	HP-111-55A	102	111	105
680-56303-10	HP-111-55B	99	107	104
680-56303-11	HP-111-56A	100	111	107
680-56303-12	Trip Blank Lot 031010	102	112	105
680-56303-13	HP-111-FB-1	102	111	106
MB 680-164684/10		103	111	102
MB 680-164798/9		102	114	103
LCS 680-164684/7		107	112	102
LCS 680-164798/6		98	119	104
LCSD 680-164684/8		104	115	102
LCSD 680-164798/7		101	116	102

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Surrogate Recovery Report

#### 8081A 8082 Organochlorine Pesticides & PCBs (GC)

##### Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	TCX1 %Rec
680-56303-1	HP-111-50A	55	70
680-56303-2	HP-111-50B	25	47
680-56303-3	HP-111-50C	22	53
680-56303-4	HP-111-51A	29	50
680-56303-5	HP-111-52A	35	107
680-56303-6	HP-111-52B	39	45
680-56303-7	HP-111-53A	28	67
680-56303-8	HP-111-53B	33	61
MB 680-164624/18-A		61	77
LCS 680-164624/25-A		61	77
LCSD 680-164624/26-A		65	79

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



Client: Ashland Inc.

Job Number: 680-56303-1

## Surrogate Recovery Report

### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec	TCX1 %Rec	TCX2 %Rec
680-56303-1	HP-111-50A	51p	89	66	64
680-56303-2	HP-111-50B	29	36	47	42
680-56303-3	HP-111-50C	19p	33	45	50
680-56303-4	HP-111-51A	30	37	48	67
680-56303-5	HP-111-52A	35p	54	73	76
680-56303-6	HP-111-52B	40p	65	45	51
680-56303-7	HP-111-53A	27p	51	53	59
680-56303-8	HP-111-53B	39	57	59	52
MB 680-164624/18-A		56p	107	74	65
LCS 680-164624/25-A		58p	106	72	69
LCSD 680-164624/26-A		63p	119X	76	70

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Method Blank - Batch: 680-164684

**Aeaco 6260m**  
**Preparation: 5030B**

Lab Sample ID: MB 680-164684/10  
Client Matrix: W0t A  
Dilution: 1.0  
Date Analyzed: 04/01/2010 1134  
Date Prepared: 04/01/2010 1134

Analysis Batch: 680-164684  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq291.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Method Blank - Batch: 680-164684

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-164684/10

Client Matrix: W0t A

Dilution: 1.0

Date Analyzed: 04/01/2010 1134

Date Prepared: 04/01/2010 1134

Analysis Batch: 680-164684

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO

Lab File ID: oq291.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	103	75 - 120
Dibromofluoromethane	111	75 - 121
Toluene-d8 (Surr)	102	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-164684**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164684/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/01/2010 0936  
Date Prepared: 04/01/2010 0936

Analysis Batch: 680-164684  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq283.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-164684/8  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/01/2010 1005  
Date Prepared: 04/01/2010 1005

Analysis Batch: 680-164684  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq285.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	95	108	17 - 175	12	50		
Benzene	101	102	77 - 119	1	30		
Bromoform	97	95	62 - 133	2	30		
Bromomethane	87	101	12 - 184	15	50		
2-Butanone (MEK)	103	108	33 - 157	4	30		
Carbon disulfide	108	109	55 - 131	1	30		
Carbon tetrachloride	106	111	71 - 135	5	30		
Chlorobenzene	107	104	85 - 116	2	30		
Chlorodibromomethane	119	117	75 - 133	2	30		
Chloroethane	93	94	40 - 165	1	50		
Chloroform	110	109	82 - 120	1	30		
Chloromethane	88	85	48 - 142	3	50		
cis-1,3-Dichloropropene	111	110	76 - 126	1	30		
1,2-Dibromo-3-Chloropropane	98	93	49 - 140	6	30		
Dibromomethane	102	99	78 - 119	3	30		
Dichlorobromomethane	102	102	78 - 127	1	30		
Dichlorodifluoromethane	114	117	34 - 154	3	30		
1,1-Dichloroethane	109	109	74 - 127	0	30		
1,2-Dichloroethane	92	93	66 - 132	1	30		
1,1-Dichloroethene	111	115	62 - 141	4	30		
1,2-Dichloropropane	97	96	73 - 124	1	30		
Ethylbenzene	106	106	86 - 116	0	30		
Ethylene Dibromide	102	102	80 - 121	1	30		
2-Hexanone	103	103	34 - 161	0	30		
Methylene Chloride	114	109	70 - 125	4	30		
4-Methyl-2-pentanone (MIBK)	99	101	40 - 151	2	30		
Styrene	107	106	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	95	94	81 - 128	1	30		
1,1,2,2-Tetrachloroethane	108	105	69 - 129	3	30		
Tetrachloroethene	104	105	76 - 126	1	30		
Toluene	97	98	81 - 117	1	30		
trans-1,2-Dichloroethene	104	107	72 - 131	3	30		
trans-1,3-Dichloropropene	112	111	73 - 128	1	30		
1,1,1-Trichloroethane	101	104	76 - 127	3	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-164684**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164684/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/01/2010 0936  
Date Prepared: 04/01/2010 0936

Analysis Batch: 680-164684  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq283.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-164684/8  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/01/2010 1005  
Date Prepared: 04/01/2010 1005

Analysis Batch: 680-164684  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq285.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	98	96	75 - 121	2	30		
Trichloroethene	100	102	84 - 115	2	30		
Trichlorofluoromethane	85	90	58 - 149	5	50		
1,2,3-Trichloropropane	99	95	70 - 130	4	30		
Vinyl acetate	130	130	10 - 217	1	30		
Vinyl chloride	81	81	59 - 144	0	50		
Xylenes, Total	106	104	84 - 118	1	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	107		104		75 - 120		
Dibromofluoromethane	112		115		75 - 121		
Toluene-d8 (Surr)	102		102		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-164684**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164684/7  
Client Matrix: W0t A  
Dilution: 1.0  
Date Analyzed: 04/01/2010 0936  
Date Prepared: 04/01/2010 0936

Units: ug/L

LCSD Lab Sample ID: LCSD 680-164684/8  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/01/2010 1005  
Date Prepared: 04/01/2010 1005

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	95.2	108
Benzene	50.0	50.0	50.6	51.0
Bromoform	50.0	50.0	48.6	47.6
Bromomethane	50.0	50.0	43.4	50.6
2-Butanone (MEK)	100	100	103	108
Carbon disulfide	50.0	50.0	54.1	54.6
Carbon tetrachloride	50.0	50.0	52.8	55.3
Chlorobenzene	50.0	50.0	53.3	52.1
Chlorodibromomethane	50.0	50.0	59.7	58.3
Chloroethane	50.0	50.0	46.5	47.0
Chloroform	50.0	50.0	54.9	54.3
Chloromethane	50.0	50.0	43.8	42.4
cis-1,3-Dichloropropene	50.0	50.0	55.5	55.0
1,2-Dibromo-3-Chloropropane	50.0	50.0	49.2	46.6
Dibromomethane	50.0	50.0	50.9	49.5
Dichlorobromomethane	50.0	50.0	51.1	50.8
Dichlorodifluoromethane	50.0	50.0	57.0	58.5
1,1-Dichloroethane	50.0	50.0	54.4	54.4
1,2-Dichloroethane	50.0	50.0	46.0	46.5
1,1-Dichloroethene	50.0	50.0	55.4	57.6
1,2-Dichloropropane	50.0	50.0	48.6	48.1
Ethylbenzene	50.0	50.0	52.8	53.0
Ethylene Dibromide	50.0	50.0	50.8	51.2
2-Hexanone	100	100	103	103
Methylene Chloride	50.0	50.0	56.8	54.4
4-Methyl-2-pentanone (MIBK)	100	100	98.8	101
Styrene	50.0	50.0	53.7	53.1
1,1,1,2-Tetrachloroethane	50.0	50.0	47.3	46.9
1,1,2,2-Tetrachloroethane	50.0	50.0	53.8	52.3
Tetrachloroethene	50.0	50.0	51.8	52.4
Toluene	50.0	50.0	48.5	49.0
trans-1,2-Dichloroethene	50.0	50.0	51.8	53.5
trans-1,3-Dichloropropene	50.0	50.0	55.9	55.4
1,1,1-Trichloroethane	50.0	50.0	50.6	52.2
1,1,2-Trichloroethane	50.0	50.0	48.8	47.9
Trichloroethene	50.0	50.0	49.9	50.9
Trichlorofluoromethane	50.0	50.0	42.6	44.9
1,2,3-Trichloropropane	50.0	50.0	49.4	47.7
Vinyl acetate	100	100	130	130
Vinyl chloride	50.0	50.0	40.6	40.4
Xylenes, Total	150	150	159	156



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

**Method Blank - Batch: 680-164798**

**Method: 8260B**

**Preparation: 5030B**

Lab Sample ID: MB 680-164798/9

Analysis Batch: 680-164798

Instrument ID: MSO

Client Matrix: W0t A

Prep Batch: N/A

Lab File ID: oq305.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 04/02/2010 1122

Final Weight/Volume: 5 mL

Date Prepared: 04/02/2010 1122

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Method Blank - Batch: 680-164798

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-164798/9

Client Matrix: W0t A

Dilution: 1.0

Date Analyzed: 04/02/2010 1122

Date Prepared: 04/02/2010 1122

Analysis Batch: 680-164798

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO

Lab File ID: oq305.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	102	75 - 120
Dibromofluoromethane	114	75 - 121
Toluene-d8 (Surr)	103	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-164798**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164798/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 0925  
Date Prepared: 04/02/2010 0925

Analysis Batch: 680-164798  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq297.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-164798/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 0954  
Date Prepared: 04/02/2010 0954

Analysis Batch: 680-164798  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq299.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	104	108	17 - 175	4	50		
Benzene	102	101	77 - 119	1	30		
Bromoform	91	94	62 - 133	3	30		
Bromomethane	91	111	12 - 184	19	50		
2-Butanone (MEK)	107	111	33 - 157	4	30		
Carbon disulfide	113	109	55 - 131	3	30		
Carbon tetrachloride	114	111	71 - 135	3	30		
Chlorobenzene	99	100	85 - 116	1	30		
Chlorodibromomethane	109	113	75 - 133	3	30		
Chloroethane	73	91	40 - 165	22	50		
Chloroform	113	111	82 - 120	2	30		
Chloromethane	89	89	48 - 142	0	50		
cis-1,3-Dichloropropene	110	107	76 - 126	3	30		
1,2-Dibromo-3-Chloropropane	95	99	49 - 140	3	30		
Dibromomethane	98	99	78 - 119	1	30		
Dichlorobromomethane	100	101	78 - 127	1	30		
Dichlorodifluoromethane	122	120	34 - 154	2	30		
1,1-Dichloroethane	112	108	74 - 127	4	30		
1,2-Dichloroethane	92	91	66 - 132	2	30		
1,1-Dichloroethene	119	115	62 - 141	3	30		
1,2-Dichloropropane	100	94	73 - 124	6	30		
Ethylbenzene	100	101	86 - 116	1	30		
Ethylene Dibromide	102	102	80 - 121	0	30		
2-Hexanone	95	99	34 - 161	5	30		
Methylene Chloride	115	115	70 - 125	0	30		
4-Methyl-2-pentanone (MIBK)	99	101	40 - 151	2	30		
Styrene	100	102	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	89	89	81 - 128	0	30		
1,1,2,2-Tetrachloroethane	101	102	69 - 129	1	30		
Tetrachloroethene	102	102	76 - 126	0	30		
Toluene	101	101	81 - 117	0	30		
trans-1,2-Dichloroethene	112	108	72 - 131	4	30		
trans-1,3-Dichloropropene	113	111	73 - 128	2	30		
1,1,1-Trichloroethane	105	103	76 - 127	1	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-164798**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164798/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 0925  
Date Prepared: 04/02/2010 0925

Analysis Batch: 680-164798  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq297.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-164798/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 0954  
Date Prepared: 04/02/2010 0954

Analysis Batch: 680-164798  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq299.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	99	97	75 - 121	2	30		
Trichloroethene	103	102	84 - 115	1	30		
Trichlorofluoromethane	94	90	58 - 149	4	50		
1,2,3-Trichloropropane	91	100	70 - 130	9	30		
Vinyl acetate	134	131	10 - 217	2	30		
Vinyl chloride	83	81	59 - 144	2	50		
Xylenes, Total	100	100	84 - 118	0	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	98		101		75 - 120		
Dibromofluoromethane	119		116		75 - 121		
Toluene-d8 (Surr)	104		102		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-164798**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-164798/6  
Client Matrix: W0t A  
Dilution: 1.0  
Date Analyzed: 04/02/2010 0925  
Date Prepared: 04/02/2010 0925

Units: ug/L

LCSD Lab Sample ID: LCSD 680-164798/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 0954  
Date Prepared: 04/02/2010 0954

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	104	108
Benzene	50.0	50.0	51.2	50.5
Bromoform	50.0	50.0	45.6	47.2
Bromomethane	50.0	50.0	45.7	55.4
2-Butanone (MEK)	100	100	107	111
Carbon disulfide	50.0	50.0	56.4	54.7
Carbon tetrachloride	50.0	50.0	57.0	55.3
Chlorobenzene	50.0	50.0	49.6	50.2
Chlorodibromomethane	50.0	50.0	54.6	56.3
Chloroethane	50.0	50.0	36.3	45.3
Chloroform	50.0	50.0	56.7	55.6
Chloromethane	50.0	50.0	44.4	44.4
cis-1,3-Dichloropropene	50.0	50.0	55.0	53.4
1,2-Dibromo-3-Chloropropane	50.0	50.0	47.7	49.4
Dibromomethane	50.0	50.0	49.2	49.6
Dichlorobromomethane	50.0	50.0	50.2	50.7
Dichlorodifluoromethane	50.0	50.0	60.8	59.9
1,1-Dichloroethane	50.0	50.0	56.2	54.2
1,2-Dichloroethane	50.0	50.0	46.2	45.5
1,1-Dichloroethene	50.0	50.0	59.4	57.5
1,2-Dichloropropane	50.0	50.0	49.9	47.2
Ethylbenzene	50.0	50.0	50.0	50.5
Ethylene Dibromide	50.0	50.0	51.1	51.1
2-Hexanone	100	100	94.7	99.3
Methylene Chloride	50.0	50.0	57.6	57.6
4-Methyl-2-pentanone (MIBK)	100	100	98.9	101
Styrene	50.0	50.0	50.2	50.9
1,1,1,2-Tetrachloroethane	50.0	50.0	44.5	44.5
1,1,2,2-Tetrachloroethane	50.0	50.0	50.6	50.9
Tetrachloroethene	50.0	50.0	51.0	51.2
Toluene	50.0	50.0	50.5	50.6
trans-1,2-Dichloroethene	50.0	50.0	55.9	53.8
trans-1,3-Dichloropropene	50.0	50.0	56.6	55.6
1,1,1-Trichloroethane	50.0	50.0	52.3	51.6
1,1,2-Trichloroethane	50.0	50.0	49.6	48.6
Trichloroethene	50.0	50.0	51.4	50.8
Trichlorofluoromethane	50.0	50.0	47.2	45.2
1,2,3-Trichloropropane	50.0	50.0	45.5	49.8
Vinyl acetate	100	100	134	131
Vinyl chloride	50.0	50.0	41.4	40.5
Xylenes, Total	150	150	149	150



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Method Blank - Batch: 680-164624

**Method: 8081A\_8082**  
**Preparation: 3520C**

Lab Sample ID: MB 680-164624/18-A  
Client Matrix: W0t A  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1558  
Date Prepared: 04/01/2010 1309

Analysis Batch: 680-164810  
Prep Batch: 680-164624  
Units: ug/L

Instrument ID: SGJ  
Lab File ID: jd02008.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	61	14 - 115
Tetrachloro-m-xylene	77	35 - 120

### Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 680-164624

**Method: 8081A\_8082**  
**Preparation: 3520C**

LCS Lab Sample ID: LCS 680-164624/25-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1708  
Date Prepared: 04/01/2010 1309

Analysis Batch: 680-164810  
Prep Batch: 680-164624  
Units: ug/L

Instrument ID: SGJ  
Lab File ID: jd02011.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

LCS Lab Sample ID: LCSD	Analysis Batch: 680-164810	Instrument ID: SGJ
Client Matrix: Water	Prep Batch: 680-164624	Lab File ID: jd02012.d
Dilution: 1.0	Units: ug/L	Initial Weight/Volume: 1000 mL
Date Analyzed: 04/02/2010 1731		Final Weight/Volume: 10 mL
Date Prepared: 04/01/2010 1309		Injection Volume: 2 uL
		Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Toxaphene, Total	70	72	30 - 120	3	40		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
DCB Decachlorobiphenyl	61		65		14 - 115		
Tetrachloro-m-xylene	77		79		35 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-164624**

**Method: 8081A\_8082  
Preparation: 3520C**

LCS Lab Sample ID: LCS 680-164624/25-A      Units: ug/L  
Client Matrix: W0t A  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1708  
Date Prepared: 04/01/2010 1309

LCSD Lab Sample ID: LCSD 680-164624/26-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1731  
Date Prepared: 04/01/2010 1309

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Toxaphene, Total	10.0	10.0	6.97	7.20



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Method Blank - Batch: 680-164624

Lab Sample ID: MB 680-164624/18-A  
Client Matrix: W0t A  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1558  
Date Prepared: 04/01/2010 1309

Analysis Batch: 680-164809  
Prep Batch: 680-164624  
Units: ug/L

### Method: 8081B/8082A Preparation: 3520C

Instrument ID: SGJ  
Lab File ID: jd02008.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0
Surrogate	% Rec		Acceptance Limits	
DCB Decachlorobiphenyl	56	p	14 - 115	
Tetrachloro-m-xylene	74		35 - 120	
Surrogate	% Rec		Acceptance Limits	
DCB Decachlorobiphenyl	107		14 - 115	
Tetrachloro-m-xylene	65		35 - 120	



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-164624**

**Method: 8081B/8082A  
Preparation: 3520C**

LCS Lab Sample ID: LCS 680-164624/25-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1708  
Date Prepared: 04/01/2010 1309

Analysis Batch: 680-164809  
Prep Batch: 680-164624  
Units: ug/L

Instrument ID: SGJ  
Lab File ID: jd02011.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1731  
Date Prepared: 04/01/2010 1309

Analysis Batch: 680-164809  
Prep Batch: 680-164624  
Units: ug/L

Instrument ID: SGJ  
Lab File ID: jd02012.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Toxaphene, Technical	71	84	30 - 120	17	40		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
DCB Decachlorobiphenyl	58	p	63	p	14 - 115		
Tetrachloro-m-xylene	72		76		35 - 120		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
DCB Decachlorobiphenyl	106		119	X	14 - 115		
Tetrachloro-m-xylene	69		70		35 - 120		

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-164624**

**Method: 8081B/8082A  
Preparation: 3520C**

LCS Lab Sample ID: LCS 680-164624/25-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1708  
Date Prepared: 04/01/2010 1309

Units: ug/L

LCSD Lab Sample ID: LCSD 680-164624/26-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1731  
Date Prepared: 04/01/2010 1309

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Toxaphene, Technical	10.0	10.0	7.08	8.40



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Method Blank - Batch: 680-164645

Lab Sample ID: MB 680-164645/10-A  
Client Matrix: W0t A  
Dilution: 1.0  
Date Analyzed: 04/08/2010 1009  
Date Prepared: 04/01/2010 1134

Analysis Batch: 680-165174  
Prep Batch: 680-164645  
Units: ug/L

### Method: 6010B Preparation: 3005A Total Recoverable

Instrument ID: ICPD  
Lab File ID: N/A  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	10	U	2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Lab Control Sample - Batch: 680-164645

**Method: 6010B**  
**Preparation: 3005A**  
**Total Recoverable**

Lab Sample ID: LCS 680-164645/11-A  
Client Matrix: W0t A  
Dilution: 1.0  
Date Analyzed: 04/07/2010 1801  
Date Prepared: 04/01/2010 1134

Analysis Batch: 680-165174  
Prep Batch: 680-164645  
Units: ug/L

Instrument ID: ICPD  
Lab File ID: N/A  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	500	524	105	75 - 125	
Arsenic	2000	2030	101	75 - 125	
Barium	2000	2140	107	75 - 125	
Beryllium	50.0	52.1	104	75 - 125	
Cadmium	50.0	53.5	107	75 - 125	
Chromium	200	209	104	75 - 125	
Cobalt	500	522	104	75 - 125	
Copper	250	256	102	75 - 125	
Lead	500	519	104	75 - 125	
Nickel	500	516	103	75 - 125	
Selenium	2000	2150	107	75 - 125	
Silver	50.0	51.1	102	75 - 125	
Thallium	2000	2150	108	75 - 125	
Tin	1000	1080	108	75 - 125	
Vanadium	500	504	101	75 - 125	
Zinc	500	523	105	75 - 125	



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Matrix Spike/

### Matrix Spike Duplicate Recovery Report - Batch: 680-164645

Method: 6010B

Preparation: 3005A

Total Recoverable

MS Lab Sample ID: 680-56303-3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/07/2010 1832  
Date Prepared: 04/01/2010 1134

Analysis Batch: 680-165174  
Prep Batch: 680-164645

Instrument ID: ICPD  
Lab File ID: N/A  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 680-56303-3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/07/2010 1837  
Date Prepared: 04/01/2010 1134

Analysis Batch: 680-165174  
Prep Batch: 680-164645

Instrument ID: ICPD  
Lab File ID: N/A  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Antimony	107	109	75 - 125	2	20		
Arsenic	104	105	75 - 125	1	20		
Barium	108	109	75 - 125	1	20		
Beryllium	106	107	75 - 125	2	20		
Cadmium	107	108	75 - 125	1	20		
Chromium	104	106	75 - 125	2	20		
Cobalt	104	106	75 - 125	2	20		
Copper	106	108	75 - 125	1	20		
Lead	105	106	75 - 125	1	20		
Nickel	103	104	75 - 125	2	20		
Selenium	109	111	75 - 125	2	20		
Silver	105	106	75 - 125	1	20		
Thallium	109	110	75 - 125	2	20		
Tin	109	111	75 - 125	1	20		
Vanadium	101	103	75 - 125	1	20		
Zinc	103	105	75 - 125	2	20		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Matrix Spike/

**Matrix Spike Duplicate Data Report - Batch: 680-164645**

**Method: 6010B**

**Preparation: 3005A**

**Total Recoverable**

MS Lab Sample ID: 680-56303-3  
 Client Matrix: W0t A  
 Dilution: 1.0  
 Date Analyzed: 04/07/2010 1832  
 Date Prepared: 04/01/2010 1134

Units: ug/L

MSD Lab Sample ID: 680-56303-3  
 Client Matrix: Water  
 Dilution: 1.0  
 Date Analyzed: 04/07/2010 1837  
 Date Prepared: 04/01/2010 1134

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Antimony	20	U	500	500	535	547
Arsenic	20	U	2000	2000	2070	2100
Barium	97		2000	2000	2250	2280
Beryllium	0.24	J	50.0	50.0	53.0	53.9
Cadmium	5.0	U	50.0	50.0	53.3	53.8
Chromium	28		200	200	236	240
Cobalt	1.5	J	500	500	522	531
Copper	9.6	J	250	250	275	279
Lead	10	U	500	500	523	528
Nickel	11	J	500	500	523	533
Selenium	20	U	2000	2000	2180	2210
Silver	10	U	50.0	50.0	52.3	53.0
Thallium	25	U	2000	2000	2170	2210
Tin	50	U	1000	1000	1090	1110
Vanadium	21		500	500	527	535
Zinc	50		500	500	567	576



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Method Blank - Batch: 680-164726

Lab Sample ID: MB 680-164726/11-A  
Client Matrix: W0t A  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1620  
Date Prepared: 04/02/2010 0954

Analysis Batch: 680-164779  
Prep Batch: 680-164726  
Units: ug/L

### Method: 7470A Preparation: 7470A

Instrument ID: LEEMAN1  
Lab File ID: N/A  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.091	0.20

### Lab Control Sample - Batch: 680-164726

Lab Sample ID: LCS 680-164726/12-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1623  
Date Prepared: 04/02/2010 0954

Analysis Batch: 680-164779  
Prep Batch: 680-164726  
Units: ug/L

### Method: 7470A Preparation: 7470A

Instrument ID: LEEMAN1  
Lab File ID: N/A  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	2.50	2.82	113	80 - 120	

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 680-164726

### Method: 7470A Preparation: 7470A

MS Lab Sample ID: 680-56303-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1628  
Date Prepared: 04/02/2010 0954

Analysis Batch: 680-164779  
Prep Batch: 680-164726

Instrument ID: LEEMAN1  
Lab File ID: N/A  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 680-56303-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1631  
Date Prepared: 04/02/2010 0954

Analysis Batch: 680-164779  
Prep Batch: 680-164726

Instrument ID: LEEMAN1  
Lab File ID: N/A  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Mercury	117	115	80 - 120	2	20		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 680-164726**

**Method: 7470A  
Preparation: 7470A**

MS Lab Sample ID: 680-56303-1  
Client Matrix: W0t A  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1628  
Date Prepared: 04/02/2010 0954

Units: ug/L

MSD Lab Sample ID: 680-56303-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/02/2010 1631  
Date Prepared: 04/02/2010 0954

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	0.20	U	1.00	1.00	1.17	1.15



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Laboratory Chronicle

Lab ID: 680-56303-1

Client ID: HP-111-50A

Sample Date/Time: 03/30/2010 09:30

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56303-C-1		680-164798		04/02/2010 11:51	1	TAL SAV	RB
A:8260B	680-56303-C-1		680-164798		04/02/2010 11:51	1	TAL SAV	RB
P:3520C	680-56303-A-1-A		680-164810	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081A_8082	680-56303-A-1-A		680-164810	680-164624	04/02/2010 20:59	1	TAL SAV	JK
P:3520C	680-56303-A-1-A		680-164809	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081B/8082A	680-56303-A-1-A		680-164809	680-164624	04/02/2010 20:59	1	TAL SAV	JK
P:3005A	680-56303-B-1-A		680-165174	680-164645	04/01/2010 11:34	1	TAL SAV	RA
A:6010B	680-56303-B-1-A		680-165174	680-164645	04/07/2010 18:06	1	TAL SAV	BCB
P:7470A	680-56303-B-1-B		680-164779	680-164726	04/02/2010 09:54	1	TAL SAV	RA
A:7470A	680-56303-B-1-B		680-164779	680-164726	04/02/2010 16:26	1	TAL SAV	CE

Lab ID: 680-56303-1 MS

Client ID: HP-111-50A

Sample Date/Time: 03/30/2010 09:30

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7470A	680-56303-B-1-C MS		680-164779	680-164726	04/02/2010 09:54	1	TAL SAV	RA
A:7470A	680-56303-B-1-C MS		680-164779	680-164726	04/02/2010 16:28	1	TAL SAV	CE

Lab ID: 680-56303-1 MSD

Client ID: HP-111-50A

Sample Date/Time: 03/30/2010 09:30

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7470A	680-56303-B-1-D MSD		680-164779	680-164726	04/02/2010 09:54	1	TAL SAV	RA
A:7470A	680-56303-B-1-D MSD		680-164779	680-164726	04/02/2010 16:31	1	TAL SAV	CE

Lab ID: 680-56303-2

Client ID: HP-111-50B

Sample Date/Time: 03/30/2010 10:00

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56303-C-2		680-164684		04/01/2010 19:56	10	TAL SAV	RB
A:8260B	680-56303-C-2		680-164684		04/01/2010 19:56	10	TAL SAV	RB
P:3520C	680-56303-A-2-A		680-164810	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081A_8082	680-56303-A-2-A		680-164810	680-164624	04/02/2010 21:22	1	TAL SAV	JK
P:3520C	680-56303-A-2-A		680-164809	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081B/8082A	680-56303-A-2-A		680-164809	680-164624	04/02/2010 21:22	1	TAL SAV	JK
P:3005A	680-56303-B-2-A		680-165174	680-164645	04/01/2010 11:34	1	TAL SAV	RA
A:6010B	680-56303-B-2-A		680-165174	680-164645	04/07/2010 18:11	1	TAL SAV	BCB
P:7470A	680-56303-B-2-B		680-164779	680-164726	04/02/2010 09:54	1	TAL SAV	RA
A:7470A	680-56303-B-2-B		680-164779	680-164726	04/02/2010 16:34	1	TAL SAV	CE



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Laboratory Chronicle

Lab ID: 680-56303-3

Client ID: HP-111-50C

Sample Date/Time: 03/30/2010 10:30

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56303-C-3		680-164798		04/02/2010 12:21	1	TAL SAV	RB
A:8260B	680-56303-C-3		680-164798		04/02/2010 12:21	1	TAL SAV	RB
P:3520C	680-56303-A-3-A		680-164810	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081A_8082	680-56303-A-3-A		680-164810	680-164624	04/02/2010 21:46	1	TAL SAV	JK
P:3520C	680-56303-A-3-A		680-164809	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081B/8082A	680-56303-A-3-A		680-164809	680-164624	04/02/2010 21:46	1	TAL SAV	JK
P:3005A	680-56303-B-3-A		680-165174	680-164645	04/01/2010 11:34	1	TAL SAV	RA
A:6010B	680-56303-B-3-A		680-165174	680-164645	04/07/2010 18:16	1	TAL SAV	BCB
P:7470A	680-56303-B-3-D		680-164779	680-164726	04/02/2010 09:54	1	TAL SAV	RA
A:7470A	680-56303-B-3-D		680-164779	680-164726	04/02/2010 16:37	1	TAL SAV	CE

Lab ID: 680-56303-3 MS

Client ID: HP-111-50C

Sample Date/Time: 03/30/2010 10:30

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	680-56303-B-3-B MS		680-165174	680-164645	04/01/2010 11:34	1	TAL SAV	RA
A:6010B	680-56303-B-3-B MS		680-165174	680-164645	04/07/2010 18:32	1	TAL SAV	BCB

Lab ID: 680-56303-3 MSD

Client ID: HP-111-50C

Sample Date/Time: 03/30/2010 10:30

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	680-56303-B-3-C MSD		680-165174	680-164645	04/01/2010 11:34	1	TAL SAV	RA
A:6010B	680-56303-B-3-C MSD		680-165174	680-164645	04/07/2010 18:37	1	TAL SAV	BCB

Lab ID: 680-56303-4

Client ID: HP-111-51A

Sample Date/Time: 03/29/2010 15:45

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56303-C-4		680-164798		04/02/2010 12:50	1	TAL SAV	RB
A:8260B	680-56303-C-4		680-164798		04/02/2010 12:50	1	TAL SAV	RB
P:3520C	680-56303-A-4-A		680-164810	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081A_8082	680-56303-A-4-A		680-164810	680-164624	04/02/2010 22:09	1	TAL SAV	JK
P:3520C	680-56303-A-4-A		680-164809	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081B/8082A	680-56303-A-4-A		680-164809	680-164624	04/02/2010 22:09	1	TAL SAV	JK
P:3005A	680-56303-B-4-A		680-165174	680-164645	04/01/2010 11:34	1	TAL SAV	RA
A:6010B	680-56303-B-4-A		680-165174	680-164645	04/07/2010 18:52	1	TAL SAV	BCB
P:7470A	680-56303-B-4-B		680-164779	680-164726	04/02/2010 09:54	1	TAL SAV	RA
A:7470A	680-56303-B-4-B		680-164779	680-164726	04/02/2010 16:40	1	TAL SAV	CE



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Laboratory Chronicle

Lab ID: 680-56303-5

Client ID: HP-111-52A

Sample Date/Time: 03/29/2010 14:15

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56303-C-5		680-164798		04/02/2010 13:19	1	TAL SAV	RB
A:8260B	680-56303-C-5		680-164798		04/02/2010 13:19	1	TAL SAV	RB
P:3520C	680-56303-A-5-A		680-164810	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081A_8082	680-56303-A-5-A		680-164810	680-164624	04/02/2010 22:32	1	TAL SAV	JK
P:3520C	680-56303-A-5-A		680-164809	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081B/8082A	680-56303-A-5-A		680-164809	680-164624	04/02/2010 22:32	1	TAL SAV	JK
P:3005A	680-56303-B-5-A		680-165174	680-164645	04/01/2010 11:34	1	TAL SAV	RA
A:6010B	680-56303-B-5-A		680-165174	680-164645	04/07/2010 18:58	1	TAL SAV	BCB
P:7470A	680-56303-B-5-B		680-164779	680-164726	04/02/2010 09:54	1	TAL SAV	RA
A:7470A	680-56303-B-5-B		680-164779	680-164726	04/02/2010 16:43	1	TAL SAV	CE

Lab ID: 680-56303-6

Client ID: HP-111-52B

Sample Date/Time: 03/29/2010 14:30

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56303-C-6		680-164798		04/02/2010 13:49	1	TAL SAV	RB
A:8260B	680-56303-C-6		680-164798		04/02/2010 13:49	1	TAL SAV	RB
P:3520C	680-56303-A-6-A		680-164810	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081A_8082	680-56303-A-6-A		680-164810	680-164624	04/02/2010 22:55	1	TAL SAV	JK
P:3520C	680-56303-A-6-A		680-164809	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081B/8082A	680-56303-A-6-A		680-164809	680-164624	04/02/2010 22:55	1	TAL SAV	JK
P:3005A	680-56303-B-6-A		680-165174	680-164645	04/01/2010 11:34	1	TAL SAV	RA
A:6010B	680-56303-B-6-A		680-165174	680-164645	04/07/2010 19:03	1	TAL SAV	BCB
P:7470A	680-56303-B-6-B		680-164779	680-164726	04/02/2010 09:54	1	TAL SAV	RA
A:7470A	680-56303-B-6-B		680-164779	680-164726	04/02/2010 16:46	1	TAL SAV	CE

Lab ID: 680-56303-7

Client ID: HP-111-53A

Sample Date/Time: 03/29/2010 10:15

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56303-C-7		680-164798		04/02/2010 14:18	1	TAL SAV	RB
A:8260B	680-56303-C-7		680-164798		04/02/2010 14:18	1	TAL SAV	RB
P:3520C	680-56303-A-7-A		680-164810	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081A_8082	680-56303-A-7-A		680-164810	680-164624	04/02/2010 23:20	1	TAL SAV	JK
P:3520C	680-56303-A-7-A		680-164809	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081B/8082A	680-56303-A-7-A		680-164809	680-164624	04/02/2010 23:20	1	TAL SAV	JK
P:3005A	680-56303-B-7-A		680-165174	680-164645	04/01/2010 11:34	1	TAL SAV	RA
A:6010B	680-56303-B-7-A		680-165174	680-164645	04/07/2010 19:08	1	TAL SAV	BCB
P:7470A	680-56303-B-7-B		680-164779	680-164726	04/02/2010 09:54	1	TAL SAV	RA
A:7470A	680-56303-B-7-B		680-164779	680-164726	04/02/2010 16:55	1	TAL SAV	CE



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Laboratory Chronicle

Lab ID: 680-56303-8

Client ID: HP-111-53B

Sample Date/Time: 03/29/2010 10:50

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56303-C-8		680-164798		04/02/2010 14:48	1	TAL SAV	RB
A:8260B	680-56303-C-8		680-164798		04/02/2010 14:48	1	TAL SAV	RB
P:3520C	680-56303-A-8-A		680-164810	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081A_8082	680-56303-A-8-A		680-164810	680-164624	04/02/2010 23:44	1	TAL SAV	JK
P:3520C	680-56303-A-8-A		680-164809	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081B/8082A	680-56303-A-8-A		680-164809	680-164624	04/02/2010 23:44	1	TAL SAV	JK
P:3005A	680-56303-B-8-A		680-165174	680-164645	04/01/2010 11:34	1	TAL SAV	RA
A:6010B	680-56303-B-8-A		680-165174	680-164645	04/07/2010 19:13	1	TAL SAV	BCB
P:7470A	680-56303-B-8-B		680-164779	680-164726	04/02/2010 09:54	1	TAL SAV	RA
A:7470A	680-56303-B-8-B		680-164779	680-164726	04/02/2010 16:57	1	TAL SAV	CE

Lab ID: 680-56303-9

Client ID: HP-111-55A

Sample Date/Time: 03/30/2010 15:30

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56303-A-9		680-164798		04/02/2010 15:17	1	TAL SAV	RB
A:8260B	680-56303-A-9		680-164798		04/02/2010 15:17	1	TAL SAV	RB

Lab ID: 680-56303-10

Client ID: HP-111-55B

Sample Date/Time: 03/30/2010 16:00

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56303-A-10		680-164798		04/02/2010 15:46	1	TAL SAV	RB
A:8260B	680-56303-A-10		680-164798		04/02/2010 15:46	1	TAL SAV	RB

Lab ID: 680-56303-11

Client ID: HP-111-56A

Sample Date/Time: 03/30/2010 14:20

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56303-A-11		680-164798		04/02/2010 16:16	1	TAL SAV	RB
A:8260B	680-56303-A-11		680-164798		04/02/2010 16:16	1	TAL SAV	RB

Lab ID: 680-56303-12

Client ID: Trip Blank Lot 031010

Sample Date/Time: 03/30/2010 00:00

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56303-A-12		680-164684		04/01/2010 14:30	1	TAL SAV	RB
A:8260B	680-56303-A-12		680-164684		04/01/2010 14:30	1	TAL SAV	RB



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Laboratory Chronicle

Lab ID: 680-56303-13

Client ID: HP-111-FB-1

Sample Date/Time: 03/30/2010 17:55

Received Date/Time: 03/31/2010 13:33

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-56303-A-13		680-164684		04/01/2010 15:00	1	TAL SAV	RB
A:8260B	680-56303-A-13		680-164684		04/01/2010 15:00	1	TAL SAV	RB

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 680-164684/10		680-164684		04/01/2010 11:34	1	TAL SAV	RB
A:8260B	MB 680-164684/10		680-164684		04/01/2010 11:34	1	TAL SAV	RB
P:5030B	MB 680-164798/9		680-164798		04/02/2010 11:22	1	TAL SAV	RB
A:8260B	MB 680-164798/9		680-164798		04/02/2010 11:22	1	TAL SAV	RB
P:3520C	MB 680-164624/18-A		680-164810	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081A_8082	MB 680-164624/18-A		680-164810	680-164624	04/02/2010 15:58	1	TAL SAV	JK
P:3520C	MB 680-164624/18-A		680-164809	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081B/8082A	MB 680-164624/18-A		680-164809	680-164624	04/02/2010 15:58	1	TAL SAV	JK
P:3005A	MB 680-164645/10-A		680-165174	680-164645	04/01/2010 11:34	1	TAL SAV	RA
A:6010B	MB 680-164645/10-A		680-165174	680-164645	04/08/2010 10:09	1	TAL SAV	BCB
P:7470A	MB 680-164726/11-A		680-164779	680-164726	04/02/2010 09:54	1	TAL SAV	RA
A:7470A	MB 680-164726/11-A		680-164779	680-164726	04/02/2010 16:20	1	TAL SAV	CE

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 680-164684/7		680-164684		04/01/2010 09:36	1	TAL SAV	RB
A:8260B	LCS 680-164684/7		680-164684		04/01/2010 09:36	1	TAL SAV	RB
P:5030B	LCS 680-164798/6		680-164798		04/02/2010 09:25	1	TAL SAV	RB
A:8260B	LCS 680-164798/6		680-164798		04/02/2010 09:25	1	TAL SAV	RB
P:3520C	LCS 680-164624/25-A		680-164810	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081A_8082	LCS 680-164624/25-A		680-164810	680-164624	04/02/2010 17:08	1	TAL SAV	JK
P:3520C	LCS 680-164624/25-A		680-164809	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081B/8082A	LCS 680-164624/25-A		680-164809	680-164624	04/02/2010 17:08	1	TAL SAV	JK
P:3005A	LCS 680-164645/11-A		680-165174	680-164645	04/01/2010 11:34	1	TAL SAV	RA
A:6010B	LCS 680-164645/11-A		680-165174	680-164645	04/07/2010 18:01	1	TAL SAV	BCB
P:7470A	LCS 680-164726/12-A		680-164779	680-164726	04/02/2010 09:54	1	TAL SAV	RA
A:7470A	LCS 680-164726/12-A		680-164779	680-164726	04/02/2010 16:23	1	TAL SAV	CE



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-56303-1

### Laboratory Chronicle

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCSD 680-164684/8		680-164684		04/01/2010 10:05	1	TAL SAV	RB
A:8260B	LCSD 680-164684/8		680-164684		04/01/2010 10:05	1	TAL SAV	RB
P:5030B	LCSD 680-164798/7		680-164798		04/02/2010 09:54	1	TAL SAV	RB
A:8260B	LCSD 680-164798/7		680-164798		04/02/2010 09:54	1	TAL SAV	RB
P:3520C	LCSD 680-164624/26-A		680-164810	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081A_8082	LCSD 680-164624/26-A		680-164810	680-164624	04/02/2010 17:31	1	TAL SAV	JK
P:3520C	LCSD 680-164624/26-A		680-164809	680-164624	04/01/2010 13:09	1	TAL SAV	RBS
A:8081B/8082A	LCSD 680-164624/26-A		680-164809	680-164624	04/02/2010 17:31	1	TAL SAV	JK

#### Lab References:

TAL SAV = TestAmerica Savannah



# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

## TestAmerica

4501306047

THE LEADER IN ENVIRONMENTAL TESTING

Website: www.testamericainc.com  
Phone: (912) 354-7858  
Fax: (912) 352-0165

TestAmerica Savannah  
5102 LaRoche Avenue  
Savannah, GA 31404

Alternate Laboratory Name/Location

Phone:  
Fax:

PROJECT REFERENCE		PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSIS	PAGE 1	OF 2	
Island Brassworks TFCW		309949309	GA					
TAL (LAB) PROJECT MANAGER		NO. NUMBER	CONTRACT NO.					
Linda Brantia		309949309	6010					
CLIENT (SITE) PM		CLIENT PHONE	CLIENT FAX					
Ryan Cate		803-404-540	803-404-5920					
CLIENT NAME		CLIENT E-MAIL						
Ashland Mercantile		TDHussell@ashland.com						
CLIENT ADDRESS		2501 Cook St.	Braswell, GA and					
800 North Spaulding Blvd.		Ste B-14, Columbia, SC	29210					
COMPANY CONTRACTING THIS WORK (if applicable)								
Ashland								
SAMPLE		SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS SUBMITTED				REMARKS
DATE	TIME	DATE	TIME					
3/30/10	930	HP-111-50A		3	1	1		
↓	1000	HP-111-50B		3	1	1		
↓	1030	HP-111-50C		3	1	1		
3/30/10	1545	HP-111-51A		3	1	1		
↓	1415	HP-111-52A		3	1	1		
↓	1430	HP-111-52B		3	1	1		
↓	1015	HP-111-53A		3	1	1		
↓	1050	HP-111-53B		3	1	1		
3/30/10	1530	HP-111-55A		3				
3/30/10	1600	HP-111-55B		3				
3/30/10	1420	HP-111-56A		3				
		Trip Blank	Lot #031010	2				
RELINQUISHED BY: (SIGNATURE)		DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME		
Chad Kean		3/30/10	1000		5/5/10	1517		
RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME		
Ryan Cate		5/5/10	1045					

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY:		DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
(SIGNATURE)		DATE	TIME	YES <input type="radio"/> NO <input type="radio"/>		630-56303	2.6/1.4
Ashland		3/31/10	1323				



## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

# TestAmerica

~~THE LEADER IN ENVIRONMENTAL TESTING~~

45030604

**TestAmerica Savannah**  
5102 LaRoche Avenue  
Savannah, GA 31404

Website: [www.testamericainc.com](http://www.testamericainc.com)  
Phone: (912) 354-7858  
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_

[illegible]



## Login Sample Receipt Check List

Client: Ashland Inc.

Job Number: 680-56303-1

Login Number: 56303

List Source: TestAmerica Savannah

Creator: Conner, Keaton

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6 and 1.4 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	Client provided only 1 liter per sample for Toxaphene analysis
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	N/A	
Sample Preservation Verified	True	



## ANALYTICAL REPORT

Job Number: 680-58086-1

Job Description: Ashland Brunswick RFI GW MAY 2010

For:  
Ashland Inc.  
500 Hercules Road  
Wilmington, DE 19894  
Attention: Timothy Hassett



Approved for release.  
Lidya Gulizia  
Project Manager I  
6/23/2010 5:47 PM

---

Lidya Gulizia  
Project Manager I  
lidya.gulizia@testamericainc.com  
06/23/2010

cc: Kelley Baker  
Mr. Leroy Bishop  
Mr. Dennis Brunner  
Ryan Cate  
Mr. Tony Mancini  
Ms. Charlene Rivard

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; AZ: AZ0741; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

**TestAmerica Laboratories, Inc.**

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404  
Tel (912) 354-7858 Fax (912) 352-0165 [www.testamericainc.com](http://www.testamericainc.com)





**Job Narrative**  
**680-58086-1**

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

Method(s) 8260B: A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for four analytes to recover outside criteria for this method when a full list spike is utilized. The LCS/LCSD associated with batch 170241 had one analyte outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8260B: A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for four analytes to recover outside criteria for this method when a full list spike is utilized. The LCS/LCSD with batch 170211 had one analytes outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8260B: A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for four analytes to recover outside criteria for this method when a full list spike is utilized. The LCS/LCSD associated with batch 170256 had two analytes outside control limits; therefore, re-analysis was not performed. These results have been reported and qualified.

Method(s) 8260B: Surrogate recovery for the following sample(s) was outside control limits: MW-17D (52610) (680-58086-8), MW-19D (52610) (680-58086-10). Reanalysis of the samples confirmed the original surrogate recoveries.

No other analytical or quality issues were noted.

**GC Semi VOA**

No analytical or quality issues were noted.

**Metals**

No analytical or quality issues were noted.

**Comments**

No additional comments.



## METHOD SUMMARY

Client: Ashland Inc.

Job Number: 680-58086-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030B
Organochlorine Pesticides & PCBs (GC)	TAL SAV	SW846 8081A_8082	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	TAL SAV	SW846 8081B/8082A	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Metals (ICP)	TAL SAV	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL SAV		SW846 3005A
Mercury (CVAA)	TAL SAV	SW846 7470A	
Preparation, Mercury	TAL SAV		SW846 7470A

### Lab References:

TAL SAV = TestAmerica Savannah

### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.



## METHOD / ANALYST SUMMARY

Client: Ashland Inc.

Job Number: 680-58086-1

Method	Analyst	Analyst ID
SW846 8260B	Cowart, Judson	WJC
SW846 8260B	Lanier, Carolyn	CL
SW846 8260B	Waldorf, Jonathan	JW
SW846 8081A_8082	Kellar, Joshua	JK
SW846 8081B/8082A	Kellar, Joshua	JK
SW846 6010B	Robertson, Bryn	BR
SW846 7470A	Eaton, Cliff	CE



## SAMPLE SUMMARY

Client: Ashland Inc.

Job Number: 680-58086-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-58086-1	MW-37D (52510)	Water	05/25/2010 1750	05/28/2010 0918
680-58086-2	MW-37S (52510)	Water	05/25/2010 1650	05/28/2010 0918
680-58086-3	MW-37I (52510)	Water	05/25/2010 1840	05/28/2010 0918
680-58086-4	MW-40D (52610)	Water	05/26/2010 1710	05/28/2010 0918
680-58086-5	MW-40S (52610)	Water	05/26/2010 1800	05/28/2010 0918
680-58086-6	MW-40I (52610)	Water	05/26/2010 1620	05/28/2010 0918
680-58086-7	MW-17S (52610)	Water	05/26/2010 1520	05/28/2010 0918
680-58086-8	MW-17D (52610)	Water	05/26/2010 1520	05/28/2010 0918
680-58086-9	MW-27D (52610)	Water	05/26/2010 1405	05/28/2010 0918
680-58086-10	MW-19D (52610)	Water	05/26/2010 1225	05/28/2010 0918
680-58086-11	MW-19S (52610)	Water	05/26/2010 1220	05/28/2010 0918
680-58086-12	MW-19I (52610)	Water	05/26/2010 1305	05/28/2010 0918
680-58086-13	MW-18 (52610)	Water	05/26/2010 1025	05/28/2010 0918
680-58086-14	MW-16S (52710)	Water	05/27/2010 1055	05/28/2010 0918
680-58086-15	MW-16D (52710)	Water	05/27/2010 1100	05/28/2010 0918
680-58086-16	MW-32D (52710)	Water	05/27/2010 1330	05/28/2010 0918
680-58086-17	MW-41I (52710)	Water	05/27/2010 1405	05/28/2010 0918
680-58086-18	MW-30S (52710)	Water	05/27/2010 1235	05/28/2010 0918
680-58086-19	MW-30D (52710)	Water	05/27/2010 1225	05/28/2010 0918
680-58086-20	MW-33 (52710)	Water	05/27/2010 1505	05/28/2010 0918
680-58086-21	MW-53S (52710)	Water	05/27/2010 1540	05/28/2010 0918
680-58086-22TB	Trip Blank	Water	05/27/2010 0000	05/28/2010 0918



# **SAMPLE RESULTS**



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-37D (52510)**

Lab Sample ID: 680-58086-1

Date Sampled: 05/25/2010 1750

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170241	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1208.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1444		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1444			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U *	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-37D (52510)**

Lab Sample ID: 680-58086-1

Date Sampled: 05/25/2010 1750

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170241	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1208.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1444		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1444			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		75 - 120
Dibromofluoromethane	110		75 - 121
Toluene-d8 (Surr)	102		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-37S (52510)**

Lab Sample ID: 680-58086-2

Date Sampled: 05/25/2010 1650

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170241	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1210.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1513		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1513			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	7.9	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	0.86	J	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U *	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	0.19	J	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-37S (52510)**

Lab Sample ID: 680-58086-2

Date Sampled: 05/25/2010 1650

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170241	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1210.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1513		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1513			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		75 - 120
Dibromofluoromethane	106		75 - 121
Toluene-d8 (Surr)	100		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-37I (52510)**

Lab Sample ID: 680-58086-3

Date Sampled: 05/25/2010 1840

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170241	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1216.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1639		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1639			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U *	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-37I (52510)**

Lab Sample ID: 680-58086-3

Date Sampled: 05/25/2010 1840

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170241	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1216.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1639		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1639			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		75 - 120
Dibromofluoromethane	108		75 - 121
Toluene-d8 (Surr)	99		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-40D (52610)**

Lab Sample ID: 680-58086-4

Date Sampled: 05/26/2010 1710

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170256	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0583.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1730		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1730			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U *	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U *	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-40D (52610)**

Lab Sample ID: 680-58086-4

Date Sampled: 05/26/2010 1710

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170256	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0583.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1730		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1730			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	91		75 - 120
Dibromofluoromethane	100		75 - 121
Toluene-d8 (Surr)	110		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-40S (52610)**

Lab Sample ID: 680-58086-5

Date Sampled: 05/26/2010 1800

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170256	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0585.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1800		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1800			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	17	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U *	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U *	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-40S (52610)**

Lab Sample ID: 680-58086-5

Date Sampled: 05/26/2010 1800

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170256	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0585.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1800		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1800			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	92		75 - 120
Dibromofluoromethane	99		75 - 121
Toluene-d8 (Surr)	112		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-40I (52610)**

Lab Sample ID: 680-58086-6

Date Sampled: 05/26/2010 1620

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170256	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0587.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1830		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1830			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	0.41	J	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	0.87	J	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U *	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U *	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-40I (52610)**

Lab Sample ID: 680-58086-6

Date Sampled: 05/26/2010 1620

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170256	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0587.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1830		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1830			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	89		75 - 120
Dibromofluoromethane	99		75 - 121
Toluene-d8 (Surr)	112		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58086-1

Client Sample ID: MW-17S (52610)

Lab Sample ID: 680-58086-7

Date Sampled: 05/26/2010 1520

Client Matrix: Water

Date Received: 05/28/2010 0918

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170256	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0589.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1859		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1859			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	34		5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U *	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U *	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-17S (52610)**

Lab Sample ID: 680-58086-7

Date Sampled: 05/26/2010 1520

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170256	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0589.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1859		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1859			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	93		75 - 120
Dibromofluoromethane	99		75 - 121
Toluene-d8 (Surr)	108		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58086-1

Client Sample ID: MW-17D (52610)

Lab Sample ID: 680-58086-8

Date Sampled: 05/26/2010 1520

Client Matrix: Water

Date Received: 05/28/2010 0918

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170360	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1262.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1318		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1318			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	91		5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	14		1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U *	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	1.8	J	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.2		0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-17D (52610)**

Lab Sample ID: 680-58086-8

Date Sampled: 05/26/2010 1520

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170360	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1262.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1318		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1318			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		75 - 120
Dibromofluoromethane	9	X	75 - 121
Toluene-d8 (Surr)	102		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-27D (52610)**

Lab Sample ID: 680-58086-9

Date Sampled: 05/26/2010 1405

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170256	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0593.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1958		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1958			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	0.34	J	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U *	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U *	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-27D (52610)**

Lab Sample ID: 680-58086-9

Date Sampled: 05/26/2010 1405

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170256	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0593.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1958		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1958			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	93		75 - 120
Dibromofluoromethane	103		75 - 121
Toluene-d8 (Surr)	109		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-19D (52610)**

Lab Sample ID: 680-58086-10

Date Sampled: 05/26/2010 1225

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170360	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1260.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1249		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1249			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1100		25	120
Acetonitrile	200	U	50	200
Acrolein	100	U	37	100
Acrylonitrile	100	U	36	100
Benzene	5.0	U	1.2	5.0
Bromoform	5.0	U	2.5	5.0
Bromomethane	5.0	U	4.0	5.0
2-Butanone (MEK)	50	U	5.0	50
Carbon disulfide	10	U	3.0	10
Carbon tetrachloride	5.0	U	2.5	5.0
Chlorobenzene	5.0	U	1.2	5.0
2-Chloro-1,3-butadiene	5.0	U	1.5	5.0
Chlorodibromomethane	5.0	U	0.50	5.0
Chloroethane	5.0	U	5.0	5.0
Chloroform	5.0	U	0.70	5.0
Chloromethane	5.0	U	1.6	5.0
3-Chloro-1-propene	5.0	U	1.0	5.0
cis-1,3-Dichloropropene	5.0	U	0.55	5.0
1,2-Dibromo-3-Chloropropane	5.0	U	2.2	5.0
Dibromomethane	5.0	U	1.0	5.0
Dichlorobromomethane	5.0	U	1.2	5.0
Dichlorodifluoromethane	5.0	U	1.2	5.0
1,1-Dichloroethane	5.0	U	1.2	5.0
1,2-Dichloroethane	5.0	U	0.50	5.0
1,1-Dichloroethene	5.0	U	0.55	5.0
1,2-Dichloropropane	5.0	U	0.65	5.0
Ethylbenzene	5.0	U	0.55	5.0
Ethylene Dibromide	5.0	U	1.2	5.0
Ethyl methacrylate	5.0	U	1.2	5.0
2-Hexanone	50	U	5.0	50
Iodomethane	25	U	5.0	25
Isobutyl alcohol	200	U	55	200
Methacrylonitrile	100	U	16	100
Methylene Chloride	25	U *	5.0	25
Methyl methacrylate	5.0	U	2.4	5.0
4-Methyl-2-pentanone (MIBK)	50	U	5.0	50
Pentachloroethane	25	U	6.0	25
Propionitrile	100	U	23	100
Styrene	5.0	U	0.55	5.0
1,1,1,2-Tetrachloroethane	5.0	U	1.6	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.90	5.0
Tetrachloroethene	5.0	U	0.75	5.0
Toluene	5.0	U	1.6	5.0
trans-1,4-Dichloro-2-butene	10	U	2.5	10
trans-1,2-Dichloroethene	5.0	U	1.0	5.0
trans-1,3-Dichloropropene	5.0	U	1.0	5.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-19D (52610)**

Lab Sample ID: 680-58086-10

Date Sampled: 05/26/2010 1225

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170360	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1260.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1249		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1249			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	5.0	U	2.5	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.65	5.0
Trichlorofluoromethane	5.0	U	1.2	5.0
1,2,3-Trichloropropane	5.0	U	2.0	5.0
Vinyl acetate	10	U	1.4	10
Vinyl chloride	5.0	U	0.90	5.0
Xylenes, Total	10	U	1.0	10

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	102		75 - 120
Dibromofluoromethane	68	X	75 - 121
Toluene-d8 (Surr)	103		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58086-1

Client Sample ID: MW-19S (52610)

Lab Sample ID: 680-58086-11

Date Sampled: 05/26/2010 1220

Client Matrix: Water

Date Received: 05/28/2010 0918

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170211	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o1223.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1820		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1820			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	12	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U *	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-19S (52610)**

Lab Sample ID: 680-58086-11

Date Sampled: 05/26/2010 1220

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170211	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o1223.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2010 1820		Final Weight/Volume:	5 mL
Date Prepared:	06/01/2010 1820			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	91		75 - 120
Dibromofluoromethane	101		75 - 121
Toluene-d8 (Surr)	101		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58086-1

Client Sample ID: MW-19I (52610)

Lab Sample ID: 680-58086-12

Date Sampled: 05/26/2010 1305

Client Matrix: Water

Date Received: 05/28/2010 0918

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170360	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1264.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1347		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1347			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	6.4	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U *	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-19I (52610)**

Lab Sample ID: 680-58086-12

Date Sampled: 05/26/2010 1305

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170360	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1264.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1347		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1347			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	104		75 - 121
Toluene-d8 (Surr)	101		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID:** MW-18 (52610)

Lab Sample ID: 680-58086-13

Date Sampled: 05/26/2010 1025

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170360	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1266.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1415		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1415			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	150		5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U *	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-18 (52610)**

Lab Sample ID: 680-58086-13

Date Sampled: 05/26/2010 1025

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170360	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1266.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1415		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1415			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	104		75 - 121
Toluene-d8 (Surr)	104		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58086-1

Client Sample ID: MW-16S (52710)

Lab Sample ID: 680-58086-14

Client Matrix: Water

Date Sampled: 05/27/2010 1055

Date Received: 05/28/2010 0918

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170360	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1272.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1542		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1542			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	18	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U *	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-16S (52710)**

Lab Sample ID: 680-58086-14

Date Sampled: 05/27/2010 1055

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170360	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1272.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1542		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1542			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	106		75 - 121
Toluene-d8 (Surr)	103		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58086-1

Client Sample ID: MW-16D (52710)

Lab Sample ID: 680-58086-15

Date Sampled: 05/27/2010 1100

Client Matrix: Water

Date Received: 05/28/2010 0918

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170360	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1274.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1610		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1610			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U *	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-16D (52710)**

Lab Sample ID: 680-58086-15

Date Sampled: 05/27/2010 1100

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170360	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1274.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1610		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1610			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	106		75 - 121
Toluene-d8 (Surr)	102		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58086-1

Client Sample ID: MW-32D (52710)

Lab Sample ID: 680-58086-16

Date Sampled: 05/27/2010 1330

Client Matrix: Water

Date Received: 05/28/2010 0918

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170469	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o2003.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1205		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1205			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	3.1		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.15	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-32D (52710)**

Lab Sample ID: 680-58086-16

Date Sampled: 05/27/2010 1330

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170469	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o2003.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1205		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1205			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	0.38	J	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	94		75 - 120
Dibromofluoromethane	107		75 - 121
Toluene-d8 (Surr)	105		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-30S (52710)**

Lab Sample ID: 680-58086-18

Date Sampled: 05/27/2010 1235

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170360	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1278.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1708		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1708			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	30		5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U *	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-30S (52710)**

Lab Sample ID: 680-58086-18

Date Sampled: 05/27/2010 1235

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170360	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o1278.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1708		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1708			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	107		75 - 121
Toluene-d8 (Surr)	105		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58086-1

Client Sample ID: MW-30D (52710)

Lab Sample ID: 680-58086-19

Date Sampled: 05/27/2010 1225

Client Matrix: Water

Date Received: 05/28/2010 0918

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170469	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o2005.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1234		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1234			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-30D (52710)**

Lab Sample ID: 680-58086-19

Date Sampled: 05/27/2010 1225

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170469	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o2005.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1234		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1234			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		75 - 120
Dibromofluoromethane	108		75 - 121
Toluene-d8 (Surr)	107		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58086-1

Client Sample ID: MW-33 (52710)

Lab Sample ID: 680-58086-20

Client Matrix: Water

Date Sampled: 05/27/2010 1505

Date Received: 05/28/2010 0918

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170350	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o1275.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1625		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1625			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID:** MW-33 (52710)

Lab Sample ID: 680-58086-20

Date Sampled: 05/27/2010 1505

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170350	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o1275.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1625		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1625			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	89		75 - 120
Dibromofluoromethane	102		75 - 121
Toluene-d8 (Surr)	101		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58086-1

Client Sample ID: MW-53S (52710)

Lab Sample ID: 680-58086-21

Date Sampled: 05/27/2010 1540

Client Matrix: Water

Date Received: 05/28/2010 0918

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170350	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o1277.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1654		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1654			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-53S (52710)**

Lab Sample ID: 680-58086-21

Date Sampled: 05/27/2010 1540

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170350	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o1277.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/02/2010 1654		Final Weight/Volume:	5 mL
Date Prepared:	06/02/2010 1654			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	88		75 - 120
Dibromofluoromethane	102		75 - 121
Toluene-d8 (Surr)	100		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID:** Trip Blank

Lab Sample ID: 680-58086-22TB

Date Sampled: 05/27/2010 0000

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170469	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o2015.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1457		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1457			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID:** Trip Blank

Lab Sample ID: 680-58086-22TB

Date Sampled: 05/27/2010 0000

Client Matrix: Water

Date Received: 05/28/2010 0918

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170469	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o2015.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1457		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1457			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		75 - 120
Dibromofluoromethane	103		75 - 121
Toluene-d8 (Surr)	109		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-37S (52510)**

Lab Sample ID: 680-58086-2

Date Sampled: 05/25/2010 1650

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-170563	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 2200		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	47		14 - 115
Tetrachloro-m-xylene	60		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID:** MW-37I (52510)

Lab Sample ID: 680-58086-3

Date Sampled: 05/25/2010 1840

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-170563	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 2223		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	24		14 - 115
Tetrachloro-m-xylene	61		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID:** MW-40D (52610)

Lab Sample ID: 680-58086-4

Date Sampled: 05/26/2010 1710

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-170563	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 2246		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.9	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	30		14 - 115
Tetrachloro-m-xylene	62		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-40S (52610)**

Lab Sample ID: 680-58086-5

Date Sampled: 05/26/2010 1800

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-170563	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 2309		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.9	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	15		14 - 115
Tetrachloro-m-xylene	36		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-40I (52610)**

Lab Sample ID: 680-58086-6

Date Sampled: 05/26/2010 1620

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-170563	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 2332		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	22		14 - 115
Tetrachloro-m-xylene	43		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-27D (52610)**

Lab Sample ID: 680-58086-9

Date Sampled: 05/26/2010 1405

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-170563	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 2355		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	15		14 - 115
Tetrachloro-m-xylene	51		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-32D (52710)**

Lab Sample ID: 680-58086-16

Date Sampled: 05/27/2010 1330

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-170563	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/04/2010 0018		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	25		14 - 115
Tetrachloro-m-xylene	80		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID:** MW-33 (52710)

Lab Sample ID: 680-58086-20

Date Sampled: 05/27/2010 1505

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-170563	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/04/2010 0041		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.9	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	36		14 - 115
Tetrachloro-m-xylene	63		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-53S (52710)**

Lab Sample ID: 680-58086-21

Date Sampled: 05/27/2010 1540

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-170563	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/04/2010 0104		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.9	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	27		14 - 115
Tetrachloro-m-xylene	46		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-37S (52510)**

Lab Sample ID: 680-58086-2

Date Sampled: 05/25/2010 1650

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-170565	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 2200		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	47		14 - 115
Tetrachloro-m-xylene	60		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID:** MW-37I (52510)

Lab Sample ID: 680-58086-3

Date Sampled: 05/25/2010 1840

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-170565	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 2223		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	24		14 - 115
Tetrachloro-m-xylene	61		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-40D (52610)**

Lab Sample ID: 680-58086-4

Date Sampled: 05/26/2010 1710

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-170565	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 2246		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.9	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	30		14 - 115
Tetrachloro-m-xylene	62		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-40S (52610)**

Lab Sample ID: 680-58086-5

Date Sampled: 05/26/2010 1800

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-170565	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 2309		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.9	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	15		14 - 115
Tetrachloro-m-xylene	36		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-40I (52610)**

Lab Sample ID: 680-58086-6

Date Sampled: 05/26/2010 1620

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-170565	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 2332		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	22		14 - 115
Tetrachloro-m-xylene	43		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID:** MW-27D (52610)

Lab Sample ID: 680-58086-9

Date Sampled: 05/26/2010 1405

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-170565	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 2355		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	15		14 - 115
Tetrachloro-m-xylene	51		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID:** MW-32D (52710)

Lab Sample ID: 680-58086-16

Date Sampled: 05/27/2010 1330

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-170565	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/04/2010 0018		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	25		14 - 115
Tetrachloro-m-xylene	80		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID:** MW-33 (52710)

Lab Sample ID: 680-58086-20

Date Sampled: 05/27/2010 1505

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-170565	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/04/2010 0041		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.9	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	36		14 - 115
Tetrachloro-m-xylene	63		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-53S (52710)**

Lab Sample ID: 680-58086-21

Date Sampled: 05/27/2010 1540

Client Matrix: Water

Date Received: 05/28/2010 0918

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-170565	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170229	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/04/2010 0104		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.9	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	27		14 - 115
Tetrachloro-m-xylene	46		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-37S (52510)**

Lab Sample ID: 680-58086-2

Date Sampled: 05/25/2010 1650

Client Matrix: Water

Date Received: 05/28/2010 0918

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**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-170841	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-170586	Lab File ID:	060710.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/08/2010 0525		Final Weight/Volume:	50 mL
Date Prepared:	06/04/2010 1143			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	48		2.0	10
Beryllium	0.13	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	2.7	J	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	5.0	J	3.0	10
Zinc	20	U	6.3	20

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**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171106	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-170770	Lab File ID:	b060810.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/09/2010 1916		Final Weight/Volume:	50 mL
Date Prepared:	06/07/2010 1632			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-37I (52510)**

Lab Sample ID: 680-58086-3

Date Sampled: 05/25/2010 1840

Client Matrix: Water

Date Received: 05/28/2010 0918

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-170841	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-170586	Lab File ID:	060710.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/08/2010 0530		Final Weight/Volume:	50 mL
Date Prepared:	06/04/2010 1143			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	55		2.0	10
Beryllium	0.34	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	43		2.0	10
Cobalt	3.2	J	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	16	J	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	13		3.0	10
Zinc	19	J	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171106	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-170770	Lab File ID:	b060810.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/09/2010 1918		Final Weight/Volume:	50 mL
Date Prepared:	06/07/2010 1632			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-40D (52610)**

Lab Sample ID: 680-58086-4

Date Sampled: 05/26/2010 1710

Client Matrix: Water

Date Received: 05/28/2010 0918

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-170841	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-170586	Lab File ID:	060710.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/08/2010 0535		Final Weight/Volume:	50 mL
Date Prepared:	06/04/2010 1143			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	4.5	J	2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171106	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-170770	Lab File ID:	b060810.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/09/2010 1921		Final Weight/Volume:	50 mL
Date Prepared:	06/07/2010 1632			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-40S (52610)**

Lab Sample ID: 680-58086-5

Date Sampled: 05/26/2010 1800

Client Matrix: Water

Date Received: 05/28/2010 0918

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-170841	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-170586	Lab File ID:	060710.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/08/2010 0540		Final Weight/Volume:	50 mL
Date Prepared:	06/04/2010 1143			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	40		2.0	10
Beryllium	0.12	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	3.7	J	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	6.7	J	3.0	10
Zinc	9.8	J	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171106	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-170770	Lab File ID:	b060810.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/09/2010 1924		Final Weight/Volume:	50 mL
Date Prepared:	06/07/2010 1632			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-40I (52610)**

Lab Sample ID: 680-58086-6

Date Sampled: 05/26/2010 1620

Client Matrix: Water

Date Received: 05/28/2010 0918

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-170841	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-170586	Lab File ID:	060710.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/08/2010 0555		Final Weight/Volume:	50 mL
Date Prepared:	06/04/2010 1143			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	110		2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171106	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-170770	Lab File ID:	b060810.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/09/2010 1927		Final Weight/Volume:	50 mL
Date Prepared:	06/07/2010 1632			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-41I (52710)**

Lab Sample ID: 680-58086-17

Date Sampled: 05/27/2010 1405

Client Matrix: Water

Date Received: 05/28/2010 0918

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-170841	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-170586	Lab File ID:	060710.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/08/2010 0600		Final Weight/Volume:	50 mL
Date Prepared:	06/04/2010 1143			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	5.2	J	5.2	20
Arsenic	20	U	10	20
Barium	2800		2.0	10
Beryllium	0.14	J	0.10	4.0
Cadmium	3.9	J	2.0	5.0
Chromium	2.7	J	2.0	10
Cobalt	10	U	1.0	10
Copper	5.6	J	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	8.2	J	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171106	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-170770	Lab File ID:	b060810.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/09/2010 1936		Final Weight/Volume:	50 mL
Date Prepared:	06/07/2010 1632			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58086-1

**Client Sample ID: MW-53S (52710)**

Lab Sample ID: 680-58086-21

Date Sampled: 05/27/2010 1540

Client Matrix: Water

Date Received: 05/28/2010 0918

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-170841	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-170586	Lab File ID:	060710.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/08/2010 0605		Final Weight/Volume:	50 mL
Date Prepared:	06/04/2010 1143			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	47		2.0	10
Beryllium	0.12	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	4.0	J	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	13	J	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171106	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-170770	Lab File ID:	b060810.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/09/2010 1939		Final Weight/Volume:	50 mL
Date Prepared:	06/07/2010 1632			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



## DATA REPORTING QUALIFIERS

Client: Ashland Inc.

Job Number: 680-58086-1

Lab Section	Qualifier	Description
GC/MS VOA	U	Indicates the analyte was analyzed for but not detected.
	*	LCS or LCSD exceeds the control limits
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC Semi VOA	U	Indicates the analyte was analyzed for but not detected.
	p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
Metals	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.



# QUALITY CONTROL RESULTS



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:680-170211</b>					
LCS 680-170211/4	Lab Control Sample	T	Water	8260B	
LCSD 680-170211/5	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-170211/8	Method Blank	T	Water	8260B	
680-58086-11	MW-19S (52610)	T	Water	8260B	
<b>Analysis Batch:680-170241</b>					
LCS 680-170241/5	Lab Control Sample	T	Water	8260B	
LCSD 680-170241/6	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-170241/1	Method Blank	T	Water	8260B	
680-58086-1	MW-37D (52510)	T	Water	8260B	
680-58086-2	MW-37S (52510)	T	Water	8260B	
680-58086-3	MW-37I (52510)	T	Water	8260B	
<b>Analysis Batch:680-170256</b>					
LCS 680-170256/4	Lab Control Sample	T	Water	8260B	
LCSD 680-170256/6	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-170256/8	Method Blank	T	Water	8260B	
680-58086-4	MW-40D (52610)	T	Water	8260B	
680-58086-5	MW-40S (52610)	T	Water	8260B	
680-58086-6	MW-40I (52610)	T	Water	8260B	
680-58086-7	MW-17S (52610)	T	Water	8260B	
680-58086-9	MW-27D (52610)	T	Water	8260B	
<b>Analysis Batch:680-170350</b>					
LCS 680-170350/4	Lab Control Sample	T	Water	8260B	
MB 680-170350/7	Method Blank	T	Water	8260B	
680-58086-20	MW-33 (52710)	T	Water	8260B	
680-58086-21	MW-53S (52710)	T	Water	8260B	
<b>Analysis Batch:680-170360</b>					
LCS 680-170360/4	Lab Control Sample	T	Water	8260B	
LCSD 680-170360/5	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-170360/7	Method Blank	T	Water	8260B	
680-58086-8	MW-17D (52610)	T	Water	8260B	
680-58086-10	MW-19D (52610)	T	Water	8260B	
680-58086-12	MW-19I (52610)	T	Water	8260B	
680-58086-13	MW-18 (52610)	T	Water	8260B	
680-58086-14	MW-16S (52710)	T	Water	8260B	
680-58086-15	MW-16D (52710)	T	Water	8260B	
680-58086-18	MW-30S (52710)	T	Water	8260B	

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## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:680-170469</b>					
LCS 680-170469/4	Lab Control Sample	T	Water	8260B	
LCSD 680-170469/5	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-170469/7	Method Blank	T	Water	8260B	
680-58086-16	MW-32D (52710)	T	Water	8260B	
680-58086-19	MW-30D (52710)	T	Water	8260B	
680-58086-22TB	Trip Blank	T	Water	8260B	

#### Report Basis

T = Total



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC Semi VOA</b>					
<b>Prep Batch: 680-170229</b>					
LCS 680-170229/27-A	Lab Control Sample	T	Water	3520C	
MB 680-170229/20-A	Method Blank	T	Water	3520C	
680-58086-2	MW-37S (52510)	T	Water	3520C	
680-58086-2MS	Matrix Spike	T	Water	3520C	
680-58086-2MSD	Matrix Spike Duplicate	T	Water	3520C	
680-58086-3	MW-37I (52510)	T	Water	3520C	
680-58086-4	MW-40D (52610)	T	Water	3520C	
680-58086-5	MW-40S (52610)	T	Water	3520C	
680-58086-6	MW-40I (52610)	T	Water	3520C	
680-58086-9	MW-27D (52610)	T	Water	3520C	
680-58086-16	MW-32D (52710)	T	Water	3520C	
680-58086-20	MW-33 (52710)	T	Water	3520C	
680-58086-21	MW-53S (52710)	T	Water	3520C	
<b>Analysis Batch:680-170563</b>					
LCS 680-170229/27-A	Lab Control Sample	T	Water	8081A_8082	680-170229
MB 680-170229/20-A	Method Blank	T	Water	8081A_8082	680-170229
680-58086-2	MW-37S (52510)	T	Water	8081A_8082	680-170229
680-58086-2MS	Matrix Spike	T	Water	8081A_8082	680-170229
680-58086-2MSD	Matrix Spike Duplicate	T	Water	8081A_8082	680-170229
680-58086-3	MW-37I (52510)	T	Water	8081A_8082	680-170229
680-58086-4	MW-40D (52610)	T	Water	8081A_8082	680-170229
680-58086-5	MW-40S (52610)	T	Water	8081A_8082	680-170229
680-58086-6	MW-40I (52610)	T	Water	8081A_8082	680-170229
680-58086-9	MW-27D (52610)	T	Water	8081A_8082	680-170229
680-58086-16	MW-32D (52710)	T	Water	8081A_8082	680-170229
680-58086-20	MW-33 (52710)	T	Water	8081A_8082	680-170229
680-58086-21	MW-53S (52710)	T	Water	8081A_8082	680-170229
<b>Analysis Batch:680-170565</b>					
LCS 680-170229/27-A	Lab Control Sample	T	Water	8081B/8082A	680-170229
MB 680-170229/20-A	Method Blank	T	Water	8081B/8082A	680-170229
680-58086-2	MW-37S (52510)	T	Water	8081B/8082A	680-170229
680-58086-2MS	Matrix Spike	T	Water	8081B/8082A	680-170229
680-58086-2MSD	Matrix Spike Duplicate	T	Water	8081B/8082A	680-170229
680-58086-3	MW-37I (52510)	T	Water	8081B/8082A	680-170229
680-58086-4	MW-40D (52610)	T	Water	8081B/8082A	680-170229
680-58086-5	MW-40S (52610)	T	Water	8081B/8082A	680-170229
680-58086-6	MW-40I (52610)	T	Water	8081B/8082A	680-170229
680-58086-9	MW-27D (52610)	T	Water	8081B/8082A	680-170229
680-58086-16	MW-32D (52710)	T	Water	8081B/8082A	680-170229
680-58086-20	MW-33 (52710)	T	Water	8081B/8082A	680-170229
680-58086-21	MW-53S (52710)	T	Water	8081B/8082A	680-170229

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Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
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Report Basis

T = Total



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 680-170586</b>					
LCS 680-170586/17-A	Lab Control Sample	R	Water	3005A	
MB 680-170586/16-A	Method Blank	R	Water	3005A	
680-58086-2	MW-37S (52510)	R	Water	3005A	
680-58086-3	MW-37I (52510)	R	Water	3005A	
680-58086-4	MW-40D (52610)	R	Water	3005A	
680-58086-5	MW-40S (52610)	R	Water	3005A	
680-58086-6	MW-40I (52610)	R	Water	3005A	
680-58086-17	MW-41I (52710)	R	Water	3005A	
680-58086-21	MW-53S (52710)	R	Water	3005A	
<b>Prep Batch: 680-170770</b>					
LCS 680-170770/24-A	Lab Control Sample	T	Water	7470A	
MB 680-170770/23-A	Method Blank	T	Water	7470A	
680-58086-2	MW-37S (52510)	T	Water	7470A	
680-58086-3	MW-37I (52510)	T	Water	7470A	
680-58086-4	MW-40D (52610)	T	Water	7470A	
680-58086-5	MW-40S (52610)	T	Water	7470A	
680-58086-6	MW-40I (52610)	T	Water	7470A	
680-58086-17	MW-41I (52710)	T	Water	7470A	
680-58086-21	MW-53S (52710)	T	Water	7470A	
<b>Analysis Batch: 680-170841</b>					
LCS 680-170586/17-A	Lab Control Sample	R	Water	6010B	680-170586
MB 680-170586/16-A	Method Blank	R	Water	6010B	680-170586
680-58086-2	MW-37S (52510)	R	Water	6010B	680-170586
680-58086-3	MW-37I (52510)	R	Water	6010B	680-170586
680-58086-4	MW-40D (52610)	R	Water	6010B	680-170586
680-58086-5	MW-40S (52610)	R	Water	6010B	680-170586
680-58086-6	MW-40I (52610)	R	Water	6010B	680-170586
680-58086-17	MW-41I (52710)	R	Water	6010B	680-170586
680-58086-21	MW-53S (52710)	R	Water	6010B	680-170586
<b>Analysis Batch: 680-171106</b>					
LCS 680-170770/24-A	Lab Control Sample	T	Water	7470A	680-170770
MB 680-170770/23-A	Method Blank	T	Water	7470A	680-170770
680-58086-2	MW-37S (52510)	T	Water	7470A	680-170770
680-58086-3	MW-37I (52510)	T	Water	7470A	680-170770
680-58086-4	MW-40D (52610)	T	Water	7470A	680-170770
680-58086-5	MW-40S (52610)	T	Water	7470A	680-170770
680-58086-6	MW-40I (52610)	T	Water	7470A	680-170770
680-58086-17	MW-41I (52710)	T	Water	7470A	680-170770
680-58086-21	MW-53S (52710)	T	Water	7470A	680-170770

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Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
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Report Basis  
R = Total Recoverable  
T = Total



Client: Ashland Inc.

Job Number: 680-58086-1

**Surrogate Recovery Report****8260B Volatile Organic Compounds (GC/MS)****Client Matrix: Water**

L8i 68: po eD	Client Wam4le l2	BFB	DBFM	TOL
		%Rec	%Rec	%Rec
680-58086-1	MW-37D (52510)	99	110	102
680-58086-2	MW-37S (52510)	98	106	100
680-58086-3	MW-37I (52510)	98	108	99
680-58086-4	MW-40D (52610)	91	100	110
680-58086-5	MW-40S (52610)	92	99	112
680-58086-6	MW-40I (52610)	89	99	112
680-58086-7	MW-17S (52610)	93	99	108
680-58086-8	MW-17D (52610)	98	9X	102
680-58086-9	MW-27D (52610)	93	103	109
680-58086-10	MW-19D (52610)	102	68X	103
680-58086-11	MW-19S (52610)	91	101	101
680-58086-12	MW-19I (52610)	97	104	101
680-58086-13	MW-18 (52610)	96	104	104
680-58086-14	MW-16S (52710)	96	106	103
680-58086-15	MW-16D (52710)	97	106	102
680-58086-16	MW-32D (52710)	94	107	105
680-58086-18	MW-30S (52710)	96	107	105
680-58086-19	MW-30D (52710)	100	108	107
680-58086-20	MW-33 (52710)	89	102	101
680-58086-21	MW-53S (52710)	88	102	100
680-58086-22	Trip Blank	100	103	109
MB 680-170211/8		87	106	98
MB 680-170241/1		102	98	105
MB 680-170256/8		92	103	110
MB 680-170350/7		110	104	100
MB 680-170360/7		100	109	102
MB 680-170469/7		101	107	107
LCS 680-170211/4		91	111	99
LCS 680-170241/5		106	117	102

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120



Client: Ashland Inc.

Job Number: 680-58086-1

## Surrogate Recovery Report

### 8260B Volatile Organic Compounds (GC/MS)

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
LCS 680-170256/4		106	105	110
LCS 680-170350/4		95	112	95
LCS 680-170360/4		93	120	103
LCS 680-170469/4		109	112	107
LCSD 680-170211/5		90	112	98
LCSD 680-170241/6		103	116	100
LCSD 680-170256/6		106	110	112
LCSD 680-170360/5		99	118	104
LCSD 680-170469/5		110	112	106

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120



Client: Ashland Inc.

Job Number: 680-58086-1

## Surrogate Recovery Report

### 8081A 8082 Organochlorine Pesticides & PCBs (GC)

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB2 %Rec	TCX1 %Rec	TCX2 %Rec
680-58086-2	MW-37S (52510)	47	60	
680-58086-3	MW-37I (52510)	24	61	
680-58086-4	MW-40D (52610)	30	62	
680-58086-5	MW-40S (52610)	15	36	
680-58086-6	MW-40I (52610)	22	43	
680-58086-9	MW-27D (52610)	15	51	
680-58086-16	MW-32D (52710)	25		80
680-58086-20	MW-33 (52710)	36	63	
680-58086-21	MW-53S (52710)	27	46	
MB 680-170229/20-A		71	74	
LCS 680-170229/27-A		68	71	
680-58086-2 MS	MW-37S (52510) MS	40	72	
680-58086-2 MSD	MW-37S (52510) MSD	34	76	

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



Client: Ashland Inc.

Job Number: 680-58086-1

## Surrogate Recovery Report

### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB2 %Rec	TCX1 %Rec	TCX2 %Rec
680-58086-2	MW-37S (52510)	47	60	
680-58086-3	MW-37I (52510)	24	61	
680-58086-4	MW-40D (52610)	30	62	
680-58086-5	MW-40S (52610)	15	36	
680-58086-6	MW-40I (52610)	22	43	
680-58086-9	MW-27D (52610)	15	51	
680-58086-16	MW-32D (52710)	25		80
680-58086-20	MW-33 (52710)	36	63	
680-58086-21	MW-53S (52710)	27	46	
MB 680-170229/20-A		71	74	
LCS 680-170229/27-A		68	71	
680-58086-2 MS	MW-37S (52510) MS	40	72	
680-58086-2 MSD	MW-37S (52510) MSD	34	76	

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170211

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170211/8  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1235  
Date Prepared: 06/01/2010 1235

Analysis Batch: 680-170211  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq613.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170211

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170211/8  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1235  
Date Prepared: 06/01/2010 1235

Analysis Batch: 680-170211  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq613.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	87	75 - 120
Dibromofluoromethane	106	75 - 121
Toluene-d8 (Surr)	98	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 680-170211

Method: 8260B

Preparation: 5030B

LCS Lab Sample ID: LCS 680-170211/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1028  
Date Prepared: 06/01/2010 1028

Analysis Batch: 680-170211  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq605.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170211/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1057  
Date Prepared: 06/01/2010 1057

Analysis Batch: 680-170211  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq607.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	105	109	17 - 175	4	50		
Benzene	95	94	77 - 119	1	30		
Bromoform	84	84	62 - 133	0	30		
Bromomethane	102	101	12 - 184	1	50		
2-Butanone (MEK)	100	98	33 - 157	2	30		
Carbon disulfide	114	112	55 - 131	2	30		
Carbon tetrachloride	84	84	71 - 135	0	30		
Chlorobenzene	94	93	85 - 116	0	30		
Chlorodibromomethane	82	84	75 - 133	2	30		
Chloroethane	123	115	40 - 165	7	50		
Chloroform	107	108	82 - 120	1	30		
Chloromethane	116	117	48 - 142	0	50		
cis-1,3-Dichloropropene	87	85	76 - 126	3	30		
1,2-Dibromo-3-Chloropropane	89	90	49 - 140	1	30		
Dibromomethane	90	92	78 - 119	2	30		
Dichlorobromomethane	87	86	78 - 127	1	30		
Dichlorodifluoromethane	138	138	34 - 154	0	30		
1,1-Dichloroethane	123	122	74 - 127	1	30		
1,2-Dichloroethane	81	80	66 - 132	2	30		
1,1-Dichloroethene	125	124	62 - 141	0	30		
1,2-Dichloropropane	98	97	73 - 124	1	30		
Ethylbenzene	93	94	86 - 116	2	30		
Ethylene Dibromide	89	88	80 - 121	1	30		
2-Hexanone	83	86	34 - 161	4	30		
Methylene Chloride	127	126	70 - 125	0	30	*	*
4-Methyl-2-pentanone (MIBK)	82	82	40 - 151	0	30		
Styrene	93	92	82 - 122	0	30		
1,1,1,2-Tetrachloroethane	88	89	81 - 128	1	30		
1,1,2,2-Tetrachloroethane	84	85	69 - 129	1	30		
Tetrachloroethene	91	94	76 - 126	2	30		
Toluene	97	95	81 - 117	2	30		
trans-1,2-Dichloroethene	118	118	72 - 131	0	30		
trans-1,3-Dichloropropene	81	80	73 - 128	2	30		
1,1,1-Trichloroethane	95	94	76 - 127	1	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170211**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170211/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1028  
Date Prepared: 06/01/2010 1028

Analysis Batch: 680-170211  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq605.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170211/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1057  
Date Prepared: 06/01/2010 1057

Analysis Batch: 680-170211  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq607.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	88	88	75 - 121	0	30		
Trichloroethene	93	93	84 - 115	0	30		
Trichlorofluoromethane	101	98	58 - 149	3	50		
1,2,3-Trichloropropane	91	93	70 - 130	2	30		
Vinyl acetate	135	134	10 - 217	1	30		
Vinyl chloride	101	100	59 - 144	1	50		
Xylenes, Total	93	92	84 - 118	0	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	91		90		75 - 120		
Dibromofluoromethane	111		112		75 - 121		
Toluene-d8 (Surr)	99		98		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-170211**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170211/4  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1028  
Date Prepared: 06/01/2010 1028

Units: ug/L

LCSD Lab Sample ID: LCSD 680-170211/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1057  
Date Prepared: 06/01/2010 1057

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	105	109
Benzene	50.0	50.0	47.5	46.9
Bromoform	50.0	50.0	42.0	41.9
Bromomethane	50.0	50.0	51.2	50.7
2-Butanone (MEK)	100	100	100	98.3
Carbon disulfide	50.0	50.0	56.8	55.8
Carbon tetrachloride	50.0	50.0	42.0	41.9
Chlorobenzene	50.0	50.0	46.8	46.7
Chlorodibromomethane	50.0	50.0	41.2	42.1
Chloroethane	50.0	50.0	61.7	57.5
Chloroform	50.0	50.0	53.5	54.0
Chloromethane	50.0	50.0	58.1	58.3
cis-1,3-Dichloropropene	50.0	50.0	43.6	42.5
1,2-Dibromo-3-Chloropropane	50.0	50.0	44.7	45.1
Dibromomethane	50.0	50.0	45.2	45.9
Dichlorobromomethane	50.0	50.0	43.6	43.2
Dichlorodifluoromethane	50.0	50.0	68.9	68.8
1,1-Dichloroethane	50.0	50.0	61.5	61.0
1,2-Dichloroethane	50.0	50.0	40.7	40.0
1,1-Dichloroethene	50.0	50.0	62.3	62.2
1,2-Dichloropropane	50.0	50.0	49.0	48.3
Ethylbenzene	50.0	50.0	46.3	47.1
Ethylene Dibromide	50.0	50.0	44.5	43.9
2-Hexanone	100	100	82.9	86.2
Methylene Chloride	50.0	50.0	63.3	63.1
4-Methyl-2-pentanone (MIBK)	100	100	82.1	82.2
Styrene	50.0	50.0	46.3	46.0
1,1,1,2-Tetrachloroethane	50.0	50.0	44.1	44.5
1,1,2,2-Tetrachloroethane	50.0	50.0	42.0	42.3
Tetrachloroethene	50.0	50.0	45.7	46.8
Toluene	50.0	50.0	48.3	47.4
trans-1,2-Dichloroethene	50.0	50.0	59.0	58.8
trans-1,3-Dichloropropene	50.0	50.0	40.6	40.0
1,1,1-Trichloroethane	50.0	50.0	47.3	46.9
1,1,2-Trichloroethane	50.0	50.0	43.9	43.8
Trichloroethene	50.0	50.0	46.5	46.7
Trichlorofluoromethane	50.0	50.0	50.5	48.9
1,2,3-Trichloropropane	50.0	50.0	45.3	46.3
Vinyl acetate	100	100	135	134
Vinyl chloride	50.0	50.0	50.4	49.9
Xylenes, Total	150	150	139	138



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170241

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170241/1  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1250  
Date Prepared: 06/01/2010 1250

Analysis Batch: 680-170241  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq614.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170241

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170241/1  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1250  
Date Prepared: 06/01/2010 1250

Analysis Batch: 680-170241  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq614.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	102	75 - 120
Dibromofluoromethane	98	75 - 121
Toluene-d8 (Surr)	105	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170241**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170241/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1043  
Date Prepared: 06/01/2010 1043

Analysis Batch: 680-170241  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq606.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170241/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1111  
Date Prepared: 06/01/2010 1111

Analysis Batch: 680-170241  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq608.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	113	112	17 - 175	1	50		
Benzene	98	96	77 - 119	2	30		
Bromoform	88	83	62 - 133	6	30		
Bromomethane	106	104	12 - 184	2	50		
2-Butanone (MEK)	113	111	33 - 157	1	30		
Carbon disulfide	117	115	55 - 131	2	30		
Carbon tetrachloride	90	89	71 - 135	1	30		
Chlorobenzene	101	98	85 - 116	4	30		
Chlorodibromomethane	100	94	75 - 133	6	30		
Chloroethane	110	106	40 - 165	4	50		
Chloroform	110	108	82 - 120	1	30		
Chloromethane	125	122	48 - 142	2	50		
cis-1,3-Dichloropropene	97	94	76 - 126	3	30		
1,2-Dibromo-3-Chloropropane	92	88	49 - 140	5	30		
Dibromomethane	94	90	78 - 119	4	30		
Dichlorobromomethane	92	89	78 - 127	4	30		
Dichlorodifluoromethane	137	137	34 - 154	0	30		
1,1-Dichloroethane	127	126	74 - 127	1	30		
1,2-Dichloroethane	83	81	66 - 132	3	30		
1,1-Dichloroethene	119	120	62 - 141	1	30		
1,2-Dichloropropane	102	98	73 - 124	4	30		
Ethylbenzene	98	94	86 - 116	4	30		
Ethylene Dibromide	90	86	80 - 121	4	30		
2-Hexanone	87	83	34 - 161	4	30		
Methylene Chloride	129	128	70 - 125	1	30	*	*
4-Methyl-2-pentanone (MIBK)	80	77	40 - 151	3	30		
Styrene	97	94	82 - 122	3	30		
1,1,1,2-Tetrachloroethane	94	89	81 - 128	5	30		
1,1,2,2-Tetrachloroethane	86	81	69 - 129	6	30		
Tetrachloroethene	105	101	76 - 126	4	30		
Toluene	98	95	81 - 117	3	30		
trans-1,2-Dichloroethene	124	122	72 - 131	1	30		
trans-1,3-Dichloropropene	90	86	73 - 128	4	30		
1,1,1-Trichloroethane	96	93	76 - 127	3	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170241**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170241/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1043  
Date Prepared: 06/01/2010 1043

Analysis Batch: 680-170241  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq606.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170241/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1111  
Date Prepared: 06/01/2010 1111

Analysis Batch: 680-170241  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq608.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	89	86	75 - 121	4	30		
Trichloroethene	97	96	84 - 115	2	30		
Trichlorofluoromethane	98	96	58 - 149	2	50		
1,2,3-Trichloropropane	93	90	70 - 130	4	30		
Vinyl acetate	139	134	10 - 217	4	30		
Vinyl chloride	103	104	59 - 144	1	50		
Xylenes, Total	98	94	84 - 118	4	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	106		103		75 - 120		
Dibromofluoromethane	117		116		75 - 121		
Toluene-d8 (Surr)	102		100		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-170241**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170241/5  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1043  
Date Prepared: 06/01/2010 1043

Units: ug/L

LCSD Lab Sample ID: LCSD 680-170241/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1111  
Date Prepared: 06/01/2010 1111

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	113	112
Benzene	50.0	50.0	49.1	48.0
Bromoform	50.0	50.0	44.0	41.5
Bromomethane	50.0	50.0	53.1	51.8
2-Butanone (MEK)	100	100	113	111
Carbon disulfide	50.0	50.0	58.7	57.7
Carbon tetrachloride	50.0	50.0	45.0	44.4
Chlorobenzene	50.0	50.0	50.6	48.9
Chlorodibromomethane	50.0	50.0	49.8	47.1
Chloroethane	50.0	50.0	55.2	52.9
Chloroform	50.0	50.0	54.8	54.1
Chloromethane	50.0	50.0	62.4	61.0
cis-1,3-Dichloropropene	50.0	50.0	48.6	47.1
1,2-Dibromo-3-Chloropropane	50.0	50.0	46.2	44.0
Dibromomethane	50.0	50.0	46.8	44.8
Dichlorobromomethane	50.0	50.0	46.2	44.4
Dichlorodifluoromethane	50.0	50.0	68.7	68.6
1,1-Dichloroethane	50.0	50.0	63.4	62.9
1,2-Dichloroethane	50.0	50.0	41.7	40.6
1,1-Dichloroethene	50.0	50.0	59.4	59.8
1,2-Dichloropropane	50.0	50.0	51.2	49.0
Ethylbenzene	50.0	50.0	49.2	47.1
Ethylene Dibromide	50.0	50.0	45.0	43.2
2-Hexanone	100	100	86.7	83.4
Methylene Chloride	50.0	50.0	64.7	64.0
4-Methyl-2-pentanone (MIBK)	100	100	79.5	76.9
Styrene	50.0	50.0	48.7	47.1
1,1,1,2-Tetrachloroethane	50.0	50.0	47.0	44.7
1,1,2,2-Tetrachloroethane	50.0	50.0	42.8	40.4
Tetrachloroethene	50.0	50.0	52.3	50.5
Toluene	50.0	50.0	49.1	47.5
trans-1,2-Dichloroethene	50.0	50.0	61.8	61.1
trans-1,3-Dichloropropene	50.0	50.0	45.1	43.2
1,1,1-Trichloroethane	50.0	50.0	47.9	46.3
1,1,2-Trichloroethane	50.0	50.0	44.7	42.9
Trichloroethene	50.0	50.0	48.6	47.8
Trichlorofluoromethane	50.0	50.0	49.0	48.1
1,2,3-Trichloropropane	50.0	50.0	46.5	44.8
Vinyl acetate	100	100	139	134
Vinyl chloride	50.0	50.0	51.5	51.9
Xylenes, Total	150	150	147	142



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170256

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170256/8

Analysis Batch: 680-170256

Instrument ID: MSP

Client Matrix: Whrer

Prep Batch: N/A

Lab File ID: pq375.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/01/2010 1157

Final Weight/Volume: 5 mL

Date Prepared: 06/01/2010 1157

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170256

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170256/8

Client Matrix: Whrer

Dilution: 1.0

Date Analyzed: 06/01/2010 1157

Date Prepared: 06/01/2010 1157

Analysis Batch: 680-170256

Prep Batch: N/A

Units: ug/L

Instrument ID: MSP

Lab File ID: pq375.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	92	75 - 120
Dibromofluoromethane	103	75 - 121
Toluene-d8 (Surr)	110	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170256**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170256/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 0959  
Date Prepared: 06/01/2010 0959

Analysis Batch: 680-170256  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq367.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170256/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1029  
Date Prepared: 06/01/2010 1029

Analysis Batch: 680-170256  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq369.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	82	95	17 - 175	14	50		
Benzene	107	108	77 - 119	1	30		
Bromoform	97	102	62 - 133	4	30		
Bromomethane	76	80	12 - 184	5	50		
2-Butanone (MEK)	86	89	33 - 157	3	30		
Carbon disulfide	86	92	55 - 131	6	30		
Carbon tetrachloride	104	104	71 - 135	0	30		
Chlorobenzene	110	113	85 - 116	2	30		
Chlorodibromomethane	106	107	75 - 133	1	30		
Chloroethane	99	97	40 - 165	1	50		
Chloroform	114	116	82 - 120	2	30		
Chloromethane	49	48	48 - 142	1	50		
cis-1,3-Dichloropropene	106	106	76 - 126	0	30		
1,2-Dibromo-3-Chloropropane	80	85	49 - 140	6	30		
Dibromomethane	94	97	78 - 119	4	30		
Dichlorobromomethane	107	108	78 - 127	1	30		
Dichlorodifluoromethane	21	21	34 - 154	3	30	*	*
1,1-Dichloroethane	110	116	74 - 127	5	30		
1,2-Dichloroethane	101	102	66 - 132	1	30		
1,1-Dichloroethene	92	100	62 - 141	8	30		
1,2-Dichloropropane	104	105	73 - 124	1	30		
Ethylbenzene	119	122	86 - 116	3	30	*	*
Ethylene Dibromide	92	93	80 - 121	1	30		
2-Hexanone	89	95	34 - 161	7	30		
Methylene Chloride	103	107	70 - 125	4	30		
4-Methyl-2-pentanone (MIBK)	85	89	40 - 151	4	30		
Styrene	113	115	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	114	117	81 - 128	3	30		
1,1,2,2-Tetrachloroethane	89	94	69 - 129	6	30		
Tetrachloroethene	112	115	76 - 126	3	30		
Toluene	108	112	81 - 117	4	30		
trans-1,2-Dichloroethene	108	111	72 - 131	3	30		
trans-1,3-Dichloropropene	101	101	73 - 128	0	30		
1,1,1-Trichloroethane	106	108	76 - 127	3	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170256**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170256/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 0959  
Date Prepared: 06/01/2010 0959

Analysis Batch: 680-170256  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq367.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170256/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1029  
Date Prepared: 06/01/2010 1029

Analysis Batch: 680-170256  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq369.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	93	95	75 - 121	2	30		
Trichloroethene	110	113	84 - 115	2	30		
Trichlorofluoromethane	100	104	58 - 149	4	50		
1,2,3-Trichloropropane	87	93	70 - 130	7	30		
Vinyl acetate	133	138	10 - 217	4	30		
Vinyl chloride	65	65	59 - 144	1	50		
Xylenes, Total	108	112	84 - 118	3	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	106		106		75 - 120		
Dibromofluoromethane	105		110		75 - 121		
Toluene-d8 (Surr)	110		112		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-170256**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170256/4  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/01/2010 0959  
Date Prepared: 06/01/2010 0959

Units: ug/L

LCSD Lab Sample ID: LCSD 680-170256/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/01/2010 1029  
Date Prepared: 06/01/2010 1029

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	82.2	95.0
Benzene	50.0	50.0	53.3	54.1
Bromoform	50.0	50.0	48.7	50.9
Bromomethane	50.0	50.0	37.9	39.9
2-Butanone (MEK)	100	100	86.4	89.0
Carbon disulfide	50.0	50.0	43.2	46.1
Carbon tetrachloride	50.0	50.0	51.9	52.1
Chlorobenzene	50.0	50.0	54.9	56.3
Chlorodibromomethane	50.0	50.0	52.8	53.5
Chloroethane	50.0	50.0	49.3	48.6
Chloroform	50.0	50.0	56.9	58.0
Chloromethane	50.0	50.0	24.4	24.2
cis-1,3-Dichloropropene	50.0	50.0	53.0	53.1
1,2-Dibromo-3-Chloropropane	50.0	50.0	39.9	42.5
Dibromomethane	50.0	50.0	47.0	48.7
Dichlorobromomethane	50.0	50.0	53.6	54.1
Dichlorodifluoromethane	50.0	50.0	10.7	10.5
1,1-Dichloroethane	50.0	50.0	55.1	57.9
1,2-Dichloroethane	50.0	50.0	50.6	51.1
1,1-Dichloroethene	50.0	50.0	46.2	49.9
1,2-Dichloropropane	50.0	50.0	52.0	52.4
Ethylbenzene	50.0	50.0	59.3	60.8
Ethylene Dibromide	50.0	50.0	45.9	46.5
2-Hexanone	100	100	88.5	94.9
Methylene Chloride	50.0	50.0	51.3	53.5
4-Methyl-2-pentanone (MIBK)	100	100	85.4	88.6
Styrene	50.0	50.0	56.5	57.3
1,1,1,2-Tetrachloroethane	50.0	50.0	57.0	58.5
1,1,2,2-Tetrachloroethane	50.0	50.0	44.4	47.2
Tetrachloroethene	50.0	50.0	55.8	57.5
Toluene	50.0	50.0	53.9	56.1
trans-1,2-Dichloroethene	50.0	50.0	53.8	55.7
trans-1,3-Dichloropropene	50.0	50.0	50.5	50.5
1,1,1-Trichloroethane	50.0	50.0	52.8	54.2
1,1,2-Trichloroethane	50.0	50.0	46.5	47.4
Trichloroethene	50.0	50.0	55.0	56.4
Trichlorofluoromethane	50.0	50.0	50.1	52.2
1,2,3-Trichloropropane	50.0	50.0	43.5	46.5
Vinyl acetate	100	100	133	138
Vinyl chloride	50.0	50.0	32.3	32.6
Xylenes, Total	150	150	162	167



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170350

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170350/7

Analysis Batch: 680-170350

Instrument ID: MSO

Client Matrix: Whrer

Prep Batch: N/A

Lab File ID: oq633.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/02/2010 1123

Final Weight/Volume: 5 mL

Date Prepared: 06/02/2010 1123

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170350

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170350/7  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/02/2010 1123  
Date Prepared: 06/02/2010 1123

Analysis Batch: 680-170350  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq633.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	110	75 - 120
Dibromofluoromethane	104	75 - 121
Toluene-d8 (Surr)	100	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Lab Control Sample - Batch: 680-170350

Method: 8260B  
Preparation: 5030B

Lab Sample ID: LCS 680-170350/4  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/02/2010 0919  
Date Prepared: 06/02/2010 0919

Analysis Batch: 680-170350  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq625.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	100	115	115	17 - 175	
Benzene	50.0	50.2	100	77 - 119	
Bromoform	50.0	34.5	69	62 - 133	
Bromomethane	50.0	56.8	114	12 - 184	
2-Butanone (MEK)	100	100	100	33 - 157	
Carbon disulfide	50.0	55.0	110	55 - 131	
Carbon tetrachloride	50.0	42.3	85	71 - 135	
Chlorobenzene	50.0	45.9	92	85 - 116	
Chlorodibromomethane	50.0	47.9	96	75 - 133	
Chloroethane	50.0	64.9	130	40 - 165	
Chloroform	50.0	53.5	107	82 - 120	
Chloromethane	50.0	55.7	111	48 - 142	
cis-1,3-Dichloropropene	50.0	44.9	90	76 - 126	
1,2-Dibromo-3-Chloropropane	50.0	51.1	102	49 - 140	
Dibromomethane	50.0	48.5	97	78 - 119	
Dichlorobromomethane	50.0	45.7	91	78 - 127	
Dichlorodifluoromethane	50.0	66.2	132	34 - 154	
1,1-Dichloroethane	50.0	60.3	121	74 - 127	
1,2-Dichloroethane	50.0	43.6	87	66 - 132	
1,1-Dichloroethene	50.0	60.9	122	62 - 141	
1,2-Dichloropropane	50.0	44.9	90	73 - 124	
Ethylbenzene	50.0	48.4	97	86 - 116	
Ethylene Dibromide	50.0	43.7	87	80 - 121	
2-Hexanone	100	102	102	34 - 161	
Methylene Chloride	50.0	62.2	124	70 - 125	
4-Methyl-2-pentanone (MIBK)	100	86.4	86	40 - 151	
Styrene	50.0	47.6	95	82 - 122	
1,1,1,2-Tetrachloroethane	50.0	43.9	88	81 - 128	
1,1,2,2-Tetrachloroethane	50.0	46.7	93	69 - 129	
Tetrachloroethene	50.0	54.7	109	76 - 126	
Toluene	50.0	45.6	91	81 - 117	
trans-1,2-Dichloroethene	50.0	57.8	116	72 - 131	
trans-1,3-Dichloropropene	50.0	40.7	81	73 - 128	
1,1,1-Trichloroethane	50.0	48.8	98	76 - 127	
1,1,2-Trichloroethane	50.0	47.7	95	75 - 121	
Trichloroethene	50.0	47.9	96	84 - 115	
Trichlorofluoromethane	50.0	51.4	103	58 - 149	
1,2,3-Trichloropropane	50.0	49.4	99	70 - 130	
Vinyl acetate	100	133	133	10 - 217	
Vinyl chloride	50.0	49.5	99	59 - 144	
Xylenes, Total	150	142	95	84 - 118	

Surrogate

% Rec

Acceptance Limits



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	95	75 - 120
Dibromofluoromethane	112	75 - 121
Toluene-d8 (Surr)	95	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170360

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170360/7  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/02/2010 1221  
Date Prepared: 06/02/2010 1221

Analysis Batch: 680-170360  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq636.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170360

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170360/7

Analysis Batch: 680-170360

Instrument ID: MSO2

Client Matrix: Whrer

Prep Batch: N/A

Lab File ID: oq636.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/02/2010 1221

Final Weight/Volume: 5 mL

Date Prepared: 06/02/2010 1221

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	100	75 - 120
Dibromofluoromethane	109	75 - 121
Toluene-d8 (Surr)	102	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170360**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170360/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/02/2010 0933  
Date Prepared: 06/02/2010 0933

Analysis Batch: 680-170360  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq626.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170360/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/02/2010 1012  
Date Prepared: 06/02/2010 1012

Analysis Batch: 680-170360  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq628.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	113	114	17 - 175	1	50		
Benzene	98	97	77 - 119	1	30		
Bromoform	80	65	62 - 133	21	30		
Bromomethane	105	104	12 - 184	1	50		
2-Butanone (MEK)	117	111	33 - 157	5	30		
Carbon disulfide	117	117	55 - 131	0	30		
Carbon tetrachloride	89	87	71 - 135	2	30		
Chlorobenzene	98	104	85 - 116	6	30		
Chlorodibromomethane	91	95	75 - 133	4	30		
Chloroethane	115	108	40 - 165	6	50		
Chloroform	110	110	82 - 120	0	30		
Chloromethane	123	121	48 - 142	2	50		
cis-1,3-Dichloropropene	95	95	76 - 126	0	30		
1,2-Dibromo-3-Chloropropane	75	78	49 - 140	3	30		
Dibromomethane	94	93	78 - 119	0	30		
Dichlorobromomethane	91	90	78 - 127	1	30		
Dichlorodifluoromethane	141	131	34 - 154	8	30		
1,1-Dichloroethane	127	126	74 - 127	1	30		
1,2-Dichloroethane	86	85	66 - 132	1	30		
1,1-Dichloroethene	120	118	62 - 141	2	30		
1,2-Dichloropropane	103	103	73 - 124	1	30		
Ethylbenzene	95	100	86 - 116	6	30		
Ethylene Dibromide	90	91	80 - 121	1	30		
2-Hexanone	84	89	34 - 161	5	30		
Methylene Chloride	130	130	70 - 125	0	30	*	*
4-Methyl-2-pentanone (MIBK)	80	78	40 - 151	2	30		
Styrene	94	101	82 - 122	7	30		
1,1,1,2-Tetrachloroethane	87	91	81 - 128	5	30		
1,1,2,2-Tetrachloroethane	78	80	69 - 129	2	30		
Tetrachloroethene	100	108	76 - 126	8	30		
Toluene	98	99	81 - 117	1	30		
trans-1,2-Dichloroethene	125	120	72 - 131	4	30		
trans-1,3-Dichloropropene	86	85	73 - 128	2	30		
1,1,1-Trichloroethane	94	94	76 - 127	1	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170360**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170360/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/02/2010 0933  
Date Prepared: 06/02/2010 0933

Analysis Batch: 680-170360  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq626.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170360/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/02/2010 1012  
Date Prepared: 06/02/2010 1012

Analysis Batch: 680-170360  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq628.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	90	89	75 - 121	1	30		
Trichloroethene	97	96	84 - 115	1	30		
Trichlorofluoromethane	104	102	58 - 149	3	50		
1,2,3-Trichloropropane	84	84	70 - 130	0	30		
Vinyl acetate	136	128	10 - 217	7	30		
Vinyl chloride	105	103	59 - 144	2	50		
Xylenes, Total	95	100	84 - 118	6	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	93		99		75 - 120		
Dibromofluoromethane	120		118		75 - 121		
Toluene-d8 (Surr)	103		104		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-170360**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170360/4  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/02/2010 0933  
Date Prepared: 06/02/2010 0933

Units: ug/L

LCSD Lab Sample ID: LCSD 680-170360/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/02/2010 1012  
Date Prepared: 06/02/2010 1012

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	113	114
Benzene	50.0	50.0	48.9	48.5
Bromoform	50.0	50.0	40.1	32.3
Bromomethane	50.0	50.0	52.6	51.9
2-Butanone (MEK)	100	100	117	111
Carbon disulfide	50.0	50.0	58.7	58.5
Carbon tetrachloride	50.0	50.0	44.3	43.6
Chlorobenzene	50.0	50.0	48.9	52.0
Chlorodibromomethane	50.0	50.0	45.6	47.7
Chloroethane	50.0	50.0	57.3	54.1
Chloroform	50.0	50.0	55.0	54.9
Chloromethane	50.0	50.0	61.5	60.5
cis-1,3-Dichloropropene	50.0	50.0	47.5	47.3
1,2-Dibromo-3-Chloropropane	50.0	50.0	37.6	38.8
Dibromomethane	50.0	50.0	46.8	46.7
Dichlorobromomethane	50.0	50.0	45.7	45.2
Dichlorodifluoromethane	50.0	50.0	70.6	65.3
1,1-Dichloroethane	50.0	50.0	63.6	62.8
1,2-Dichloroethane	50.0	50.0	42.9	42.7
1,1-Dichloroethene	50.0	50.0	60.0	58.8
1,2-Dichloropropane	50.0	50.0	51.7	51.4
Ethylbenzene	50.0	50.0	47.5	50.2
Ethylene Dibromide	50.0	50.0	44.9	45.6
2-Hexanone	100	100	84.1	88.7
Methylene Chloride	50.0	50.0	64.9	64.8
4-Methyl-2-pentanone (MIBK)	100	100	79.8	78.4
Styrene	50.0	50.0	47.0	50.6
1,1,1,2-Tetrachloroethane	50.0	50.0	43.5	45.7
1,1,2,2-Tetrachloroethane	50.0	50.0	38.9	39.9
Tetrachloroethene	50.0	50.0	49.9	54.1
Toluene	50.0	50.0	49.0	49.5
trans-1,2-Dichloroethene	50.0	50.0	62.3	60.0
trans-1,3-Dichloropropene	50.0	50.0	43.2	42.3
1,1,1-Trichloroethane	50.0	50.0	47.1	46.8
1,1,2-Trichloroethane	50.0	50.0	45.2	44.7
Trichloroethene	50.0	50.0	48.6	48.1
Trichlorofluoromethane	50.0	50.0	52.2	50.9
1,2,3-Trichloropropane	50.0	50.0	42.1	42.1
Vinyl acetate	100	100	136	128
Vinyl chloride	50.0	50.0	52.3	51.4
Xylenes, Total	150	150	142	150



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170469

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170469/7  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/03/2010 1053  
Date Prepared: 06/03/2010 1053

Analysis Batch: 680-170469  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq667.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170469

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170469/7

Client Matrix: Whrer

Dilution: 1.0

Date Analyzed: 06/03/2010 1053

Date Prepared: 06/03/2010 1053

Analysis Batch: 680-170469

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO

Lab File ID: oq667.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	101	75 - 120
Dibromofluoromethane	107	75 - 121
Toluene-d8 (Surr)	107	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170469**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170469/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0843  
Date Prepared: 06/03/2010 0843

Analysis Batch: 680-170469  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq659.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170469/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0927  
Date Prepared: 06/03/2010 0927

Analysis Batch: 680-170469  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq661.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	99	109	17 - 175	9	50		
Benzene	99	99	77 - 119	0	30		
Bromoform	129	131	62 - 133	2	30		
Bromomethane	98	99	12 - 184	1	50		
2-Butanone (MEK)	101	102	33 - 157	1	30		
Carbon disulfide	99	99	55 - 131	0	30		
Carbon tetrachloride	101	102	71 - 135	0	30		
Chlorobenzene	92	91	85 - 116	1	30		
Chlorodibromomethane	106	107	75 - 133	1	30		
Chloroethane	97	107	40 - 165	10	50		
Chloroform	112	112	82 - 120	0	30		
Chloromethane	99	94	48 - 142	5	50		
cis-1,3-Dichloropropene	93	95	76 - 126	2	30		
1,2-Dibromo-3-Chloropropane	104	107	49 - 140	3	30		
Dibromomethane	98	99	78 - 119	1	30		
Dichlorobromomethane	103	106	78 - 127	2	30		
Dichlorodifluoromethane	101	96	34 - 154	5	30		
1,1-Dichloroethane	109	109	74 - 127	1	30		
1,2-Dichloroethane	94	97	66 - 132	3	30		
1,1-Dichloroethene	96	95	62 - 141	1	30		
1,2-Dichloropropane	98	100	73 - 124	2	30		
Ethylbenzene	105	104	86 - 116	0	30		
Ethylene Dibromide	95	97	80 - 121	2	30		
2-Hexanone	104	107	34 - 161	2	30		
Methylene Chloride	99	99	70 - 125	0	30		
4-Methyl-2-pentanone (MIBK)	101	102	40 - 151	1	30		
Styrene	103	103	82 - 122	0	30		
1,1,1,2-Tetrachloroethane	106	105	81 - 128	1	30		
1,1,2,2-Tetrachloroethane	109	109	69 - 129	0	30		
Tetrachloroethene	104	103	76 - 126	1	30		
Toluene	105	106	81 - 117	1	30		
trans-1,2-Dichloroethene	92	93	72 - 131	0	30		
trans-1,3-Dichloropropene	106	107	73 - 128	1	30		
1,1,1-Trichloroethane	103	103	76 - 127	1	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170469**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170469/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0843  
Date Prepared: 06/03/2010 0843

Analysis Batch: 680-170469  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq659.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170469/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0927  
Date Prepared: 06/03/2010 0927

Analysis Batch: 680-170469  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq661.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	97	96	75 - 121	0	30		
Trichloroethene	102	103	84 - 115	1	30		
Trichlorofluoromethane	103	102	58 - 149	1	50		
1,2,3-Trichloropropane	110	109	70 - 130	1	30		
Vinyl acetate	106	105	10 - 217	1	30		
Vinyl chloride	102	102	59 - 144	1	50		
Xylenes, Total	104	103	84 - 118	1	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	109		110		75 - 120		
Dibromofluoromethane	112		112		75 - 121		
Toluene-d8 (Surr)	107		106		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-170469**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170469/4  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0843  
Date Prepared: 06/03/2010 0843

Units: ug/L

LCSD Lab Sample ID: LCSD 680-170469/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0927  
Date Prepared: 06/03/2010 0927

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	99.3	109
Benzene	50.0	50.0	49.5	49.4
Bromoform	50.0	50.0	64.3	65.4
Bromomethane	50.0	50.0	48.9	49.3
2-Butanone (MEK)	100	100	101	102
Carbon disulfide	50.0	50.0	49.3	49.5
Carbon tetrachloride	50.0	50.0	50.7	50.8
Chlorobenzene	50.0	50.0	45.9	45.6
Chlorodibromomethane	50.0	50.0	52.9	53.6
Chloroethane	50.0	50.0	48.7	53.6
Chloroform	50.0	50.0	55.9	55.8
Chloromethane	50.0	50.0	49.3	46.8
cis-1,3-Dichloropropene	50.0	50.0	46.6	47.4
1,2-Dibromo-3-Chloropropane	50.0	50.0	51.8	53.4
Dibromomethane	50.0	50.0	48.8	49.3
Dichlorobromomethane	50.0	50.0	51.6	52.9
Dichlorodifluoromethane	50.0	50.0	50.7	48.2
1,1-Dichloroethane	50.0	50.0	54.7	54.3
1,2-Dichloroethane	50.0	50.0	47.0	48.4
1,1-Dichloroethene	50.0	50.0	47.8	47.5
1,2-Dichloropropane	50.0	50.0	49.0	49.9
Ethylbenzene	50.0	50.0	52.3	52.1
Ethylene Dibromide	50.0	50.0	47.5	48.7
2-Hexanone	100	100	104	107
Methylene Chloride	50.0	50.0	49.7	49.5
4-Methyl-2-pentanone (MIBK)	100	100	101	102
Styrene	50.0	50.0	51.6	51.6
1,1,1,2-Tetrachloroethane	50.0	50.0	53.1	52.7
1,1,2,2-Tetrachloroethane	50.0	50.0	54.7	54.7
Tetrachloroethene	50.0	50.0	52.2	51.5
Toluene	50.0	50.0	52.5	52.9
trans-1,2-Dichloroethene	50.0	50.0	46.2	46.4
trans-1,3-Dichloropropene	50.0	50.0	53.0	53.5
1,1,1-Trichloroethane	50.0	50.0	51.5	51.7
1,1,2-Trichloroethane	50.0	50.0	48.4	48.2
Trichloroethene	50.0	50.0	51.1	51.7
Trichlorofluoromethane	50.0	50.0	51.7	51.0
1,2,3-Trichloropropane	50.0	50.0	54.9	54.5
Vinyl acetate	100	100	106	105
Vinyl chloride	50.0	50.0	50.9	51.2
Xylenes, Total	150	150	155	154



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170229

**Method: 8081A\_8082**  
**Preparation: 3520C**

Lab Sample ID: MB 680-170229/20-A  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/03/2010 2028  
Date Prepared: 06/01/2010 1533

Analysis Batch: 680-170563  
Prep Batch: 680-170229  
Units: ug/L

Instrument ID: SGJ  
Lab File ID: jf03023.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	71	14 - 115
Tetrachloro-m-xylene	74	35 - 120

### Lab Control Sample - Batch: 680-170229

**Method: 8081A\_8082**  
**Preparation: 3520C**

Lab Sample ID: LCS 680-170229/27-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 2137  
Date Prepared: 06/01/2010 1533

Analysis Batch: 680-170563  
Prep Batch: 680-170229  
Units: ug/L

Instrument ID: SGJ  
Lab File ID: jf03026.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Toxaphene, Total	10.0	9.25	92	30 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	68	14 - 115
Tetrachloro-m-xylene	71	35 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 680-170229

Method: 8081A\_8082  
Preparation: 3520C

MS Lab Sample ID: 680-58086-2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 0150  
Date Prepared: 06/01/2010 1533

Analysis Batch: 680-170563  
Prep Batch: 680-170229

Instrument ID: SGJ  
Lab File ID: jf03037.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 680-58086-2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 0213  
Date Prepared: 06/01/2010 1533

Analysis Batch: 680-170563  
Prep Batch: 680-170229

Instrument ID: SGJ  
Lab File ID: jf03038.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Toxaphene, Total	88	93	30 - 120	5	40	p	p

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	40	34	14 - 115
Tetrachloro-m-xylene	72	76	35 - 120

### Matrix Spike/ Matrix Spike Duplicate Data Report - Batch: 680-170229

Method: 8081A\_8082  
Preparation: 3520C

MS Lab Sample ID: 680-58086-2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 0150  
Date Prepared: 06/01/2010 1533

Units: ug/L

MSD Lab Sample ID: 680-58086-2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 0213  
Date Prepared: 06/01/2010 1533

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Toxaphene, Total	5.0 U	10.0	10.0	8.80 p	9.29 p



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170229

**Method: 8081B/8082A**  
**Preparation: 3520C**

Lab Sample ID: MB 680-170229/20-A  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/03/2010 2028  
Date Prepared: 06/01/2010 1533

Analysis Batch: 680-170565  
Prep Batch: 680-170229  
Units: ug/L

Instrument ID: SGJ  
Lab File ID: jf03023.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	71	14 - 115
Tetrachloro-m-xylene	74	35 - 120

### Lab Control Sample - Batch: 680-170229

**Method: 8081B/8082A**  
**Preparation: 3520C**

Lab Sample ID: LCS 680-170229/27-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 2137  
Date Prepared: 06/01/2010 1533

Analysis Batch: 680-170565  
Prep Batch: 680-170229  
Units: ug/L

Instrument ID: SGJ  
Lab File ID: jf03026.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Toxaphene, Technical	10.0	7.70	77	30 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	68	14 - 115
Tetrachloro-m-xylene	71	35 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 680-170229**

**Method: 8081B/8082A  
Preparation: 3520C**

MS Lab Sample ID: 680-58086-2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 0150  
Date Prepared: 06/01/2010 1533

Analysis Batch: 680-170565  
Prep Batch: 680-170229

Instrument ID: SGJ  
Lab File ID: jf03037.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 680-58086-2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 0213  
Date Prepared: 06/01/2010 1533

Analysis Batch: 680-170565  
Prep Batch: 680-170229

Instrument ID: SGJ  
Lab File ID: jf03038.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Toxaphene, Technical	73	77	30 - 120	5	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	40	34	14 - 115
Tetrachloro-m-xylene	72	76	35 - 120

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 680-170229**

**Method: 8081B/8082A  
Preparation: 3520C**

MS Lab Sample ID: 680-58086-2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 0150  
Date Prepared: 06/01/2010 1533

Units: ug/L

MSD Lab Sample ID: 680-58086-2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 0213  
Date Prepared: 06/01/2010 1533

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Toxaphene, Technical	5.0 U	10.0	10.0	7.30	7.65



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170586

Lab Sample ID: MB 680-170586/16-A  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/08/2010 0455  
Date Prepared: 06/04/2010 1143

Analysis Batch: 680-170841  
Prep Batch: 680-170586  
Units: ug/L

### Method: 6010B Preparation: 3005A Total Recoverable

Instrument ID: ICPD  
Lab File ID: 060710.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	10	U	2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Lab Control Sample - Batch: 680-170586

**Method: 6010B**  
**Preparation: 3005A**  
**Total Recoverable**

Lab Sample ID: LCS 680-170586/17-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 0500  
Date Prepared: 06/04/2010 1143

Analysis Batch: 680-170841  
Prep Batch: 680-170586  
Units: ug/L

Instrument ID: ICPD  
Lab File ID: 060710.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	500	515	103	75 - 125	
Arsenic	2000	2060	103	75 - 125	
Barium	2000	2060	103	75 - 125	
Beryllium	50.0	49.9	100	75 - 125	
Cadmium	50.0	49.8	100	75 - 125	
Chromium	200	205	102	75 - 125	
Cobalt	500	513	103	75 - 125	
Copper	250	261	104	75 - 125	
Lead	500	517	103	75 - 125	
Nickel	500	508	102	75 - 125	
Selenium	2000	2060	103	75 - 125	
Silver	50.0	50.9	102	75 - 125	
Thallium	2000	2070	103	75 - 125	
Tin	1000	988	99	75 - 125	
Vanadium	500	515	103	75 - 125	
Zinc	500	521	104	75 - 125	



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Method Blank - Batch: 680-170770

Lab Sample ID: MB 680-170770/23-A  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1825  
Date Prepared: 06/07/2010 1632

Analysis Batch: 680-171106  
Prep Batch: 680-170770  
Units: ug/L

### Method: 7470A Preparation: 7470A

Instrument ID: LEEMAN1  
Lab File ID: b060810.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.091	0.20

### Lab Control Sample - Batch: 680-170770

Lab Sample ID: LCS 680-170770/24-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1828  
Date Prepared: 06/07/2010 1632

Analysis Batch: 680-171106  
Prep Batch: 680-170770  
Units: ug/L

### Method: 7470A Preparation: 7470A

Instrument ID: LEEMAN1  
Lab File ID: b060810.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	2.50	2.55	102	80 - 120	



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Laboratory Chronicle

Lab ID: 680-58086-1

Client ID: MW-37D (52510)

Sample Date/Time: 05/25/2010 17:50

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-A-1		680-170241		06/01/2010 14:44	1	TAL SAV	JW
A:8260B	680-58086-A-1		680-170241		06/01/2010 14:44	1	TAL SAV	JW

Lab ID: 680-58086-2

Client ID: MW-37S (52510)

Sample Date/Time: 05/25/2010 16:50

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-D-2		680-170241		06/01/2010 15:13	1	TAL SAV	JW
A:8260B	680-58086-D-2		680-170241		06/01/2010 15:13	1	TAL SAV	JW
P:3520C	680-58086-B-2-A		680-170563	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58086-B-2-A		680-170563	680-170229	06/03/2010 22:00	1	TAL SAV	JK
P:3520C	680-58086-B-2-A		680-170565	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58086-B-2-A		680-170565	680-170229	06/03/2010 22:00	1	TAL SAV	JK
P:3005A	680-58086-C-2-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	680-58086-C-2-A		680-170841	680-170586	06/08/2010 05:25	1	TAL SAV	BR
P:7470A	680-58086-A-2-C		680-171106	680-170770	06/07/2010 16:32	1	TAL SAV	DH
A:7470A	680-58086-A-2-C		680-171106	680-170770	06/09/2010 19:16	1	TAL SAV	CE

Lab ID: 680-58086-2 MS

Client ID: MW-37S (52510)

Sample Date/Time: 05/25/2010 16:50

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	680-58086-A-2-A MS		680-170563	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58086-A-2-A MS		680-170563	680-170229	06/04/2010 01:50	1	TAL SAV	JK
P:3520C	680-58086-A-2-A MS		680-170565	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58086-A-2-A MS		680-170565	680-170229	06/04/2010 01:50	1	TAL SAV	JK

Lab ID: 680-58086-2 MSD

Client ID: MW-37S (52510)

Sample Date/Time: 05/25/2010 16:50

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	680-58086-A-2-B MSD		680-170563	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58086-A-2-B MSD		680-170563	680-170229	06/04/2010 02:13	1	TAL SAV	JK
P:3520C	680-58086-A-2-B MSD		680-170565	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58086-A-2-B MSD		680-170565	680-170229	06/04/2010 02:13	1	TAL SAV	JK



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Laboratory Chronicle

Lab ID: 680-58086-3

Client ID: MW-37I (52510)

Sample Date/Time: 05/25/2010 18:40

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-D-3		680-170241		06/01/2010 16:39	1	TAL SAV	JW
A:8260B	680-58086-D-3		680-170241		06/01/2010 16:39	1	TAL SAV	JW
P:3520C	680-58086-A-3-A		680-170563	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58086-A-3-A		680-170563	680-170229	06/03/2010 22:23	1	TAL SAV	JK
P:3520C	680-58086-A-3-A		680-170565	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58086-A-3-A		680-170565	680-170229	06/03/2010 22:23	1	TAL SAV	JK
P:3005A	680-58086-C-3-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	680-58086-C-3-A		680-170841	680-170586	06/08/2010 05:30	1	TAL SAV	BR
P:7470A	680-58086-A-3-B		680-171106	680-170770	06/07/2010 16:32	1	TAL SAV	DH
A:7470A	680-58086-A-3-B		680-171106	680-170770	06/09/2010 19:18	1	TAL SAV	CE

Lab ID: 680-58086-4

Client ID: MW-40D (52610)

Sample Date/Time: 05/26/2010 17:10

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-D-4		680-170256		06/01/2010 17:30	1	TAL SAV	CL
A:8260B	680-58086-D-4		680-170256		06/01/2010 17:30	1	TAL SAV	CL
P:3520C	680-58086-A-4-A		680-170563	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58086-A-4-A		680-170563	680-170229	06/03/2010 22:46	1	TAL SAV	JK
P:3520C	680-58086-A-4-A		680-170565	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58086-A-4-A		680-170565	680-170229	06/03/2010 22:46	1	TAL SAV	JK
P:3005A	680-58086-C-4-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	680-58086-C-4-A		680-170841	680-170586	06/08/2010 05:35	1	TAL SAV	BR
P:7470A	680-58086-A-4-B		680-171106	680-170770	06/07/2010 16:32	1	TAL SAV	DH
A:7470A	680-58086-A-4-B		680-171106	680-170770	06/09/2010 19:21	1	TAL SAV	CE

Lab ID: 680-58086-5

Client ID: MW-40S (52610)

Sample Date/Time: 05/26/2010 18:00

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-D-5		680-170256		06/01/2010 18:00	1	TAL SAV	CL
A:8260B	680-58086-D-5		680-170256		06/01/2010 18:00	1	TAL SAV	CL
P:3520C	680-58086-A-5-A		680-170563	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58086-A-5-A		680-170563	680-170229	06/03/2010 23:09	1	TAL SAV	JK
P:3520C	680-58086-A-5-A		680-170565	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58086-A-5-A		680-170565	680-170229	06/03/2010 23:09	1	TAL SAV	JK
P:3005A	680-58086-C-5-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	680-58086-C-5-A		680-170841	680-170586	06/08/2010 05:40	1	TAL SAV	BR
P:7470A	680-58086-A-5-B		680-171106	680-170770	06/07/2010 16:32	1	TAL SAV	DH
A:7470A	680-58086-A-5-B		680-171106	680-170770	06/09/2010 19:24	1	TAL SAV	CE



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Laboratory Chronicle

Lab ID: 680-58086-6

Client ID: MW-40I (52610)

Sample Date/Time: 05/26/2010 16:20

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-D-6		680-170256		06/01/2010 18:30	1	TAL SAV	CL
A:8260B	680-58086-D-6		680-170256		06/01/2010 18:30	1	TAL SAV	CL
P:3520C	680-58086-A-6-A		680-170563	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58086-A-6-A		680-170563	680-170229	06/03/2010 23:32	1	TAL SAV	JK
P:3520C	680-58086-A-6-A		680-170565	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58086-A-6-A		680-170565	680-170229	06/03/2010 23:32	1	TAL SAV	JK
P:3005A	680-58086-C-6-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	680-58086-C-6-A		680-170841	680-170586	06/08/2010 05:55	1	TAL SAV	BR
P:7470A	680-58086-A-6-B		680-171106	680-170770	06/07/2010 16:32	1	TAL SAV	DH
A:7470A	680-58086-A-6-B		680-171106	680-170770	06/09/2010 19:27	1	TAL SAV	CE

Lab ID: 680-58086-7

Client ID: MW-17S (52610)

Sample Date/Time: 05/26/2010 15:20

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-A-7		680-170256		06/01/2010 18:59	1	TAL SAV	CL
A:8260B	680-58086-A-7		680-170256		06/01/2010 18:59	1	TAL SAV	CL

Lab ID: 680-58086-8

Client ID: MW-17D (52610)

Sample Date/Time: 05/26/2010 15:20

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-B-8		680-170360		06/02/2010 13:18	1	TAL SAV	WJC
A:8260B	680-58086-B-8		680-170360		06/02/2010 13:18	1	TAL SAV	WJC

Lab ID: 680-58086-9

Client ID: MW-27D (52610)

Sample Date/Time: 05/26/2010 14:05

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-C-9		680-170256		06/01/2010 19:58	1	TAL SAV	CL
A:8260B	680-58086-C-9		680-170256		06/01/2010 19:58	1	TAL SAV	CL
P:3520C	680-58086-A-9-A		680-170563	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58086-A-9-A		680-170563	680-170229	06/03/2010 23:55	1	TAL SAV	JK
P:3520C	680-58086-A-9-A		680-170565	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58086-A-9-A		680-170565	680-170229	06/03/2010 23:55	1	TAL SAV	JK



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Laboratory Chronicle

Lab ID: 680-58086-10

Client ID: MW-19D (52610)

Sample Date/Time: 05/26/2010 12:25

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-B-10		680-170360		06/02/2010 12:49	5	TAL SAV	WJC
A:8260B	680-58086-B-10		680-170360		06/02/2010 12:49	5	TAL SAV	WJC

Lab ID: 680-58086-11

Client ID: MW-19S (52610)

Sample Date/Time: 05/26/2010 12:20

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-A-11		680-170211		06/01/2010 18:20	1	TAL SAV	JW
A:8260B	680-58086-A-11		680-170211		06/01/2010 18:20	1	TAL SAV	JW

Lab ID: 680-58086-12

Client ID: MW-19I (52610)

Sample Date/Time: 05/26/2010 13:05

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-B-12		680-170360		06/02/2010 13:47	1	TAL SAV	WJC
A:8260B	680-58086-B-12		680-170360		06/02/2010 13:47	1	TAL SAV	WJC

Lab ID: 680-58086-13

Client ID: MW-18 (52610)

Sample Date/Time: 05/26/2010 10:25

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-B-13		680-170360		06/02/2010 14:15	1	TAL SAV	WJC
A:8260B	680-58086-B-13		680-170360		06/02/2010 14:15	1	TAL SAV	WJC

Lab ID: 680-58086-14

Client ID: MW-16S (52710)

Sample Date/Time: 05/27/2010 10:55

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-A-14		680-170360		06/02/2010 15:42	1	TAL SAV	WJC
A:8260B	680-58086-A-14		680-170360		06/02/2010 15:42	1	TAL SAV	WJC

Lab ID: 680-58086-15

Client ID: MW-16D (52710)

Sample Date/Time: 05/27/2010 11:00

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-A-15		680-170360		06/02/2010 16:10	1	TAL SAV	WJC
A:8260B	680-58086-A-15		680-170360		06/02/2010 16:10	1	TAL SAV	WJC



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Laboratory Chronicle

Lab ID: 680-58086-16

Client ID: MW-32D (52710)

Sample Date/Time: 05/27/2010 13:30

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-B-16		680-170469		06/03/2010 12:05	1	TAL SAV	JW
A:8260B	680-58086-B-16		680-170469		06/03/2010 12:05	1	TAL SAV	JW
P:3520C	680-58086-D-16-A		680-170563	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58086-D-16-A		680-170563	680-170229	06/04/2010 00:18	1	TAL SAV	JK
P:3520C	680-58086-D-16-A		680-170565	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58086-D-16-A		680-170565	680-170229	06/04/2010 00:18	1	TAL SAV	JK

Lab ID: 680-58086-17

Client ID: MW-41I (52710)

Sample Date/Time: 05/27/2010 14:05

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	680-58086-A-17-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	680-58086-A-17-A		680-170841	680-170586	06/08/2010 06:00	1	TAL SAV	BR
P:7470A	680-58086-A-17-B		680-171106	680-170770	06/07/2010 16:32	1	TAL SAV	DH
A:7470A	680-58086-A-17-B		680-171106	680-170770	06/09/2010 19:36	1	TAL SAV	CE

Lab ID: 680-58086-18

Client ID: MW-30S (52710)

Sample Date/Time: 05/27/2010 12:35

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-C-18		680-170360		06/02/2010 17:08	1	TAL SAV	WJC
A:8260B	680-58086-C-18		680-170360		06/02/2010 17:08	1	TAL SAV	WJC

Lab ID: 680-58086-19

Client ID: MW-30D (52710)

Sample Date/Time: 05/27/2010 12:25

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-A-19		680-170469		06/03/2010 12:34	1	TAL SAV	JW
A:8260B	680-58086-A-19		680-170469		06/03/2010 12:34	1	TAL SAV	JW

Lab ID: 680-58086-20

Client ID: MW-33 (52710)

Sample Date/Time: 05/27/2010 15:05

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-C-20		680-170350		06/02/2010 16:25	1	TAL SAV	JW
A:8260B	680-58086-C-20		680-170350		06/02/2010 16:25	1	TAL SAV	JW
P:3520C	680-58086-A-20-A		680-170563	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58086-A-20-A		680-170563	680-170229	06/04/2010 00:41	1	TAL SAV	JK
P:3520C	680-58086-A-20-A		680-170565	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58086-A-20-A		680-170565	680-170229	06/04/2010 00:41	1	TAL SAV	JK

TestAmerica Savannah

A = Analytical Method P = Prep Method



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Laboratory Chronicle

Lab ID: 680-58086-21

Client ID: MW-53S (52710)

Sample Date/Time: 05/27/2010 15:40

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-D-21		680-170350		06/02/2010 16:54	1	TAL SAV	JW
A:8260B	680-58086-D-21		680-170350		06/02/2010 16:54	1	TAL SAV	JW
P:3520C	680-58086-A-21-A		680-170563	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58086-A-21-A		680-170563	680-170229	06/04/2010 01:04	1	TAL SAV	JK
P:3520C	680-58086-A-21-A		680-170565	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58086-A-21-A		680-170565	680-170229	06/04/2010 01:04	1	TAL SAV	JK
P:3005A	680-58086-C-21-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	680-58086-C-21-A		680-170841	680-170586	06/08/2010 06:05	1	TAL SAV	BR
P:7470A	680-58086-A-21-B		680-171106	680-170770	06/07/2010 16:32	1	TAL SAV	DH
A:7470A	680-58086-A-21-B		680-171106	680-170770	06/09/2010 19:39	1	TAL SAV	CE

Lab ID: 680-58086-22

Client ID: Trip Blank

Sample Date/Time: 05/27/2010 00:00

Received Date/Time: 05/28/2010 09:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58086-A-22		680-170469		06/03/2010 14:57	1	TAL SAV	JW
A:8260B	680-58086-A-22		680-170469		06/03/2010 14:57	1	TAL SAV	JW

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 680-170256/8		680-170256		06/01/2010 11:57	1	TAL SAV	CL
A:8260B	MB 680-170256/8		680-170256		06/01/2010 11:57	1	TAL SAV	CL
P:5030B	MB 680-170211/8		680-170211		06/01/2010 12:35	1	TAL SAV	JW
A:8260B	MB 680-170211/8		680-170211		06/01/2010 12:35	1	TAL SAV	JW
P:5030B	MB 680-170241/1		680-170241		06/01/2010 12:50	1	TAL SAV	JW
A:8260B	MB 680-170241/1		680-170241		06/01/2010 12:50	1	TAL SAV	JW
P:5030B	MB 680-170350/7		680-170350		06/02/2010 11:23	1	TAL SAV	JW
A:8260B	MB 680-170350/7		680-170350		06/02/2010 11:23	1	TAL SAV	JW
P:5030B	MB 680-170360/7		680-170360		06/02/2010 12:21	1	TAL SAV	WJC
A:8260B	MB 680-170360/7		680-170360		06/02/2010 12:21	1	TAL SAV	WJC
P:5030B	MB 680-170469/7		680-170469		06/03/2010 10:53	1	TAL SAV	JW
A:8260B	MB 680-170469/7		680-170469		06/03/2010 10:53	1	TAL SAV	JW
P:3520C	MB 680-170229/20-A		680-170563	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	MB 680-170229/20-A		680-170563	680-170229	06/03/2010 20:28	1	TAL SAV	JK
P:3520C	MB 680-170229/20-A		680-170565	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	MB 680-170229/20-A		680-170565	680-170229	06/03/2010 20:28	1	TAL SAV	JK
P:3005A	MB 680-170586/16-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	MB 680-170586/16-A		680-170841	680-170586	06/08/2010 04:55	1	TAL SAV	BR
P:7470A	MB 680-170770/23-A		680-171106	680-170770	06/07/2010 16:32	1	TAL SAV	DH
A:7470A	MB 680-170770/23-A		680-171106	680-170770	06/09/2010 18:25	1	TAL SAV	CE



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58086-1

### Laboratory Chronicle

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 680-170256/4		680-170256		06/01/2010 09:59	1	TAL SAV	CL
A:8260B	LCS 680-170256/4		680-170256		06/01/2010 09:59	1	TAL SAV	CL
P:5030B	LCS 680-170211/4		680-170211		06/01/2010 10:28	1	TAL SAV	JW
A:8260B	LCS 680-170211/4		680-170211		06/01/2010 10:28	1	TAL SAV	JW
P:5030B	LCS 680-170241/5		680-170241		06/01/2010 10:43	1	TAL SAV	JW
A:8260B	LCS 680-170241/5		680-170241		06/01/2010 10:43	1	TAL SAV	JW
P:5030B	LCS 680-170350/4		680-170350		06/02/2010 09:19	1	TAL SAV	JW
A:8260B	LCS 680-170350/4		680-170350		06/02/2010 09:19	1	TAL SAV	JW
P:5030B	LCS 680-170360/4		680-170360		06/02/2010 09:33	1	TAL SAV	WJC
A:8260B	LCS 680-170360/4		680-170360		06/02/2010 09:33	1	TAL SAV	WJC
P:5030B	LCS 680-170469/4		680-170469		06/03/2010 08:43	1	TAL SAV	JW
A:8260B	LCS 680-170469/4		680-170469		06/03/2010 08:43	1	TAL SAV	JW
P:3520C	LCS 680-170229/27-A		680-170563	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	LCS 680-170229/27-A		680-170563	680-170229	06/03/2010 21:37	1	TAL SAV	JK
P:3520C	LCS 680-170229/27-A		680-170565	680-170229	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	LCS 680-170229/27-A		680-170565	680-170229	06/03/2010 21:37	1	TAL SAV	JK
P:3005A	LCS 680-170586/17-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	LCS 680-170586/17-A		680-170841	680-170586	06/08/2010 05:00	1	TAL SAV	BR
P:7470A	LCS 680-170770/24-A		680-171106	680-170770	06/07/2010 16:32	1	TAL SAV	DH
A:7470A	LCS 680-170770/24-A		680-171106	680-170770	06/09/2010 18:28	1	TAL SAV	CE

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCSD 680-170256/6		680-170256		06/01/2010 10:29	1	TAL SAV	CL
A:8260B	LCSD 680-170256/6		680-170256		06/01/2010 10:29	1	TAL SAV	CL
P:5030B	LCSD 680-170211/5		680-170211		06/01/2010 10:57	1	TAL SAV	JW
A:8260B	LCSD 680-170211/5		680-170211		06/01/2010 10:57	1	TAL SAV	JW
P:5030B	LCSD 680-170241/6		680-170241		06/01/2010 11:11	1	TAL SAV	JW
A:8260B	LCSD 680-170241/6		680-170241		06/01/2010 11:11	1	TAL SAV	JW
P:5030B	LCSD 680-170360/5		680-170360		06/02/2010 10:12	1	TAL SAV	WJC
A:8260B	LCSD 680-170360/5		680-170360		06/02/2010 10:12	1	TAL SAV	WJC
P:5030B	LCSD 680-170469/5		680-170469		06/03/2010 09:27	1	TAL SAV	JW
A:8260B	LCSD 680-170469/5		680-170469		06/03/2010 09:27	1	TAL SAV	JW

#### Lab References:

TAL SAV = TestAmerica Savannah



# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

## TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

☒ TestAmerica Savannah  
5102 LaRoche Avenue  
Savannah, GA 31404

Website: www.testamericainc.com  
Phone: (912) 354-7858  
Fax: (912) 352-0165

☐ Alternate Laboratory Name/Location

Phone:  
Fax:

PROJECT REFERENCE		PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSIS				PAGE	OF
ASHLAND - BRUNSWICK		30984-850-9	GA	COMPOSITE (C) OR GRAB (G) INDICATE	82608 - VOC's	8082	8081A - TOXAPHEM	7470A METALS	1	2
LYDIA GULIZIA		4301306047	N/A		8082	8081A - TOXAPHEM	7470A METALS	1	2	
TIM HASSETT				AQUEOUS (WATER)	8082	8081A - TOXAPHEM	7470A METALS	1	2	
CLIENT NAME		CLIENT E-MAIL		SOLID OR SEMISOLID	8082	8081A - TOXAPHEM	7470A METALS	1	2	
CLIENT ADDRESS		CLIENT PHONE		AIR	8082	8081A - TOXAPHEM	7470A METALS	1	2	
2801 Brook St. Brunswick, GA		4301306047		NONAQUEOUS LIQUID (OIL, SOLVENT)	8082	8081A - TOXAPHEM	7470A METALS	1	2	
COMPANY CONTRACTING THIS WORK (if applicable)		CLIENT FAX			8082	8081A - TOXAPHEM	7470A METALS	1	2	
DELTA CONSULTANTS					8082	8081A - TOXAPHEM	7470A METALS	1	2	
SAMPLE IDENTIFICATION					8082	8081A - TOXAPHEM	7470A METALS	1	2	
DATE	TIME				8082	8081A - TOXAPHEM	7470A METALS	1	2	
5/25/10	1750				8082	8081A - TOXAPHEM	7470A METALS	1	2	
5/25/10	1840				8082	8081A - TOXAPHEM	7470A METALS	1	2	
5/26/10	1710				8082	8081A - TOXAPHEM	7470A METALS	1	2	
5/26/10	1800				8082	8081A - TOXAPHEM	7470A METALS	1	2	
5/26/10	1620				8082	8081A - TOXAPHEM	7470A METALS	1	2	
5/26/10	1520				8082	8081A - TOXAPHEM	7470A METALS	1	2	
5/26/10	1520				8082	8081A - TOXAPHEM	7470A METALS	1	2	
5/26/10	1405				8082	8081A - TOXAPHEM	7470A METALS	1	2	
5/26/10	1225				8082	8081A - TOXAPHEM	7470A METALS	1	2	
5/26/10	1220				8082	8081A - TOXAPHEM	7470A METALS	1	2	
5/26/10	1305				8082	8081A - TOXAPHEM	7470A METALS	1	2	
RELINQUISHED BY: (SIGNATURE)		DATE		TIME	RELINQUISHED BY: (SIGNATURE)				DATE	TIME
Burdett		5/25/10		1700	Burdett				5/25/10	1700
RECEIVED BY: (SIGNATURE)		DATE		TIME	RECEIVED BY: (SIGNATURE)				DATE	TIME
Burdett		5/28/10		0918	Burdett				5/28/10	0918

LABORATORY USE ONLY		LABORATORY REMARKS	
SAVANNAH LOG NO.	680-58086	4.6/4.4/4.6	
CUSTODY SEAL NO.			
CUSTODY INTACT	YES <input type="radio"/> NO <input type="radio"/>		
DATE	5/28/10	0918	
RECEIVED FOR LABORATORY BY: (SIGNATURE)	Burdett		



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah  
5102 LaRoche Avenue  
Savannah, GA 31404

Website: www.testamericainc.com  
Phone: (912) 354-7858  
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:  
Fax:

PROJECT REFERENCE		PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSIS				PAGE	OF	
TAL (LAB) PROJECT MANAGER		P.O. NUMBER	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	82608-VOC'S	8082-TORAPHE	60108-APP-9 MERM	74704-MERCURY	2	2
CLIENT (SITE) PM		CLIENT PHONE	CLIENT FAX	ACQUEOUS (WATER)	AIR						STANDARD REPORT DELIVERY
CLIENT NAME		CLIENT E-MAIL		SOLID OR SEMISOLID							DATE DUE
CLIENT ADDRESS											EXPEDITED REPORT DELIVERY (SURCHARGE)
COMPANY CONTRACTING THIS WORK (if applicable)											DATE DUE
DELTA CONSULTANTS											NUMBER OF COOLERS SUBMITTED PER SHIPMENT
SAMPLE	DATE	TIME	SAMPLE IDENTIFICATION								REMARKS
5/26/10	1025		(52610) MW-18	G	X	3					
5/27/10	1055		(52710) MW-165								
	1100		(52710) MW-160								
	1330		(52710) MW-320								
	1405		(52710) MW-412								
	1235		(52710) MW-305								
	1225		(52710) MW-300								
	1505		(52710) MW-33								
	1540		(52710) MW-535								
	1505		(52710) MW-255								
			(52710) MW-250								
			(52710)								
RELINQUISHED BY: (SIGNATURE)				RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME	
Bw Howell					5/27/10	1700					
RECEIVED BY: (SIGNATURE)				RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME	

LABORATORY USE ONLY				LABORATORY REMARKS	
RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES NO	CUSTODY SEAL NO.	SAVANNAH LOG NO.
North	5/28/10	0918	YES		680-3886



## Login Sample Receipt Check List

Client: Ashland Inc.

Job Number: 680-58086-1

**Login Number: 58086**  
**Creator: Conner, Keaton**  
**List Number: 1**

**List Source: TestAmerica Savannah**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	-16 logged for Toxaphene/-18 not logged for Toxaphene--see below
There are no discrepancies between the sample IDs on the containers and the COC.	False	Received liter volume -16--not received -18/TB not listed
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	1 liter -9 received broken
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified	True	



## ANALYTICAL REPORT

Job Number: 680-58129-1

Job Description: Ashland Brunswick RFI GW May 2010

For:  
Ashland Inc.  
500 Hercules Road  
Wilmington, DE 19894  
Attention: Timothy Hassett



Approved for release.  
Lidya Gulizia  
Project Manager I  
6/23/2010 5:49 PM

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Lidya Gulizia  
Project Manager I  
lidya.gulizia@testamericainc.com  
06/23/2010

cc: Kelley Baker  
Mr. Leroy Bishop  
Mr. Dennis Brunner  
Ryan Cate  
Mr. Tony Mancini  
Ms. Charlene Rivard

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; AZ: AZ0741; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

**TestAmerica Laboratories, Inc.**

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404  
Tel (912) 354-7858 Fax (912) 352-0165 [www.testamericainc.com](http://www.testamericainc.com)





**Job Narrative**  
**680-58129-1**

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

Method(s) 8260B: The equipment blank associated with these samples contained a detection above the reporting limit (RL) for the following analyte: Acetone.

No other analytical or quality issues were noted.

**GC Semi VOA**

Method(s) 8081B/8082A: Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample(s) contained an allowable number of surrogate compounds outside limits: MW-54D (52810) (680-58129-1), MW-54D (52810) (680-58129-1 MSD), MW-54I (52810) (680-58129-4). These results have been reported and qualified.

Method(s) 8081B/8082A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 680-170233 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

**Metals**

No analytical or quality issues were noted.

**Comments**

No additional comments.



## METHOD SUMMARY

Client: Ashland Inc.

Job Number: 680-58129-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030B
Organochlorine Pesticides & PCBs (GC)	TAL SAV	SW846 8081A_8082	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	TAL SAV	SW846 8081B/8082A	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Metals (ICP)	TAL SAV	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL SAV		SW846 3005A
Mercury (CVAA)	TAL SAV	SW846 7470A	
Preparation, Mercury	TAL SAV		SW846 7470A

### Lab References:

TAL SAV = TestAmerica Savannah

### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.



## METHOD / ANALYST SUMMARY

Client: Ashland Inc.

Job Number: 680-58129-1

Method	Analyst	Analyst ID
SW846 8260B	Waldorf, Jonathan	JW
SW846 8081A_8082	Kellar, Joshua	JK
SW846 8081B/8082A	Kellar, Joshua	JK
SW846 6010B	Robertson, Bryn	BR
SW846 7470A	Eaton, Cliff	CE



## SAMPLE SUMMARY

Client: Ashland Inc.

Job Number: 680-58129-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-58129-1	MW-54D (52810)	Water	a5/28/2a1a 1115	05/29/2010 1318
680-58129-1MS	MW-54D (52810)	Water	05/28/2010 1120	05/29/2010 1318
680-58129-1MSD	MW-54D (52810)	Water	05/28/2010 1120	05/29/2010 1318
680-58129-2FD	MW-54DD (52810)	Water	05/28/2010 1115	05/29/2010 1318
680-58129-3EB	EQPT. BLANK (52810)	Water	05/28/2010 1200	05/29/2010 1318
680-58129-4	MW-54I (52810)	Water	05/28/2010 1315	05/29/2010 1318
680-58129-5	MW-54S (52810)	Water	05/28/2010 1120	05/29/2010 1318
680-58129-6TB	TRIP BLANK	Water	05/28/2010 0000	05/29/2010 1318



# **SAMPLE RESULTS**



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54D (52810)**

Lab Sample ID: 680-58129-1

Date Sampled: 05/28/2010 1115

Client Matrix: Water

Date Received: 05/29/2010 1318

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170470	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o2008.d
Dilution:	2.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1317		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1317			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	50	U	10	50
Acetonitrile	80	U	20	80
Acrolein	40	U	15	40
Acrylonitrile	40	U	14	40
Benzene	110		0.50	2.0
Bromoform	2.0	U	1.0	2.0
Bromomethane	2.0	U	1.6	2.0
2-Butanone (MEK)	20	U	2.0	20
Carbon disulfide	4.0	U	1.2	4.0
Carbon tetrachloride	2.0	U	1.0	2.0
Chlorobenzene	170		0.50	2.0
2-Chloro-1,3-butadiene	2.0	U	0.60	2.0
Chlorodibromomethane	2.0	U	0.20	2.0
Chloroethane	2.0	U	2.0	2.0
Chloroform	1.7	J	0.28	2.0
Chloromethane	2.0	U	0.66	2.0
3-Chloro-1-propene	2.0	U	0.40	2.0
cis-1,3-Dichloropropene	2.0	U	0.22	2.0
1,2-Dibromo-3-Chloropropane	2.0	U	0.88	2.0
Dibromomethane	2.0	U	0.40	2.0
Dichlorobromomethane	2.0	U	0.50	2.0
Dichlorodifluoromethane	2.0	U	0.50	2.0
1,1-Dichloroethane	0.61	J	0.50	2.0
1,2-Dichloroethane	2.9		0.20	2.0
1,1-Dichloroethene	0.61	J	0.22	2.0
1,2-Dichloropropane	2.0	U	0.26	2.0
Ethylbenzene	32		0.22	2.0
Ethylene Dibromide	2.0	U	0.50	2.0
Ethyl methacrylate	2.0	U	0.50	2.0
2-Hexanone	20	U	2.0	20
Iodomethane	10	U	2.0	10
Isobutyl alcohol	80	U	22	80
Methacrylonitrile	40	U	6.6	40
Methylene Chloride	17		2.0	10
Methyl methacrylate	2.0	U	0.96	2.0
4-Methyl-2-pentanone (MIBK)	20	U	2.0	20
Pentachloroethane	10	U	2.4	10
Propionitrile	40	U	9.2	40
Styrene	2.0	U	0.22	2.0
1,1,1,2-Tetrachloroethane	2.0	U	0.66	2.0
1,1,2,2-Tetrachloroethane	2.0	U	0.36	2.0
Tetrachloroethene	0.59	J	0.30	2.0
Toluene	13		0.66	2.0
trans-1,4-Dichloro-2-butene	4.0	U	1.0	4.0
trans-1,2-Dichloroethene	2.0	U	0.40	2.0
trans-1,3-Dichloropropene	2.0	U	0.42	2.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54D (52810)**

Lab Sample ID: 680-58129-1

Date Sampled: 05/28/2010 1115

Client Matrix: Water

Date Received: 05/29/2010 1318

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170470	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o2008.d
Dilution:	2.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1317		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1317			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	2.0	U	1.0	2.0
1,1,2-Trichloroethane	2.0	U	0.26	2.0
Trichloroethene	0.70	J	0.26	2.0
Trichlorofluoromethane	2.0	U	0.50	2.0
1,2,3-Trichloropropane	2.0	U	0.82	2.0
Vinyl acetate	4.0	U	0.56	4.0
Vinyl chloride	2.0	U	0.36	2.0
Xylenes, Total	320		0.40	4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	80		75 - 121
Toluene-d8 (Surr)	98		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54DD (52810)**

Lab Sample ID: 680-58129-2FD

Date Sampled: 05/28/2010 1115

Client Matrix: Water

Date Received: 05/29/2010 1318

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170470	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o2010.d
Dilution:	2.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1345		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1345			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	21	J	10	50
Acetonitrile	80	U	20	80
Acrolein	40	U	15	40
Acrylonitrile	40	U	14	40
Benzene	120		0.50	2.0
Bromoform	2.0	U	1.0	2.0
Bromomethane	2.0	U	1.6	2.0
2-Butanone (MEK)	2.2	J	2.0	20
Carbon disulfide	4.0	U	1.2	4.0
Carbon tetrachloride	2.0	U	1.0	2.0
Chlorobenzene	180		0.50	2.0
2-Chloro-1,3-butadiene	2.0	U	0.60	2.0
Chlorodibromomethane	2.0	U	0.20	2.0
Chloroethane	2.0	U	2.0	2.0
Chloroform	1.8	J	0.28	2.0
Chloromethane	2.0	U	0.66	2.0
3-Chloro-1-propene	2.0	U	0.40	2.0
cis-1,3-Dichloropropene	2.0	U	0.22	2.0
1,2-Dibromo-3-Chloropropane	2.0	U	0.88	2.0
Dibromomethane	2.0	U	0.40	2.0
Dichlorobromomethane	2.0	U	0.50	2.0
Dichlorodifluoromethane	2.0	U	0.50	2.0
1,1-Dichloroethane	0.64	J	0.50	2.0
1,2-Dichloroethane	2.9		0.20	2.0
1,1-Dichloroethene	0.58	J	0.22	2.0
1,2-Dichloropropane	2.0	U	0.26	2.0
Ethylbenzene	33		0.22	2.0
Ethylene Dibromide	2.0	U	0.50	2.0
Ethyl methacrylate	2.0	U	0.50	2.0
2-Hexanone	20	U	2.0	20
Iodomethane	10	U	2.0	10
Isobutyl alcohol	80	U	22	80
Methacrylonitrile	40	U	6.6	40
Methylene Chloride	17		2.0	10
Methyl methacrylate	2.0	U	0.96	2.0
4-Methyl-2-pentanone (MIBK)	20	U	2.0	20
Pentachloroethane	10	U	2.4	10
Propionitrile	40	U	9.2	40
Styrene	2.0	U	0.22	2.0
1,1,1,2-Tetrachloroethane	2.0	U	0.66	2.0
1,1,2,2-Tetrachloroethane	2.0	U	0.36	2.0
Tetrachloroethene	0.61	J	0.30	2.0
Toluene	13		0.66	2.0
trans-1,4-Dichloro-2-butene	4.0	U	1.0	4.0
trans-1,2-Dichloroethene	2.0	U	0.40	2.0
trans-1,3-Dichloropropene	2.0	U	0.42	2.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54DD (52810)**

Lab Sample ID: 680-58129-2FD

Date Sampled: 05/28/2010 1115

Client Matrix: Water

Date Received: 05/29/2010 1318

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170470	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o2010.d
Dilution:	2.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1345		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1345			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	2.0	U	1.0	2.0
1,1,2-Trichloroethane	2.0	U	0.26	2.0
Trichloroethene	0.74	J	0.26	2.0
Trichlorofluoromethane	2.0	U	0.50	2.0
1,2,3-Trichloropropane	2.0	U	0.82	2.0
Vinyl acetate	4.0	U	0.56	4.0
Vinyl chloride	2.0	U	0.36	2.0
Xylenes, Total	330		0.40	4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	102		75 - 120
Dibromofluoromethane	83		75 - 121
Toluene-d8 (Surr)	98		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: EQPT. BLANK (52810)**

Lab Sample ID: 680-58129-3EB

Date Sampled: 05/28/2010 1200

Client Matrix: Water

Date Received: 05/29/2010 1318

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170470	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o2004.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1219		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1219			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	300		5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.16	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: EQPT. BLANK (52810)**

Lab Sample ID: 680-58129-3EB

Date Sampled: 05/28/2010 1200

Client Matrix: Water

Date Received: 05/29/2010 1318

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170470	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o2004.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1219		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1219			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	1.3	J	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	93		75 - 120
Dibromofluoromethane	93		75 - 121
Toluene-d8 (Surr)	95		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54I (52810)**

Lab Sample ID: 680-58129-4

Date Sampled: 05/28/2010 1315

Client Matrix: Water

Date Received: 05/29/2010 1318

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170470	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o2012.d
Dilution:	100		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1414		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1414			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	2500	U	500	2500
Acetonitrile	4000	U	1000	4000
Acrolein	2000	U	740	2000
Acrylonitrile	2000	U	720	2000
Benzene	100	U	25	100
Bromoform	100	U	50	100
Bromomethane	100	U	80	100
2-Butanone (MEK)	1000	U	100	1000
Carbon disulfide	200	U	60	200
Carbon tetrachloride	100	U	50	100
Chlorobenzene	28	J	25	100
2-Chloro-1,3-butadiene	100	U	30	100
Chlorodibromomethane	100	U	10	100
Chloroethane	100	U	100	100
Chloroform	100	U	14	100
Chloromethane	100	U	33	100
3-Chloro-1-propene	100	U	20	100
cis-1,3-Dichloropropene	100	U	11	100
1,2-Dibromo-3-Chloropropane	100	U	44	100
Dibromomethane	100	U	20	100
Dichlorobromomethane	100	U	25	100
Dichlorodifluoromethane	100	U	25	100
1,1-Dichloroethane	100	U	25	100
1,2-Dichloroethane	100	U	10	100
1,1-Dichloroethene	100	U	11	100
1,2-Dichloropropane	100	U	13	100
Ethylbenzene	3300		11	100
Ethylene Dibromide	100	U	25	100
Ethyl methacrylate	100	U	25	100
2-Hexanone	1000	U	100	1000
Iodomethane	500	U	100	500
Isobutyl alcohol	4000	U	1100	4000
Methacrylonitrile	2000	U	330	2000
Methylene Chloride	500	U	100	500
Methyl methacrylate	100	U	48	100
4-Methyl-2-pentanone (MIBK)	1000	U	100	1000
Pentachloroethane	500	U	120	500
Propionitrile	2000	U	460	2000
Styrene	100	U	11	100
1,1,1,2-Tetrachloroethane	100	U	33	100
1,1,2,2-Tetrachloroethane	100	U	18	100
Tetrachloroethene	100	U	15	100
Toluene	47	J	33	100
trans-1,4-Dichloro-2-butene	200	U	50	200
trans-1,2-Dichloroethene	100	U	20	100
trans-1,3-Dichloropropene	100	U	21	100



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54I (52810)**

Lab Sample ID: 680-58129-4

Date Sampled: 05/28/2010 1315

Client Matrix: Water

Date Received: 05/29/2010 1318

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170470	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o2012.d
Dilution:	100		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1414		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1414			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	100	U	50	100
1,1,2-Trichloroethane	100	U	13	100
Trichloroethene	100	U	13	100
Trichlorofluoromethane	100	U	25	100
1,2,3-Trichloropropane	100	U	41	100
Vinyl acetate	200	U	28	200
Vinyl chloride	100	U	18	100
Xylenes, Total	21000		20	200

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		75 - 120
Dibromofluoromethane	84		75 - 121
Toluene-d8 (Surr)	99		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54S (52810)**

Lab Sample ID: 680-58129-5

Date Sampled: 05/28/2010 1120

Client Matrix: Water

Date Received: 05/29/2010 1318

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170470	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o2014.d
Dilution:	20		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1442		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1442			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	500	U	100	500
Acetonitrile	800	U	200	800
Acrolein	400	U	150	400
Acrylonitrile	400	U	140	400
Benzene	20	U	5.0	20
Bromoform	20	U	10	20
Bromomethane	20	U	16	20
2-Butanone (MEK)	200	U	20	200
Carbon disulfide	40	U	12	40
Carbon tetrachloride	20	U	10	20
Chlorobenzene	20	U	5.0	20
2-Chloro-1,3-butadiene	20	U	6.0	20
Chlorodibromomethane	20	U	2.0	20
Chloroethane	20	U	20	20
Chloroform	20	U	2.8	20
Chloromethane	20	U	6.6	20
3-Chloro-1-propene	20	U	4.0	20
cis-1,3-Dichloropropene	20	U	2.2	20
1,2-Dibromo-3-Chloropropane	20	U	8.8	20
Dibromomethane	20	U	4.0	20
Dichlorobromomethane	20	U	5.0	20
Dichlorodifluoromethane	20	U	5.0	20
1,1-Dichloroethane	20	U	5.0	20
1,2-Dichloroethane	20	U	2.0	20
1,1-Dichloroethene	20	U	2.2	20
1,2-Dichloropropane	20	U	2.6	20
Ethylbenzene	970		2.2	20
Ethylene Dibromide	20	U	5.0	20
Ethyl methacrylate	20	U	5.0	20
2-Hexanone	200	U	20	200
Iodomethane	100	U	20	100
Isobutyl alcohol	800	U	220	800
Methacrylonitrile	400	U	66	400
Methylene Chloride	100	U	20	100
Methyl methacrylate	20	U	9.6	20
4-Methyl-2-pentanone (MIBK)	200	U	20	200
Pentachloroethane	100	U	24	100
Propionitrile	400	U	92	400
Styrene	20	U	2.2	20
1,1,1,2-Tetrachloroethane	20	U	6.6	20
1,1,2,2-Tetrachloroethane	20	U	3.6	20
Tetrachloroethene	20	U	3.0	20
Toluene	20	U	6.6	20
trans-1,4-Dichloro-2-butene	40	U	10	40
trans-1,2-Dichloroethene	20	U	4.0	20
trans-1,3-Dichloropropene	20	U	4.2	20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54S (52810)**

Lab Sample ID: 680-58129-5

Date Sampled: 05/28/2010 1120

Client Matrix: Water

Date Received: 05/29/2010 1318

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170470	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o2014.d
Dilution:	20		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1442		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1442			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	20	U	10	20
1,1,2-Trichloroethane	20	U	2.6	20
Trichloroethene	20	U	2.6	20
Trichlorofluoromethane	20	U	5.0	20
1,2,3-Trichloropropane	20	U	8.2	20
Vinyl acetate	40	U	5.6	40
Vinyl chloride	20	U	3.6	20
Xylenes, Total	4300		4.0	40

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		75 - 120
Dibromofluoromethane	83		75 - 121
Toluene-d8 (Surr)	96		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 680-58129-6TB

Date Sampled: 05/28/2010 0000

Client Matrix: Water

Date Received: 05/29/2010 1318

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170470	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o2006.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1248		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1248			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 680-58129-6TB

Date Sampled: 05/28/2010 0000

Client Matrix: Water

Date Received: 05/29/2010 1318

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170470	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o2006.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 1248		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 1248			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	93		75 - 120
Dibromofluoromethane	92		75 - 121
Toluene-d8 (Surr)	96		75 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-58129-1

Client Sample ID: MW-54D (52810)

Lab Sample ID: 680-58129-1

Date Sampled: 05/28/2010 1115

Client Matrix: Water

Date Received: 05/29/2010 1318

### 8081A\_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-170425	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170233	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 0130		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	6.9		0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	33		14 - 115
Tetrachloro-m-xylene	144	X	35 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-58129-1

Client Sample ID: MW-54DD (52810)

Lab Sample ID: 680-58129-2FD

Date Sampled: 05/28/2010 1115

Client Matrix: Water

Date Received: 05/29/2010 1318

### 8081A\_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-170425	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170233	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 0153		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	6.1		0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	65		14 - 115
Tetrachloro-m-xylene	52		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID:** MW-54I (52810)

Lab Sample ID: 680-58129-4

Date Sampled: 05/28/2010 1315

Client Matrix: Water

Date Received: 05/29/2010 1318

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-170425	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170233	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 0216		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	28		0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	73		14 - 115
Tetrachloro-m-xylene	132	X	35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54S (52810)**

Lab Sample ID: 680-58129-5

Date Sampled: 05/28/2010 1120

Client Matrix: Water

Date Received: 05/29/2010 1318

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-170425	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170233	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 0239		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	67		14 - 115
Tetrachloro-m-xylene	73		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID:** MW-54D (52810)

Lab Sample ID: 680-58129-1

Date Sampled: 05/28/2010 1115

Client Matrix: Water

Date Received: 05/29/2010 1318

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-170426	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170233	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 0130		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.7	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	33		14 - 115
Tetrachloro-m-xylene	144	X	35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID:** MW-54DD (52810)

Lab Sample ID: 680-58129-2FD

Date Sampled: 05/28/2010 1115

Client Matrix: Water

Date Received: 05/29/2010 1318

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-170426	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170233	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 0153		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.9	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	65		14 - 115
Tetrachloro-m-xylene	52		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54I (52810)**

Lab Sample ID: 680-58129-4

Date Sampled: 05/28/2010 1315

Client Matrix: Water

Date Received: 05/29/2010 1318

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-170426	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170233	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 0216		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	73		14 - 115
Tetrachloro-m-xylene	132	X	35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54S (52810)**

Lab Sample ID: 680-58129-5

Date Sampled: 05/28/2010 1120

Client Matrix: Water

Date Received: 05/29/2010 1318

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-170426	Instrument ID:	SGJ
Preparation:	3520C	Prep Batch: 680-170233	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/03/2010 0239		Injection Volume:	2 uL
Date Prepared:	06/01/2010 1533		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	67		14 - 115
Tetrachloro-m-xylene	73		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54D (52810)**

Lab Sample ID: 680-58129-1

Date Sampled: 05/28/2010 1115

Client Matrix: Water

Date Received: 05/29/2010 1318

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-170841	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-170586	Lab File ID:	060710.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/08/2010 0610		Final Weight/Volume:	50 mL
Date Prepared:	06/04/2010 1143			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	580		2.0	10
Beryllium	0.15	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	9.1	J	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171231	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171056	Lab File ID:	b061010.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/10/2010 1934		Final Weight/Volume:	50 mL
Date Prepared:	06/09/2010 1703			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54DD (52810)**

Lab Sample ID: 680-58129-2FD

Date Sampled: 05/28/2010 1115

Client Matrix: Water

Date Received: 05/29/2010 1318

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-170841	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-170586	Lab File ID:	060710.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/08/2010 0635		Final Weight/Volume:	50 mL
Date Prepared:	06/04/2010 1143			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	400		2.0	10
Beryllium	0.13	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	3.8	J	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	19	J	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171231	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171056	Lab File ID:	b061010.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/10/2010 1943		Final Weight/Volume:	50 mL
Date Prepared:	06/09/2010 1703			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54I (52810)**

Lab Sample ID: 680-58129-4

Date Sampled: 05/28/2010 1315

Client Matrix: Water

Date Received: 05/29/2010 1318

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-170841	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-170586	Lab File ID:	060710.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/08/2010 0640		Final Weight/Volume:	50 mL
Date Prepared:	06/04/2010 1143			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	470		2.0	10
Beryllium	2.5	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171231	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171056	Lab File ID:	b061010.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/10/2010 1946		Final Weight/Volume:	50 mL
Date Prepared:	06/09/2010 1703			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58129-1

**Client Sample ID: MW-54S (52810)**

Lab Sample ID: 680-58129-5

Date Sampled: 05/28/2010 1120

Client Matrix: Water

Date Received: 05/29/2010 1318

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-170841	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-170586	Lab File ID:	060710.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/08/2010 0656		Final Weight/Volume:	50 mL
Date Prepared:	06/04/2010 1143			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	110		2.0	10
Beryllium	0.15	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	16	J	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171231	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171056	Lab File ID:	b061010.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/10/2010 1949		Final Weight/Volume:	50 mL
Date Prepared:	06/09/2010 1703			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



## DATA REPORTING QUALIFIERS

Client: Ashland Inc.

Job Number: 680-58129-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Indicates the analyte was analyzed for but not detected.
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
	F	MS or MSD exceeds the control limits
	X	Surrogate is outside control limits
Metals		
	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.



# QUALITY CONTROL RESULTS



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:680-170470					
LCS 680-170470/4	Lab Control Sample	T	Water	8260B	
LCSD 680-170470/5	Lab Control Sample Duplicate	T	Water	8260B	
680-58129-1	MW-54D (52810)	T	Water	8260B	
680-58129-1MS	Matrix Spike	T	Water	8260B	
680-58129-1MSD	Matrix Spike Duplicate	T	Water	8260B	
680-58129-2FD	MW-54DD (52810)	T	Water	8260B	
680-58129-3EB	EQPT. BLANK (52810)	T	Water	8260B	
680-58129-4	MW-54I (52810)	T	Water	8260B	
680-58129-5	MW-54S (52810)	T	Water	8260B	
680-58129-6TB	TRIP BLANK	T	Water	8260B	

#### Report Basis

T = Total



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC Semi VOA</b>					
<b>Prep Batch: 680-170233</b>					
LCS 680-170233/27-A	Lab Control Sample	T	Water	3520C	
MB 680-170233/19-A	Method Blank	T	Water	3520C	
680-58129-1	MW-54D (52810)	T	Water	3520C	
680-58129-1MS	Matrix Spike	T	Water	3520C	
680-58129-1MSD	Matrix Spike Duplicate	T	Water	3520C	
680-58129-2FD	MW-54DD (52810)	T	Water	3520C	
680-58129-4	MW-54I (52810)	T	Water	3520C	
680-58129-5	MW-54S (52810)	T	Water	3520C	
<b>Analysis Batch: 680-170425</b>					
LCS 680-170233/27-A	Lab Control Sample	T	Water	8081A_8082	680-170233
MB 680-170233/19-A	Method Blank	T	Water	8081A_8082	680-170233
680-58129-1	MW-54D (52810)	T	Water	8081A_8082	680-170233
680-58129-1MS	Matrix Spike	T	Water	8081A_8082	680-170233
680-58129-1MSD	Matrix Spike Duplicate	T	Water	8081A_8082	680-170233
680-58129-2FD	MW-54DD (52810)	T	Water	8081A_8082	680-170233
680-58129-4	MW-54I (52810)	T	Water	8081A_8082	680-170233
680-58129-5	MW-54S (52810)	T	Water	8081A_8082	680-170233
<b>Analysis Batch: 680-170426</b>					
LCS 680-170233/27-A	Lab Control Sample	T	Water	8081A_8082	680-170233
MB 680-170233/19-A	Method Blank	T	Water	8081A_8082	680-170233
680-58129-1	MW-54D (52810)	T	Water	8081B/8082A	680-170233
680-58129-1MS	Matrix Spike	T	Water	8081B/8082A	680-170233
680-58129-1MSD	Matrix Spike Duplicate	T	Water	8081B/8082A	680-170233
680-58129-2FD	MW-54DD (52810)	T	Water	8081B/8082A	680-170233
680-58129-4	MW-54I (52810)	T	Water	8081B/8082A	680-170233
680-58129-5	MW-54S (52810)	T	Water	8081B/8082A	680-170233

#### Report Basis

T = Total



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 680-170586</b>					
LCS 680-170586/17-A	Lab Control Sample	R	Water	3005A	
MB 680-170586/16-A	Method Blank	R	Water	3005A	
680-58129-1	MW-54D (52810)	R	Water	3005A	
680-58129-1MS	Matrix Spike	R	Water	3005A	
680-58129-1MSD	Matrix Spike Duplicate	R	Water	3005A	
680-58129-2FD	MW-54DD (52810)	R	Water	3005A	
680-58129-4	MW-54I (52810)	R	Water	3005A	
680-58129-5	MW-54S (52810)	R	Water	3005A	
<b>Analysis Batch: 680-170841</b>					
LCS 680-170586/17-A	Lab Control Sample	R	Water	6010B	680-170586
MB 680-170586/16-A	Method Blank	R	Water	6010B	680-170586
680-58129-1	MW-54D (52810)	R	Water	6010B	680-170586
680-58129-1MS	Matrix Spike	R	Water	6010B	680-170586
680-58129-1MSD	Matrix Spike Duplicate	R	Water	6010B	680-170586
680-58129-2FD	MW-54DD (52810)	R	Water	6010B	680-170586
680-58129-4	MW-54I (52810)	R	Water	6010B	680-170586
680-58129-5	MW-54S (52810)	R	Water	6010B	680-170586
<b>Prep Batch: 680-171056</b>					
LCS 680-171056/24-A	Lab Control Sample	T	Water	7470A	
MB 680-171056/23-A	Method Blank	T	Water	7470A	
680-58129-1	MW-54D (52810)	T	Water	7470A	
680-58129-1MS	Matrix Spike	T	Water	7470A	
680-58129-1MSD	Matrix Spike Duplicate	T	Water	7470A	
680-58129-2FD	MW-54DD (52810)	T	Water	7470A	
680-58129-4	MW-54I (52810)	T	Water	7470A	
680-58129-5	MW-54S (52810)	T	Water	7470A	
<b>Analysis Batch: 680-171231</b>					
LCS 680-171056/24-A	Lab Control Sample	T	Water	7470A	680-171056
MB 680-171056/23-A	Method Blank	T	Water	7470A	680-171056
680-58129-1	MW-54D (52810)	T	Water	7470A	680-171056
680-58129-1MS	Matrix Spike	T	Water	7470A	680-171056
680-58129-1MSD	Matrix Spike Duplicate	T	Water	7470A	680-171056
680-58129-2FD	MW-54DD (52810)	T	Water	7470A	680-171056
680-58129-4	MW-54I (52810)	T	Water	7470A	680-171056
680-58129-5	MW-54S (52810)	T	Water	7470A	680-171056

#### Report Basis

R = Total Recoverable

T = Total

TestAmerica Savannah



Client: Ashland Inc.

Job Number: 680-58129-1

## Surrogate Recovery Report

### 8260B Volatile Organic Compounds (GC/MS)

#### Client Matrix: Water

L-16: pNeD	Client Name	BFB %Rec	DBFM %Rec	TOL %Rec
680-58129-1	MW-54D (52810)	97	80	98
680-58129-2	MW-54DD (52810)	102	83	98
680-58129-3	EQPT. BLANK (52810)	93	93	95
680-58129-4	MW-54I (52810)	99	84	99
680-58129-5	MW-54S (52810)	99	83	96
680-58129-6	TRIP BLANK	93	92	96
LCS 680-170470/4		100	97	95
LCSD 680-170470/5		96	96	95
680-58129-1 MS	MW-54D (52810) MS	100	95	99
680-58129-1 MSD	MW-54D (52810) MSD	100	91	98

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120



Client: Ashland Inc.

Job Number: 680-58129-1

## Surrogate Recovery Report

### 8081A 8082 Organochlorine Pesticides & PCBs (GC)

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	TCX1 %Rec
680-58129-1	MW-54D (52810)	33	144X
680-58129-2	MW-54DD (52810)	65	52
680-58129-4	MW-54I (52810)	73	132X
680-58129-5	MW-54S (52810)	67	73
MB 680-170233/19-A		105	68
MB 680-170233/19-A		105	68
LCS 680-170233/27-A		137X	74
LCS 680-170233/27-A		137X	74
680-58129-1 MS	MW-54D (52810) MS	101	118
680-58129-1 MSD	MW-54D (52810) MSD	120X	114

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



Client: Ashland Inc.

Job Number: 680-58129-1

**Surrogate Recovery Report****8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography****Client Matrix: Water**

Lab Sample ID	Client Sample ID	DCB1	TCX1
		%Rec	%Rec
680-58129-1	MW-54D (52810)	33	144X
680-58129-2	MW-54DD (52810)	65	52
680-58129-4	MW-54I (52810)	73	132X
680-58129-5	MW-54S (52810)	67	73
680-58129-1 MS	MW-54D (52810) MS	101	118
680-58129-1 MSD	MW-54D (52810) MSD	120X	114

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170470**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170470/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0858  
Date Prepared: 06/03/2010 0858

Analysis Batch: 680-170470  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq660.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170470/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0941  
Date Prepared: 06/03/2010 0941

Analysis Batch: 680-170470  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq662.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	104	101	17 - 175	3	50		
Benzene	97	96	77 - 119	1	30		
Bromoform	102	100	62 - 133	2	30		
Bromomethane	112	113	12 - 184	1	50		
2-Butanone (MEK)	104	102	33 - 157	2	30		
Carbon disulfide	96	96	55 - 131	0	30		
Carbon tetrachloride	99	98	71 - 135	2	30		
Chlorobenzene	105	105	85 - 116	0	30		
Chlorodibromomethane	112	109	75 - 133	2	30		
Chloroethane	96	92	40 - 165	4	50		
Chloroform	107	104	82 - 120	3	30		
Chloromethane	101	99	48 - 142	2	50		
cis-1,3-Dichloropropene	108	108	76 - 126	0	30		
1,2-Dibromo-3-Chloropropane	90	105	49 - 140	15	30		
Dibromomethane	98	99	78 - 119	2	30		
Dichlorobromomethane	94	95	78 - 127	1	30		
Dichlorodifluoromethane	97	88	34 - 154	9	30		
1,1-Dichloroethane	95	94	74 - 127	2	30		
1,2-Dichloroethane	99	100	66 - 132	0	30		
1,1-Dichloroethene	99	97	62 - 141	1	30		
1,2-Dichloropropane	99	99	73 - 124	0	30		
Ethylbenzene	92	92	86 - 116	0	30		
Ethylene Dibromide	96	98	80 - 121	2	30		
2-Hexanone	106	102	34 - 161	3	30		
Methylene Chloride	105	105	70 - 125	0	30		
4-Methyl-2-pentanone (MIBK)	101	99	40 - 151	2	30		
Styrene	102	101	82 - 122	2	30		
1,1,1,2-Tetrachloroethane	102	101	81 - 128	0	30		
1,1,2,2-Tetrachloroethane	103	102	69 - 129	2	30		
Tetrachloroethene	93	92	76 - 126	1	30		
Toluene	96	98	81 - 117	1	30		
trans-1,2-Dichloroethene	106	104	72 - 131	2	30		
trans-1,3-Dichloropropene	93	93	73 - 128	0	30		
1,1,1-Trichloroethane	94	95	76 - 127	1	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170470**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170470/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0858  
Date Prepared: 06/03/2010 0858

Analysis Batch: 680-170470  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq660.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170470/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0941  
Date Prepared: 06/03/2010 0941

Analysis Batch: 680-170470  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq662.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	98	97	75 - 121	1	30		
Trichloroethene	93	94	84 - 115	2	30		
Trichlorofluoromethane	101	98	58 - 149	3	50		
1,2,3-Trichloropropane	98	94	70 - 130	4	30		
Vinyl acetate	105	100	10 - 217	5	30		
Vinyl chloride	94	95	59 - 144	1	50		
Xylenes, Total	105	103	84 - 118	1	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	100		96		75 - 120		
Dibromofluoromethane	97		96		75 - 121		
Toluene-d8 (Surr)	95		95		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-170470**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170470/4  
Client Matrix: W- r A  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0858  
Date Prepared: 06/03/2010 0858

Units: ug/L

LCSD Lab Sample ID: LCSD 680-170470/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0941  
Date Prepared: 06/03/2010 0941

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	104	101
Benzene	50.0	50.0	48.4	48.2
Bromoform	50.0	50.0	51.0	49.8
Bromomethane	50.0	50.0	56.2	56.7
2-Butanone (MEK)	100	100	104	102
Carbon disulfide	50.0	50.0	48.1	48.1
Carbon tetrachloride	50.0	50.0	49.7	49.0
Chlorobenzene	50.0	50.0	52.5	52.6
Chlorodibromomethane	50.0	50.0	55.8	54.7
Chloroethane	50.0	50.0	47.9	46.2
Chloroform	50.0	50.0	53.7	52.2
Chloromethane	50.0	50.0	50.5	49.7
cis-1,3-Dichloropropene	50.0	50.0	53.8	53.9
1,2-Dibromo-3-Chloropropane	50.0	50.0	45.1	52.6
Dibromomethane	50.0	50.0	48.9	49.6
Dichlorobromomethane	50.0	50.0	46.8	47.4
Dichlorodifluoromethane	50.0	50.0	48.3	43.9
1,1-Dichloroethane	50.0	50.0	47.7	46.9
1,2-Dichloroethane	50.0	50.0	49.7	49.8
1,1-Dichloroethene	50.0	50.0	49.4	48.7
1,2-Dichloropropane	50.0	50.0	49.6	49.7
Ethylbenzene	50.0	50.0	46.1	46.2
Ethylene Dibromide	50.0	50.0	48.0	48.9
2-Hexanone	100	100	106	102
Methylene Chloride	50.0	50.0	52.5	52.4
4-Methyl-2-pentanone (MIBK)	100	100	101	99.3
Styrene	50.0	50.0	51.1	50.4
1,1,1,2-Tetrachloroethane	50.0	50.0	50.9	50.7
1,1,2,2-Tetrachloroethane	50.0	50.0	51.6	50.8
Tetrachloroethene	50.0	50.0	46.4	46.0
Toluene	50.0	50.0	48.1	48.8
trans-1,2-Dichloroethene	50.0	50.0	53.2	52.1
trans-1,3-Dichloropropene	50.0	50.0	46.5	46.3
1,1,1-Trichloroethane	50.0	50.0	47.1	47.7
1,1,2-Trichloroethane	50.0	50.0	48.8	48.3
Trichloroethene	50.0	50.0	46.3	47.1
Trichlorofluoromethane	50.0	50.0	50.6	49.0
1,2,3-Trichloropropane	50.0	50.0	49.2	47.1
Vinyl acetate	100	100	105	100
Vinyl chloride	50.0	50.0	47.2	47.6
Xylenes, Total	150	150	157	155



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 680-170470**

**Method: 8260B  
Preparation: 5030B**

MS Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 1735  
Date Prepared: 06/03/2010 1735

Analysis Batch: 680-170470  
Prep Batch: N/A

Instrument ID: MSO2  
Lab File ID: o2026.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 1804  
Date Prepared: 06/03/2010 1804

Analysis Batch: 680-170470  
Prep Batch: N/A

Instrument ID: MSO2  
Lab File ID: o2028.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Acetone	93	99	17 - 175	6	50		
Benzene	-16	-19	77 - 119	1	30	F	F
Bromoform	98	101	62 - 133	3	30		
Bromomethane	105	113	12 - 184	7	50		
2-Butanone (MEK)	101	96	33 - 157	5	30		
Carbon disulfide	94	90	55 - 131	4	30		
Carbon tetrachloride	98	98	71 - 135	0	30		
Chlorobenzene	-30	-29	85 - 116	0	30	F	F
Chlorodibromomethane	109	110	75 - 133	0	30		
Chloroethane	96	96	40 - 165	0	50		
Chloroform	102	99	82 - 120	3	30		
Chloromethane	107	97	48 - 142	10	50		
cis-1,3-Dichloropropene	109	109	76 - 126	0	30		
1,2-Dibromo-3-Chloropropane	99	112	49 - 140	13	30		
Dibromomethane	103	106	78 - 119	3	30		
Dichlorobromomethane	98	99	78 - 127	1	30		
Dichlorodifluoromethane	69	65	34 - 154	6	30		
1,1-Dichloroethane	93	89	74 - 127	5	30		
1,2-Dichloroethane	105	105	66 - 132	1	30		
1,1-Dichloroethene	94	88	62 - 141	6	30		
1,2-Dichloropropane	108	104	73 - 124	4	30		
Ethylbenzene	69	67	86 - 116	1	30	F	F
Ethylene Dibromide	103	103	80 - 121	0	30		
2-Hexanone	104	104	34 - 161	0	30		
Methylene Chloride	80	78	70 - 125	2	30		
4-Methyl-2-pentanone (MIBK)	114	112	40 - 151	2	30		
Styrene	105	103	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	100	100	81 - 128	0	30		
1,1,2,2-Tetrachloroethane	106	107	69 - 129	0	30		
Tetrachloroethene	90	88	76 - 126	2	30		
Toluene	91	88	81 - 117	2	30		
trans-1,2-Dichloroethene	104	100	72 - 131	4	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 680-170470**

**Method: 8260B  
Preparation: 5030B**

MS Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 1735  
Date Prepared: 06/03/2010 1735

Analysis Batch: 680-170470  
Prep Batch: N/A

Instrument ID: MSO2  
Lab File ID: o2026.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 1804  
Date Prepared: 06/03/2010 1804

Analysis Batch: 680-170470  
Prep Batch: N/A

Instrument ID: MSO2  
Lab File ID: o2028.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
trans-1,3-Dichloropropene	95	95	73 - 128	1	30		
1,1,1-Trichloroethane	96	95	76 - 127	1	30		
1,1,2-Trichloroethane	108	106	75 - 121	2	30		
Trichloroethene	95	92	84 - 115	3	30		
Trichlorofluoromethane	106	98	58 - 149	8	50		
1,2,3-Trichloropropane	99	101	70 - 130	2	30		
Vinyl acetate	105	100	10 - 217	4	30		
Vinyl chloride	99	94	59 - 144	4	50		
Xylenes, Total	3	4	84 - 118	1	30	F	F

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene	100	100	75 - 120
Dibromofluoromethane	95	91	75 - 121
Toluene-d8 (Surr)	99	98	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 680-170470**

**Method: 8260B  
Preparation: 5030B**

MS Lab Sample ID: 680-58129-1  
Client Matrix: W- r A  
Dilution: 1.0  
Date Analyzed: 06/03/2010 1735  
Date Prepared: 06/03/2010 1735

Units: ug/L

MSD Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 1804  
Date Prepared: 06/03/2010 1804

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Acetone	50	U	100	100	93.3		99.4	
Benzene	110		50.0	50.0	105	F	103	F
Bromoform	2.0	U	50.0	50.0	49.2		50.5	
Bromomethane	2.0	U	50.0	50.0	52.6		56.3	
2-Butanone (MEK)	20	U	100	100	101		96.4	
Carbon disulfide	4.0	U	50.0	50.0	46.9		45.2	
Carbon tetrachloride	2.0	U	50.0	50.0	49.2		49.2	
Chlorobenzene	170		50.0	50.0	160	F	160	F
Chlorodibromomethane	2.0	U	50.0	50.0	54.7		54.8	
Chloroethane	2.0	U	50.0	50.0	48.1		48.1	
Chloroform	1.7	J	50.0	50.0	52.7		51.1	
Chloromethane	2.0	U	50.0	50.0	53.6		48.7	
cis-1,3-Dichloropropene	2.0	U	50.0	50.0	54.7		54.7	
1,2-Dibromo-3-Chloropropane	2.0	U	50.0	50.0	49.6		56.2	
Dibromomethane	2.0	U	50.0	50.0	51.7		53.2	
Dichlorobromomethane	2.0	U	50.0	50.0	49.0		49.5	
Dichlorodifluoromethane	2.0	U	50.0	50.0	34.6		32.6	
1,1-Dichloroethane	0.61	J	50.0	50.0	47.3		45.0	
1,2-Dichloroethane	2.9		50.0	50.0	55.5		55.2	
1,1-Dichloroethene	0.61	J	50.0	50.0	47.7		44.8	
1,2-Dichloropropane	2.0	U	50.0	50.0	53.8		51.8	
Ethylbenzene	32		50.0	50.0	66.0	F	65.3	F
Ethylene Dibromide	2.0	U	50.0	50.0	51.5		51.7	
2-Hexanone	20	U	100	100	104		104	
Methylene Chloride	17		50.0	50.0	57.5		56.4	
4-Methyl-2-pentanone (MIBK)	20	U	100	100	114		112	
Styrene	2.0	U	50.0	50.0	52.4		51.6	
1,1,1,2-Tetrachloroethane	2.0	U	50.0	50.0	50.0		50.1	
1,1,2,2-Tetrachloroethane	2.0	U	50.0	50.0	53.2		53.4	
Tetrachloroethene	0.59	J	50.0	50.0	45.4		44.7	
Toluene	13		50.0	50.0	58.1		56.8	
trans-1,2-Dichloroethene	2.0	U	50.0	50.0	51.9		50.1	
trans-1,3-Dichloropropene	2.0	U	50.0	50.0	47.7		47.4	
1,1,1-Trichloroethane	2.0	U	50.0	50.0	48.0		47.4	
1,1,2-Trichloroethane	2.0	U	50.0	50.0	53.8		52.9	
Trichloroethene	0.70	J	50.0	50.0	48.0		46.8	
Trichlorofluoromethane	2.0	U	50.0	50.0	52.9		49.0	
1,2,3-Trichloropropane	2.0	U	50.0	50.0	49.6		50.5	
Vinyl acetate	4.0	U	100	100	105		100	
Vinyl chloride	2.0	U	50.0	50.0	49.3		47.1	
Xylenes, Total	320		150	150	327	F	329	F



**Quality Control Results**

Client: Ashland Inc.

Job Number: 680-58129-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

### Method Blank - Batch: 680-170233

**Method: 8081A\_8082**  
**Preparation: 3520C**

Lab Sample ID: MB 680-170233/19-A  
Client Matrix: W- r A  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0044  
Date Prepared: 06/01/2010 1533

Analysis Batch: 680-170425  
Prep Batch: 680-170233  
Units: ug/L

Instrument ID: SGJ  
Lab File ID: jf02041.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	105	14 - 115
DCB Decachlorobiphenyl	105	14 - 115
Tetrachloro-m-xylene	68	35 - 120
Tetrachloro-m-xylene	68	35 - 120

### Lab Control Sample - Batch: 680-170233

**Method: 8081A\_8082**  
**Preparation: 3520C**

Lab Sample ID: LCS 680-170233/27-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0107  
Date Prepared: 06/01/2010 1533

Analysis Batch: 680-170425  
Prep Batch: 680-170233  
Units: ug/L

Instrument ID: SGJ  
Lab File ID: jf02042.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Toxaphene, Total	10.0	6.19	62	30 - 120	
Toxaphene, Technical	10.0	6.47	65	30 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	137 X	14 - 115
DCB Decachlorobiphenyl	137 X	14 - 115
Tetrachloro-m-xylene	74	35 - 120
Tetrachloro-m-xylene	74	35 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 680-170233

Method: 8081A\_8082  
Preparation: 3520C

MS Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0302  
Date Prepared: 06/01/2010 1533

Analysis Batch: 680-170425  
Prep Batch: 680-170233

Instrument ID: SGJ  
Lab File ID: jf02047.d  
Initial Weight/Volume: 1030 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0324  
Date Prepared: 06/01/2010 1533

Analysis Batch: 680-170425  
Prep Batch: 680-170233

Instrument ID: SGJ  
Lab File ID: jf02048.d  
Initial Weight/Volume: 1060 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Toxaphene, Total	166	97	30 - 120	26	40	F	

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits	
DCB Decachlorobiphenyl	101	120	X	14 - 115
Tetrachloro-m-xylene	118	114		35 - 120

### Matrix Spike/ Matrix Spike Duplicate Data Report - Batch: 680-170233

Method: 8081A\_8082  
Preparation: 3520C

MS Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0302  
Date Prepared: 06/01/2010 1533

Units: ug/L

MSD Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0324  
Date Prepared: 06/01/2010 1533

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Toxaphene, Total	6.9	4.85	4.72	14.9 F	11.5



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 680-170233

Method: 8081B/8082A  
Preparation: 3520C

MS Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0302  
Date Prepared: 06/01/2010 1533

Analysis Batch: 680-170426  
Prep Batch: 680-170233

Instrument ID: SGJ  
Lab File ID: jf02047.d  
Initial Weight/Volume: 1030 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0324  
Date Prepared: 06/01/2010 1533

Analysis Batch: 680-170426  
Prep Batch: 680-170233

Instrument ID: SGJ  
Lab File ID: jf02048.d  
Initial Weight/Volume: 1060 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Toxaphene, Technical	144	142	30 - 120	4	40	F	F

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits	
DCB Decachlorobiphenyl	101	120	X	14 - 115
Tetrachloro-m-xylene	118	114		35 - 120

### Matrix Spike/ Matrix Spike Duplicate Data Report - Batch: 680-170233

Method: 8081B/8082A  
Preparation: 3520C

MS Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0302  
Date Prepared: 06/01/2010 1533

Units: ug/L

MSD Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 0324  
Date Prepared: 06/01/2010 1533

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Toxaphene, Technical	4.7 U	4.85	4.72	6.99 F	6.69 F



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

### Method Blank - Batch: 680-170586

Lab Sample ID: MB 680-170586/16-A  
Client Matrix: W- r A  
Dilution: 1.0  
Date Analyzed: 06/08/2010 0455  
Date Prepared: 06/04/2010 1143

Analysis Batch: 680-170841  
Prep Batch: 680-170586  
Units: ug/L

### Method: 6010B Preparation: 3005A Total Recoverable

Instrument ID: ICPD  
Lab File ID: 060710.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	10	U	2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

### Lab Control Sample - Batch: 680-170586

**Method: 6010B**  
**Preparation: 3005A**  
**Total Recoverable**

Lab Sample ID: LCS 680-170586/17-A  
Client Matrix: W- r A  
Dilution: 1.0  
Date Analyzed: 06/08/2010 0500  
Date Prepared: 06/04/2010 1143

Analysis Batch: 680-170841  
Prep Batch: 680-170586  
Units: ug/L

Instrument ID: ICPD  
Lab File ID: 060710.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	500	515	103	75 - 125	
Arsenic	2000	2060	103	75 - 125	
Barium	2000	2060	103	75 - 125	
Beryllium	50.0	49.9	100	75 - 125	
Cadmium	50.0	49.8	100	75 - 125	
Chromium	200	205	102	75 - 125	
Cobalt	500	513	103	75 - 125	
Copper	250	261	104	75 - 125	
Lead	500	517	103	75 - 125	
Nickel	500	508	102	75 - 125	
Selenium	2000	2060	103	75 - 125	
Silver	50.0	50.9	102	75 - 125	
Thallium	2000	2070	103	75 - 125	
Tin	1000	988	99	75 - 125	
Vanadium	500	515	103	75 - 125	
Zinc	500	521	104	75 - 125	



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

### Matrix Spike/

### Matrix Spike Duplicate Recovery Report - Batch: 680-170586

Method: 6010B

Preparation: 3005A

Total Recoverable

MS Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 0625  
Date Prepared: 06/04/2010 1143

Analysis Batch: 680-170841  
Prep Batch: 680-170586

Instrument ID: ICPD  
Lab File ID: 060710.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 0630  
Date Prepared: 06/04/2010 1143

Analysis Batch: 680-170841  
Prep Batch: 680-170586

Instrument ID: ICPD  
Lab File ID: 060710.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Antimony	105	110	75 - 125	5	20		
Arsenic	105	109	75 - 125	4	20		
Barium	101	105	75 - 125	3	20		
Beryllium	97	102	75 - 125	4	20		
Cadmium	96	100	75 - 125	4	20		
Chromium	100	104	75 - 125	4	20		
Cobalt	99	103	75 - 125	4	20		
Copper	106	110	75 - 125	4	20		
Lead	101	105	75 - 125	4	20		
Nickel	97	101	75 - 125	4	20		
Selenium	105	109	75 - 125	4	20		
Silver	105	108	75 - 125	3	20		
Thallium	103	107	75 - 125	4	20		
Tin	99	103	75 - 125	4	20		
Vanadium	102	106	75 - 125	4	20		
Zinc	100	104	75 - 125	4	20		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 680-170586**

**Method: 6010B  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 680-58129-1 Units: ug/L  
Client Matrix: W- r A  
Dilution: 1.0  
Date Analyzed: 06/08/2010 0625  
Date Prepared: 06/04/2010 1143

MSD Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 0630  
Date Prepared: 06/04/2010 1143

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Antimony	20	U	500	500	527	552
Arsenic	20	U	2000	2000	2100	2190
Barium	580		2000	2000	2600	2680
Beryllium	0.15	J	50.0	50.0	48.8	50.9
Cadmium	5.0	U	50.0	50.0	48.0	50.1
Chromium	10	U	200	200	199	207
Cobalt	10	U	500	500	496	516
Copper	20	U	250	250	264	274
Lead	10	U	500	500	503	525
Nickel	40	U	500	500	485	503
Selenium	20	U	2000	2000	2100	2180
Silver	10	U	50.0	50.0	52.4	54.1
Thallium	25	U	2000	2000	2060	2140
Tin	50	U	1000	1000	991	1030
Vanadium	10	U	500	500	508	529
Zinc	9.1	J	500	500	507	529



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

### Method Blank - Batch: 680-171056

**Method: 7470A**  
**Preparation: 7470A**

Lab Sample ID: MB 680-171056/23-A  
Client Matrix: W- r A  
Dilution: 1.0  
Date Analyzed: 06/10/2010 1928  
Date Prepared: 06/09/2010 1703

Analysis Batch: 680-171231  
Prep Batch: 680-171056  
Units: ug/L

Instrument ID: LEEMAN1  
Lab File ID: b061010.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.091	0.20

### Lab Control Sample - Batch: 680-171056

**Method: 7470A**  
**Preparation: 7470A**

Lab Sample ID: LCS 680-171056/24-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 1931  
Date Prepared: 06/09/2010 1703

Analysis Batch: 680-171231  
Prep Batch: 680-171056  
Units: ug/L

Instrument ID: LEEMAN1  
Lab File ID: b061010.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	2.50	2.42	97	80 - 120	

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 680-171056

**Method: 7470A**  
**Preparation: 7470A**

MS Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 1937  
Date Prepared: 06/09/2010 1703

Analysis Batch: 680-171231  
Prep Batch: 680-171056

Instrument ID: LEEMAN1  
Lab File ID: b061010.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 1940  
Date Prepared: 06/09/2010 1703

Analysis Batch: 680-171231  
Prep Batch: 680-171056

Instrument ID: LEEMAN1  
Lab File ID: b061010.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Mercury	120	109	80 - 120	9	20		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 680-171056**

**Method: 7470A  
Preparation: 7470A**

MS Lab Sample ID: 680-58129-1  
Client Matrix: W- r A  
Dilution: 1.0  
Date Analyzed: 06/10/2010 1937  
Date Prepared: 06/09/2010 1703

Units: ug/L

MSD Lab Sample ID: 680-58129-1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 1940  
Date Prepared: 06/09/2010 1703

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	0.20	U	1.00	1.00	1.20	1.09



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

### Laboratory Chronicle

Lab ID: 680-58129-1

Client ID: MW-54D (52810)

Sample Date/Time: 05/28/2010 11:15

Received Date/Time: 05/29/2010 13:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58129-E-1		680-170470		06/03/2010 13:17	2	TAL SAV	JW
A:8260B	680-58129-E-1		680-170470		06/03/2010 13:17	2	TAL SAV	JW
P:3520C	680-58129-B-1-A		680-170425	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58129-B-1-A		680-170425	680-170233	06/03/2010 01:30	1	TAL SAV	JK
P:3520C	680-58129-B-1-A		680-170426	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58129-B-1-A		680-170426	680-170233	06/03/2010 01:30	1	TAL SAV	JK
P:3005A	680-58129-C-1-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	680-58129-C-1-A		680-170841	680-170586	06/08/2010 06:10	1	TAL SAV	BR
P:7470A	680-58129-A-1-C		680-171231	680-171056	06/09/2010 17:03	1	TAL SAV	DH
A:7470A	680-58129-A-1-C		680-171231	680-171056	06/10/2010 19:34	1	TAL SAV	CE

Lab ID: 680-58129-1

Client ID: MW-54D (52810)

Sample Date/Time: 05/28/2010 11:15

Received Date/Time: 05/29/2010 13:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58129-D-1 MS		680-170470		06/03/2010 17:35	1	TAL SAV	JW
A:8260B	680-58129-D-1 MS		680-170470		06/03/2010 17:35	1	TAL SAV	JW
P:3520C	680-58129-A-1-A MS		680-170425	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58129-A-1-A MS		680-170425	680-170233	06/03/2010 03:02	1	TAL SAV	JK
P:3520C	680-58129-A-1-A MS		680-170426	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58129-A-1-A MS		680-170426	680-170233	06/03/2010 03:02	1	TAL SAV	JK
P:3005A	680-58129-C-1-B MS		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	680-58129-C-1-B MS		680-170841	680-170586	06/08/2010 06:25	1	TAL SAV	BR
P:7470A	680-58129-A-1-D MS		680-171231	680-171056	06/09/2010 17:03	1	TAL SAV	DH
A:7470A	680-58129-A-1-D MS		680-171231	680-171056	06/10/2010 19:37	1	TAL SAV	CE



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

### Laboratory Chronicle

Lab ID: 680-58129-1

Client ID: MW-54D (52810)

Sample Date/Time: 05/28/2010 11:15

Received Date/Time: 05/29/2010 13:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58129-D-1 MSD		680-170470		06/03/2010 18:04	1	TAL SAV	JW
A:8260B	680-58129-D-1 MSD		680-170470		06/03/2010 18:04	1	TAL SAV	JW
P:3520C	680-58129-A-1-B MSD		680-170425	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58129-A-1-B MSD		680-170425	680-170233	06/03/2010 03:24	1	TAL SAV	JK
P:3520C	680-58129-A-1-B MSD		680-170426	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58129-A-1-B MSD		680-170426	680-170233	06/03/2010 03:24	1	TAL SAV	JK
P:3005A	680-58129-C-1-C MSD		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	680-58129-C-1-C MSD		680-170841	680-170586	06/08/2010 06:30	1	TAL SAV	BR
P:7470A	680-58129-A-1-E MSD		680-171231	680-171056	06/09/2010 17:03	1	TAL SAV	DH
A:7470A	680-58129-A-1-E MSD		680-171231	680-171056	06/10/2010 19:40	1	TAL SAV	CE

Lab ID: 680-58129-2

Client ID: MW-54DD (52810)

Sample Date/Time: 05/28/2010 11:15

Received Date/Time: 05/29/2010 13:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58129-E-2		680-170470		06/03/2010 13:45	2	TAL SAV	JW
A:8260B	680-58129-E-2		680-170470		06/03/2010 13:45	2	TAL SAV	JW
P:3520C	680-58129-B-2-A		680-170425	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58129-B-2-A		680-170425	680-170233	06/03/2010 01:53	1	TAL SAV	JK
P:3520C	680-58129-B-2-A		680-170426	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58129-B-2-A		680-170426	680-170233	06/03/2010 01:53	1	TAL SAV	JK
P:3005A	680-58129-C-2-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	680-58129-C-2-A		680-170841	680-170586	06/08/2010 06:35	1	TAL SAV	BR
P:7470A	680-58129-A-2-A		680-171231	680-171056	06/09/2010 17:03	1	TAL SAV	DH
A:7470A	680-58129-A-2-A		680-171231	680-171056	06/10/2010 19:43	1	TAL SAV	CE

Lab ID: 680-58129-3

Client ID: EQPT. BLANK (52810)

Sample Date/Time: 05/28/2010 12:00

Received Date/Time: 05/29/2010 13:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58129-A-3		680-170470		06/03/2010 12:19	1	TAL SAV	JW
A:8260B	680-58129-A-3		680-170470		06/03/2010 12:19	1	TAL SAV	JW



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

### Laboratory Chronicle

Lab ID: 680-58129-4

Client ID: MW-54I (52810)

Sample Date/Time: 05/28/2010 13:15

Received Date/Time: 05/29/2010 13:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58129-E-4		680-170470		06/03/2010 14:14	100	TAL SAV	JW
A:8260B	680-58129-E-4		680-170470		06/03/2010 14:14	100	TAL SAV	JW
P:3520C	680-58129-A-4-A		680-170425	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58129-A-4-A		680-170425	680-170233	06/03/2010 02:16	1	TAL SAV	JK
P:3520C	680-58129-A-4-A		680-170426	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58129-A-4-A		680-170426	680-170233	06/03/2010 02:16	1	TAL SAV	JK
P:3005A	680-58129-C-4-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	680-58129-C-4-A		680-170841	680-170586	06/08/2010 06:40	1	TAL SAV	BR
P:7470A	680-58129-A-4-B		680-171231	680-171056	06/09/2010 17:03	1	TAL SAV	DH
A:7470A	680-58129-A-4-B		680-171231	680-171056	06/10/2010 19:46	1	TAL SAV	CE

Lab ID: 680-58129-5

Client ID: MW-54S (52810)

Sample Date/Time: 05/28/2010 11:20

Received Date/Time: 05/29/2010 13:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58129-E-5		680-170470		06/03/2010 14:42	20	TAL SAV	JW
A:8260B	680-58129-E-5		680-170470		06/03/2010 14:42	20	TAL SAV	JW
P:3520C	680-58129-B-5-A		680-170425	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	680-58129-B-5-A		680-170425	680-170233	06/03/2010 02:39	1	TAL SAV	JK
P:3520C	680-58129-B-5-A		680-170426	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
A:8081B/8082A	680-58129-B-5-A		680-170426	680-170233	06/03/2010 02:39	1	TAL SAV	JK
P:3005A	680-58129-C-5-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	680-58129-C-5-A		680-170841	680-170586	06/08/2010 06:56	1	TAL SAV	BR
P:7470A	680-58129-A-5-A		680-171231	680-171056	06/09/2010 17:03	1	TAL SAV	DH
A:7470A	680-58129-A-5-A		680-171231	680-171056	06/10/2010 19:49	1	TAL SAV	CE

Lab ID: 680-58129-6

Client ID: TRIP BLANK

Sample Date/Time: 05/28/2010 00:00

Received Date/Time: 05/29/2010 13:18

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58129-B-6		680-170470		06/03/2010 12:48	1	TAL SAV	JW
A:8260B	680-58129-B-6		680-170470		06/03/2010 12:48	1	TAL SAV	JW



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58129-1

### Laboratory Chronicle

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	MB 680-170233/19-A		680-170425	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
P:3520C	MB 680-170233/19-A		680-170426	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	MB 680-170233/19-A		680-170425	680-170233	06/03/2010 00:44	1	TAL SAV	JK
A:8081A_8082	MB 680-170233/19-A		680-170426	680-170233	06/03/2010 00:44	1	TAL SAV	JK
P:3005A	MB 680-170586/16-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	MB 680-170586/16-A		680-170841	680-170586	06/08/2010 04:55	1	TAL SAV	BR
P:7470A	MB 680-171056/23-A		680-171231	680-171056	06/09/2010 17:03	1	TAL SAV	DH
A:7470A	MB 680-171056/23-A		680-171231	680-171056	06/10/2010 19:28	1	TAL SAV	CE

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 680-170470/4		680-170470		06/03/2010 08:58	1	TAL SAV	JW
A:8260B	LCS 680-170470/4		680-170470		06/03/2010 08:58	1	TAL SAV	JW
P:3520C	LCS 680-170233/27-A		680-170425	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
P:3520C	LCS 680-170233/27-A		680-170426	680-170233	06/01/2010 15:33	1	TAL SAV	RBS
A:8081A_8082	LCS 680-170233/27-A		680-170425	680-170233	06/03/2010 01:07	1	TAL SAV	JK
A:8081A_8082	LCS 680-170233/27-A		680-170426	680-170233	06/03/2010 01:07	1	TAL SAV	JK
P:3005A	LCS 680-170586/17-A		680-170841	680-170586	06/04/2010 11:43	1	TAL SAV	RA
A:6010B	LCS 680-170586/17-A		680-170841	680-170586	06/08/2010 05:00	1	TAL SAV	BR
P:7470A	LCS 680-171056/24-A		680-171231	680-171056	06/09/2010 17:03	1	TAL SAV	DH
A:7470A	LCS 680-171056/24-A		680-171231	680-171056	06/10/2010 19:31	1	TAL SAV	CE

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCSD 680-170470/5		680-170470		06/03/2010 09:41	1	TAL SAV	JW
A:8260B	LCSD 680-170470/5		680-170470		06/03/2010 09:41	1	TAL SAV	JW

#### Lab References:

TAL SAV = TestAmerica Savannah



Serial Number 031449

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

☒ TestAmerica Savannah  
5102 LaRoche Avenue  
Savannah, GA 31404

Website: www.testamericainc.com  
Phone: (912) 354-7858  
Fax: (912) 352-0165

☐ Alternate Laboratory Name/Location

Phone:  
Fax:

PROJECT REFERENCE		PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSIS		PAGE	OF
ASHLAND-BRUNSWICK		30984-850.9	GA.	COMPOSITE (C) OR GRAB (G) INDICATE	82608-VOC'S	8082	1	1
TAL (LAB) PROJECT MANAGER		P.O. NUMBER	CONTRACT NO.		8081A-TOXAPHENE	7470A-APP.9 METALS		
LYDIA GULIZIA		4501306047	N/A		60108-MERCURY			
CLIENT (SITE) PM		CLIENT PHONE	CLIENT FAX					
TIM HASSETT		CLIENT E-MAIL						
CLIENT NAME								
ASHLAND								
CLIENT ADDRESS								
2801 COOK ST. BRUNSWICK, GA.								
COMPANY CONTRACTING THIS WORK (if applicable)								
DELTA CONSULTANTS								
SAMPLE IDENTIFICATION								
DATE	TIME							
5/28/10	1115	MW-54D (52810)		CK	3	2	1	
	1115	MW-5400 (52810)						
	1120	(MS) MW-54-MATRIX SPIKE (52810)						
	1120	(MSD) MATRIX SPIKE DUP. (52810)						
	1200	EPT. BLANK (52810)						
	1315	MW-54I (52810)						
	1120	MW-54S (52810)						
RELINQUISHED BY: (SIGNATURE)		DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	DATE	TIME
[Signature]		5/28/10	1430	[Signature]				
RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	DATE	TIME
[Signature]		5/29/10	0948	[Signature]				
RECEIVED FOR LABORATORY BY: (SIGNATURE)		DATE	TIME	LABORATORY REMARKS				
[Signature]		5/29/10	0948	SAVANNAH LOG NO. 6280-58129		5.0°C		



## Login Sample Receipt Check List

Client: Ashland Inc.

Job Number: 680-58129-1

Login Number: 58129

List Source: TestAmerica Savannah

Creator: Conner, Keaton

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	TB NOT LISTED
There are no discrepancies between the sample IDs on the containers and the COC.	False	RECEIVED VIALS ONLY FOR EB (-3)
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	received 1 MSD liter broken
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	N/A	
Sample Preservation Verified	True	



## ANALYTICAL REPORT

Job Number: 680-58180-1

Job Description: Ashland Brunswick RFI GW June 2010

For:  
Ashland Inc.  
500 Hercules Road  
Wilmington, DE 19894  
Attention: Timothy Hassett



Approved for release.  
Lidya Gulizia  
Project Manager I  
6/29/2010 12:44 PM

---

Lidya Gulizia  
Project Manager I  
lidya.gulizia@testamericainc.com  
06/29/2010

cc: Kelley Baker  
Mr. Leroy Bishop  
Mr. Dennis Brunner  
Ryan Cate  
Mr. Tony Mancini  
Ms. Charlene Rivard

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; AZ: AZ0741; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

**TestAmerica Laboratories, Inc.**

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404  
Tel (912) 354-7858 Fax (912) 352-0165 [www.testamericainc.com](http://www.testamericainc.com)





**Job Narrative**  
**680-58180-1**

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

Method(s) 8260B: A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for four analytes to recover outside criteria for this method when a full list spike is utilized. The LCS associated with batch 170495 had one analytes outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8260B: A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for four analytes to recover outside criteria for this method when a full list spike is utilized. The LCSD associated with batch 170611 had one analyte outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

No other analytical or quality issues were noted.

**GC Semi VOA**

No analytical or quality issues were noted.

**Comments**

No additional comments.



## METHOD SUMMARY

Client: Ashland Inc.

Job Number: 680-58180-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030B
Organochlorine Pesticides & PCBs (GC)	TAL SAV	SW846 8081A_8082	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	TAL SAV	SW846 8081B/8082A	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C

### Lab References:

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### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.



## METHOD / ANALYST SUMMARY

Client: Ashland Inc.

Job Number: 680-58180-1

Method	Analyst	Analyst ID
SW846 8260B	Lanier, Carolyn	CL
SW846 8081A_8082	Hao, Lili	LH
SW846 8081B/8082A	Hao, Lili	LH



## SAMPLE SUMMARY

Client: Ashland Inc.

Job Number: 680-58180-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-58180-1	MW-5S	Water	06/01/2010 1455	06/02/2010 0929
680-58180-2	MW-4	Water	06/01/2010 1540	06/02/2010 0929
680-58180-3	MW-7	Water	06/01/2010 1345	06/02/2010 0929
680-58180-4	MW-5I	Water	06/01/2010 1500	06/02/2010 0929
680-58180-5TB	Trip Blank Lot 051110	Water	06/01/2010 0000	06/02/2010 0929



# **SAMPLE RESULTS**



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58180-1

Client Sample ID: MW-5S

L8i 68A po eDm 680-58180-1

Client Matrix: Water

Date Sampled: 06/01/2010 1455

Date Received: 06/02/2010 0929

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170611	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0058.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/04/2010 1907		Final Weight/Volume:	5 mL
Date Prepared:	06/04/2010 1907			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	0.39	J	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U *	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	0.17	J	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58180-1

**Client Sample ID: MW-5S**

L8i 68A po eDm 680-58180-1

Client Matrix: Water

Date Sampled: 06/01/2010 1455

Date Received: 06/02/2010 0929

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170611	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0058.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/04/2010 1907		Final Weight/Volume:	5 mL
Date Prepared:	06/04/2010 1907			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	93		75 - 121
Toluene-d8 (Surr)	106		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58180-1

Client Sample ID: MW-4

Lab: 68A po eDm 680-58180-2

Client Matrix: Water

Date Sampled: 06/01/2010 1540

Date Received: 06/02/2010 0929

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170611	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0060.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/04/2010 1936		Final Weight/Volume:	5 mL
Date Prepared:	06/04/2010 1936			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U *	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58180-1

**Client Sample ID: MW-4**

L8i 68A po eDm 680-58180-2

Client Matrix: Water

Date Sampled: 06/01/2010 1540

Date Received: 06/02/2010 0929

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170611	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0060.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/04/2010 1936		Final Weight/Volume:	5 mL
Date Prepared:	06/04/2010 1936			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	94		75 - 121
Toluene-d8 (Surr)	104		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58180-1

Client Sample ID: MW-7

L8i 68A po eDm 680-58180-3

Client Matrix: Water

Date Sampled: 06/01/2010 1345

Date Received: 06/02/2010 0929

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170611	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0062.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/04/2010 2006		Final Weight/Volume:	5 mL
Date Prepared:	06/04/2010 2006			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.4	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	22		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U *	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	74		0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	0.19	J	0.11	1.0
1,2-Dichloropropane	0.54	J	0.13	1.0
Ethylbenzene	0.14	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.1		0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58180-1

**Client Sample ID: MW-7**

L8i 68A po eDm 680-58180-3

Client Matrix: Water

Date Sampled: 06/01/2010 1345

Date Received: 06/02/2010 0929

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170611	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0062.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/04/2010 2006		Final Weight/Volume:	5 mL
Date Prepared:	06/04/2010 2006			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0		0.18	1.0
Xylenes, Total	8.0		0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		75 - 120
Dibromofluoromethane	89		75 - 121
Toluene-d8 (Surr)	101		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58180-1

Client Sample ID: MW-51

Lab: 68A po eDm 680-58180-4

Client Matrix: Water

Date Sampled: 06/01/2010 1500

Date Received: 06/02/2010 0929

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170611	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0064.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/04/2010 2036		Final Weight/Volume:	5 mL
Date Prepared:	06/04/2010 2036			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U *	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58180-1

**Client Sample ID: MW-51**

L8i 68A po eDm 680-58180-4

Client Matrix: Water

Date Sampled: 06/01/2010 1500

Date Received: 06/02/2010 0929

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170611	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0064.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/04/2010 2036		Final Weight/Volume:	5 mL
Date Prepared:	06/04/2010 2036			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	92		75 - 121
Toluene-d8 (Surr)	103		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58180-1

Client Sample ID: Trip Blank Lot 051110

L8i 68A po eDm 680-58180-5TB

Date Sampled: 06/01/2010 0000

Client Matrix: Water

Date Received: 06/02/2010 0929

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170495	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0032.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 2135		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 2135			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U *	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58180-1

**Client Sample ID:** Trip Blank Lot 051110

L8i 68A po eDm 680-58180-5TB

Client Matrix: Water

Date Sampled: 06/01/2010 0000

Date Received: 06/02/2010 0929

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170495	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0032.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2010 2135		Final Weight/Volume:	5 mL
Date Prepared:	06/03/2010 2135			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	89		75 - 121
Toluene-d8 (Surr)	104		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58180-1

**Client Sample ID: MW-51**

L8i 68A po eDm 680-58180-4

Client Matrix: Water

Date Sampled: 06/01/2010 1500

Date Received: 06/02/2010 0929

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-170797	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170432	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	06/04/2010 1622		Injection Volume:	2 uL
Date Prepared:	06/03/2010 1534		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	87		14 - 115
Tetrachloro-m-xylene	73		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58180-1

**Client Sample ID: MW-51**

L8i 68A po eDm 680-58180-4

Date Sampled: 06/01/2010 1500

Client Matrix: Water

Date Received: 06/02/2010 0929

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-170680	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170432	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	06/04/2010 1622		Injection Volume:	2 uL
Date Prepared:	06/03/2010 1534		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	100		14 - 115
Tetrachloro-m-xylene	76		35 - 120



## DATA REPORTING QUALIFIERS

Client: Ashland Inc.

Job Number: 680-58180-1

Lab Section	Qualifier	Description
GC/MS VOA	U	Indicates the analyte was analyzed for but not detected.
	*	LCS or LCSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA	U	Indicates the analyte was analyzed for but not detected.
	X	Surrogate is outside control limits



# QUALITY CONTROL RESULTS



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch: 680-170495</b>					
LCS 680-170495/5	Lab Control Sample	T	Water	8260B	
LCSD 680-170495/6	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-170495/8	Method Blank	T	Water	8260B	
680-58180-5TB	Trip Blank Lot 051110	T	Water	8260B	
<b>Analysis Batch: 680-170611</b>					
LCS 680-170611/4	Lab Control Sample	T	Water	8260B	
LCSD 680-170611/5	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-170611/7	Method Blank	T	Water	8260B	
680-58180-1	MW-5S	T	Water	8260B	
680-58180-2	MW-4	T	Water	8260B	
680-58180-3	MW-7	T	Water	8260B	
680-58180-4	MW-5I	T	Water	8260B	
<b>GC Semi VOA</b>					
<b>Prep Batch: 680-170432</b>					
LCS 680-170432/24-A	Lab Control Sample	T	Water	3520C	
MB 680-170432/17-A	Method Blank	T	Water	3520C	
680-58180-4	MW-5I	T	Water	3520C	
680-58180-4MS	Matrix Spike	T	Water	3520C	
680-58180-4MSD	Matrix Spike Duplicate	T	Water	3520C	
<b>Analysis Batch: 680-170680</b>					
LCS 680-170432/24-A	Lab Control Sample	T	Water	8081B/8082A	680-170432
MB 680-170432/17-A	Method Blank	T	Water	8081B/8082A	680-170432
680-58180-4	MW-5I	T	Water	8081B/8082A	680-170432
680-58180-4MS	Matrix Spike	T	Water	8081B/8082A	680-170432
680-58180-4MSD	Matrix Spike Duplicate	T	Water	8081B/8082A	680-170432
<b>Analysis Batch: 680-170797</b>					
LCS 680-170432/24-A	Lab Control Sample	T	Water	8081A_8082	680-170432
MB 680-170432/17-A	Method Blank	T	Water	8081A_8082	680-170432
680-58180-4	MW-5I	T	Water	8081A_8082	680-170432
680-58180-4MS	Matrix Spike	T	Water	8081A_8082	680-170432
680-58180-4MSD	Matrix Spike Duplicate	T	Water	8081A_8082	680-170432

#### Report Basis

T = Total

TestAmerica Savannah



Client: Ashland Inc.

Job Number: 680-58180-1

## Surrogate Recovery Report

### 8260B Volatile Organic Compounds (GC/MS)

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-58180-1	MW-5S	97	93	106
680-58180-2	MW-4	95	94	104
680-58180-3	MW-7	98	89	101
680-58180-4	MW-5I	96	92	103
680-58180-5	Trip Blank Lot 051110	96	89	104
MB 680-170495/8		98	100	103
MB 680-170611/7		98	100	104
LCS 680-170495/5		101	102	103
LCS 680-170611/4		107	100	106
LCSD 680-170495/6		102	105	102
LCSD 680-170611/5		104	104	104

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120



Client: Ashland Inc.

Job Number: 680-58180-1

## Surrogate Recovery Report

### 8081A 8082 Organochlorine Pesticides & PCBs (GC)

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	TCX1 %Rec
680-58180-4	MW-5I	87	S3
MB 680-1704T2/17-A		81	75
LCS 680-170) ( 242) -A		115	9z
680-58180-4 MS	MW-5I MS	68	66
680-58180-4 MSD	MW-5I MSD	65	58

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



Client: Ashland Inc.

Job Number: 680-58180-1

## Surrogate Recovery Report

### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec	TCX1 %Rec	MI ) 2 %Rec
680-58180-4	MW-5I		100		76
MB 680-170432/17-A			102		86
LCS 680-170432/24-A			135X		96
680-58180-4 MS	MW-5I MS	68		66	
680-58180-4 MSD	MW-5I MSD	65			62

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

### Method Blank - Batch: 680-170495

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170495/8  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/03/2010 1342  
Date Prepared: 06/03/2010 1342

Analysis Batch: 680-170495  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq046.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

### Method Blank - Batch: 680-170495

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170495/8

Client Matrix: Whrer

Dilution: 1.0

Date Analyzed: 06/03/2010 1342

Date Prepared: 06/03/2010 1342

Analysis Batch: 680-170495

Prep Batch: N/A

Units: ug/L

Instrument ID: MSP2

Lab File ID: pq046.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	98	75 - 120
Dibromofluoromethane	100	75 - 121
Toluene-d8 (Surr)	103	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170495**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170495/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 1144  
Date Prepared: 06/03/2010 1144

Analysis Batch: 680-170495  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq038.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170495/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 1213  
Date Prepared: 06/03/2010 1213

Analysis Batch: 680-170495  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq040.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	89	76	17 - 175	16	50		
Benzene	104	105	77 - 119	1	30		
Bromoform	113	111	62 - 133	2	30		
Bromomethane	135	155	12 - 184	14	50		
2-Butanone (MEK)	108	110	33 - 157	2	30		
Carbon disulfide	140	103	55 - 131	30	30	*	
Carbon tetrachloride	106	106	71 - 135	0	30		
Chlorobenzene	104	104	85 - 116	0	30		
Chlorodibromomethane	102	104	75 - 133	2	30		
Chloroethane	106	112	40 - 165	5	50		
Chloroform	109	114	82 - 120	4	30		
Chloromethane	118	124	48 - 142	5	50		
cis-1,3-Dichloropropene	111	110	76 - 126	1	30		
1,2-Dibromo-3-Chloropropane	105	102	49 - 140	3	30		
Dibromomethane	96	97	78 - 119	1	30		
Dichlorobromomethane	103	102	78 - 127	1	30		
Dichlorodifluoromethane	124	126	34 - 154	1	30		
1,1-Dichloroethane	110	110	74 - 127	0	30		
1,2-Dichloroethane	99	97	66 - 132	2	30		
1,1-Dichloroethene	96	79	62 - 141	20	30		
1,2-Dichloropropane	104	107	73 - 124	4	30		
Ethylbenzene	107	107	86 - 116	0	30		
Ethylene Dibromide	104	100	80 - 121	4	30		
2-Hexanone	111	107	34 - 161	4	30		
Methylene Chloride	110	111	70 - 125	0	30		
4-Methyl-2-pentanone (MIBK)	101	99	40 - 151	2	30		
Styrene	107	108	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	105	107	81 - 128	1	30		
1,1,2,2-Tetrachloroethane	94	97	69 - 129	3	30		
Tetrachloroethene	105	106	76 - 126	1	30		
Toluene	103	103	81 - 117	0	30		
trans-1,2-Dichloroethene	99	105	72 - 131	6	30		
trans-1,3-Dichloropropene	113	113	73 - 128	1	30		
1,1,1-Trichloroethane	106	105	76 - 127	1	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170495**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170495/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 1144  
Date Prepared: 06/03/2010 1144

Analysis Batch: 680-170495  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq038.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170495/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 1213  
Date Prepared: 06/03/2010 1213

Analysis Batch: 680-170495  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq040.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	101	101	75 - 121	0	30		
Trichloroethene	102	103	84 - 115	1	30		
Trichlorofluoromethane	119	115	58 - 149	3	50		
1,2,3-Trichloropropane	98	98	70 - 130	0	30		
Vinyl acetate	189	187	10 - 217	1	30		
Vinyl chloride	113	121	59 - 144	7	50		
Xylenes, Total	106	106	84 - 118	0	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	101		102		75 - 120		
Dibromofluoromethane	102		105		75 - 121		
Toluene-d8 (Surr)	103		102		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-170495**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170495/5  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/03/2010 1144  
Date Prepared: 06/03/2010 1144

Units: ug/L

LCSD Lab Sample ID: LCSD 680-170495/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/03/2010 1213  
Date Prepared: 06/03/2010 1213

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	89.2	75.9
Benzene	50.0	50.0	52.0	52.7
Bromoform	50.0	50.0	56.6	55.6
Bromomethane	50.0	50.0	67.4	77.7
2-Butanone (MEK)	100	100	108	110
Carbon disulfide	50.0	50.0	69.8	51.6
Carbon tetrachloride	50.0	50.0	53.1	53.0
Chlorobenzene	50.0	50.0	52.1	51.8
Chlorodibromomethane	50.0	50.0	50.8	51.8
Chloroethane	50.0	50.0	53.2	55.9
Chloroform	50.0	50.0	54.7	56.9
Chloromethane	50.0	50.0	59.0	62.0
cis-1,3-Dichloropropene	50.0	50.0	55.3	54.9
1,2-Dibromo-3-Chloropropane	50.0	50.0	52.6	51.1
Dibromomethane	50.0	50.0	48.0	48.6
Dichlorobromomethane	50.0	50.0	51.7	51.2
Dichlorodifluoromethane	50.0	50.0	62.2	62.8
1,1-Dichloroethane	50.0	50.0	54.9	54.8
1,2-Dichloroethane	50.0	50.0	49.5	48.7
1,1-Dichloroethene	50.0	50.0	48.2	39.6
1,2-Dichloropropane	50.0	50.0	51.8	53.7
Ethylbenzene	50.0	50.0	53.4	53.3
Ethylene Dibromide	50.0	50.0	52.0	50.2
2-Hexanone	100	100	111	107
Methylene Chloride	50.0	50.0	55.2	55.5
4-Methyl-2-pentanone (MIBK)	100	100	101	99.2
Styrene	50.0	50.0	53.5	53.9
1,1,1,2-Tetrachloroethane	50.0	50.0	52.7	53.4
1,1,2,2-Tetrachloroethane	50.0	50.0	47.0	48.3
Tetrachloroethene	50.0	50.0	52.4	52.8
Toluene	50.0	50.0	51.4	51.4
trans-1,2-Dichloroethene	50.0	50.0	49.5	52.3
trans-1,3-Dichloropropene	50.0	50.0	56.7	56.3
1,1,1-Trichloroethane	50.0	50.0	52.8	52.5
1,1,2-Trichloroethane	50.0	50.0	50.6	50.7
Trichloroethene	50.0	50.0	51.2	51.7
Trichlorofluoromethane	50.0	50.0	59.4	57.7
1,2,3-Trichloropropane	50.0	50.0	49.1	49.0
Vinyl acetate	100	100	189	187
Vinyl chloride	50.0	50.0	56.7	60.7
Xylenes, Total	150	150	159	159



**Quality Control Results**

Client: Ashland Inc.

Job Number: 680-58180-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

### Method Blank - Batch: 680-170611

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170611/7  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/04/2010 1243  
Date Prepared: 06/04/2010 1243

Analysis Batch: 680-170611  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq060.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

### Method Blank - Batch: 680-170611

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170611/7

Client Matrix: Whrer

Dilution: 1.0

Date Analyzed: 06/04/2010 1243

Date Prepared: 06/04/2010 1243

Analysis Batch: 680-170611

Prep Batch: N/A

Units: ug/L

Instrument ID: MSP2

Lab File ID: pq060.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	98	75 - 120
Dibromofluoromethane	100	75 - 121
Toluene-d8 (Surr)	104	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170611**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170611/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 1045  
Date Prepared: 06/04/2010 1045

Analysis Batch: 680-170611  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq052.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170611/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 1114  
Date Prepared: 06/04/2010 1114

Analysis Batch: 680-170611  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq054.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	89	86	17 - 175	3	50		
Benzene	107	104	77 - 119	3	30		
Bromoform	118	112	62 - 133	5	30		
Bromomethane	158	187	12 - 184	17	50		*
2-Butanone (MEK)	102	99	33 - 157	3	30		
Carbon disulfide	124	125	55 - 131	1	30		
Carbon tetrachloride	123	117	71 - 135	5	30		
Chlorobenzene	102	103	85 - 116	1	30		
Chlorodibromomethane	108	106	75 - 133	1	30		
Chloroethane	107	112	40 - 165	5	50		
Chloroform	108	111	82 - 120	4	30		
Chloromethane	113	121	48 - 142	7	50		
cis-1,3-Dichloropropene	115	108	76 - 126	6	30		
1,2-Dibromo-3-Chloropropane	107	107	49 - 140	0	30		
Dibromomethane	101	95	78 - 119	6	30		
Dichlorobromomethane	113	107	78 - 127	5	30		
Dichlorodifluoromethane	142	137	34 - 154	3	30		
1,1-Dichloroethane	103	103	74 - 127	0	30		
1,2-Dichloroethane	111	105	66 - 132	6	30		
1,1-Dichloroethene	87	90	62 - 141	3	30		
1,2-Dichloropropane	104	102	73 - 124	2	30		
Ethylbenzene	109	107	86 - 116	2	30		
Ethylene Dibromide	102	101	80 - 121	1	30		
2-Hexanone	101	100	34 - 161	1	30		
Methylene Chloride	100	106	70 - 125	6	30		
4-Methyl-2-pentanone (MIBK)	100	97	40 - 151	3	30		
Styrene	106	105	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	109	108	81 - 128	0	30		
1,1,2,2-Tetrachloroethane	95	93	69 - 129	2	30		
Tetrachloroethene	104	104	76 - 126	1	30		
Toluene	105	101	81 - 117	4	30		
trans-1,2-Dichloroethene	95	95	72 - 131	1	30		
trans-1,3-Dichloropropene	119	115	73 - 128	4	30		
1,1,1-Trichloroethane	126	114	76 - 127	9	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170611**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170611/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 1045  
Date Prepared: 06/04/2010 1045

Analysis Batch: 680-170611  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq052.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170611/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 1114  
Date Prepared: 06/04/2010 1114

Analysis Batch: 680-170611  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq054.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	107	101	75 - 121	6	30		
Trichloroethene	105	100	84 - 115	5	30		
Trichlorofluoromethane	128	130	58 - 149	2	50		
1,2,3-Trichloropropane	103	100	70 - 130	2	30		
Vinyl acetate	170	171	10 - 217	1	30		
Vinyl chloride	112	115	59 - 144	2	50		
Xylenes, Total	106	104	84 - 118	2	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	107		104		75 - 120		
Dibromofluoromethane	100		104		75 - 121		
Toluene-d8 (Surr)	106		104		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-170611**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170611/4  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/04/2010 1045  
Date Prepared: 06/04/2010 1045

Units: ug/L

LCSD Lab Sample ID: LCSD 680-170611/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 1114  
Date Prepared: 06/04/2010 1114

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	89.0	86.1
Benzene	50.0	50.0	53.5	51.8
Bromoform	50.0	50.0	59.1	56.2
Bromomethane	50.0	50.0	79.1	93.7
2-Butanone (MEK)	100	100	102	99.2
Carbon disulfide	50.0	50.0	62.1	62.6
Carbon tetrachloride	50.0	50.0	61.5	58.7
Chlorobenzene	50.0	50.0	50.8	51.3
Chlorodibromomethane	50.0	50.0	53.9	53.2
Chloroethane	50.0	50.0	53.4	55.9
Chloroform	50.0	50.0	53.8	55.7
Chloromethane	50.0	50.0	56.7	60.7
cis-1,3-Dichloropropene	50.0	50.0	57.4	53.9
1,2-Dibromo-3-Chloropropane	50.0	50.0	53.3	53.4
Dibromomethane	50.0	50.0	50.6	47.7
Dichlorobromomethane	50.0	50.0	56.4	53.6
Dichlorodifluoromethane	50.0	50.0	70.9	68.5
1,1-Dichloroethane	50.0	50.0	51.7	51.6
1,2-Dichloroethane	50.0	50.0	55.5	52.3
1,1-Dichloroethene	50.0	50.0	43.6	44.8
1,2-Dichloropropane	50.0	50.0	52.2	51.2
Ethylbenzene	50.0	50.0	54.3	53.3
Ethylene Dibromide	50.0	50.0	50.8	50.4
2-Hexanone	100	100	101	99.8
Methylene Chloride	50.0	50.0	49.8	52.8
4-Methyl-2-pentanone (MIBK)	100	100	100	96.8
Styrene	50.0	50.0	53.1	52.7
1,1,1,2-Tetrachloroethane	50.0	50.0	54.4	54.2
1,1,2,2-Tetrachloroethane	50.0	50.0	47.4	46.4
Tetrachloroethene	50.0	50.0	52.2	51.8
Toluene	50.0	50.0	52.3	50.4
trans-1,2-Dichloroethene	50.0	50.0	47.6	47.3
trans-1,3-Dichloropropene	50.0	50.0	59.5	57.5
1,1,1-Trichloroethane	50.0	50.0	62.8	57.1
1,1,2-Trichloroethane	50.0	50.0	53.4	50.3
Trichloroethene	50.0	50.0	52.4	49.9
Trichlorofluoromethane	50.0	50.0	64.1	65.2
1,2,3-Trichloropropane	50.0	50.0	51.3	50.2
Vinyl acetate	100	100	170	171
Vinyl chloride	50.0	50.0	56.1	57.5
Xylenes, Total	150	150	159	155



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

### Method Blank - Batch: 680-170432

**Method: 8081A\_8082**  
**Preparation: 3520C**

Lab Sample ID: MB 680-170432/17-A  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/04/2010 1504  
Date Prepared: 06/03/2010 1534

Analysis Batch: 680-170797  
Prep Batch: 680-170432  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mf04007.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	81	14 - 115
Tetrachloro-m-xylene	75	35 - 120

### Lab Control Sample - Batch: 680-170432

**Method: 8081A\_8082**  
**Preparation: 3520C**

Lab Sample ID: LCS 680-170432/24-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 1602  
Date Prepared: 06/03/2010 1534

Analysis Batch: 680-170797  
Prep Batch: 680-170432  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mf04010.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume:  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Toxaphene, Total	10.0	9.69	97	30 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	115	14 - 115
Tetrachloro-m-xylene	92	35 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 680-170432**

**Method: 8081A\_8082  
Preparation: 3520C**

MS Lab Sample ID: 680-58180-4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 2053  
Date Prepared: 06/03/2010 1534

Analysis Batch: 680-170797  
Prep Batch: 680-170432

Instrument ID: SGM  
Lab File ID: mf04024.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 680-58180-4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 2112  
Date Prepared: 06/03/2010 1534

Analysis Batch: 680-170797  
Prep Batch: 680-170432

Instrument ID: SGM  
Lab File ID: mf04025.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Toxaphene, Total	75	69	30 - 120	9	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	68	65	14 - 115
Tetrachloro-m-xylene	66	58	35 - 120

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 680-170432**

**Method: 8081A\_8082  
Preparation: 3520C**

MS Lab Sample ID: 680-58180-4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 2053  
Date Prepared: 06/03/2010 1534

Units: ug/L

MSD Lab Sample ID: 680-58180-4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 2112  
Date Prepared: 06/03/2010 1534

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Toxaphene, Total	5.0 U	10.0	10.0	7.50	6.86



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

### Method Blank - Batch: 680-170432

**Method: 8081B/8082A**  
**Preparation: 3520C**

Lab Sample ID: MB 680-170432/17-A  
Client Matrix: Whrer  
Dilution: 1.0  
Date Analyzed: 06/04/2010 1504  
Date Prepared: 06/03/2010 1534

Analysis Batch: 680-170680  
Prep Batch: 680-170432  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mf04007.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	102	14 - 115
Tetrachloro-m-xylene	86	35 - 120

### Lab Control Sample - Batch: 680-170432

**Method: 8081B/8082A**  
**Preparation: 3520C**

Lab Sample ID: LCS 680-170432/24-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 1602  
Date Prepared: 06/03/2010 1534

Analysis Batch: 680-170680  
Prep Batch: 680-170432  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mf04010.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume:  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Toxaphene, Technical	10.0	10.3	103	30 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	135	14 - 115
Tetrachloro-m-xylene	96	35 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 680-170432**

**Method: 8081B/8082A  
Preparation: 3520C**

MS Lab Sample ID: 680-58180-4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 2053  
Date Prepared: 06/03/2010 1534

Analysis Batch: 680-170680  
Prep Batch: 680-170432

Instrument ID: SGM  
Lab File ID: mf04024.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 680-58180-4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 2112  
Date Prepared: 06/03/2010 1534

Analysis Batch: 680-170680  
Prep Batch: 680-170432

Instrument ID: SGM  
Lab File ID: mf04025.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Toxaphene, Technical	71	72	30 - 120	2	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	68	65	14 - 115
Tetrachloro-m-xylene	66	62	35 - 120

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 680-170432**

**Method: 8081B/8082A  
Preparation: 3520C**

MS Lab Sample ID: 680-58180-4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 2053  
Date Prepared: 06/03/2010 1534

Units: ug/L

MSD Lab Sample ID: 680-58180-4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/04/2010 2112  
Date Prepared: 06/03/2010 1534

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Toxaphene, Technical	5.0 U	10.0	10.0	7.12	7.25



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

### Laboratory Chronicle

Lab ID: 680-58180-1

Client ID: MW-5S

Sample Date/Time: 06/01/2010 14:55

Received Date/Time: 06/02/2010 09:29

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58180-A-1		hadl. 7dh. .		06/04/2010 19:07	1	TAL SAV	CL
A:8260B	680-58180-A-1		680-170611		06/04/2010 19:07	1	TAL SAV	CL

Lab ID: 680-58180-2

Client ID: MW-4

Sample Date/Time: 06/01/2010 15:40

Received Date/Time: 06/02/2010 09:29

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58180-A-2		680-170611		06/04/2010 19:36	1	TAL SAV	CL
A:8260B	680-58180-A-2		680-170611		06/04/2010 19:36	1	TAL SAV	CL

Lab ID: 680-58180-3

Client ID: MW-7

Sample Date/Time: 06/01/2010 13:45

Received Date/Time: 06/02/2010 09:29

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58180-A-3		680-170611		06/04/2010 20:06	1	TAL SAV	CL
A:8260B	680-58180-A-3		680-170611		06/04/2010 20:06	1	TAL SAV	CL

Lab ID: 680-58180-4

Client ID: MW-5I

Sample Date/Time: 06/01/2010 15:00

Received Date/Time: 06/02/2010 09:29

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58180-C-4		680-170611		06/04/2010 20:36	1	TAL SAV	CL
A:8260B	680-58180-C-4		680-170611		06/04/2010 20:36	1	TAL SAV	CL
P:3520C	680-58180-A-4-A		680-170797	680-170432	06/03/2010 15:34	1	TAL SAV	RBS
A:8081A_8082	680-58180-A-4-A		680-170797	680-170432	06/04/2010 16:22	1	TAL SAV	LH
P:3520C	680-58180-A-4-A		680-170680	680-170432	06/03/2010 15:34	1	TAL SAV	RBS
A:8081B/8082A	680-58180-A-4-A		680-170680	680-170432	06/04/2010 16:22	1	TAL SAV	LH

Lab ID: 680-58180-4 MS

Client ID: MW-5I

Sample Date/Time: 06/01/2010 15:00

Received Date/Time: 06/02/2010 09:29

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	680-58180-B-4-A MS		680-170797	680-170432	06/03/2010 15:34	1	TAL SAV	RBS
A:8081A_8082	680-58180-B-4-A MS		680-170797	680-170432	06/04/2010 20:53	1	TAL SAV	LH
P:3520C	680-58180-B-4-A MS		680-170680	680-170432	06/03/2010 15:34	1	TAL SAV	RBS
A:8081B/8082A	680-58180-B-4-A MS		680-170680	680-170432	06/04/2010 20:53	1	TAL SAV	LH



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

### Laboratory Chronicle

Lab ID: 680-58180-4 MSD

Client ID: MW-5I

Sample Date/Time: 06/01/2010 15:00

Received Date/Time: 06/02/2010 09:29

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	680-58180-B-4-B MSD		680-170797	680-170432	06/03/2010 15:34	1	TAL SAV	RBS
A:8081A_8082	680-58180-B-4-B MSD		680-170797	680-170432	06/04/2010 21:12	1	TAL SAV	LH
P:3520C	680-58180-B-4-B MSD		680-170680	680-170432	06/03/2010 15:34	1	TAL SAV	RBS
A:8081B/8082A	680-58180-B-4-B MSD		680-170680	680-170432	06/04/2010 21:12	1	TAL SAV	LH

Lab ID: 680-58180-5

Client ID: Trip Blank Lot 051110

Sample Date/Time: 06/01/2010 00:00

Received Date/Time: 06/02/2010 09:29

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58180-A-5		680-170495		06/03/2010 21:35	1	TAL SAV	CL
A:8260B	680-58180-A-5		680-170495		06/03/2010 21:35	1	TAL SAV	CL

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 680-170495/8		680-170495		06/03/2010 13:42	1	TAL SAV	CL
A:8260B	MB 680-170495/8		680-170495		06/03/2010 13:42	1	TAL SAV	CL
P:5030B	MB 680-170611/7		680-170611		06/04/2010 12:43	1	TAL SAV	CL
A:8260B	MB 680-170611/7		680-170611		06/04/2010 12:43	1	TAL SAV	CL
P:3520C	MB 680-170432/17-A		680-170797	680-170432	06/03/2010 15:34	1	TAL SAV	RBS
A:8081A_8082	MB 680-170432/17-A		680-170797	680-170432	06/04/2010 15:04	1	TAL SAV	LH
P:3520C	MB 680-170432/17-A		680-170680	680-170432	06/03/2010 15:34	1	TAL SAV	RBS
A:8081B/8082A	MB 680-170432/17-A		680-170680	680-170432	06/04/2010 15:04	1	TAL SAV	LH

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 680-170495/5		680-170495		06/03/2010 11:44	1	TAL SAV	CL
A:8260B	LCS 680-170495/5		680-170495		06/03/2010 11:44	1	TAL SAV	CL
P:5030B	LCS 680-170611/4		680-170611		06/04/2010 10:45	1	TAL SAV	CL
A:8260B	LCS 680-170611/4		680-170611		06/04/2010 10:45	1	TAL SAV	CL
P:3520C	LCS 680-170432/24-A		680-170797	680-170432	06/03/2010 15:34	1	TAL SAV	RBS
A:8081A_8082	LCS 680-170432/24-A		680-170797	680-170432	06/04/2010 16:02	1	TAL SAV	LH
P:3520C	LCS 680-170432/24-A		680-170680	680-170432	06/03/2010 15:34	1	TAL SAV	RBS
A:8081B/8082A	LCS 680-170432/24-A		680-170680	680-170432	06/04/2010 16:02	1	TAL SAV	LH



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58180-1

### Laboratory Chronicle

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCSD 680-170495/6		680-170495		06/03/2010 12:13	1	TAL SAV	CL
A:8260B	LCSD 680-170495/6		680-170495		06/03/2010 12:13	1	TAL SAV	CL
P:5030B	LCSD 680-170611/5		680-170611		06/04/2010 11:14	1	TAL SAV	CL
A:8260B	LCSD 680-170611/5		680-170611		06/04/2010 11:14	1	TAL SAV	CL

#### Lab References:

TAL SAV = TestAmerica Savannah



026434

### **ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD**

**TestAmerica Savannah**  
5102 LaRoche Avenue  
Savannah, GA 31404

Website: [www.testamericainc.com](http://www.testamericainc.com)  
Phone: (912) 354-7858  
Fax: (912) 352-0165

# TestAmerica

Alternate Laboratory Name/Location

Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_

## THE LEADER IN ENVIRONMENTAL TESTING

PROJECT REFERENCE		PROJECT NO.		PROJECT LOCATION		MATRIX TYPE		REQUIRED ANALYSIS		PAGE 1	
PROJECT NO.		PROJECT NO.		PROJECT LOCATION		MATRIX TYPE		REQUIRED ANALYSIS		PAGE 1	
PROJECT NO.		PROJECT NO.		PROJECT LOCATION		MATRIX TYPE		REQUIRED ANALYSIS		PAGE 1	
Ashland Brunswick		509849509		GA		GA		STANDARD REPORT DELIVERY		X	
Lidia Gilizia		4501306047		CONTRACT NO.		CONTRACT NO.		EXPEDITED REPORT DELIVERY (SURCHARGE)		O	
Tim Hassett		CLIENT PHONE		CLIENT FAX		CLIENT FAX		DATE DUE			
Ashland - Hercules		CLIENT E-MAIL		CLIENT E-MAIL		CLIENT E-MAIL		DATE DUE			
2508 Carter St Brunswick GA		CLIENT ADDRESS		CLIENT ADDRESS		CLIENT ADDRESS		NUMBER OF COOLERS SUBMITTED PER SHIPMENT			
COMPANY CONTRACTING THIS WORK (if applicable)											
SAMPLE		SAMPLE IDENTIFICATION		MATRIX TYPE		REQUIRED ANALYSIS		PAGE 1		REMARKS	
DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME
6/1/10	1455	MW-55		GA							
6/1/10	1540	MW-4		GA							
6/1/10	1345	MW-7		GA							
6/1/10	1500	MW-5I		GA							
6/1/10		TRIP Blank Lot 057110		GA							

LABORATORY USE ONLY

LABORATORY REMARKS

SAVANNAH  
LOG NO.

310C	RY REMARKS
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RECEIVED FOR LABORATORY BY:

### END

DATE \_\_\_\_\_

**CUSTODY INTACT**

CUSTODY  
OF ALL NO

LABORATORY MEMORANDUM

SAVANNAH  
LOG NO.

3106

RECEIVED FOR LABORATORY BY:

### END

DATE \_\_\_\_\_

**CUSTODY INTACT**

CUSTODY  
OF ALL NO

LABORATORY MEMORANDUM

SAVANNAH  
LOG NO.

3106



## Login Sample Receipt Check List

Client: Ashland Inc.

Job Number: 680-58180-1

Login Number: 58180

List Source: TestAmerica Savannah

Creator: Conner, Keaton

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.1 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	N/A	
Sample Preservation Verified	True	



## ANALYTICAL REPORT

Job Number: 680-58232-1

Job Description: Ashland Brunswick RFI GW June 2010

For:  
Ashland Inc.  
500 Hercules Road  
Wilmington, DE 19894  
Attention: Timothy Hassett



Approved for release.  
Lidya Gulizia  
Project Manager I  
6/29/2010 6:27 PM

---

Lidya Gulizia  
Project Manager I  
lidya.gulizia@testamericainc.com  
06/29/2010

cc: Kelley Baker  
Mr. Leroy Bishop  
Mr. Dennis Brunner  
Ryan Cate  
Mr. Tony Mancini  
Ms. Charlene Rivard

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; AZ: AZ0741; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

**TestAmerica Laboratories, Inc.**

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404  
Tel (912) 354-7858 Fax (912) 352-0165 [www.testamericainc.com](http://www.testamericainc.com)





**Job Narrative**  
**680-58232-1**

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

Method(s) 8260B: A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for four analytes to recover outside criteria for this method when a full list spike is utilized. The LCSD associated with batch 170857 had one analyte outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8260B: A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for four analytes to recover outside criteria for this method when a full list spike is utilized. The MS associated with batch 170857 had two analytes outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8260B: A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for four analytes to recover outside criteria for this method when a full list spike is utilized. The MSD associated with batch 170857 had one analyte outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8260B: A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for four analytes to recover outside criteria for this method when a full list spike is utilized. The LCSD associated with batch 171008 had one analyte outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

No other analytical or quality issues were noted.

**GC Semi VOA**

Method(s) 8081A\_8082: Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample(s) contained an allowable number of surrogate compounds outside limits: MW20S (680-58232-8). These results have been reported and qualified.

No other analytical or quality issues were noted.

**Metals**

No analytical or quality issues were noted.

**Comments**

No additional comments.



## METHOD SUMMARY

Client: Ashland Inc.

Job Number: 680-58232-1

Description		Lab Location	Method	Preparation Method
Matrix	Water			
Volatile Organic Compounds (GC/MS)		TAL SAV	SW846 8260B	
	Purge and Trap	TAL SAV		SW846 5030B
Organochlorine Pesticides & PCBs (GC)		TAL SAV	SW846 8081A_8082	
	Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography		TAL SAV	SW846 8081B/8082A	
	Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Metals (ICP)		TAL SAV	SW846 6010B	
	Preparation, Total Recoverable or Dissolved Metals	TAL SAV		SW846 3005A
Mercury (CVAA)		TAL SAV	SW846 7470A	
	Preparation, Mercury	TAL SAV		SW846 7470A

### Lab References:

TAL SAV = TestAmerica Savannah

### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.



## METHOD / ANALYST SUMMARY

Client: Ashland Inc.

Job Number: 680-58232-1

Method	Analyst	Analyst ID
SW846 8260B	Lanier, Carolyn	CL
SW846 8081A_8082	Kellar, Joshua	JK
SW846 8081B/8082A	Kellar, Joshua	JK
SW846 6010B	Bland, Brian	BCB
SW846 7470A	Eaton, Cliff	CE



## SAMPLE SUMMARY

Client: Ashland Inc.

Job Number: 680-58232-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-58232-1	MW39D	Water	06/01/1090 9000	06/03/2010 1256
680-58232-2	MW39I	Water	06/02/2010 1050	06/03/2010 1256
680-58232-3	MW20D	Water	06/02/2010 1200	06/03/2010 1256
680-58232-4	MW38D	Water	06/02/2010 1300	06/03/2010 1256
680-58232-5	MW38I	Water	06/02/2010 1400	06/03/2010 1256
680-58232-6	MW48D	Water	06/02/2010 1530	06/03/2010 1256
680-58232-7	MW13	Water	06/02/2010 1320	06/03/2010 1256
680-58232-8	MW20S	Water	06/02/2010 1035	06/03/2010 1256
680-58232-9	MW8	Water	06/02/2010 0740	06/03/2010 1256
680-58232-10	MW6	Water	06/02/2010 0820	06/03/2010 1256
680-58232-11	MW39S	Water	06/02/2010 0930	06/03/2010 1256
680-58232-12	MW38S	Water	06/02/2010 1025	06/03/2010 1256
680-58232-13	MW20I	Water	06/02/2010 1230	06/03/2010 1256
680-58232-14TB	Trip Blank 051110	Water	06/02/2010 0000	06/03/2010 1256



# **SAMPLE RESULTS**



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58232-1

Client Sample ID: MW39D

Lab Sample ID: 680-58232-1

Client Matrix: Water

Date Sampled: 06/02/2010 1000

Date Received: 06/03/2010 1256

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170857	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0170.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1527		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1527			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U *	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW39D**

Lab Sample ID: 680-58232-1

Date Sampled: 06/02/2010 1000

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170857	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0170.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1527		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1527			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	94		75 - 121
Toluene-d8 (Surr)	107		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58232-1

Client Sample ID: MW39A

Lab Sample ID: 680-58232-2

Client Matrix: Water

Date Sampled: 06/02/2010 1050

Date Received: 06/03/2010 1256

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170857	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0172.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1557		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1557			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U *	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	0.57	J	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW39A**

Lab Sample ID: 680-58232-2

Date Sampled: 06/02/2010 1050

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170857	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0172.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1557		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1557			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	90		75 - 121
Toluene-d8 (Surr)	106		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW20D**

Lab Sample ID: 680-58232-3

Date Sampled: 06/02/2010 1200

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171008	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0216.d
Dilution:	4.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1249		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1249			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	100	U	20	100
Acetonitrile	160	U	40	160
Acrolein	80	U	30	80
Acrylonitrile	80	U	29	80
Benzene	320		1.0	4.0
Bromoform	4.0	U	2.0	4.0
Bromomethane	4.0	U *	3.2	4.0
2-Butanone (MEK)	40	U	4.0	40
Carbon disulfide	8.0	U	2.4	8.0
Carbon tetrachloride	4.0	U	2.0	4.0
Chlorobenzene	250		1.0	4.0
2-Chloro-1,3-butadiene	4.0	U	1.2	4.0
Chlorodibromomethane	4.0	U	0.40	4.0
Chloroethane	4.0	U	4.0	4.0
Chloroform	4.0	U	0.56	4.0
Chloromethane	4.0	U	1.3	4.0
3-Chloro-1-propene	4.0	U	0.80	4.0
cis-1,3-Dichloropropene	4.0	U	0.44	4.0
1,2-Dibromo-3-Chloropropane	4.0	U	1.8	4.0
Dibromomethane	4.0	U	0.80	4.0
Dichlorobromomethane	4.0	U	1.0	4.0
Dichlorodifluoromethane	4.0	U	1.0	4.0
1,1-Dichloroethane	4.0	U	1.0	4.0
1,2-Dichloroethane	4.0	U	0.40	4.0
1,1-Dichloroethene	4.0	U	0.44	4.0
1,2-Dichloropropane	4.0	U	0.52	4.0
Ethylbenzene	2.2	J	0.44	4.0
Ethylene Dibromide	4.0	U	1.0	4.0
Ethyl methacrylate	4.0	U	1.0	4.0
2-Hexanone	40	U	4.0	40
Iodomethane	20	U	4.0	20
Isobutyl alcohol	160	U	44	160
Methacrylonitrile	80	U	13	80
Methylene Chloride	20	U	4.0	20
Methyl methacrylate	4.0	U	1.9	4.0
4-Methyl-2-pentanone (MIBK)	40	U	4.0	40
Pentachloroethane	20	U	4.8	20
Propionitrile	80	U	18	80
Styrene	4.0	U	0.44	4.0
1,1,1,2-Tetrachloroethane	4.0	U	1.3	4.0
1,1,2,2-Tetrachloroethane	4.0	U	0.72	4.0
Tetrachloroethene	4.0	U	0.60	4.0
Toluene	3.0	J	1.3	4.0
trans-1,4-Dichloro-2-butene	8.0	U	2.0	8.0
trans-1,2-Dichloroethene	4.0	U	0.80	4.0
trans-1,3-Dichloropropene	4.0	U	0.84	4.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW20D**

Lab Sample ID: 680-58232-3

Date Sampled: 06/02/2010 1200

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171008	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0216.d
Dilution:	4.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1249		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1249			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	4.0	U	2.0	4.0
1,1,2-Trichloroethane	4.0	U	0.52	4.0
Trichloroethene	4.0	U	0.52	4.0
Trichlorofluoromethane	4.0	U	1.0	4.0
1,2,3-Trichloropropane	4.0	U	1.6	4.0
Vinyl acetate	8.0	U	1.1	8.0
Vinyl chloride	4.0	U	0.72	4.0
Xylenes, Total	6.8	J	0.80	8.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	98		75 - 120
Dibromofluoromethane	92		75 - 121
Toluene-d8 (Surr)	105		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW38D**

Lab Sample ID: 680-58232-4

Date Sampled: 06/02/2010 1300

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171008	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0218.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1319		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1319			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	120	U	25	120
Acetonitrile	200	U	50	200
Acrolein	100	U	37	100
Acrylonitrile	100	U	36	100
Benzene	920		1.2	5.0
Bromoform	5.0	U	2.5	5.0
Bromomethane	5.0	U *	4.0	5.0
2-Butanone (MEK)	50	U	5.0	50
Carbon disulfide	10	U	3.0	10
Carbon tetrachloride	5.0	U	2.5	5.0
Chlorobenzene	480		1.2	5.0
2-Chloro-1,3-butadiene	5.0	U	1.5	5.0
Chlorodibromomethane	5.0	U	0.50	5.0
Chloroethane	5.0	U	5.0	5.0
Chloroform	5.0	U	0.70	5.0
Chloromethane	5.0	U	1.6	5.0
3-Chloro-1-propene	5.0	U	1.0	5.0
cis-1,3-Dichloropropene	5.0	U	0.55	5.0
1,2-Dibromo-3-Chloropropane	5.0	U	2.2	5.0
Dibromomethane	5.0	U	1.0	5.0
Dichlorobromomethane	5.0	U	1.2	5.0
Dichlorodifluoromethane	5.0	U	1.2	5.0
1,1-Dichloroethane	5.0	U	1.2	5.0
1,2-Dichloroethane	5.0	U	0.50	5.0
1,1-Dichloroethene	5.0	U	0.55	5.0
1,2-Dichloropropane	5.0	U	0.65	5.0
Ethylbenzene	53		0.55	5.0
Ethylene Dibromide	5.0	U	1.2	5.0
Ethyl methacrylate	5.0	U	1.2	5.0
2-Hexanone	50	U	5.0	50
Iodomethane	25	U	5.0	25
Isobutyl alcohol	200	U	55	200
Methacrylonitrile	100	U	16	100
Methylene Chloride	25	U	5.0	25
Methyl methacrylate	5.0	U	2.4	5.0
4-Methyl-2-pentanone (MIBK)	50	U	5.0	50
Pentachloroethane	25	U	6.0	25
Propionitrile	100	U	23	100
Styrene	5.0	U	0.55	5.0
1,1,1,2-Tetrachloroethane	5.0	U	1.6	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.90	5.0
Tetrachloroethene	5.0	U	0.75	5.0
Toluene	15		1.6	5.0
trans-1,4-Dichloro-2-butene	10	U	2.5	10
trans-1,2-Dichloroethene	5.0	U	1.0	5.0
trans-1,3-Dichloropropene	5.0	U	1.0	5.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW38D**

Lab Sample ID: 680-58232-4

Date Sampled: 06/02/2010 1300

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171008	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0218.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1319		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1319			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	5.0	U	2.5	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.65	5.0
Trichlorofluoromethane	5.0	U	1.2	5.0
1,2,3-Trichloropropane	5.0	U	2.0	5.0
Vinyl acetate	10	U	1.4	10
Vinyl chloride	3.9	J	0.90	5.0
Xylenes, Total	150		1.0	10

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		75 - 120
Dibromofluoromethane	94		75 - 121
Toluene-d8 (Surr)	107		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW38I**

Lab Sample ID: 680-58232-5

Date Sampled: 06/02/2010 1400

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171009	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0215.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1235		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1235			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	0.30	J	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW38I**

Lab Sample ID: 680-58232-5

Date Sampled: 06/02/2010 1400

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171009	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0215.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1235		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1235			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	85		75 - 120
Dibromofluoromethane	99		75 - 121
Toluene-d8 (Surr)	99		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW48D**

Lab Sample ID: 680-58232-6

Date Sampled: 06/02/2010 1530

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170857	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0188.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1953		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1953			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	33		5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	27		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U *	0.80	1.0
2-Butanone (MEK)	1.6	J	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	4.4		0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	2.5	J	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	12		0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW48D**

Lab Sample ID: 680-58232-6

Date Sampled: 06/02/2010 1530

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170857	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0188.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1953		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1953			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	7.8		0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	102		75 - 120
Dibromofluoromethane	90		75 - 121
Toluene-d8 (Surr)	105		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58232-1

Client Sample ID: MW13

Lab Sample ID: 680-58232-7

Client Matrix: Water

Date Sampled: 06/02/2010 1320

Date Received: 06/03/2010 1256

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170857	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0190.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 2023		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 2023			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U *	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW13**

Lab Sample ID: 680-58232-7

Date Sampled: 06/02/2010 1320

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170857	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0190.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 2023		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 2023			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	95		75 - 121
Toluene-d8 (Surr)	107		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW20S**

Lab Sample ID: 680-58232-8

Date Sampled: 06/02/2010 1035

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170857	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0192.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 2053		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 2053			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	21	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U *	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW20S**

Lab Sample ID: 680-58232-8

Date Sampled: 06/02/2010 1035

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170857	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0192.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 2053		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 2053			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	96		75 - 121
Toluene-d8 (Surr)	107		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW8**

Lab Sample ID: 680-58232-9

Date Sampled: 06/02/2010 0740

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170853	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0187.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1939		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1939			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	9.6	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	180		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	200		0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	0.47	J	0.13	1.0
Ethylbenzene	0.66	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.3		0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID:** MW8

Lab Sample ID: 680-58232-9

Date Sampled: 06/02/2010 0740

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170853	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0187.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1939		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1939			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	5.0		0.18	1.0
Xylenes, Total	3.8		0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	92		75 - 120
Dibromofluoromethane	93		75 - 121
Toluene-d8 (Surr)	99		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58232-1

Client Sample ID: MW6

Lab Sample ID: 680-58232-10

Client Matrix: Water

Date Sampled: 06/02/2010 0820

Date Received: 06/03/2010 1256

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170853	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0189.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 2008		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 2008			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	5.5		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	2.3		0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.19	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID:** MW6

Lab Sample ID: 680-58232-10

Date Sampled: 06/02/2010 0820

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170853	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0189.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 2008		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 2008			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	0.33	J	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	87		75 - 120
Dibromofluoromethane	101		75 - 121
Toluene-d8 (Surr)	99		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW39S**

Lab Sample ID: 680-58232-11

Date Sampled: 06/02/2010 0930

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170853	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0191.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 2038		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 2038			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	19	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	0.34	J	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	14		0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	2.0		0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW39S**

Lab Sample ID: 680-58232-11

Date Sampled: 06/02/2010 0930

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170853	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0191.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 2038		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 2038			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	79		0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	86		75 - 120
Dibromofluoromethane	99		75 - 121
Toluene-d8 (Surr)	100		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW38S**

Lab Sample ID: 680-58232-12

Date Sampled: 06/02/2010 1025

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170853	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0185.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1909		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1909			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	7.5	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW38S**

Lab Sample ID: 680-58232-12

Date Sampled: 06/02/2010 1025

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170853	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0185.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1909		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1909			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	87		75 - 120
Dibromofluoromethane	97		75 - 121
Toluene-d8 (Surr)	98		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58232-1

Client Sample ID: MW201

Lab Sample ID: 680-58232-13

Client Matrix: Water

Date Sampled: 06/02/2010 1230

Date Received: 06/03/2010 1256

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171009	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0217.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1304		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1304			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID:** MW20I

Lab Sample ID: 680-58232-13

Date Sampled: 06/02/2010 1230

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171009	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0217.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1304		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1304			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	86		75 - 120
Dibromofluoromethane	101		75 - 121
Toluene-d8 (Surr)	99		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID:** Trip Blank 051110

Lab Sample ID: 680-58232-14TB

Date Sampled: 06/02/2010 0000

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170857	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0168.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1457		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1457			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U *	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID:** Trip Blank 051110

Lab Sample ID: 680-58232-14TB

Date Sampled: 06/02/2010 0000

Client Matrix: Water

Date Received: 06/03/2010 1256

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170857	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0168.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1457		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1457			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	94		75 - 120
Dibromofluoromethane	98		75 - 121
Toluene-d8 (Surr)	107		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW38D**

Lab Sample ID: 680-58232-4

Date Sampled: 06/02/2010 1300

Client Matrix: Water

Date Received: 06/03/2010 1256

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171114	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1942		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	8.9		0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	34		14 - 115
Tetrachloro-m-xylene	41		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID:** MW38I

Lab Sample ID: 680-58232-5

Date Sampled: 06/02/2010 1400

Client Matrix: Water

Date Received: 06/03/2010 1256

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171114	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 2001		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	78		14 - 115
Tetrachloro-m-xylene	66		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID:** MW20S

Lab Sample ID: 680-58232-8

Date Sampled: 06/02/2010 1035

Client Matrix: Water

Date Received: 06/03/2010 1256

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171114	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2020		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	11	X	14 - 115
Tetrachloro-m-xylene	45		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW38S**

Lab Sample ID: 680-58232-12

Date Sampled: 06/02/2010 1025

Client Matrix: Water

Date Received: 06/03/2010 1256

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171114	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2040		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.7	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	22		14 - 115
Tetrachloro-m-xylene	64		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID:** MW201

Lab Sample ID: 680-58232-13

Date Sampled: 06/02/2010 1230

Client Matrix: Water

Date Received: 06/03/2010 1256

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171114	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2059		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.7	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	20		14 - 115
Tetrachloro-m-xylene	58		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW38D**

Lab Sample ID: 680-58232-4

Date Sampled: 06/02/2010 1300

Client Matrix: Water

Date Received: 06/03/2010 1256

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171118	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1942		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	34		14 - 115
Tetrachloro-m-xylene	41		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID:** MW38I

Lab Sample ID: 680-58232-5

Date Sampled: 06/02/2010 1400

Client Matrix: Water

Date Received: 06/03/2010 1256

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171118	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 2001		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	78		14 - 115
Tetrachloro-m-xylene	66		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW20S**

Lab Sample ID: 680-58232-8

Date Sampled: 06/02/2010 1035

Client Matrix: Water

Date Received: 06/03/2010 1256

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171118	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2020		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	11	X	14 - 115
Tetrachloro-m-xylene	45		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID:** MW38S

Lab Sample ID: 680-58232-12

Date Sampled: 06/02/2010 1025

Client Matrix: Water

Date Received: 06/03/2010 1256

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171118	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2040		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.7	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	22		14 - 115
Tetrachloro-m-xylene	64		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID:** MW201

Lab Sample ID: 680-58232-13

Date Sampled: 06/02/2010 1230

Client Matrix: Water

Date Received: 06/03/2010 1256

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171118	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2059		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.7	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	20		14 - 115
Tetrachloro-m-xylene	58		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW39D**

Lab Sample ID: 680-58232-1

Date Sampled: 06/02/2010 1000

Client Matrix: Water

Date Received: 06/03/2010 1256

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1553		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	76		2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10		2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	6.4	J	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171505	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171404	Lab File ID:	b061410.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/14/2010 1736		Final Weight/Volume:	50 mL
Date Prepared:	06/14/2010 0910			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW39I**

Lab Sample ID: 680-58232-2

Date Sampled: 06/02/2010 1050

Client Matrix: Water

Date Received: 06/03/2010 1256

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1654		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	130		2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	27		2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	12	J	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171505	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171404	Lab File ID:	b061410.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/14/2010 1740		Final Weight/Volume:	50 mL
Date Prepared:	06/14/2010 0910			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW38D**

Lab Sample ID: 680-58232-4

Date Sampled: 06/02/2010 1300

Client Matrix: Water

Date Received: 06/03/2010 1256

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1659		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	440		2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	4.4	J	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20		6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171505	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171404	Lab File ID:	b061410.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/14/2010 1742		Final Weight/Volume:	50 mL
Date Prepared:	06/14/2010 0910			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID:** MW38I

Lab Sample ID: 680-58232-5

Date Sampled: 06/02/2010 1400

Client Matrix: Water

Date Received: 06/03/2010 1256

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1704		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	41		2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	2.3	J	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	6.8	J	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171505	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171404	Lab File ID:	b061410.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/14/2010 1753		Final Weight/Volume:	50 mL
Date Prepared:	06/14/2010 0910			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW39S**

Lab Sample ID: 680-58232-11

Date Sampled: 06/02/2010 0930

Client Matrix: Water

Date Received: 06/03/2010 1256

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1709		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	200		2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	6.6	J	2.0	10
Cobalt	2.3	J	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	3.6	J	3.0	10
Zinc	13	J	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171505	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171404	Lab File ID:	b061410.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/14/2010 1756		Final Weight/Volume:	50 mL
Date Prepared:	06/14/2010 0910			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58232-1

**Client Sample ID: MW38S**

Lab Sample ID: 680-58232-12

Date Sampled: 06/02/2010 1025

Client Matrix: Water

Date Received: 06/03/2010 1256

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1714		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	260		2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171505	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171404	Lab File ID:	b061410.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/14/2010 1759		Final Weight/Volume:	50 mL
Date Prepared:	06/14/2010 0910			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



## DATA REPORTING QUALIFIERS

Client: Ashland Inc.

Job Number: 680-58232-1

Lab Section	Qualifier	Description
GC/MS VOA	U	Indicates the analyte was analyzed for but not detected.
	*	LCS or LCSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the Mx D and the concentration is an approximate value.
GC Semi VOA	U	Indicates the analyte was analyzed for but not detected.
	X	Surrogate is outside control limits
Metals	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.



# QUALITY CONTROL RESULTS



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
GC/MS VOA					
Analysis Batch:680-170853					
LCS 680-170853/6	Lab Control Sample	T	Water	8260B	
LCSD 680-170853/7	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-170853/9	Method Blank	T	Water	8260B	
680-58232-9	MW8	T	Water	8260B	
680-58232-10	MW6	T	Water	8260B	
680-58232-11	MW39S	T	Water	8260B	
680-58232-12	MW38S	T	Water	8260B	
Analysis Batch:680-170857					
LCS 680-170857/6	Lab Control Sample	T	Water	8260B	
LCSD 680-170857/7	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-170857/9	Method Blank	T	Water	8260B	
680-58232-1	MW39D	T	Water	8260B	
680-58232-2	MW39I	T	Water	8260B	
680-58232-6	MW48D	T	Water	8260B	
680-58232-7	MW13	T	Water	8260B	
680-58232-8	MW20S	T	Water	8260B	
680-58232-14TB	Trip Blank 051110	T	Water	8260B	
Analysis Batch:680-171008					
LCS 680-171008/4	Lab Control Sample	T	Water	8260B	
LCSD 680-171008/5	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-171008/9	Method Blank	T	Water	8260B	
680-58232-3	MW20D	T	Water	8260B	
680-58232-4	MW38D	T	Water	8260B	
Analysis Batch:680-171009					
LCS 680-171009/4	Lab Control Sample	T	Water	8260B	
LCSD 680-171009/8	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-171009/10	Method Blank	T	Water	8260B	
680-58232-5	MW38I	T	Water	8260B	
680-58232-13	MW20I	T	Water	8260B	

### Report Analysis

T = Total



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
GC Semi VOA					
Prep Batch: 680-170727					
LCS 680-170727/20-A	Lab Control Sample	T	Water	3520C	
MB 680-170727/15-A	Method Blank	T	Water	3520C	
shad hc. cd4	MW38D	T	Water	3520C	
680-58232-5	MW38I	T	Water	3520C	
680-58232-5MS	Matrix Spike	T	Water	3520C	
680-58232-5MSD	Matrix Spike Duplicate	T	Water	3520C	
680-58232-8	MW20S	T	Water	3520C	
680-58232-12	MW38S	T	Water	3520C	
680-58232-13	MW20I	T	Water	3520C	
Analysis Batch:680-171114					
LCS 680-170727/20-A	Lab Control Sample	T	Water	8081A_8082	680-170727
MB 680-170727/15-A	Method Blank	T	Water	8081A_8082	680-170727
680-58232-4	MW38D	T	Water	8081A_8082	680-170727
680-58232-5	MW38I	T	Water	8081A_8082	680-170727
680-58232-5MS	Matrix Spike	T	Water	8081A_8082	680-170727
680-58232-5MSD	Matrix Spike Duplicate	T	Water	8081A_8082	680-170727
680-58232-8	MW20S	T	Water	8081A_8082	680-170727
680-58232-12	MW38S	T	Water	8081A_8082	680-170727
680-58232-13	MW20I	T	Water	8081A_8082	680-170727
Analysis Batch:680-171118					
LCS 680-170727/20-A	Lab Control Sample	T	Water	8081B/8082A	680-170727
MB 680-170727/15-A	Method Blank	T	Water	8081B/8082A	680-170727
680-58232-4	MW38D	T	Water	8081B/8082A	680-170727
680-58232-5	MW38I	T	Water	8081B/8082A	680-170727
680-58232-5MS	Matrix Spike	T	Water	8081B/8082A	680-170727
680-58232-5MSD	Matrix Spike Duplicate	T	Water	8081B/8082A	680-170727
680-58232-8	MW20S	T	Water	8081B/8082A	680-170727
680-58232-12	MW38S	T	Water	8081B/8082A	680-170727
680-58232-13	MW20I	T	Water	8081B/8082A	680-170727

#### Report Basis

T = Total



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
Metals					
Prep Batch: 680-171282					
LCS 680-171282/22-A	Lab Control Sample	R	Water	3005A	
MB 680-171282/21-A	Method Blank	R	Water	3005A	
680-58232-1	MW39D	R	Water	3005A	
680-58232-2	MW39I	R	Water	3005A	
680-58232-4	MW38D	R	Water	3005A	
680-58232-5	MW38I	R	Water	3005A	
680-58232-11	MW39S	R	Water	3005A	
680-58232-12	MW38S	R	Water	3005A	
Prep Batch: 680-171404					
LCS 680-171404/24-A	Lab Control Sample	T	Water	7470A	
MB 680-171404/23-A	Method Blank	T	Water	7470A	
680-58232-1	MW39D	T	Water	7470A	
680-58232-2	MW39I	T	Water	7470A	
680-58232-4	MW38D	T	Water	7470A	
680-58232-5	MW38I	T	Water	7470A	
680-58232-11	MW39S	T	Water	7470A	
680-58232-12	MW38S	T	Water	7470A	
Analysis Batch:680-171505					
LCS 680-171404/24-A	Lab Control Sample	T	Water	7470A	680-171404
MB 680-171404/23-A	Method Blank	T	Water	7470A	680-171404
680-58232-1	MW39D	T	Water	7470A	680-171404
680-58232-2	MW39I	T	Water	7470A	680-171404
680-58232-4	MW38D	T	Water	7470A	680-171404
680-58232-5	MW38I	T	Water	7470A	680-171404
680-58232-11	MW39S	T	Water	7470A	680-171404
680-58232-12	MW38S	T	Water	7470A	680-171404
Analysis Batch:680-171623					
LCS 680-171282/22-A	Lab Control Sample	R	Water	6010B	680-171282
MB 680-171282/21-A	Method Blank	R	Water	6010B	680-171282
680-58232-1	MW39D	R	Water	6010B	680-171282
680-58232-2	MW39I	R	Water	6010B	680-171282
680-58232-4	MW38D	R	Water	6010B	680-171282
680-58232-5	MW38I	R	Water	6010B	680-171282
680-58232-11	MW39S	R	Water	6010B	680-171282
680-58232-12	MW38S	R	Water	6010B	680-171282

#### Report Basis

R = Total Recoverable

T = Total

TestAmerica Savannah



Client: Ashland Inc.

Job Number: 680-58232-1

## Surrogate Recovery Report

### 8260B Volatile Organic Compounds (GC/MS)

#### Client Matrix: Water

L-16-: pND	Client Name	BFB %Rec	DBFM %Rec	TOL %Rec
680-58232-1	MW39D	96	94	107
680-58232-2	MW39I	96	90	106
680-58232-3	MW20D	98	92	105
680-58232-4	MW38D	100	94	107
680-58232-5	MW38I	85	99	99
680-58232-6	MW48D	102	90	105
680-58232-7	MW13	97	95	107
680-58232-8	MW20S	95	96	107
680-58232-9	MW8	92	93	99
680-58232-10	MW6	87	101	99
680-58232-11	MW39S	86	99	100
680-58232-12	MW38S	87	97	98
680-58232-13	MW20I	86	101	99
680-58232-14	Trip Blank 051110	94	98	107
MB 680-170853/9		86	99	98
MB 680-170857/9		96	92	105
MB 680-171008/9		97	92	105
MB 680-171009/10		85	97	99
LCS 680-170853/6		92	107	102
LCS 680-170857/6		97	102	106
LCS 680-171008/4		99	98	107
LCS 680-171009/4		91	104	103
LCSD 680-170853/7		92	105	99
LCSD 680-170857/7		99	103	106
LCSD 680-171008/5		100	101	106
LCSD 680-171009/8		93	106	103

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120



Client: Ashland Inc.

Job Number: 680-58232-1

## Surrogate Recovery Report

### 8081A 8082 Organochlorine Pesticides & PCBs (GC)

#### Client Matrix: Water

L-16-: pNAD	Client Wam4le IB	DCB1 %Rec	TCX1 %Rec
680-58232-4	MW38D	34	41
680-58232-5	MW38I	78	66
680-58232-8	MW20S	11X	45
680-58232-12	MW38S	22	64
680-58232-13	MW20I	20	58
MB 680-170727/15-A		72	71
LCS		73	68
680-170727/20-A			
680-58232-5 MS	MW38I MS	104	83
680-58232-5 MSD	MW38I MSD	86	75

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



Client: Ashland Inc.

Job Number: 680-58232-1

**Surrogate Recovery Report****8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography****Client Matrix: Water**

L-16: pNAD	Client Name	DCB1	TCX1
		%Rec	%Rec
680-58232-4	MW38D	34	41
680-58232-5	MW38I	78	66
680-58232-8	MW20S	11X	45
680-58232-12	MW38S	22	64
680-58232-13	MW20I	20	58
MB 680-170727/15-A		64	82
LCS		73	68
680-170727/20-A			
680-58232-5 MS	MW38I MS	104	83
680-58232-5 MSD	MW38I MSD	86	75

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Method Blank - Batch: 680-170853

Lab Sample ID: MB 680-170853/9  
Client Matrix: WdAer  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1211  
Date Prepared: 06/08/2010 1211

Analysis Batch: 680-170853  
Prep Batch: N/A  
Units: ug/L

### Method: 8260B Preparation: 5030B

Instrument ID: MSP  
Lab File ID: pq119.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Method Blank - Batch: 680-170853

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170853/9  
 Client Matrix: WdAer  
 Dilution: 1.0  
 Date Analyzed: 06/08/2010 1211  
 Date Prepared: 06/08/2010 1211

Analysis Batch: 680-170853  
 Prep Batch: N/A  
 Units: ug/L

Instrument ID: MSP  
 Lab File ID: pq119.d  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	86	75 - 120
Dibromofluoromethane	99	75 - 121
Toluene-d8 (Surr)	98	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 680-170853

Method: 8260B

Preparation: 5030B

LCS Lab Sample ID: LCS 680-170853/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1013  
Date Prepared: 06/08/2010 1013

Analysis Batch: 680-170853  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq111.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170853/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1042  
Date Prepared: 06/08/2010 1042

Analysis Batch: 680-170853  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq113.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	94	100	17 - 175	6	50		
Benzene	101	100	77 - 119	1	30		
Bromoform	98	95	62 - 133	2	30		
Bromomethane	121	132	12 - 184	8	50		
2-Butanone (MEK)	96	91	33 - 157	6	30		
Carbon disulfide	123	127	55 - 131	4	30		
Carbon tetrachloride	104	101	71 - 135	3	30		
Chlorobenzene	99	97	85 - 116	2	30		
Chlorodibromomethane	96	95	75 - 133	1	30		
Chloroethane	98	115	40 - 165	16	50		
Chloroform	115	116	82 - 120	1	30		
Chloromethane	139	137	48 - 142	1	50		
cis-1,3-Dichloropropene	105	105	76 - 126	0	30		
1,2-Dibromo-3-Chloropropane	89	82	49 - 140	8	30		
Dibromomethane	95	93	78 - 119	2	30		
Dichlorobromomethane	105	101	78 - 127	3	30		
Dichlorodifluoromethane	137	137	34 - 154	0	30		
1,1-Dichloroethane	104	104	74 - 127	0	30		
1,2-Dichloroethane	97	92	66 - 132	5	30		
1,1-Dichloroethene	104	105	62 - 141	1	30		
1,2-Dichloropropane	99	97	73 - 124	3	30		
Ethylbenzene	97	99	86 - 116	2	30		
Ethylene Dibromide	97	93	80 - 121	4	30		
2-Hexanone	91	91	34 - 161	0	30		
Methylene Chloride	107	107	70 - 125	0	30		
4-Methyl-2-pentanone (MIBK)	94	91	40 - 151	3	30		
Styrene	100	99	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	93	92	81 - 128	1	30		
1,1,2,2-Tetrachloroethane	84	80	69 - 129	6	30		
Tetrachloroethene	96	94	76 - 126	2	30		
Toluene	100	99	81 - 117	1	30		
trans-1,2-Dichloroethene	103	102	72 - 131	1	30		
trans-1,3-Dichloropropene	101	98	73 - 128	3	30		
1,1,1-Trichloroethane	99	99	76 - 127	0	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170853**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170853/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1013  
Date Prepared: 06/08/2010 1013

Analysis Batch: 680-170853  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq111.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170853/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1042  
Date Prepared: 06/08/2010 1042

Analysis Batch: 680-170853  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq113.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	95	96	75 - 121	1	30		
Trichloroethene	105	103	84 - 115	2	30		
Trichlorofluoromethane	118	125	58 - 149	6	50		
1,2,3-Trichloropropane	92	85	70 - 130	7	30		
Vinyl acetate	155	155	10 - 217	0	30		
Vinyl chloride	139	139	59 - 144	0	50		
Xylenes, Total	98	98	84 - 118	0	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	92		92		75 - 120		
Dibromofluoromethane	107		105		75 - 121		
Toluene-d8 (Surr)	102		99		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-170853**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170853/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1013  
Date Prepared: 06/08/2010 1013

Units: ug/L

LCSD Lab Sample ID: LCSD 680-170853/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1042  
Date Prepared: 06/08/2010 1042

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	94.1	99.9
Benzene	50.0	50.0	50.6	50.2
Bromoform	50.0	50.0	48.8	47.7
Bromomethane	50.0	50.0	60.7	66.1
2-Butanone (MEK)	100	100	96.4	91.0
Carbon disulfide	50.0	50.0	61.3	63.5
Carbon tetrachloride	50.0	50.0	52.0	50.5
Chlorobenzene	50.0	50.0	49.6	48.5
Chlorodibromomethane	50.0	50.0	48.0	47.7
Chloroethane	50.0	50.0	48.9	57.3
Chloroform	50.0	50.0	57.7	58.2
Chloromethane	50.0	50.0	69.4	68.7
cis-1,3-Dichloropropene	50.0	50.0	52.5	52.4
1,2-Dibromo-3-Chloropropane	50.0	50.0	44.5	40.9
Dibromomethane	50.0	50.0	47.5	46.4
Dichlorobromomethane	50.0	50.0	52.4	50.7
Dichlorodifluoromethane	50.0	50.0	68.7	68.6
1,1-Dichloroethane	50.0	50.0	52.1	51.9
1,2-Dichloroethane	50.0	50.0	48.4	46.2
1,1-Dichloroethene	50.0	50.0	51.9	52.3
1,2-Dichloropropane	50.0	50.0	49.5	48.3
Ethylbenzene	50.0	50.0	48.6	49.5
Ethylene Dibromide	50.0	50.0	48.4	46.7
2-Hexanone	100	100	91.1	91.4
Methylene Chloride	50.0	50.0	53.7	53.7
4-Methyl-2-pentanone (MIBK)	100	100	93.7	91.3
Styrene	50.0	50.0	50.0	49.6
1,1,1,2-Tetrachloroethane	50.0	50.0	46.5	46.1
1,1,2,2-Tetrachloroethane	50.0	50.0	42.2	39.8
Tetrachloroethene	50.0	50.0	48.2	47.1
Toluene	50.0	50.0	50.1	49.7
trans-1,2-Dichloroethene	50.0	50.0	51.3	50.9
trans-1,3-Dichloropropene	50.0	50.0	50.5	49.1
1,1,1-Trichloroethane	50.0	50.0	49.5	49.5
1,1,2-Trichloroethane	50.0	50.0	47.4	47.9
Trichloroethene	50.0	50.0	52.6	51.5
Trichlorofluoromethane	50.0	50.0	59.0	62.6
1,2,3-Trichloropropane	50.0	50.0	45.8	42.6
Vinyl acetate	100	100	155	155
Vinyl chloride	50.0	50.0	69.4	69.6
Xylenes, Total	150	150	147	146



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Method Blank - Batch: 680-170857

Lab Sample ID: MB 680-170857/9  
Client Matrix: WdAer  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1226  
Date Prepared: 06/08/2010 1226

Analysis Batch: 680-170857  
Prep Batch: N/A  
Units: ug/L

### Method: 8260B Preparation: 5030B

Instrument ID: MSP2  
Lab File ID: pq120.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Method Blank - Batch: 680-170857

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170857/9

Analysis Batch: 680-170857

Instrument ID: MSP2

Client Matrix: WdAer

Prep Batch: N/A

Lab File ID: pq120.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/08/2010 1226

Final Weight/Volume: 5 mL

Date Prepared: 06/08/2010 1226

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	96	75 - 120
Dibromofluoromethane	92	75 - 121
Toluene-d8 (Surr)	105	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 680-170857

Method: 8260B

Preparation: 5030B

LCS Lab Sample ID: LCS 680-170857/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1028  
Date Prepared: 06/08/2010 1028

Analysis Batch: 680-170857  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq112.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170857/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1057  
Date Prepared: 06/08/2010 1057

Analysis Batch: 680-170857  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq114.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	86	92	17 - 175	7	50		
Benzene	106	105	77 - 119	1	30		
Bromoform	108	110	62 - 133	2	30		
Bromomethane	161	212	12 - 184	27	50		*
2-Butanone (MEK)	99	97	33 - 157	1	30		
Carbon disulfide	120	127	55 - 131	5	30		
Carbon tetrachloride	121	115	71 - 135	5	30		
Chlorobenzene	97	100	85 - 116	2	30		
Chlorodibromomethane	101	103	75 - 133	2	30		
Chloroethane	112	113	40 - 165	2	50		
Chloroform	112	111	82 - 120	2	30		
Chloromethane	122	133	48 - 142	9	50		
cis-1,3-Dichloropropene	114	113	76 - 126	0	30		
1,2-Dibromo-3-Chloropropane	100	105	49 - 140	6	30		
Dibromomethane	99	97	78 - 119	2	30		
Dichlorobromomethane	113	110	78 - 127	2	30		
Dichlorodifluoromethane	125	131	34 - 154	4	30		
1,1-Dichloroethane	104	107	74 - 127	2	30		
1,2-Dichloroethane	112	107	66 - 132	5	30		
1,1-Dichloroethene	91	94	62 - 141	2	30		
1,2-Dichloropropane	104	104	73 - 124	0	30		
Ethylbenzene	101	105	86 - 116	5	30		
Ethylene Dibromide	104	101	80 - 121	3	30		
2-Hexanone	103	98	34 - 161	5	30		
Methylene Chloride	102	108	70 - 125	6	30		
4-Methyl-2-pentanone (MIBK)	105	102	40 - 151	3	30		
Styrene	99	105	82 - 122	7	30		
1,1,1,2-Tetrachloroethane	99	103	81 - 128	4	30		
1,1,2,2-Tetrachloroethane	88	89	69 - 129	1	30		
Tetrachloroethene	97	100	76 - 126	3	30		
Toluene	103	105	81 - 117	2	30		
trans-1,2-Dichloroethene	96	95	72 - 131	0	30		
trans-1,3-Dichloropropene	118	115	73 - 128	2	30		
1,1,1-Trichloroethane	116	117	76 - 127	1	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170857**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170857/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1028  
Date Prepared: 06/08/2010 1028

Analysis Batch: 680-170857  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq112.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170857/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1057  
Date Prepared: 06/08/2010 1057

Analysis Batch: 680-170857  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq114.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	106	103	75 - 121	3	30		
Trichloroethene	107	102	84 - 115	5	30		
Trichlorofluoromethane	119	126	58 - 149	6	50		
1,2,3-Trichloropropane	98	99	70 - 130	2	30		
Vinyl acetate	187	185	10 - 217	1	30		
Vinyl chloride	118	122	59 - 144	4	50		
Xylenes, Total	97	101	84 - 118	4	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	97		99		75 - 120		
Dibromofluoromethane	102		103		75 - 121		
Toluene-d8 (Surr)	106		106		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-170857**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170857/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1028  
Date Prepared: 06/08/2010 1028

Units: ug/L

LCSD Lab Sample ID: LCSD 680-170857/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1057  
Date Prepared: 06/08/2010 1057

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	86.0	92.3
Benzene	50.0	50.0	52.9	52.4
Bromoform	50.0	50.0	54.1	55.0
Bromomethane	50.0	50.0	80.4	106
2-Butanone (MEK)	100	100	98.7	97.5
Carbon disulfide	50.0	50.0	60.2	63.5
Carbon tetrachloride	50.0	50.0	60.7	57.7
Chlorobenzene	50.0	50.0	48.7	49.8
Chlorodibromomethane	50.0	50.0	50.5	51.5
Chloroethane	50.0	50.0	55.9	56.7
Chloroform	50.0	50.0	56.2	55.3
Chloromethane	50.0	50.0	61.0	66.7
cis-1,3-Dichloropropene	50.0	50.0	56.9	56.6
1,2-Dibromo-3-Chloropropane	50.0	50.0	49.8	52.7
Dibromomethane	50.0	50.0	49.5	48.7
Dichlorobromomethane	50.0	50.0	56.3	55.2
Dichlorodifluoromethane	50.0	50.0	62.6	65.3
1,1-Dichloroethane	50.0	50.0	52.2	53.3
1,2-Dichloroethane	50.0	50.0	56.2	53.3
1,1-Dichloroethene	50.0	50.0	45.7	46.9
1,2-Dichloropropane	50.0	50.0	52.2	52.2
Ethylbenzene	50.0	50.0	50.3	52.7
Ethylene Dibromide	50.0	50.0	51.9	50.4
2-Hexanone	100	100	103	98.0
Methylene Chloride	50.0	50.0	50.8	53.8
4-Methyl-2-pentanone (MIBK)	100	100	105	102
Styrene	50.0	50.0	49.3	52.7
1,1,1,2-Tetrachloroethane	50.0	50.0	49.6	51.7
1,1,2,2-Tetrachloroethane	50.0	50.0	44.2	44.4
Tetrachloroethene	50.0	50.0	48.7	49.9
Toluene	50.0	50.0	51.6	52.5
trans-1,2-Dichloroethene	50.0	50.0	47.8	47.7
trans-1,3-Dichloropropene	50.0	50.0	58.9	57.6
1,1,1-Trichloroethane	50.0	50.0	58.2	58.7
1,1,2-Trichloroethane	50.0	50.0	52.8	51.4
Trichloroethene	50.0	50.0	53.6	51.2
Trichlorofluoromethane	50.0	50.0	59.6	63.2
1,2,3-Trichloropropane	50.0	50.0	48.8	49.7
Vinyl acetate	100	100	187	185
Vinyl chloride	50.0	50.0	58.9	61.2
Xylenes, Total	150	150	146	152



**Quality Control Results**

Client: Ashland Inc.

Job Number: 680-58232-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Method Blank - Batch: 680-171008

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171008/9

Analysis Batch: 680-171008

Instrument ID: MSP2

Client Matrix: WdAer

Prep Batch: N/A

Lab File ID: pq142.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/09/2010 1220

Final Weight/Volume: 5 mL

Date Prepared: 06/09/2010 1220

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Method Blank - Batch: 680-171008

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171008/9

Analysis Batch: 680-171008

Instrument ID: MSP2

Client Matrix: WdAer

Prep Batch: N/A

Lab File ID: pq142.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/09/2010 1220

Final Weight/Volume: 5 mL

Date Prepared: 06/09/2010 1220

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	97	75 - 120
Dibromofluoromethane	92	75 - 121
Toluene-d8 (Surr)	105	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Lab Control Sample/

### Lab Control Sample Duplicate Recovery Report - Batch: 680-171008

Method: 8260B

Preparation: 5030B

LCS Lab Sample ID: LCS 680-171008/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1022  
Date Prepared: 06/09/2010 1022

Analysis Batch: 680-171008  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq134.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171008/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1051  
Date Prepared: 06/09/2010 1051

Analysis Batch: 680-171008  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq136.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	83	81	17 - 175	2	50		
Benzene	103	100	77 - 119	3	30		
Bromoform	112	110	62 - 133	2	30		
Bromomethane	184	219	12 - 184	17	50		*
2-Butanone (MEK)	93	90	33 - 157	4	30		
Carbon disulfide	115	123	55 - 131	7	30		
Carbon tetrachloride	122	119	71 - 135	2	30		
Chlorobenzene	98	100	85 - 116	2	30		
Chlorodibromomethane	100	102	75 - 133	2	30		
Chloroethane	113	123	40 - 165	9	50		
Chloroform	112	113	82 - 120	1	30		
Chloromethane	113	126	48 - 142	11	50		
cis-1,3-Dichloropropene	113	109	76 - 126	3	30		
1,2-Dibromo-3-Chloropropane	107	105	49 - 140	2	30		
Dibromomethane	100	97	78 - 119	3	30		
Dichlorobromomethane	112	111	78 - 127	2	30		
Dichlorodifluoromethane	128	132	34 - 154	3	30		
1,1-Dichloroethane	98	104	74 - 127	6	30		
1,2-Dichloroethane	112	107	66 - 132	5	30		
1,1-Dichloroethene	88	88	62 - 141	1	30		
1,2-Dichloropropane	99	98	73 - 124	1	30		
Ethylbenzene	103	106	86 - 116	3	30		
Ethylene Dibromide	104	98	80 - 121	6	30		
2-Hexanone	96	93	34 - 161	3	30		
Methylene Chloride	97	102	70 - 125	5	30		
4-Methyl-2-pentanone (MIBK)	96	93	40 - 151	3	30		
Styrene	100	104	82 - 122	4	30		
1,1,1,2-Tetrachloroethane	103	102	81 - 128	1	30		
1,1,2,2-Tetrachloroethane	89	89	69 - 129	0	30		
Tetrachloroethene	102	102	76 - 126	0	30		
Toluene	102	102	81 - 117	0	30		
trans-1,2-Dichloroethene	92	95	72 - 131	4	30		
trans-1,3-Dichloropropene	120	115	73 - 128	4	30		
1,1,1-Trichloroethane	118	118	76 - 127	1	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-171008**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171008/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1022  
Date Prepared: 06/09/2010 1022

Analysis Batch: 680-171008  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq134.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171008/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1051  
Date Prepared: 06/09/2010 1051

Analysis Batch: 680-171008  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP2  
Lab File ID: pq136.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	105	98	75 - 121	7	30		
Trichloroethene	107	105	84 - 115	3	30		
Trichlorofluoromethane	129	132	58 - 149	3	50		
1,2,3-Trichloropropane	97	100	70 - 130	4	30		
Vinyl acetate	172	175	10 - 217	2	30		
Vinyl chloride	117	123	59 - 144	5	50		
Xylenes, Total	99	102	84 - 118	3	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	99		100		75 - 120		
Dibromofluoromethane	98		101		75 - 121		
Toluene-d8 (Surr)	107		106		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-171008**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171008/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1022  
Date Prepared: 06/09/2010 1022

Units: ug/L

LCSD Lab Sample ID: LCSD 680-171008/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1051  
Date Prepared: 06/09/2010 1051

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	82.9	81.3
Benzene	50.0	50.0	51.4	50.0
Bromoform	50.0	50.0	56.1	54.8
Bromomethane	50.0	50.0	91.9	110 *
2-Butanone (MEK)	100	100	93.2	89.6
Carbon disulfide	50.0	50.0	57.6	61.6
Carbon tetrachloride	50.0	50.0	60.8	59.4
Chlorobenzene	50.0	50.0	48.9	50.0
Chlorodibromomethane	50.0	50.0	50.1	51.1
Chloroethane	50.0	50.0	56.3	61.4
Chloroform	50.0	50.0	55.8	56.3
Chloromethane	50.0	50.0	56.4	62.9
cis-1,3-Dichloropropene	50.0	50.0	56.4	54.7
1,2-Dibromo-3-Chloropropane	50.0	50.0	53.3	52.3
Dibromomethane	50.0	50.0	50.1	48.5
Dichlorobromomethane	50.0	50.0	56.2	55.3
Dichlorodifluoromethane	50.0	50.0	64.1	65.8
1,1-Dichloroethane	50.0	50.0	49.0	52.0
1,2-Dichloroethane	50.0	50.0	56.2	53.7
1,1-Dichloroethene	50.0	50.0	43.9	44.2
1,2-Dichloropropane	50.0	50.0	49.4	48.9
Ethylbenzene	50.0	50.0	51.6	52.9
Ethylene Dibromide	50.0	50.0	52.2	49.2
2-Hexanone	100	100	95.6	92.6
Methylene Chloride	50.0	50.0	48.7	51.2
4-Methyl-2-pentanone (MIBK)	100	100	96.4	93.4
Styrene	50.0	50.0	50.2	52.2
1,1,1,2-Tetrachloroethane	50.0	50.0	51.4	51.0
1,1,2,2-Tetrachloroethane	50.0	50.0	44.5	44.6
Tetrachloroethene	50.0	50.0	51.1	51.2
Toluene	50.0	50.0	51.1	51.1
trans-1,2-Dichloroethene	50.0	50.0	45.9	47.7
trans-1,3-Dichloropropene	50.0	50.0	59.8	57.6
1,1,1-Trichloroethane	50.0	50.0	59.1	58.8
1,1,2-Trichloroethane	50.0	50.0	52.6	49.1
Trichloroethene	50.0	50.0	53.7	52.4
Trichlorofluoromethane	50.0	50.0	64.3	66.1
1,2,3-Trichloropropane	50.0	50.0	48.3	50.1
Vinyl acetate	100	100	172	175
Vinyl chloride	50.0	50.0	58.5	61.6
Xylenes, Total	150	150	148	153



**Quality Control Results**

Client: Ashland Inc.

Job Number: 680-58232-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Method Blank - Batch: 680-171009

Lab Sample ID: MB 680-171009/10  
 Client Matrix: WdAer  
 Dilution: 1.0  
 Date Analyzed: 06/09/2010 1205  
 Date Prepared: 06/09/2010 1205

Analysis Batch: 680-171009  
 Prep Batch: N/A  
 Units: ug/L

### Method: 8260B Preparation: 5030B

Instrument ID: MSP  
 Lab File ID: pq141.d  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Method Blank - Batch: 680-171009

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171009/10

Analysis Batch: 680-171009

Instrument ID: MSP

Client Matrix: WdAer

Prep Batch: N/A

Lab File ID: pq141.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/09/2010 1205

Final Weight/Volume: 5 mL

Date Prepared: 06/09/2010 1205

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	85	75 - 120
Dibromofluoromethane	97	75 - 121
Toluene-d8 (Surr)	99	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 680-171009

Method: 8260B

Preparation: 5030B

LCS Lab Sample ID: LCS 680-171009/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1007  
Date Prepared: 06/09/2010 1007

Analysis Batch: 680-171009  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq133.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171009/8  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1037  
Date Prepared: 06/09/2010 1037

Analysis Batch: 680-171009  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq135.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	75	69	17 - 175	9	50		
Benzene	99	100	77 - 119	1	30		
Bromoform	95	95	62 - 133	1	30		
Bromomethane	116	126	12 - 184	8	50		
2-Butanone (MEK)	79	86	33 - 157	8	30		
Carbon disulfide	114	120	55 - 131	5	30		
Carbon tetrachloride	107	106	71 - 135	1	30		
Chlorobenzene	95	97	85 - 116	3	30		
Chlorodibromomethane	91	92	75 - 133	1	30		
Chloroethane	89	103	40 - 165	15	50		
Chloroform	114	120	82 - 120	4	30		
Chloromethane	124	125	48 - 142	1	50		
cis-1,3-Dichloropropene	105	105	76 - 126	0	30		
1,2-Dibromo-3-Chloropropane	85	91	49 - 140	7	30		
Dibromomethane	95	92	78 - 119	3	30		
Dichlorobromomethane	107	107	78 - 127	0	30		
Dichlorodifluoromethane	138	138	34 - 154	0	30		
1,1-Dichloroethane	98	103	74 - 127	5	30		
1,2-Dichloroethane	101	102	66 - 132	1	30		
1,1-Dichloroethene	93	98	62 - 141	5	30		
1,2-Dichloropropane	95	95	73 - 124	0	30		
Ethylbenzene	96	99	86 - 116	3	30		
Ethylene Dibromide	94	97	80 - 121	2	30		
2-Hexanone	80	83	34 - 161	4	30		
Methylene Chloride	98	106	70 - 125	8	30		
4-Methyl-2-pentanone (MIBK)	87	89	40 - 151	2	30		
Styrene	99	101	82 - 122	3	30		
1,1,1,2-Tetrachloroethane	96	98	81 - 128	2	30		
1,1,2,2-Tetrachloroethane	78	78	69 - 129	0	30		
Tetrachloroethene	92	94	76 - 126	2	30		
Toluene	99	99	81 - 117	0	30		
trans-1,2-Dichloroethene	97	99	72 - 131	2	30		
trans-1,3-Dichloropropene	104	99	73 - 128	5	30		
1,1,1-Trichloroethane	102	102	76 - 127	1	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-171009**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171009/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1007  
Date Prepared: 06/09/2010 1007

Analysis Batch: 680-171009  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq133.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171009/8  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1037  
Date Prepared: 06/09/2010 1037

Analysis Batch: 680-171009  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq135.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	93	94	75 - 121	1	30		
Trichloroethene	105	106	84 - 115	2	30		
Trichlorofluoromethane	121	130	58 - 149	8	50		
1,2,3-Trichloropropane	91	84	70 - 130	9	30		
Vinyl acetate	137	142	10 - 217	4	30		
Vinyl chloride	133	128	59 - 144	4	50		
Xylenes, Total	96	99	84 - 118	3	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	91		93		75 - 120		
Dibromofluoromethane	104		106		75 - 121		
Toluene-d8 (Surr)	103		103		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-171009**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171009/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1007  
Date Prepared: 06/09/2010 1007

Units: ug/L

LCSD Lab Sample ID: LCSD 680-171009/8  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1037  
Date Prepared: 06/09/2010 1037

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	75.2	68.7
Benzene	50.0	50.0	49.6	50.0
Bromoform	50.0	50.0	47.3	47.7
Bromomethane	50.0	50.0	58.2	63.2
2-Butanone (MEK)	100	100	79.1	85.7
Carbon disulfide	50.0	50.0	56.8	59.8
Carbon tetrachloride	50.0	50.0	53.3	53.0
Chlorobenzene	50.0	50.0	47.4	48.7
Chlorodibromomethane	50.0	50.0	45.4	45.9
Chloroethane	50.0	50.0	44.6	51.7
Chloroform	50.0	50.0	57.2	59.8
Chloromethane	50.0	50.0	61.9	62.7
cis-1,3-Dichloropropene	50.0	50.0	52.5	52.6
1,2-Dibromo-3-Chloropropane	50.0	50.0	42.4	45.7
Dibromomethane	50.0	50.0	47.6	46.1
Dichlorobromomethane	50.0	50.0	53.5	53.4
Dichlorodifluoromethane	50.0	50.0	68.9	69.1
1,1-Dichloroethane	50.0	50.0	48.8	51.3
1,2-Dichloroethane	50.0	50.0	50.4	50.8
1,1-Dichloroethene	50.0	50.0	46.5	48.9
1,2-Dichloropropane	50.0	50.0	47.7	47.5
Ethylbenzene	50.0	50.0	47.9	49.4
Ethylene Dibromide	50.0	50.0	47.2	48.3
2-Hexanone	100	100	80.2	83.2
Methylene Chloride	50.0	50.0	48.9	52.8
4-Methyl-2-pentanone (MIBK)	100	100	86.7	88.7
Styrene	50.0	50.0	49.3	50.6
1,1,1,2-Tetrachloroethane	50.0	50.0	47.8	48.8
1,1,2,2-Tetrachloroethane	50.0	50.0	38.9	38.9
Tetrachloroethene	50.0	50.0	45.9	46.8
Toluene	50.0	50.0	49.7	49.6
trans-1,2-Dichloroethene	50.0	50.0	48.4	49.4
trans-1,3-Dichloropropene	50.0	50.0	51.8	49.5
1,1,1-Trichloroethane	50.0	50.0	51.2	50.9
1,1,2-Trichloroethane	50.0	50.0	46.5	46.8
Trichloroethene	50.0	50.0	52.4	53.2
Trichlorofluoromethane	50.0	50.0	60.4	65.2
1,2,3-Trichloropropane	50.0	50.0	45.6	41.9
Vinyl acetate	100	100	137	142
Vinyl chloride	50.0	50.0	66.4	63.9
Xylenes, Total	150	150	144	148



**Quality Control Results**

Client: Ashland Inc.

Job Number: 680-58232-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Method Blank - Batch: 680-170727

**Method: 8081A\_8082**  
**Preparation: 3520C**

Lab Sample ID: MB 680-170727/15-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1745  
Date Prepared: 06/07/2010 1421

Analysis Batch: 680-171114  
Prep Batch: 680-170727  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mf08088.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	72	14 - 115
Tetrachloro-m-xylene	71	35 - 120

### Lab Control Sample - Batch: 680-170727

**Method: 8081A\_8082**  
**Preparation: 3520C**

Lab Sample ID: LCS 680-170727/20-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1922  
Date Prepared: 06/07/2010 1421

Analysis Batch: 680-171114  
Prep Batch: 680-170727  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mf08093.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Toxaphene, Total	10.0	6.74	67	30 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	73	14 - 115
Tetrachloro-m-xylene	68	35 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 680-170727**

**Method: 8081A\_8082  
Preparation: 3520C**

MS Lab Sample ID: 680-58232-5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 0013  
Date Prepared: 06/07/2010 1421

Analysis Batch: 680-171114  
Prep Batch: 680-170727

Instrument ID: SGM  
Lab File ID: mf08108.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 680-58232-5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 0033  
Date Prepared: 06/07/2010 1421

Analysis Batch: 680-171114  
Prep Batch: 680-170727

Instrument ID: SGM  
Lab File ID: mf08109.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Toxaphene, Total	113	89	30 - 120	24	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	104	86	14 - 115
Tetrachloro-m-xylene	83	75	35 - 120

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 680-170727**

**Method: 8081A\_8082  
Preparation: 3520C**

MS Lab Sample ID: 680-58232-5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 0013  
Date Prepared: 06/07/2010 1421

Units: ug/L

MSD Lab Sample ID: 680-58232-5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 0033  
Date Prepared: 06/07/2010 1421

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Toxaphene, Total	5.0 U	10.0	10.0	11.3	8.87



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Method Blank - Batch: 680-170727

**Method: 8081B/8082A**  
**Preparation: 3520C**

Lab Sample ID: MB 680-170727/15-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1745  
Date Prepared: 06/07/2010 1421

Analysis Batch: 680-171118  
Prep Batch: 680-170727  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mf08088.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	64	14 - 115
Tetrachloro-m-xylene	82	35 - 120

### Lab Control Sample - Batch: 680-170727

**Method: 8081B/8082A**  
**Preparation: 3520C**

Lab Sample ID: LCS 680-170727/20-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1922  
Date Prepared: 06/07/2010 1421

Analysis Batch: 680-171118  
Prep Batch: 680-170727  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mf08093.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Toxaphene, Technical	10.0	8.08	81	30 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	73	14 - 115
Tetrachloro-m-xylene	68	35 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 680-170727**

**Method: 8081B/8082A  
Preparation: 3520C**

MS Lab Sample ID: 680-58232-5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 0013  
Date Prepared: 06/07/2010 1421

Analysis Batch: 680-171118  
Prep Batch: 680-170727

Instrument ID: SGM  
Lab File ID: mf08108.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 680-58232-5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 0033  
Date Prepared: 06/07/2010 1421

Analysis Batch: 680-171118  
Prep Batch: 680-170727

Instrument ID: SGM  
Lab File ID: mf08109.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Toxaphene, Technical	120	99	30 - 120	20	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	104	86	14 - 115
Tetrachloro-m-xylene	83	75	35 - 120

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 680-170727**

**Method: 8081B/8082A  
Preparation: 3520C**

MS Lab Sample ID: 680-58232-5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 0013  
Date Prepared: 06/07/2010 1421

Units: ug/L

MSD Lab Sample ID: 680-58232-5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 0033  
Date Prepared: 06/07/2010 1421

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Toxaphene, Technical	5.0 U	10.0	10.0	12.0	9.86



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Method Blank - Batch: 680-171282

Lab Sample ID: MB 680-171282/21-A  
Client Matrix: WdAer  
Dilution: 1.0  
Date Analyzed: 06/15/2010 1543  
Date Prepared: 06/11/2010 1157

Analysis Batch: 680-171623  
Prep Batch: 680-171282  
Units: ug/L

### Method: 6010B Preparation: 3005A Total Recoverable

Instrument ID: ICPD  
Lab File ID: 061510.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	10	U	2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Lab Control Sample - Batch: 680-171282

**Method: 6010B**  
**Preparation: 3005A**  
**Total Recoverable**

Lab Sample ID: LCS 680-171282/22-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 1548  
Date Prepared: 06/11/2010 1157

Analysis Batch: 680-171623  
Prep Batch: 680-171282  
Units: ug/L

Instrument ID: ICPD  
Lab File ID: 061510.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	500	500	100	75 - 125	
Arsenic	2000	1980	99	75 - 125	
Barium	2000	2000	100	75 - 125	
Beryllium	50.0	50.0	100	75 - 125	
Cadmium	50.0	50.9	102	75 - 125	
Chromium	200	200	100	75 - 125	
Cobalt	500	496	99	75 - 125	
Copper	250	242	97	75 - 125	
Lead	500	504	101	75 - 125	
Nickel	500	490	98	75 - 125	
Selenium	2000	2050	102	75 - 125	
Silver	50.0	48.7	97	75 - 125	
Thallium	2000	2070	104	75 - 125	
Tin	1000	954	95	75 - 125	
Vanadium	500	483	97	75 - 125	
Zinc	500	502	100	75 - 125	



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Method Blank - Batch: 680-171404

Lab Sample ID: MB 680-171404/23-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1629  
Date Prepared: 06/14/2010 0910

Analysis Batch: 680-171505  
Prep Batch: 680-171404  
Units: ug/L

### Method: 7470A Preparation: 7470A

Instrument ID: LEEMAN1  
Lab File ID: b061410.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.091	0.20

### Lab Control Sample - Batch: 680-171404

Lab Sample ID: LCS 680-171404/24-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1632  
Date Prepared: 06/14/2010 0910

Analysis Batch: 680-171505  
Prep Batch: 680-171404  
Units: ug/L

### Method: 7470A Preparation: 7470A

Instrument ID: LEEMAN1  
Lab File ID: b061410.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	2.50	2.52	101	80 - 120	



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Laboratory Chronicle

Lab ID: 680-58232-1

Client ID: MW39D

Sample Date/Time: 06/02/2010 10:00

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58232-B-1		680-170857		06/08/2010 15:27	1	TAL SAV	CL
A:8260B	680-58232-B-1		680-170857		06/08/2010 15:27	1	TAL SAV	CL
P:3005A	680-58232-A-1-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58232-A-1-A		680-171623	680-171282	06/15/2010 15:53	1	TAL SAV	BCB
P:7470A	680-58232-A-1-B		680-171505	680-171404	06/14/2010 09:10	1	TAL SAV	DH
A:7470A	680-58232-A-1-B		680-171505	680-171404	06/14/2010 17:36	1	TAL SAV	CE

Lab ID: 680-58232-2

Client ID: MW39I

Sample Date/Time: 06/02/2010 10:50

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58232-B-2		680-170857		06/08/2010 15:57	1	TAL SAV	CL
A:8260B	680-58232-B-2		680-170857		06/08/2010 15:57	1	TAL SAV	CL
P:3005A	680-58232-A-2-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58232-A-2-A		680-171623	680-171282	06/15/2010 16:54	1	TAL SAV	BCB
P:7470A	680-58232-A-2-B		680-171505	680-171404	06/14/2010 09:10	1	TAL SAV	DH
A:7470A	680-58232-A-2-B		680-171505	680-171404	06/14/2010 17:40	1	TAL SAV	CE

Lab ID: 680-58232-3

Client ID: MW20D

Sample Date/Time: 06/02/2010 12:00

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58232-B-3		680-171008		06/09/2010 12:49	4	TAL SAV	CL
A:8260B	680-58232-B-3		680-171008		06/09/2010 12:49	4	TAL SAV	CL

Lab ID: 680-58232-4

Client ID: MW38D

Sample Date/Time: 06/02/2010 13:00

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58232-E-4		680-171008		06/09/2010 13:19	5	TAL SAV	CL
A:8260B	680-58232-E-4		680-171008		06/09/2010 13:19	5	TAL SAV	CL
P:3520C	680-58232-A-4-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58232-A-4-A		680-171114	680-170727	06/09/2010 19:42	1	TAL SAV	JK
P:3520C	680-58232-A-4-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58232-A-4-A		680-171118	680-170727	06/09/2010 19:42	1	TAL SAV	JK
P:3005A	680-58232-C-4-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58232-C-4-A		680-171623	680-171282	06/15/2010 16:59	1	TAL SAV	BCB
P:7470A	680-58232-A-4-B		680-171505	680-171404	06/14/2010 09:10	1	TAL SAV	DH
A:7470A	680-58232-A-4-B		680-171505	680-171404	06/14/2010 17:42	1	TAL SAV	CE



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Laboratory Chronicle

Lab ID: 680-58232-5

Client ID: MW38I

Sample Date/Time: 06/02/2010 14:00

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58232-E-5		680-171009		06/09/2010 12:35	1	TAL SAV	CL
A:8260B	680-58232-E-5		680-171009		06/09/2010 12:35	1	TAL SAV	CL
P:3520C	680-58232-B-5-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58232-B-5-A		680-171114	680-170727	06/09/2010 20:01	1	TAL SAV	JK
P:3520C	680-58232-B-5-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58232-B-5-A		680-171118	680-170727	06/09/2010 20:01	1	TAL SAV	JK
P:3005A	680-58232-C-5-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58232-C-5-A		680-171623	680-171282	06/15/2010 17:04	1	TAL SAV	BCB
P:7470A	680-58232-A-5-C		680-171505	680-171404	06/14/2010 09:10	1	TAL SAV	DH
A:7470A	680-58232-A-5-C		680-171505	680-171404	06/14/2010 17:53	1	TAL SAV	CE

Lab ID: 680-58232-5 MS

Client ID: MW38I

Sample Date/Time: 06/02/2010 14:00

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	680-58232-A-5-A MS		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58232-A-5-A MS		680-171114	680-170727	06/10/2010 00:13	1	TAL SAV	JK
P:3520C	680-58232-A-5-A MS		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58232-A-5-A MS		680-171118	680-170727	06/10/2010 00:13	1	TAL SAV	JK

Lab ID: 680-58232-5 MSD

Client ID: MW38I

Sample Date/Time: 06/02/2010 14:00

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	680-58232-A-5-B MSD		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58232-A-5-B MSD		680-171114	680-170727	06/10/2010 00:33	1	TAL SAV	JK
P:3520C	680-58232-A-5-B MSD		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58232-A-5-B MSD		680-171118	680-170727	06/10/2010 00:33	1	TAL SAV	JK

Lab ID: 680-58232-6

Client ID: MW48D

Sample Date/Time: 06/02/2010 15:30

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58232-A-6		680-170857		06/08/2010 19:53	1	TAL SAV	CL
A:8260B	680-58232-A-6		680-170857		06/08/2010 19:53	1	TAL SAV	CL



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Laboratory Chronicle

Lab ID: 680-58232-7

Client ID: MW13

Sample Date/Time: 06/02/2010 13:20

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58232-A-7		680-170857		06/08/2010 20:23	1	TAL SAV	CL
A:8260B	680-58232-A-7		680-170857		06/08/2010 20:23	1	TAL SAV	CL

Lab ID: 680-58232-8

Client ID: MW20S

Sample Date/Time: 06/02/2010 10:35

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58232-C-8		680-170857		06/08/2010 20:53	1	TAL SAV	CL
A:8260B	680-58232-C-8		680-170857		06/08/2010 20:53	1	TAL SAV	CL
P:3520C	680-58232-A-8-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58232-A-8-A		680-171114	680-170727	06/09/2010 20:20	1	TAL SAV	JK
P:3520C	680-58232-A-8-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58232-A-8-A		680-171118	680-170727	06/09/2010 20:20	1	TAL SAV	JK

Lab ID: 680-58232-9

Client ID: MW8

Sample Date/Time: 06/02/2010 07:40

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58232-A-9		680-170853		06/08/2010 19:39	1	TAL SAV	CL
A:8260B	680-58232-A-9		680-170853		06/08/2010 19:39	1	TAL SAV	CL

Lab ID: 680-58232-10

Client ID: MW6

Sample Date/Time: 06/02/2010 08:20

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58232-A-10		680-170853		06/08/2010 20:08	1	TAL SAV	CL
A:8260B	680-58232-A-10		680-170853		06/08/2010 20:08	1	TAL SAV	CL

Lab ID: 680-58232-11

Client ID: MW39S

Sample Date/Time: 06/02/2010 09:30

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58232-B-11		680-170853		06/08/2010 20:38	1	TAL SAV	CL
A:8260B	680-58232-B-11		680-170853		06/08/2010 20:38	1	TAL SAV	CL
P:3005A	680-58232-A-11-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58232-A-11-A		680-171623	680-171282	06/15/2010 17:09	1	TAL SAV	BCB
P:7470A	680-58232-A-11-B		680-171505	680-171404	06/14/2010 09:10	1	TAL SAV	DH
A:7470A	680-58232-A-11-B		680-171505	680-171404	06/14/2010 17:56	1	TAL SAV	CE



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Laboratory Chronicle

Lab ID: 680-58232-12

Client ID: MW38S

Sample Date/Time: 06/02/2010 10:25

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58232-D-12		680-170853		06/08/2010 19:09	1	TAL SAV	CL
A:8260B	680-58232-D-12		680-170853		06/08/2010 19:09	1	TAL SAV	CL
P:3520C	680-58232-A-12-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58232-A-12-A		680-171114	680-170727	06/09/2010 20:40	1	TAL SAV	JK
P:3520C	680-58232-A-12-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58232-A-12-A		680-171118	680-170727	06/09/2010 20:40	1	TAL SAV	JK
P:3005A	680-58232-C-12-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58232-C-12-A		680-171623	680-171282	06/15/2010 17:14	1	TAL SAV	BCB
P:7470A	680-58232-A-12-B		680-171505	680-171404	06/14/2010 09:10	1	TAL SAV	DH
A:7470A	680-58232-A-12-B		680-171505	680-171404	06/14/2010 17:59	1	TAL SAV	CE

Lab ID: 680-58232-13

Client ID: MW20I

Sample Date/Time: 06/02/2010 12:30

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58232-C-13		680-171009		06/09/2010 13:04	1	TAL SAV	CL
A:8260B	680-58232-C-13		680-171009		06/09/2010 13:04	1	TAL SAV	CL
P:3520C	680-58232-B-13-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58232-B-13-A		680-171114	680-170727	06/09/2010 20:59	1	TAL SAV	JK
P:3520C	680-58232-B-13-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58232-B-13-A		680-171118	680-170727	06/09/2010 20:59	1	TAL SAV	JK

Lab ID: 680-58232-14

Client ID: Trip Blank 051110

Sample Date/Time: 06/02/2010 00:00

Received Date/Time: 06/03/2010 12:56

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58232-A-14		680-170857		06/08/2010 14:57	1	TAL SAV	CL
A:8260B	680-58232-A-14		680-170857		06/08/2010 14:57	1	TAL SAV	CL



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Laboratory Chronicle

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 680-170853/9		680-170853		06/08/2010 12:11	1	TAL SAV	CL
A:8260B	MB 680-170853/9		680-170853		06/08/2010 12:11	1	TAL SAV	CL
P:5030B	MB 680-170857/9		680-170857		06/08/2010 12:26	1	TAL SAV	CL
A:8260B	MB 680-170857/9		680-170857		06/08/2010 12:26	1	TAL SAV	CL
P:5030B	MB 680-171009/10		680-171009		06/09/2010 12:05	1	TAL SAV	CL
A:8260B	MB 680-171009/10		680-171009		06/09/2010 12:05	1	TAL SAV	CL
P:5030B	MB 680-171008/9		680-171008		06/09/2010 12:20	1	TAL SAV	CL
A:8260B	MB 680-171008/9		680-171008		06/09/2010 12:20	1	TAL SAV	CL
P:3520C	MB 680-170727/15-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	MB 680-170727/15-A		680-171114	680-170727	06/09/2010 17:45	1	TAL SAV	JK
P:3520C	MB 680-170727/15-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	MB 680-170727/15-A		680-171118	680-170727	06/09/2010 17:45	1	TAL SAV	JK
P:3005A	MB 680-171282/21-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	MB 680-171282/21-A		680-171623	680-171282	06/15/2010 15:43	1	TAL SAV	BCB
P:7470A	MB 680-171404/23-A		680-171505	680-171404	06/14/2010 09:10	1	TAL SAV	DH
A:7470A	MB 680-171404/23-A		680-171505	680-171404	06/14/2010 16:29	1	TAL SAV	CE

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 680-170853/6		680-170853		06/08/2010 10:13	1	TAL SAV	CL
A:8260B	LCS 680-170853/6		680-170853		06/08/2010 10:13	1	TAL SAV	CL
P:5030B	LCS 680-170857/6		680-170857		06/08/2010 10:28	1	TAL SAV	CL
A:8260B	LCS 680-170857/6		680-170857		06/08/2010 10:28	1	TAL SAV	CL
P:5030B	LCS 680-171009/4		680-171009		06/09/2010 10:07	1	TAL SAV	CL
A:8260B	LCS 680-171009/4		680-171009		06/09/2010 10:07	1	TAL SAV	CL
P:5030B	LCS 680-171008/4		680-171008		06/09/2010 10:22	1	TAL SAV	CL
A:8260B	LCS 680-171008/4		680-171008		06/09/2010 10:22	1	TAL SAV	CL
P:3520C	LCS 680-170727/20-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	LCS 680-170727/20-A		680-171114	680-170727	06/09/2010 19:22	1	TAL SAV	JK
P:3520C	LCS 680-170727/20-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	LCS 680-170727/20-A		680-171118	680-170727	06/09/2010 19:22	1	TAL SAV	JK
P:3005A	LCS 680-171282/22-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	LCS 680-171282/22-A		680-171623	680-171282	06/15/2010 15:48	1	TAL SAV	BCB
P:7470A	LCS 680-171404/24-A		680-171505	680-171404	06/14/2010 09:10	1	TAL SAV	DH
A:7470A	LCS 680-171404/24-A		680-171505	680-171404	06/14/2010 16:32	1	TAL SAV	CE



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58232-1

### Laboratory Chronicle

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCSD 680-170853/7		680-170853		06/08/2010 10:42	1	TAL SAV	CL
A:8260B	LCSD 680-170853/7		680-170853		06/08/2010 10:42	1	TAL SAV	CL
P:5030B	LCSD 680-170857/7		680-170857		06/08/2010 10:57	1	TAL SAV	CL
A:8260B	LCSD 680-170857/7		680-170857		06/08/2010 10:57	1	TAL SAV	CL
P:5030B	LCSD 680-171009/8		680-171009		06/09/2010 10:37	1	TAL SAV	CL
A:8260B	LCSD 680-171009/8		680-171009		06/09/2010 10:37	1	TAL SAV	CL
P:5030B	LCSD 680-171008/5		680-171008		06/09/2010 10:51	1	TAL SAV	CL
A:8260B	LCSD 680-171008/5		680-171008		06/09/2010 10:51	1	TAL SAV	CL

#### Lab References:

TAL SAV = TestAmerica Savannah



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

Website: www.testamericainc.com  
Phone: (912) 354-7858  
Fax: (912) 352-0165

TestAmerica Savannah  
5102 LaRoche Avenue  
Savannah, GA 31404

Alternate Laboratory Name/Location

Phone:  
Fax:

THE LEADER IN ENVIRONMENTAL TESTING

PROJECT REFERENCE <i>Asland Brunswick</i>		PROJECT NO. <i>109849509</i>	PROJECT LOCATION (STATE) <i>GA</i>	MATRIX TYPE	REQUIRED ANALYSIS		PAGE <i>1</i>	OF <i>2</i>
TAL (LAB) PROJECT MANAGER <i>Tim Hassett</i>		P.O. NUMBER <i>430131047</i>	CONTRACT NO.				STANDARD REPORT DELIVERY <input checked="" type="checkbox"/>	
CLIENT (SITE) PM <i>Tim Hassett</i>		CLIENT PHONE	CLIENT FAX				DATE DUE	
CLIENT NAME <i>Asland Horentes</i>		CLIENT E-MAIL					EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>	
CLIENT ADDRESS <i>2508 Cook St Brunswick GA</i>							DATE DUE	
COMPANY CONTRACTING THIS WORK (if applicable)							NUMBER OF COOLERS SUBMITTED PER SHIPMENT:	
SAMPLE IDENTIFICATION				REMARKS				
SAMPLE	DATE	TIME						
<i>8/2/10</i>	<i>1000</i>	<i>MW39D</i>	<i>GX</i>					
<i>96</i>	<i>1050</i>	<i>MW39I</i>						
<i>01</i>	<i>1200</i>	<i>MW20D</i>						
<i>98</i>	<i>1300</i>	<i>MW38D</i>						
	<i>1480</i>	<i>MW38I</i>						
	<i>1530</i>	<i>MW48D</i>						
	<i>1320</i>	<i>MW13</i>						
	<i>1035</i>	<i>MW20S</i>						
	<i>0740</i>	<i>MW8</i>						
	<i>0820</i>	<i>MW6</i>						
	<i>0930</i>	<i>MW39S</i>						
	<i>1025</i>	<i>MW38S</i>						
RELINQUISHED BY: (SIGNATURE) <i>Tim Hassett</i>				DATE <i>8/2/10</i>	TIME <i>1700</i>	RELINQUISHED BY: (SIGNATURE)		
RECEIVED BY: (SIGNATURE)				DATE	TIME	RECEIVED BY: (SIGNATURE)		

RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>Tim Hassett</i>		DATE <i>6/3/10</i>	TIME <i>0924</i>	CUSTODY INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	CUSTODY SEAL NO.	SAVANNAH LOG NO. <i>680-58232</i>	LABORATORY REMARKS <i>38/0.20c</i>
--	--	-----------------------	---------------------	--	------------------	--------------------------------------	---------------------------------------



Serial Number 026437

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

# TestAmerica

## THE LEADER IN ENVIRONMENTAL TESTING

PROJECT REFERENCE PROJECT NO.

Ashland Brunswick

TAL (LAB) PROJECT MANAGER

Tina Lidia G.

CLIENT (SITE) PM

Tim Harsett

CLIENT NAME

Ashland Hatterer

CLIENT ADDRESS

COMPANY CONTRACTING THIS WORK (if applicable)

PROJECT LOCATION (STATE)

GA

CONTRACT NO.

CLIENT FAX

CLIENT PHONE

CLIENT E-MAIL

MATRIX TYPE

COMPOSITE (C) OR GRAB (G) INDICATE

AQUEOUS (WATER)

SOLID OR SEMISOLID

AIR

NONAQUEOUS LIQUID (OIL, SOLVENT, ...)

REQUIRED ANALYSIS

PAGE

OF 2

STANDARD REPORT DELIVERY

DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE)

DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT

REMARKS

NUMBER OF CONTAINERS SUBMITTED

SAMPLE IDENTIFICATION

SAMPLE DATE

TIME

Page 37 of 98

6/12/10 1230

MW 20 I

TRIP Blank 051110

32

2

RELINQUISHED BY: (SIGNATURE)

DATE

TIME

7/20/10 12/10

RELINQUISHED BY: (SIGNATURE)

DATE

TIME

RELINQUISHED BY: (SIGNATURE)

DATE

TIME

RECEIVED BY: (SIGNATURE)

DATE

TIME

6/13/10 0924

RECEIVED BY: (SIGNATURE)

DATE

TIME

RECEIVED BY: (SIGNATURE)

DATE

TIME

LABORATORY USE ONLY

CUSTODY INTACT

YES

NO

TIME

6/13/10

RECEIVED FOR LABORATORY BY: (SIGNATURE)

Tina Lidia G.

LABORATORY REMARKS

SAVANNAH LOG NO.

680-59732



## Login Sample Receipt Check List

Client: Ashland Inc.

Job Number: 680-58232-1

**Login Number: 58232**

**List Source: TestAmerica Savannah**

**Creator: Conner, Keaton**

**List Number: 1**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	2 coolers reclk on ice
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.8 and 0.2 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	Received toxaphene volume for -8 not listed on COC
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	MW-38D - 1 liter received broken
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	MS/MSd not received ( no additional volume provided).
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	N/A	
Sample Preservation Verified	True	



## ANALYTICAL REPORT

Job Number: 680-58279-1

Job Description: Ashland Brunswick RFI GW June 2010

For:  
Ashland Inc.  
500 Hercules Road  
Wilmington, DE 19894  
Attention: Timothy Hassett



Approved for release.  
Lidya Gulizia  
Project Manager I  
6/29/2010 1:42 PM

---

Lidya Gulizia  
Project Manager I  
lidya.gulizia@testamericainc.com  
06/29/2010

cc: Kelley Baker  
Mr. Leroy Bishop  
Mr. Dennis Brunner  
Ryan Cate  
Mr. Tony Mancini  
Ms. Charlene Rivard

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; AZ: AZ0741; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

**TestAmerica Laboratories, Inc.**

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404  
Tel (912) 354-7858 Fax (912) 352-0165 [www.testamericainc.com](http://www.testamericainc.com)





**Job Narrative**  
**680-58279-1**

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

Method(s) 8260B: The equipment blank associated with these samples contained a detection above the method detection limit (MDL) for the following analytes: 2-butanone, 4-methyl-2-pentanone, and acetone.

Method(s) 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for batch 171000 exceeded control limits for the following analytes: Chloroethane.

No other analytical or quality issues were noted.

**GC Semi VOA**

No analytical or quality issues were noted.

**Metals**

No analytical or quality issues were noted.

**Comments**

No additional comments.



## METHOD SUMMARY

Client: Ashland Inc.

Job Number: 680-58279-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030B
Organochlorine Pesticides & PCBs (GC)	TAL SAV	SW846 8081A_8082	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	TAL SAV	SW846 8081B/8082A	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Metals (ICP)	TAL SAV	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL SAV		SW846 3005A
Mercury (CVAA)	TAL SAV	SW846 7470A	
Preparation, Mercury	TAL SAV		SW846 7470A

### Lab References:

TAL SAV = TestAmerica Savannah

### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.



## METHOD / ANALYST SUMMARY

Client: Ashland Inc.

Job Number: 680-58279-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB
SW846 8260B	Cowart, Judson	WJC
SW846 8260B	Lanier, Carolyn	CL
SW846 8260B	Waldorf, Jonathan	JW
SW846 8081A_8082	Kellar, Joshua	JK
SW846 8081B/8082A	Kellar, Joshua	JK
SW846 6010B	Bland, Brian	BCB
SW846 7470A	Eaton, Cliff	CE



## SAMPLE SUMMARY

Client: Ashland Inc.

Job Number: 680-58279-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-58279-1	MW2D	Water	06/03/2010 0750	06/04/2010 1030
680-58279-2	MW44I	Water	06/03/2010 1000	06/04/2010 1030
680-58279-3	MW44ID	Water	06/03/2010 1130	06/04/2010 1030
680-58279-4	MW44D	Water	06/03/2010 1400	06/04/2010 1030
680-58279-5	MW2S	Water	06/03/2010 0745	06/04/2010 1030
680-58279-6	MW1S	Water	06/03/2010 0820	06/04/2010 1030
680-58279-7	MW25S	Water	06/03/2010 0855	06/04/2010 1030
680-58279-8	MW25D	Water	06/03/2010 0930	06/04/2010 1030
680-58279-9	MW14S	Water	06/03/2010 1100	06/04/2010 1030
680-58279-10	MW14D	Water	06/03/2010 1150	06/04/2010 1030
680-58279-11	MW15S	Water	06/03/2010 1720	06/04/2010 1030
680-58279-12EB	Equip Blank (Mega Monsoon)	Water	06/02/2010 1800	06/04/2010 1030
680-58279-13EB	Equip Blank (PP)	Water	06/02/2010 1830	06/04/2010 1030
680-58279-14FB	Field Blank 1	Water	06/03/2010 1630	06/04/2010 1030
680-58279-15TB	Trip Blank Lot 051110	Water	06/03/2010 0000	06/04/2010 1030
680-58279-16	MW-44S	Water	06/03/2010 1400	06/04/2010 1030
680-58279-17	MW-1D	Water	06/03/2010 0900	06/04/2010 1030



# **SAMPLE RESULTS**



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW2D**

Lab Sample ID: 680-58279-1

Date Sampled: 06/03/2010 0750

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171163	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0053.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 0128		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 0128			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	120	U	25	120
Acetonitrile	200	U	50	200
Acrolein	100	U	37	100
Acrylonitrile	100	U	36	100
Benzene	160		1.2	5.0
Bromoform	5.0	U	2.5	5.0
Bromomethane	5.0	U	4.0	5.0
2-Butanone (MEK)	50	U	5.0	50
Carbon disulfide	10	U	3.0	10
Carbon tetrachloride	5.0	U	2.5	5.0
Chlorobenzene	240		1.2	5.0
2-Chloro-1,3-butadiene	5.0	U	1.5	5.0
Chlorodibromomethane	5.0	U	0.50	5.0
Chloroethane	5.0	U	5.0	5.0
Chloroform	5.0	U	0.70	5.0
Chloromethane	5.0	U	1.6	5.0
3-Chloro-1-propene	5.0	U	1.0	5.0
cis-1,3-Dichloropropene	5.0	U	0.55	5.0
1,2-Dibromo-3-Chloropropane	5.0	U	2.2	5.0
Dibromomethane	5.0	U	1.0	5.0
Dichlorobromomethane	5.0	U	1.2	5.0
Dichlorodifluoromethane	5.0	U	1.2	5.0
1,1-Dichloroethane	5.0	U	1.2	5.0
1,2-Dichloroethane	5.0	U	0.50	5.0
1,1-Dichloroethene	5.0	U	0.55	5.0
1,2-Dichloropropane	5.0	U	0.65	5.0
Ethylbenzene	350		0.55	5.0
Ethylene Dibromide	5.0	U	1.2	5.0
Ethyl methacrylate	5.0	U	1.2	5.0
2-Hexanone	50	U	5.0	50
Iodomethane	25	U	5.0	25
Isobutyl alcohol	200	U	55	200
Methacrylonitrile	100	U	16	100
Methylene Chloride	25	U	5.0	25
Methyl methacrylate	5.0	U	2.4	5.0
4-Methyl-2-pentanone (MIBK)	50	U	5.0	50
Pentachloroethane	25	U	6.0	25
Propionitrile	100	U	23	100
Styrene	5.0	U	0.55	5.0
1,1,1,2-Tetrachloroethane	5.0	U	1.6	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.90	5.0
Tetrachloroethene	5.0	U	0.75	5.0
Toluene	3.2	J	1.6	5.0
trans-1,4-Dichloro-2-butene	10	U	2.5	10
trans-1,2-Dichloroethene	5.0	U	1.0	5.0
trans-1,3-Dichloropropene	5.0	U	1.0	5.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW2D**

Lab Sample ID: 680-58279-1

Date Sampled: 06/03/2010 0750

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171163	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0053.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 0128		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 0128			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	5.0	U	2.5	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.65	5.0
Trichlorofluoromethane	5.0	U	1.2	5.0
1,2,3-Trichloropropane	5.0	U	2.0	5.0
Vinyl acetate	10	U	1.4	10
Vinyl chloride	7.7		0.90	5.0
Xylenes, Total	290		1.0	10

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		75 - 120
Dibromofluoromethane	92		75 - 121
Toluene-d8 (Surr)	105		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58279-1

Client Sample ID: MW44I

Lab Sample ID: 680-58279-2

Client Matrix: Water

Date Sampled: 06/03/2010 1000

Date Received: 06/04/2010 1030

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171000	Instrument ID:	MSA
Preparation:	5030B		Lab File ID:	a0019.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1628		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1628			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	13	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	94		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	52		0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U *	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U *	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.30	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	0.48	J	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** MW44I

Lab Sample ID: 680-58279-2

Date Sampled: 06/03/2010 1000

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171000	Instrument ID:	MSA
Preparation:	5030B		Lab File ID:	a0019.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1628		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1628			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	1.7	J	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	109		75 - 120
Dibromofluoromethane	106		75 - 121
Toluene-d8 (Surr)	109		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58279-1

Client Sample ID: MW44ID

Lab Sample ID: 680-58279-3

Client Matrix: Water

Date Sampled: 06/03/2010 1130

Date Received: 06/04/2010 1030

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171185	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0068.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1331		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1331			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	120	U	25	120
Acetonitrile	200	U	50	200
Acrolein	100	U	37	100
Acrylonitrile	100	U	36	100
Benzene	220		1.2	5.0
Bromoform	5.0	U	2.5	5.0
Bromomethane	5.0	U	4.0	5.0
2-Butanone (MEK)	50	U	5.0	50
Carbon disulfide	10	U	3.0	10
Carbon tetrachloride	5.0	U	2.5	5.0
Chlorobenzene	230		1.2	5.0
2-Chloro-1,3-butadiene	5.0	U	1.5	5.0
Chlorodibromomethane	5.0	U	0.50	5.0
Chloroethane	5.0	U	5.0	5.0
Chloroform	580		0.70	5.0
Chloromethane	5.0	U	1.6	5.0
3-Chloro-1-propene	5.0	U	1.0	5.0
cis-1,3-Dichloropropene	5.0	U	0.55	5.0
1,2-Dibromo-3-Chloropropane	5.0	U	2.2	5.0
Dibromomethane	5.0	U	1.0	5.0
Dichlorobromomethane	5.0	U	1.2	5.0
Dichlorodifluoromethane	5.0	U	1.2	5.0
1,1-Dichloroethane	5.0	U	1.2	5.0
1,2-Dichloroethane	5.0	U	0.50	5.0
1,1-Dichloroethene	5.0	U	0.55	5.0
1,2-Dichloropropane	5.0	U	0.65	5.0
Ethylbenzene	220		0.55	5.0
Ethylene Dibromide	5.0	U	1.2	5.0
Ethyl methacrylate	5.0	U	1.2	5.0
2-Hexanone	50	U	5.0	50
Iodomethane	25	U	5.0	25
Isobutyl alcohol	200	U	55	200
Methacrylonitrile	100	U	16	100
Methylene Chloride	22	J	5.0	25
Methyl methacrylate	5.0	U	2.4	5.0
4-Methyl-2-pentanone (MIBK)	50	U	5.0	50
Pentachloroethane	25	U	6.0	25
Propionitrile	100	U	23	100
Styrene	5.0	U	0.55	5.0
1,1,1,2-Tetrachloroethane	5.0	U	1.6	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.90	5.0
Tetrachloroethene	5.0	U	0.75	5.0
Toluene	27		1.6	5.0
trans-1,4-Dichloro-2-butene	10	U	2.5	10
trans-1,2-Dichloroethene	5.0	U	1.0	5.0
trans-1,3-Dichloropropene	5.0	U	1.0	5.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** MW44ID

Lab Sample ID: 680-58279-3

Date Sampled: 06/03/2010 1130

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171185	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0068.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1331		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1331			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	5.0	U	2.5	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.65	5.0
Trichlorofluoromethane	5.0	U	1.2	5.0
1,2,3-Trichloropropane	5.0	U	2.0	5.0
Vinyl acetate	10	U	1.4	10
Vinyl chloride	5.0	U	0.90	5.0
Xylenes, Total	610		1.0	10

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	103		75 - 120
Dibromofluoromethane	95		75 - 121
Toluene-d8 (Surr)	105		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW44D**

Lab Sample ID: 680-58279-4

Date Sampled: 06/03/2010 1400

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171163	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0054.d
Dilution:	2.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 0148		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 0148			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	50	U	10	50
Acetonitrile	80	U	20	80
Acrolein	40	U	15	40
Acrylonitrile	40	U	14	40
Benzene	340		0.50	2.0
Bromoform	2.0	U	1.0	2.0
Bromomethane	2.0	U	1.6	2.0
2-Butanone (MEK)	20	U	2.0	20
Carbon disulfide	4.0	U	1.2	4.0
Carbon tetrachloride	2.0	U	1.0	2.0
Chlorobenzene	52		0.50	2.0
2-Chloro-1,3-butadiene	2.0	U	0.60	2.0
Chlorodibromomethane	2.0	U	0.20	2.0
Chloroethane	2.0	U	2.0	2.0
Chloroform	2.0	U	0.28	2.0
Chloromethane	2.0	U	0.66	2.0
3-Chloro-1-propene	2.0	U	0.40	2.0
cis-1,3-Dichloropropene	2.0	U	0.22	2.0
1,2-Dibromo-3-Chloropropane	2.0	U	0.88	2.0
Dibromomethane	2.0	U	0.40	2.0
Dichlorobromomethane	2.0	U	0.50	2.0
Dichlorodifluoromethane	2.0	U	0.50	2.0
1,1-Dichloroethane	2.0	U	0.50	2.0
1,2-Dichloroethane	8.1		0.20	2.0
1,1-Dichloroethene	2.0	U	0.22	2.0
1,2-Dichloropropane	2.0	U	0.26	2.0
Ethylbenzene	2.6		0.22	2.0
Ethylene Dibromide	2.0	U	0.50	2.0
Ethyl methacrylate	2.0	U	0.50	2.0
2-Hexanone	20	U	2.0	20
Iodomethane	10	U	2.0	10
Isobutyl alcohol	80	U	22	80
Methacrylonitrile	40	U	6.6	40
Methylene Chloride	10	U	2.0	10
Methyl methacrylate	2.0	U	0.96	2.0
4-Methyl-2-pentanone (MIBK)	20	U	2.0	20
Pentachloroethane	10	U	2.4	10
Propionitrile	40	U	9.2	40
Styrene	2.0	U	0.22	2.0
1,1,1,2-Tetrachloroethane	2.0	U	0.66	2.0
1,1,2,2-Tetrachloroethane	2.0	U	0.36	2.0
Tetrachloroethene	2.0	U	0.30	2.0
Toluene	8.6		0.66	2.0
trans-1,4-Dichloro-2-butene	4.0	U	1.0	4.0
trans-1,2-Dichloroethene	2.0	U	0.40	2.0
trans-1,3-Dichloropropene	2.0	U	0.42	2.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW44D**

Lab Sample ID: 680-58279-4

Date Sampled: 06/03/2010 1400

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171163	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0054.d
Dilution:	2.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 0148		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 0148			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	2.0	U	1.0	2.0
1,1,2-Trichloroethane	2.0	U	0.26	2.0
Trichloroethene	2.0	U	0.26	2.0
Trichlorofluoromethane	2.0	U	0.50	2.0
1,2,3-Trichloropropane	2.0	U	0.82	2.0
Vinyl acetate	4.0	U	0.56	4.0
Vinyl chloride	2.0	U	0.36	2.0
Xylenes, Total	8.1		0.40	4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		75 - 120
Dibromofluoromethane	86		75 - 121
Toluene-d8 (Surr)	107		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58279-1

Client Sample ID: MW2S

Lab Sample ID: 680-58279-5

Client Matrix: Water

Date Sampled: 06/03/2010 0745

Date Received: 06/04/2010 1030

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171185	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0069.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1352		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1352			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	120	U	25	120
Acetonitrile	200	U	50	200
Acrolein	100	U	37	100
Acrylonitrile	100	U	36	100
Benzene	110		1.2	5.0
Bromoform	5.0	U	2.5	5.0
Bromomethane	5.0	U	4.0	5.0
2-Butanone (MEK)	50	U	5.0	50
Carbon disulfide	10	U	3.0	10
Carbon tetrachloride	5.0	U	2.5	5.0
Chlorobenzene	260		1.2	5.0
2-Chloro-1,3-butadiene	5.0	U	1.5	5.0
Chlorodibromomethane	5.0	U	0.50	5.0
Chloroethane	5.0	U	5.0	5.0
Chloroform	5.0	U	0.70	5.0
Chloromethane	5.0	U	1.6	5.0
3-Chloro-1-propene	5.0	U	1.0	5.0
cis-1,3-Dichloropropene	5.0	U	0.55	5.0
1,2-Dibromo-3-Chloropropane	5.0	U	2.2	5.0
Dibromomethane	5.0	U	1.0	5.0
Dichlorobromomethane	5.0	U	1.2	5.0
Dichlorodifluoromethane	5.0	U	1.2	5.0
1,1-Dichloroethane	5.0	U	1.2	5.0
1,2-Dichloroethane	5.0	U	0.50	5.0
1,1-Dichloroethene	5.0	U	0.55	5.0
1,2-Dichloropropane	5.0	U	0.65	5.0
Ethylbenzene	280		0.55	5.0
Ethylene Dibromide	5.0	U	1.2	5.0
Ethyl methacrylate	5.0	U	1.2	5.0
2-Hexanone	50	U	5.0	50
Iodomethane	25	U	5.0	25
Isobutyl alcohol	200	U	55	200
Methacrylonitrile	100	U	16	100
Methylene Chloride	25	U	5.0	25
Methyl methacrylate	5.0	U	2.4	5.0
4-Methyl-2-pentanone (MIBK)	50	U	5.0	50
Pentachloroethane	25	U	6.0	25
Propionitrile	100	U	23	100
Styrene	5.0	U	0.55	5.0
1,1,1,2-Tetrachloroethane	5.0	U	1.6	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.90	5.0
Tetrachloroethene	5.0	U	0.75	5.0
Toluene	11		1.6	5.0
trans-1,4-Dichloro-2-butene	10	U	2.5	10
trans-1,2-Dichloroethene	5.0	U	1.0	5.0
trans-1,3-Dichloropropene	5.0	U	1.0	5.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW2S**

Lab Sample ID: 680-58279-5

Date Sampled: 06/03/2010 0745

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171185	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0069.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1352		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1352			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	5.0	U	2.5	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.65	5.0
Trichlorofluoromethane	5.0	U	1.2	5.0
1,2,3-Trichloropropane	5.0	U	2.0	5.0
Vinyl acetate	10	U	1.4	10
Vinyl chloride	5.0	U	0.90	5.0
Xylenes, Total	24		1.0	10

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		75 - 120
Dibromofluoromethane	93		75 - 121
Toluene-d8 (Surr)	106		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58279-1

Client Sample ID: MW1S

Lab Sample ID: 680-58279-6

Client Matrix: Water

Date Sampled: 06/03/2010 0820

Date Received: 06/04/2010 1030

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171163	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0059.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 0332		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 0332			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	9.5	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	35		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	110		0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	0.62	J	0.13	1.0
Ethylbenzene	1.2		0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	2.1		0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW1S**

Lab Sample ID: 680-58279-6

Date Sampled: 06/03/2010 0820

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171163	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0059.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 0332		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 0332			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.1		0.18	1.0
Xylenes, Total	97		0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	98		75 - 121
Toluene-d8 (Surr)	104		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW25S**

Lab Sample ID: 680-58279-7

Date Sampled: 06/03/2010 0855

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171185	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0066.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1250		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1250			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	12	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.35	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0		0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	0.57	J	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW25S**

Lab Sample ID: 680-58279-7

Date Sampled: 06/03/2010 0855

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171185	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0066.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1250		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1250			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	45		0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	101		75 - 120
Dibromofluoromethane	99		75 - 121
Toluene-d8 (Surr)	107		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58279-1

Client Sample ID: MW25D

Lab Sample ID: 680-58279-8

Client Matrix: Water

Date Sampled: 06/03/2010 0930

Date Received: 06/04/2010 1030

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171003	Instrument ID:	MSA2
Preparation:	5030B		Lab File ID:	a0020.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1642		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1642			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW25D**

Lab Sample ID: 680-58279-8

Date Sampled: 06/03/2010 0930

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171003	Instrument ID:	MSA2
Preparation:	5030B		Lab File ID:	a0020.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1642		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1642			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	94		75 - 121
Toluene-d8 (Surr)	109		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58279-1

Client Sample ID: MW14S

Lab Sample ID: 680-58279-9

Client Matrix: Water

Date Sampled: 06/03/2010 1100

Date Received: 06/04/2010 1030

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171185	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0063.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1147		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1147			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	59		5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW14S**

Lab Sample ID: 680-58279-9

Date Sampled: 06/03/2010 1100

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171185	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0063.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1147		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1147			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	100		75 - 121
Toluene-d8 (Surr)	106		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW14D**

Lab Sample ID: 680-58279-10

Date Sampled: 06/03/2010 1150

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171185	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0064.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1208		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1208			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	5.2		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW14D**

Lab Sample ID: 680-58279-10

Date Sampled: 06/03/2010 1150

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171185	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0064.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1208		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1208			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	97		75 - 121
Toluene-d8 (Surr)	104		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW15S**

Lab Sample ID: 680-58279-11

Date Sampled: 06/03/2010 1720

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171003	Instrument ID:	MSA2
Preparation:	5030B		Lab File ID:	a0026.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1933		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1933			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	0.66	J	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW15S**

Lab Sample ID: 680-58279-11

Date Sampled: 06/03/2010 1720

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171003	Instrument ID:	MSA2
Preparation:	5030B		Lab File ID:	a0026.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1933		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1933			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	97		75 - 121
Toluene-d8 (Surr)	106		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** Equip Blank (Mega Monsoon)

Lab Sample ID: 680-58279-12EB

Date Sampled: 06/02/2010 1800

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170853	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0171.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1542		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1542			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	6.4	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	2.1	J	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	1.0	J	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** Equip Blank (Mega Monsoon)

Lab Sample ID: 680-58279-12EB

Date Sampled: 06/02/2010 1800

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170853	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0171.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1542		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1542			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	85		75 - 120
Dibromofluoromethane	97		75 - 121
Toluene-d8 (Surr)	100		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58279-1

Client Sample ID: Equip Blank (PP)

Lab Sample ID: 680-58279-13EB

Client Matrix: Water

Date Sampled: 06/02/2010 1830

Date Received: 06/04/2010 1030

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170853	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0173.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1611		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1611			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	7.5	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	2.1	J	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	1.2	J	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** Equip Blank (PP)

Lab Sample ID: 680-58279-13EB

Client Matrix: Water

Date Sampled: 06/02/2010 1830

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-170853	Instrument ID:	MSP
Preparation:	5030B		Lab File ID:	p0173.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1611		Final Weight/Volume:	5 mL
Date Prepared:	06/08/2010 1611			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	84		75 - 120
Dibromofluoromethane	94		75 - 121
Toluene-d8 (Surr)	102		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58279-1

Client Sample ID: Field Blank 1

Lab Sample ID: 680-58279-14FB

Date Sampled: 06/03/2010 1630

Client Matrix: Water

Date Received: 06/04/2010 1030

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171000	Instrument ID:	MSA
Preparation:	5030B		Lab File ID:	a0011.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1435		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1435			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	12	J	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	2.1	J	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U *	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U *	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	1.5	J	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** Field Blank 1

Lab Sample ID: 680-58279-14FB

Date Sampled: 06/03/2010 1630

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171000	Instrument ID:	MSA
Preparation:	5030B		Lab File ID:	a0011.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1435		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1435			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	105		75 - 120
Dibromofluoromethane	105		75 - 121
Toluene-d8 (Surr)	109		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** Trip Blank Lot 051110

Lab Sample ID: 680-58279-15TB

Date Sampled: 06/03/2010 0000

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171000	Instrument ID:	MSA
Preparation:	5030B		Lab File ID:	a0013.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1503		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1503			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U *	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U *	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** Trip Blank Lot 051110

Lab Sample ID: 680-58279-15TB

Date Sampled: 06/03/2010 0000

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171000	Instrument ID:	MSA
Preparation:	5030B		Lab File ID:	a0013.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1503		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1503			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	103		75 - 120
Dibromofluoromethane	107		75 - 121
Toluene-d8 (Surr)	108		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58279-1

Client Sample ID: MW-44S

Lab Sample ID: 680-58279-16

Client Matrix: Water

Date Sampled: 06/03/2010 1400

Date Received: 06/04/2010 1030

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171185	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0065.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1229		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1229			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	48		5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.48	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	3.9		0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW-44S**

Lab Sample ID: 680-58279-16

Date Sampled: 06/03/2010 1400

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171185	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0065.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1229		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1229			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	102		75 - 121
Toluene-d8 (Surr)	106		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58279-1

Client Sample ID: MW-1D

Lab Sample ID: 680-58279-17

Client Matrix: Water

Date Sampled: 06/03/2010 0900

Date Received: 06/04/2010 1030

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171185	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0070.d
Dilution:	2.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1413		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1413			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	39	J	10	50
Acetonitrile	80	U	20	80
Acrolein	40	U	15	40
Acrylonitrile	40	U	14	40
Benzene	210		0.50	2.0
Bromoform	2.0	U	1.0	2.0
Bromomethane	2.0	U	1.6	2.0
2-Butanone (MEK)	20	U	2.0	20
Carbon disulfide	4.0	U	1.2	4.0
Carbon tetrachloride	2.0	U	1.0	2.0
Chlorobenzene	230		0.50	2.0
2-Chloro-1,3-butadiene	2.0	U	0.60	2.0
Chlorodibromomethane	2.0	U	0.20	2.0
Chloroethane	2.0	U	2.0	2.0
Chloroform	2.0	U	0.28	2.0
Chloromethane	2.0	U	0.66	2.0
3-Chloro-1-propene	2.0	U	0.40	2.0
cis-1,3-Dichloropropene	2.0	U	0.22	2.0
1,2-Dibromo-3-Chloropropane	2.0	U	0.88	2.0
Dibromomethane	2.0	U	0.40	2.0
Dichlorobromomethane	2.0	U	0.50	2.0
Dichlorodifluoromethane	2.0	U	0.50	2.0
1,1-Dichloroethane	2.0	U	0.50	2.0
1,2-Dichloroethane	2.0	U	0.20	2.0
1,1-Dichloroethene	2.0	U	0.22	2.0
1,2-Dichloropropane	3.0		0.26	2.0
Ethylbenzene	150		0.22	2.0
Ethylene Dibromide	2.0	U	0.50	2.0
Ethyl methacrylate	2.0	U	0.50	2.0
2-Hexanone	20	U	2.0	20
Iodomethane	10	U	2.0	10
Isobutyl alcohol	80	U	22	80
Methacrylonitrile	40	U	6.6	40
Methylene Chloride	10	U	2.0	10
Methyl methacrylate	2.0	U	0.96	2.0
4-Methyl-2-pentanone (MIBK)	20	U	2.0	20
Pentachloroethane	10	U	2.4	10
Propionitrile	40	U	9.2	40
Styrene	2.0	U	0.22	2.0
1,1,1,2-Tetrachloroethane	2.0	U	0.66	2.0
1,1,2,2-Tetrachloroethane	2.0	U	0.36	2.0
Tetrachloroethene	2.0	U	0.30	2.0
Toluene	5.4		0.66	2.0
trans-1,4-Dichloro-2-butene	4.0	U	1.0	4.0
trans-1,2-Dichloroethene	2.0	U	0.40	2.0
trans-1,3-Dichloropropene	2.0	U	0.42	2.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW-1D**

Lab Sample ID: 680-58279-17

Date Sampled: 06/03/2010 0900

Client Matrix: Water

Date Received: 06/04/2010 1030

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171185	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0070.d
Dilution:	2.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1413		Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1413			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	2.0	U	1.0	2.0
1,1,2-Trichloroethane	2.0	U	0.26	2.0
Trichloroethene	2.0	U	0.26	2.0
Trichlorofluoromethane	2.0	U	0.50	2.0
1,2,3-Trichloropropane	2.0	U	0.82	2.0
Vinyl acetate	4.0	U	0.56	4.0
Vinyl chloride	5.5		0.36	2.0
Xylenes, Total	300		0.40	4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	104		75 - 120
Dibromofluoromethane	90		75 - 121
Toluene-d8 (Surr)	106		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** MW44I

Lab Sample ID: 680-58279-2

Date Sampled: 06/03/2010 1000

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171114	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2138		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	1.4	J	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	20		14 - 115
Tetrachloro-m-xylene	39		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** MW44ID

Lab Sample ID: 680-58279-3

Date Sampled: 06/03/2010 1130

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171114	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2158		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	5.0		0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	24		14 - 115
Tetrachloro-m-xylene	44		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW44D**

Lab Sample ID: 680-58279-4

Date Sampled: 06/03/2010 1400

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171114	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2217		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	1.0	J	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	40		14 - 115
Tetrachloro-m-xylene	50		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW25S**

Lab Sample ID: 680-58279-7

Date Sampled: 06/03/2010 0855

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171114	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2236		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	1.1	J	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	14		14 - 115
Tetrachloro-m-xylene	52		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW25D**

Lab Sample ID: 680-58279-8

Date Sampled: 06/03/2010 0930

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171114	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2256		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.7	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	28		14 - 115
Tetrachloro-m-xylene	54		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** Equip Blank (Mega Monsoon)

Lab Sample ID: 680-58279-12EB

Date Sampled: 06/02/2010 1800

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171114	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2315		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.7	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	61		14 - 115
Tetrachloro-m-xylene	79		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** Equip Blank (PP)

Lab Sample ID: 680-58279-13EB

Client Matrix: Water

Date Sampled: 06/02/2010 1830

Date Received: 06/04/2010 1030

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171114	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2335		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.9	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	43		14 - 115
Tetrachloro-m-xylene	59		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW-44S**

Lab Sample ID: 680-58279-16

Date Sampled: 06/03/2010 1400

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171114	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 2354		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	34		14 - 115
Tetrachloro-m-xylene	62		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** MW44I

Lab Sample ID: 680-58279-2

Date Sampled: 06/03/2010 1000

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171118	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2138		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.7	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	20		14 - 115
Tetrachloro-m-xylene	39		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** MW44ID

Lab Sample ID: 680-58279-3

Date Sampled: 06/03/2010 1130

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171118	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2158		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.7	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	24		14 - 115
Tetrachloro-m-xylene	44		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW44D**

Lab Sample ID: 680-58279-4

Date Sampled: 06/03/2010 1400

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171118	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2217		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	40		14 - 115
Tetrachloro-m-xylene	50		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW25S**

Lab Sample ID: 680-58279-7

Date Sampled: 06/03/2010 0855

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171118	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2236		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	14		14 - 115
Tetrachloro-m-xylene	52		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW25D**

Lab Sample ID: 680-58279-8

Date Sampled: 06/03/2010 0930

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171118	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2256		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.7	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	28		14 - 115
Tetrachloro-m-xylene	54		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** Equip Blank (Mega Monsoon)

Lab Sample ID: 680-58279-12EB

Date Sampled: 06/02/2010 1800

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171118	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2315		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.7	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	61		14 - 115
Tetrachloro-m-xylene	79		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** Equip Blank (PP)

Lab Sample ID: 680-58279-13EB

Date Sampled: 06/02/2010 1830

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171118	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/09/2010 2335		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.9	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	43		14 - 115
Tetrachloro-m-xylene	59		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW-44S**

Lab Sample ID: 680-58279-16

Date Sampled: 06/03/2010 1400

Client Matrix: Water

Date Received: 06/04/2010 1030

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171118	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-170727	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 2354		Injection Volume:	2 uL
Date Prepared:	06/07/2010 1421		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	34		14 - 115
Tetrachloro-m-xylene	62		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW44I**

Lab Sample ID: 680-58279-2

Date Sampled: 06/03/2010 1000

Client Matrix: Water

Date Received: 06/04/2010 1030

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1720		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	140		2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	4.6	J	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	3.5	J	3.0	10
Zinc	7.2	J	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171505	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171421	Lab File ID:	b061410.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/14/2010 1926		Final Weight/Volume:	50 mL
Date Prepared:	06/14/2010 1106			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW44ID**

Lab Sample ID: 680-58279-3

Date Sampled: 06/03/2010 1130

Client Matrix: Water

Date Received: 06/04/2010 1030

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1725		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	1800		2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	47		2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	7.1	J	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171505	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171421	Lab File ID:	b061410.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/14/2010 1929		Final Weight/Volume:	50 mL
Date Prepared:	06/14/2010 1106			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW44D**

Lab Sample ID: 680-58279-4

Date Sampled: 06/03/2010 1400

Client Matrix: Water

Date Received: 06/04/2010 1030

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1740		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	33		2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	12		2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	6.0	J	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171505	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171421	Lab File ID:	b061410.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/14/2010 1932		Final Weight/Volume:	50 mL
Date Prepared:	06/14/2010 1106			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** Equip Blank (Mega Monsoon)

Lab Sample ID: 680-58279-12EB

Date Sampled: 06/02/2010 1800

Client Matrix: Water

Date Received: 06/04/2010 1030

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1746		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	10	U	2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171505	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171421	Lab File ID:	b061410.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/14/2010 1940		Final Weight/Volume:	50 mL
Date Prepared:	06/14/2010 1106			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID:** Equip Blank (PP)

Lab Sample ID: 680-58279-13EB

Client Matrix: Water

Date Sampled: 06/02/2010 1830

Date Received: 06/04/2010 1030

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1751		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	10	U	2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	7.1	J	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171505	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171421	Lab File ID:	b061410.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/14/2010 1943		Final Weight/Volume:	50 mL
Date Prepared:	06/14/2010 1106			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58279-1

**Client Sample ID: MW-44S**

Lab Sample ID: 680-58279-16

Date Sampled: 06/03/2010 1400

Client Matrix: Water

Date Received: 06/04/2010 1030

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1756		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	43		2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	9.5	J	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	5.5	J	3.0	10
Zinc	20	U	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-171505	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171421	Lab File ID:	b061410.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/14/2010 1946		Final Weight/Volume:	50 mL
Date Prepared:	06/14/2010 1106			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



## DATA REPORTING QUALIFIERS

Client: Ashland Inc.

Job Number: 680-58279-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	*	RPD of the LCS and LCSD exceeds the control limits
GC Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.



# QUALITY CONTROL RESULTS



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:680-170853</b>					
LCS 680-170853/6	Lab Control Sample	T	Water	8260B	
LCSD 680-170853/7	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-170853/9	Method Blank	T	Water	8260B	
680-58279-12EB	Equip Blank (Mega Monsoon)	T	Water	8260B	
680-58279-13EB	Equip Blank (PP)	T	Water	8260B	
<b>Analysis Batch:680-171000</b>					
LCS 680-171000/4	Lab Control Sample	T	Water	8260B	
LCSD 680-171000/5	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-171000/10	Method Blank	T	Water	8260B	
680-58279-2	MW44I	T	Water	8260B	
680-58279-14FB	Field Blank 1	T	Water	8260B	
680-58279-15TB	Trip Blank Lot 051110	T	Water	8260B	
<b>Analysis Batch:680-171003</b>					
LCS 680-171003/5	Lab Control Sample	T	Water	8260B	
LCSD 680-171003/6	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-171003/8	Method Blank	T	Water	8260B	
680-58279-8	MW25D	T	Water	8260B	
680-58279-11	MW15S	T	Water	8260B	
<b>Analysis Batch:680-171163</b>					
LCS 680-171163/15	Lab Control Sample	T	Water	8260B	
LCSD 680-171163/16	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-171163/18	Method Blank	T	Water	8260B	
680-58279-1	MW2D	T	Water	8260B	
680-58279-4	MW44D	T	Water	8260B	
680-58279-6	MW1S	T	Water	8260B	
<b>Analysis Batch:680-171185</b>					
LCS 680-171185/11	Lab Control Sample	T	Water	8260B	
LCSD 680-171185/12	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-171185/14	Method Blank	T	Water	8260B	
680-58279-3	MW44ID	T	Water	8260B	
680-58279-5	MW2S	T	Water	8260B	
680-58279-7	MW25S	T	Water	8260B	
680-58279-9	MW14S	T	Water	8260B	
680-58279-10	MW14D	T	Water	8260B	
680-58279-16	MW-44S	T	Water	8260B	
680-58279-17	MW-1D	T	Water	8260B	

#### Report Basis

T = Total

TestAmerica Savannah



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC Semi VOA</b>					
<b>Prep Batch: 680-170727</b>					
LCS 680-170727/20-A	Lab Control Sample	T	Water	3520C	
MB 680-170727/15-A	Method Blank	T	Water	3520C	
680-58279-2	MW44I	T	Water	3520C	
680-58279-3	MW44ID	T	Water	3520C	
680-58279-4	MW44D	T	Water	3520C	
680-58279-7	MW25S	T	Water	3520C	
680-58279-8	MW25D	T	Water	3520C	
680-58279-12EB	Equip Blank (Mega Monsoon)	T	Water	3520C	
680-58279-13EB	Equip Blank (PP)	T	Water	3520C	
680-58279-16	MW-44S	T	Water	3520C	
<b>Analysis Batch:680-171114</b>					
LCS 680-170727/20-A	Lab Control Sample	T	Water	8081A_8082	680-170727
MB 680-170727/15-A	Method Blank	T	Water	8081A_8082	680-170727
680-58279-2	MW44I	T	Water	8081A_8082	680-170727
680-58279-3	MW44ID	T	Water	8081A_8082	680-170727
680-58279-4	MW44D	T	Water	8081A_8082	680-170727
680-58279-7	MW25S	T	Water	8081A_8082	680-170727
680-58279-8	MW25D	T	Water	8081A_8082	680-170727
680-58279-12EB	Equip Blank (Mega Monsoon)	T	Water	8081A_8082	680-170727
680-58279-13EB	Equip Blank (PP)	T	Water	8081A_8082	680-170727
680-58279-16	MW-44S	T	Water	8081A_8082	680-170727
<b>Analysis Batch:680-171118</b>					
LCS 680-170727/20-A	Lab Control Sample	T	Water	8081B/8082A	680-170727
MB 680-170727/15-A	Method Blank	T	Water	8081B/8082A	680-170727
680-58279-2	MW44I	T	Water	8081B/8082A	680-170727
680-58279-3	MW44ID	T	Water	8081B/8082A	680-170727
680-58279-4	MW44D	T	Water	8081B/8082A	680-170727
680-58279-7	MW25S	T	Water	8081B/8082A	680-170727
680-58279-8	MW25D	T	Water	8081B/8082A	680-170727
680-58279-12EB	Equip Blank (Mega Monsoon)	T	Water	8081B/8082A	680-170727
680-58279-13EB	Equip Blank (PP)	T	Water	8081B/8082A	680-170727
680-58279-16	MW-44S	T	Water	8081B/8082A	680-170727

#### Report Basis

T = Total



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
Metals					
Prep Batch: 680-171282					
LCS 680-171282/22-A	Lab Control Sample	R	Water	3005A	
MB 680-171282/21-A	Method Blank	R	Water	3005A	
680-58279-2	MW44I	R	Water	3005A	
680-58279-3	MW44ID	R	Water	3005A	
680-58279-4	MW44D	R	Water	3005A	
680-58279-12EB	Equip Blank (Mega Monsoon)	R	Water	3005A	
680-58279-13EB	Equip Blank (PP)	R	Water	3005A	
680-58279-16	MW-44S	R	Water	3005A	
Prep Batch: 680-171421					
LCS 680-171421/24-A	Lab Control Sample	T	Water	7470A	
MB 680-171421/23-A	Method Blank	T	Water	7470A	
680-58279-2	MW44I	T	Water	7470A	
680-58279-3	MW44ID	T	Water	7470A	
680-58279-4	MW44D	T	Water	7470A	
680-58279-12EB	Equip Blank (Mega Monsoon)	T	Water	7470A	
680-58279-13EB	Equip Blank (PP)	T	Water	7470A	
680-58279-16	MW-44S	T	Water	7470A	
680-58279-16MS	Matrix Spike	T	Water	7470A	
680-58279-16MSD	Matrix Spike Duplicate	T	Water	7470A	
Analysis Batch:680-171505					
LCS 680-171421/24-A	Lab Control Sample	T	Water	7470A	680-171421
MB 680-171421/23-A	Method Blank	T	Water	7470A	680-171421
680-58279-2	MW44I	T	Water	7470A	680-171421
680-58279-3	MW44ID	T	Water	7470A	680-171421
680-58279-4	MW44D	T	Water	7470A	680-171421
680-58279-12EB	Equip Blank (Mega Monsoon)	T	Water	7470A	680-171421
680-58279-13EB	Equip Blank (PP)	T	Water	7470A	680-171421
680-58279-16	MW-44S	T	Water	7470A	680-171421
680-58279-16MS	Matrix Spike	T	Water	7470A	680-171421
680-58279-16MSD	Matrix Spike Duplicate	T	Water	7470A	680-171421
Analysis Batch:680-171623					
LCS 680-171282/22-A	Lab Control Sample	R	Water	6010B	680-171282
MB 680-171282/21-A	Method Blank	R	Water	6010B	680-171282
680-58279-2	MW44I	R	Water	6010B	680-171282
680-58279-3	MW44ID	R	Water	6010B	680-171282
680-58279-4	MW44D	R	Water	6010B	680-171282
680-58279-12EB	Equip Blank (Mega Monsoon)	R	Water	6010B	680-171282
680-58279-13EB	Equip Blank (PP)	R	Water	6010B	680-171282
680-58279-16	MW-44S	R	Water	6010B	680-171282



Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
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**Report Basis**  
R = Total Recoverable  
T = Total



Client: Ashland Inc.

Job Number: 680-58279-1

## Surrogate Recovery Report

### 8260B Volatile Organic Compounds (GC/MS)

#### Client Matrix: Water

L5i 65: pu 6D	Client Wam4le IB	BFB %Rec	DBFM %Rec	TOL %Rec
680-58279-1	MW2D	99	92	105
680-58279-2	MW44I	109	106	109
680-58279-3	MW44ID	103	95	105
680-58279-4	MW44D	99	86	107
680-58279-5	MW2S	100	93	106
680-58279-6	MW1S	97	98	104
680-58279-7	MW25S	101	99	107
680-58279-8	MW25D	95	94	109
680-58279-9	MW14S	95	100	106
680-58279-10	MW14D	96	97	104
680-58279-11	MW15S	96	97	106
680-58279-12	Equip Blank (Mega Monsoon)	85	97	100
680-58279-13	Equip Blank (PP)	84	94	102
680-58279-14	Field Blank 1	105	105	109
680-58279-15	Trip Blank Lot 051110	103	107	108
680-58279-16	MW-44S	96	102	106
680-58279-17	MW-1D	104	90	106
MB 680-170853/9		86	99	98
MB 680-171000/10		108	100	113
MB 680-171003/8		94	91	107
MB 680-171163/18		96	99	106
MB 680-171185/14		94	98	105
LCS 680-170853/6		92	107	102
LCS 680-171000/4		113	111	108
LCS 680-171003/5		107	100	108
LCS 680-171163/15		99	99	102
LCS 680-171185/11		97	97	102
LCSD 680-170853/7		92	105	99
LCSD 680-171000/5		110	114	110

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120



Client: Ashland Inc.

Job Number: 680-58279-1

## Surrogate Recovery Report

### 8260B Volatile Organic Compounds (GC/MS)

#### Client Matrix: Water

L5i 65: pu 6D	Client Wam4le IB	BFB	DBFM	TOL
		%Rec	%Rec	%Rec
LCSD 680-171003/6		107	103	107
LCSD 680-171163/16		99	97	102
LCSD 680-171185/12		95	94	101

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120



Client: Ashland Inc.

Job Number: 680-58279-1

## Surrogate Recovery Report

### 8081A 8082 Organochlorine Pesticides & PCBs (GC)

#### Client Matrix: Water

L5i 65: pu eD	Client Wam4le IB	WCB1	TCX1
		%Rec	%Rec
680-58279-2	MW44I	20	39
680-58279-3	MW44ID	24	44
680-58279-4	MW44D	40	50
680-58279-7	MW25S	14	52
680-58279-8	MW25D	28	54
680-58279-12	Equip Blank (Mega Monsoon)	61	79
680-58279-13	Equip Blank (PP)	43	59
680-58279-16	MW-44S	34	62
MB 680-170727/15-A		72	71
LCS 680-170727/20-A		73	68

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



Client: Ashland Inc.

Job Number: 680-58279-1

**Surrogate Recovery Report****8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography****Client Matrix: Water**

L5i 65: pu eD	Client Wam4le IB	WCB1	TCX1
		%Rec	%Rec
680-58279-2	MW44I	20	39
680-58279-3	MW44ID	24	44
680-58279-4	MW44D	40	50
680-58279-7	MW25S	14	52
680-58279-8	MW25D	28	54
680-58279-12	Equip Blank (Mega Monsoon)	61	79
680-58279-13	Equip Blank (PP)	43	59
680-58279-16	MW-44S	34	62
MB 680-170727/15-A		64	82
LCS 680-170727/20-A		73	68

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Method Blank - Batch: 680-170853

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170853/9

Analysis Batch: 680-170853

Instrument ID: MSP

Client Matrix: WdAer

Prep Batch: N/A

Lab File ID: pq119.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/08/2010 1211

Final Weight/Volume: 5 mL

Date Prepared: 06/08/2010 1211

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Method Blank - Batch: 680-170853

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-170853/9  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1211  
Date Prepared: 06/08/2010 1211

Analysis Batch: 680-170853  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq119.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	86	75 - 120
Dibromofluoromethane	99	75 - 121
Toluene-d8 (Surr)	98	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170853**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170853/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1013  
Date Prepared: 06/08/2010 1013

Analysis Batch: 680-170853  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq111.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170853/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1042  
Date Prepared: 06/08/2010 1042

Analysis Batch: 680-170853  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq113.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	94	100	17 - 175	6	50		
Benzene	101	100	77 - 119	1	30		
Bromoform	98	95	62 - 133	2	30		
Bromomethane	121	132	12 - 184	8	50		
2-Butanone (MEK)	96	91	33 - 157	6	30		
Carbon disulfide	123	127	55 - 131	4	30		
Carbon tetrachloride	104	101	71 - 135	3	30		
Chlorobenzene	99	97	85 - 116	2	30		
Chlorodibromomethane	96	95	75 - 133	1	30		
Chloroethane	98	115	40 - 165	16	50		
Chloroform	115	116	82 - 120	1	30		
Chloromethane	139	137	48 - 142	1	50		
cis-1,3-Dichloropropene	105	105	76 - 126	0	30		
1,2-Dibromo-3-Chloropropane	89	82	49 - 140	8	30		
Dibromomethane	95	93	78 - 119	2	30		
Dichlorobromomethane	105	101	78 - 127	3	30		
Dichlorodifluoromethane	137	137	34 - 154	0	30		
1,1-Dichloroethane	104	104	74 - 127	0	30		
1,2-Dichloroethane	97	92	66 - 132	5	30		
1,1-Dichloroethene	104	105	62 - 141	1	30		
1,2-Dichloropropane	99	97	73 - 124	3	30		
Ethylbenzene	97	99	86 - 116	2	30		
Ethylene Dibromide	97	93	80 - 121	4	30		
2-Hexanone	91	91	34 - 161	0	30		
Methylene Chloride	107	107	70 - 125	0	30		
4-Methyl-2-pentanone (MIBK)	94	91	40 - 151	3	30		
Styrene	100	99	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	93	92	81 - 128	1	30		
1,1,2,2-Tetrachloroethane	84	80	69 - 129	6	30		
Tetrachloroethene	96	94	76 - 126	2	30		
Toluene	100	99	81 - 117	1	30		
trans-1,2-Dichloroethene	103	102	72 - 131	1	30		
trans-1,3-Dichloropropene	101	98	73 - 128	3	30		
1,1,1-Trichloroethane	99	99	76 - 127	0	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-170853**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170853/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1013  
Date Prepared: 06/08/2010 1013

Analysis Batch: 680-170853  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq111.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-170853/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1042  
Date Prepared: 06/08/2010 1042

Analysis Batch: 680-170853  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSP  
Lab File ID: pq113.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	95	96	75 - 121	1	30		
Trichloroethene	105	103	84 - 115	2	30		
Trichlorofluoromethane	118	125	58 - 149	6	50		
1,2,3-Trichloropropane	92	85	70 - 130	7	30		
Vinyl acetate	155	155	10 - 217	0	30		
Vinyl chloride	139	139	59 - 144	0	50		
Xylenes, Total	98	98	84 - 118	0	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	92		92		75 - 120		
Dibromofluoromethane	107		105		75 - 121		
Toluene-d8 (Surr)	102		99		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-170853**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-170853/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1013  
Date Prepared: 06/08/2010 1013

Units: ug/L

LCSD Lab Sample ID: LCSD 680-170853/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/08/2010 1042  
Date Prepared: 06/08/2010 1042

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	94.1	99.9
Benzene	50.0	50.0	50.6	50.2
Bromoform	50.0	50.0	48.8	47.7
Bromomethane	50.0	50.0	60.7	66.1
2-Butanone (MEK)	100	100	96.4	91.0
Carbon disulfide	50.0	50.0	61.3	63.5
Carbon tetrachloride	50.0	50.0	52.0	50.5
Chlorobenzene	50.0	50.0	49.6	48.5
Chlorodibromomethane	50.0	50.0	48.0	47.7
Chloroethane	50.0	50.0	48.9	57.3
Chloroform	50.0	50.0	57.7	58.2
Chloromethane	50.0	50.0	69.4	68.7
cis-1,3-Dichloropropene	50.0	50.0	52.5	52.4
1,2-Dibromo-3-Chloropropane	50.0	50.0	44.5	40.9
Dibromomethane	50.0	50.0	47.5	46.4
Dichlorobromomethane	50.0	50.0	52.4	50.7
Dichlorodifluoromethane	50.0	50.0	68.7	68.6
1,1-Dichloroethane	50.0	50.0	52.1	51.9
1,2-Dichloroethane	50.0	50.0	48.4	46.2
1,1-Dichloroethene	50.0	50.0	51.9	52.3
1,2-Dichloropropane	50.0	50.0	49.5	48.3
Ethylbenzene	50.0	50.0	48.6	49.5
Ethylene Dibromide	50.0	50.0	48.4	46.7
2-Hexanone	100	100	91.1	91.4
Methylene Chloride	50.0	50.0	53.7	53.7
4-Methyl-2-pentanone (MIBK)	100	100	93.7	91.3
Styrene	50.0	50.0	50.0	49.6
1,1,1,2-Tetrachloroethane	50.0	50.0	46.5	46.1
1,1,2,2-Tetrachloroethane	50.0	50.0	42.2	39.8
Tetrachloroethene	50.0	50.0	48.2	47.1
Toluene	50.0	50.0	50.1	49.7
trans-1,2-Dichloroethene	50.0	50.0	51.3	50.9
trans-1,3-Dichloropropene	50.0	50.0	50.5	49.1
1,1,1-Trichloroethane	50.0	50.0	49.5	49.5
1,1,2-Trichloroethane	50.0	50.0	47.4	47.9
Trichloroethene	50.0	50.0	52.6	51.5
Trichlorofluoromethane	50.0	50.0	59.0	62.6
1,2,3-Trichloropropane	50.0	50.0	45.8	42.6
Vinyl acetate	100	100	155	155
Vinyl chloride	50.0	50.0	69.4	69.6
Xylenes, Total	150	150	147	146



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Method Blank - Batch: 680-171000

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171000/10

Analysis Batch: 680-171000

Instrument ID: MSA

Client Matrix: Water

Prep Batch: N/A

Lab File ID: aq045.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/09/2010 1147

Final Weight/Volume: 5 mL

Date Prepared: 06/09/2010 1147

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Method Blank - Batch: 680-171000

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171000/10

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 06/09/2010 1147

Date Prepared: 06/09/2010 1147

Analysis Batch: 680-171000

Prep Batch: N/A

Units: ug/L

Instrument ID: MSA

Lab File ID: aq045.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	108	75 - 120
Dibromofluoromethane	100	75 - 121
Toluene-d8 (Surr)	113	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-171000**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171000/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 0928  
Date Prepared: 06/09/2010 0928

Analysis Batch: 680-171000  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSA  
Lab File ID: aq039.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171000/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1023  
Date Prepared: 06/09/2010 1023

Analysis Batch: 680-171000  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSA  
Lab File ID: aq041.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	98	112	17 - 175	13	50		
Benzene	107	109	77 - 119	1	30		
Bromoform	112	103	62 - 133	8	30		
Bromomethane	77	114	12 - 184	38	50		
2-Butanone (MEK)	97	98	33 - 157	1	30		
Carbon disulfide	98	113	55 - 131	14	30		
Carbon tetrachloride	106	108	71 - 135	1	30		
Chlorobenzene	110	109	85 - 116	1	30		
Chlorodibromomethane	107	102	75 - 133	5	30		
Chloroethane	57	115	40 - 165	68	50		*
Chloroform	111	112	82 - 120	1	30		
Chloromethane	102	118	48 - 142	15	50		
cis-1,3-Dichloropropene	99	97	76 - 126	2	30		
1,2-Dibromo-3-Chloropropane	107	102	49 - 140	5	30		
Dibromomethane	108	107	78 - 119	2	30		
Dichlorobromomethane	96	97	78 - 127	1	30		
Dichlorodifluoromethane	55	120	34 - 154	75	30		*
1,1-Dichloroethane	91	100	74 - 127	10	30		
1,2-Dichloroethane	101	100	66 - 132	1	30		
1,1-Dichloroethene	99	114	62 - 141	14	30		
1,2-Dichloropropane	107	109	73 - 124	2	30		
Ethylbenzene	100	101	86 - 116	1	30		
Ethylene Dibromide	109	107	80 - 121	1	30		
2-Hexanone	112	101	34 - 161	10	30		
Methylene Chloride	90	107	70 - 125	18	30		
4-Methyl-2-pentanone (MIBK)	107	102	40 - 151	5	30		
Styrene	108	109	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	106	103	81 - 128	3	30		
1,1,2,2-Tetrachloroethane	111	102	69 - 129	9	30		
Tetrachloroethene	103	102	76 - 126	1	30		
Toluene	104	105	81 - 117	1	30		
trans-1,2-Dichloroethene	100	102	72 - 131	2	30		
trans-1,3-Dichloropropene	106	104	73 - 128	2	30		
1,1,1-Trichloroethane	99	101	76 - 127	2	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-171000**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171000/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 0928  
Date Prepared: 06/09/2010 0928

Analysis Batch: 680-171000  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSA  
Lab File ID: aq039.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171000/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1023  
Date Prepared: 06/09/2010 1023

Analysis Batch: 680-171000  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSA  
Lab File ID: aq041.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	106	105	75 - 121	1	30		
Trichloroethene	99	99	84 - 115	0	30		
Trichlorofluoromethane	104	131	58 - 149	23	50		
1,2,3-Trichloropropane	111	102	70 - 130	8	30		
Vinyl acetate	120	115	10 - 217	4	30		
Vinyl chloride	82	122	59 - 144	39	50		
Xylenes, Total	107	108	84 - 118	1	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	113		110		75 - 120		
Dibromofluoromethane	111		114		75 - 121		
Toluene-d8 (Surr)	108		110		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-171000**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171000/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 0928  
Date Prepared: 06/09/2010 0928

Units: ug/L

LCSD Lab Sample ID: LCSD 680-171000/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1023  
Date Prepared: 06/09/2010 1023

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	98.0	112
Benzene	50.0	50.0	53.7	54.4
Bromoform	50.0	50.0	55.8	51.5
Bromomethane	50.0	50.0	38.7	56.9
2-Butanone (MEK)	100	100	97.4	98.0
Carbon disulfide	50.0	50.0	49.1	56.5
Carbon tetrachloride	50.0	50.0	53.2	53.8
Chlorobenzene	50.0	50.0	55.2	54.5
Chlorodibromomethane	50.0	50.0	53.4	50.9
Chloroethane	50.0	50.0	28.4	57.4
Chloroform	50.0	50.0	55.4	56.1
Chloromethane	50.0	50.0	50.9	59.1
cis-1,3-Dichloropropene	50.0	50.0	49.5	48.5
1,2-Dibromo-3-Chloropropane	50.0	50.0	53.4	50.9
Dibromomethane	50.0	50.0	54.2	53.4
Dichlorobromomethane	50.0	50.0	48.1	48.4
Dichlorodifluoromethane	50.0	50.0	27.4	60.0
1,1-Dichloroethane	50.0	50.0	45.4	50.2
1,2-Dichloroethane	50.0	50.0	50.5	50.0
1,1-Dichloroethene	50.0	50.0	49.6	57.2
1,2-Dichloropropane	50.0	50.0	53.4	54.3
Ethylbenzene	50.0	50.0	50.0	50.6
Ethylene Dibromide	50.0	50.0	54.5	53.7
2-Hexanone	100	100	112	101
Methylene Chloride	50.0	50.0	44.8	53.5
4-Methyl-2-pentanone (MIBK)	100	100	107	102
Styrene	50.0	50.0	54.2	54.7
1,1,1,2-Tetrachloroethane	50.0	50.0	53.0	51.4
1,1,2,2-Tetrachloroethane	50.0	50.0	55.6	50.8
Tetrachloroethene	50.0	50.0	51.5	51.0
Toluene	50.0	50.0	51.8	52.6
trans-1,2-Dichloroethene	50.0	50.0	50.0	51.2
trans-1,3-Dichloropropene	50.0	50.0	53.0	52.1
1,1,1-Trichloroethane	50.0	50.0	49.4	50.3
1,1,2-Trichloroethane	50.0	50.0	52.9	52.4
Trichloroethene	50.0	50.0	49.6	49.6
Trichlorofluoromethane	50.0	50.0	52.1	65.5
1,2,3-Trichloropropane	50.0	50.0	55.4	50.9
Vinyl acetate	100	100	120	115
Vinyl chloride	50.0	50.0	41.1	61.0
Xylenes, Total	150	150	160	161



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Method Blank - Batch: 680-171003

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171003/8  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1201  
Date Prepared: 06/09/2010 1201

Analysis Batch: 680-171003  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSA2  
Lab File ID: aq046.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Method Blank - Batch: 680-171003

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171003/8

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 06/09/2010 1201

Date Prepared: 06/09/2010 1201

Analysis Batch: 680-171003

Prep Batch: N/A

Units: ug/L

Instrument ID: MSA2

Lab File ID: aq046.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	94	75 - 120
Dibromofluoromethane	91	75 - 121
Toluene-d8 (Surr)	107	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-171003**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171003/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 0942  
Date Prepared: 06/09/2010 0942

Analysis Batch: 680-171003  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSA2  
Lab File ID: aq040.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171003/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1037  
Date Prepared: 06/09/2010 1037

Analysis Batch: 680-171003  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSA2  
Lab File ID: aq042.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	90	78	17 - 175	14	50		
Benzene	95	98	77 - 119	3	30		
Bromoform	109	102	62 - 133	6	30		
Bromomethane	132	112	12 - 184	17	50		
2-Butanone (MEK)	96	91	33 - 157	6	30		
Carbon disulfide	86	89	55 - 131	3	30		
Carbon tetrachloride	93	95	71 - 135	2	30		
Chlorobenzene	109	112	85 - 116	2	30		
Chlorodibromomethane	97	98	75 - 133	1	30		
Chloroethane	105	102	40 - 165	3	50		
Chloroform	98	103	82 - 120	6	30		
Chloromethane	108	117	48 - 142	8	50		
cis-1,3-Dichloropropene	101	98	76 - 126	2	30		
1,2-Dibromo-3-Chloropropane	98	88	49 - 140	11	30		
Dibromomethane	105	101	78 - 119	4	30		
Dichlorobromomethane	99	98	78 - 127	1	30		
Dichlorodifluoromethane	98	108	34 - 154	10	30		
1,1-Dichloroethane	95	99	74 - 127	4	30		
1,2-Dichloroethane	100	98	66 - 132	2	30		
1,1-Dichloroethene	87	94	62 - 141	8	30		
1,2-Dichloropropane	106	104	73 - 124	2	30		
Ethylbenzene	97	101	86 - 116	3	30		
Ethylene Dibromide	107	100	80 - 121	6	30		
2-Hexanone	99	95	34 - 161	5	30		
Methylene Chloride	89	89	70 - 125	0	30		
4-Methyl-2-pentanone (MIBK)	103	92	40 - 151	11	30		
Styrene	109	110	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	94	95	81 - 128	1	30		
1,1,2,2-Tetrachloroethane	108	101	69 - 129	6	30		
Tetrachloroethene	101	103	76 - 126	3	30		
Toluene	107	104	81 - 117	3	30		
trans-1,2-Dichloroethene	87	74	72 - 131	16	30		
trans-1,3-Dichloropropene	98	95	73 - 128	3	30		
1,1,1-Trichloroethane	98	101	76 - 127	3	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-171003**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171003/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 0942  
Date Prepared: 06/09/2010 0942

Analysis Batch: 680-171003  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSA2  
Lab File ID: aq040.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171003/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1037  
Date Prepared: 06/09/2010 1037

Analysis Batch: 680-171003  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSA2  
Lab File ID: aq042.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	100	98	75 - 121	2	30		
Trichloroethene	102	103	84 - 115	1	30		
Trichlorofluoromethane	104	110	58 - 149	6	50		
1,2,3-Trichloropropane	105	97	70 - 130	9	30		
Vinyl acetate	110	107	10 - 217	3	30		
Vinyl chloride	103	107	59 - 144	4	50		
Xylenes, Total	99	100	84 - 118	1	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	107		107		75 - 120		
Dibromofluoromethane	100		103		75 - 121		
Toluene-d8 (Surr)	108		107		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-171003**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171003/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 0942  
Date Prepared: 06/09/2010 0942

Units: ug/L

LCSD Lab Sample ID: LCSD 680-171003/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1037  
Date Prepared: 06/09/2010 1037

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	89.9	78.4
Benzene	50.0	50.0	47.5	48.8
Bromoform	50.0	50.0	54.3	51.0
Bromomethane	50.0	50.0	66.0	55.8
2-Butanone (MEK)	100	100	96.1	90.7
Carbon disulfide	50.0	50.0	42.8	44.3
Carbon tetrachloride	50.0	50.0	46.3	47.4
Chlorobenzene	50.0	50.0	54.7	55.8
Chlorodibromomethane	50.0	50.0	48.3	49.0
Chloroethane	50.0	50.0	52.5	50.8
Chloroform	50.0	50.0	48.8	51.6
Chloromethane	50.0	50.0	54.1	58.5
cis-1,3-Dichloropropene	50.0	50.0	50.3	49.2
1,2-Dibromo-3-Chloropropane	50.0	50.0	49.1	43.8
Dibromomethane	50.0	50.0	52.3	50.4
Dichlorobromomethane	50.0	50.0	49.6	49.1
Dichlorodifluoromethane	50.0	50.0	48.9	54.2
1,1-Dichloroethane	50.0	50.0	47.7	49.4
1,2-Dichloroethane	50.0	50.0	49.9	48.9
1,1-Dichloroethene	50.0	50.0	43.3	46.8
1,2-Dichloropropane	50.0	50.0	53.2	51.9
Ethylbenzene	50.0	50.0	48.7	50.3
Ethylene Dibromide	50.0	50.0	53.3	50.1
2-Hexanone	100	100	99.4	94.6
Methylene Chloride	50.0	50.0	44.5	44.4
4-Methyl-2-pentanone (MIBK)	100	100	103	92.0
Styrene	50.0	50.0	54.7	55.0
1,1,1,2-Tetrachloroethane	50.0	50.0	46.8	47.5
1,1,2,2-Tetrachloroethane	50.0	50.0	54.0	50.7
Tetrachloroethene	50.0	50.0	50.3	51.6
Toluene	50.0	50.0	53.5	51.8
trans-1,2-Dichloroethene	50.0	50.0	43.3	36.9
trans-1,3-Dichloropropene	50.0	50.0	48.8	47.6
1,1,1-Trichloroethane	50.0	50.0	49.0	50.7
1,1,2-Trichloroethane	50.0	50.0	50.2	49.2
Trichloroethene	50.0	50.0	51.2	51.6
Trichlorofluoromethane	50.0	50.0	51.8	54.9
1,2,3-Trichloropropane	50.0	50.0	52.7	48.4
Vinyl acetate	100	100	110	107
Vinyl chloride	50.0	50.0	51.7	53.6
Xylenes, Total	150	150	148	151



**Quality Control Results**

Client: Ashland Inc.

Job Number: 680-58279-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Method Blank - Batch: 680-171163

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171163/18

Analysis Batch: 680-171163

Instrument ID: MSO

Client Matrix: Water

Prep Batch: N/A

Lab File ID: oq291.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/09/2010 2133

Final Weight/Volume: 5 mL

Date Prepared: 06/09/2010 2133

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Method Blank - Batch: 680-171163

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171163/18

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 06/09/2010 2133

Date Prepared: 06/09/2010 2133

Analysis Batch: 680-171163

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO

Lab File ID: oq291.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	96	75 - 120
Dibromofluoromethane	99	75 - 121
Toluene-d8 (Surr)	106	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-171163**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171163/15  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 2009  
Date Prepared: 06/09/2010 2009

Analysis Batch: 680-171163  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq287.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171163/16  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 2030  
Date Prepared: 06/09/2010 2030

Analysis Batch: 680-171163  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq288.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	133	131	17 - 175	2	50		
Benzene	99	100	77 - 119	1	30		
Bromoform	103	104	62 - 133	1	30		
Bromomethane	70	71	12 - 184	2	50		
2-Butanone (MEK)	114	109	33 - 157	5	30		
Carbon disulfide	88	86	55 - 131	2	30		
Carbon tetrachloride	107	109	71 - 135	2	30		
Chlorobenzene	94	93	85 - 116	1	30		
Chlorodibromomethane	83	83	75 - 133	1	30		
Chloroethane	104	98	40 - 165	6	50		
Chloroform	92	91	82 - 120	2	30		
Chloromethane	86	84	48 - 142	2	50		
cis-1,3-Dichloropropene	99	99	76 - 126	1	30		
1,2-Dibromo-3-Chloropropane	100	99	49 - 140	0	30		
Dibromomethane	102	101	78 - 119	1	30		
Dichlorobromomethane	97	100	78 - 127	3	30		
Dichlorodifluoromethane	91	90	34 - 154	1	30		
1,1-Dichloroethane	104	101	74 - 127	4	30		
1,2-Dichloroethane	102	103	66 - 132	1	30		
1,1-Dichloroethene	104	101	62 - 141	3	30		
1,2-Dichloropropane	99	100	73 - 124	1	30		
Ethylbenzene	99	97	86 - 116	2	30		
Ethylene Dibromide	97	98	80 - 121	1	30		
2-Hexanone	115	118	34 - 161	2	30		
Methylene Chloride	98	96	70 - 125	2	30		
4-Methyl-2-pentanone (MIBK)	112	113	40 - 151	1	30		
Styrene	101	100	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	101	103	81 - 128	1	30		
1,1,2,2-Tetrachloroethane	105	105	69 - 129	0	30		
Tetrachloroethene	98	99	76 - 126	1	30		
Toluene	99	99	81 - 117	0	30		
trans-1,2-Dichloroethene	103	99	72 - 131	4	30		
trans-1,3-Dichloropropene	82	85	73 - 128	3	30		
1,1,1-Trichloroethane	103	103	76 - 127	0	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-171163**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171163/15  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 2009  
Date Prepared: 06/09/2010 2009

Analysis Batch: 680-171163  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq287.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171163/16  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 2030  
Date Prepared: 06/09/2010 2030

Analysis Batch: 680-171163  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq288.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	96	98	75 - 121	2	30		
Trichloroethene	94	95	84 - 115	1	30		
Trichlorofluoromethane	114	108	58 - 149	5	50		
1,2,3-Trichloropropane	99	99	70 - 130	0	30		
Vinyl acetate	117	114	10 - 217	2	30		
Vinyl chloride	101	95	59 - 144	6	50		
Xylenes, Total	100	99	84 - 118	0	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	99		99		75 - 120		
Dibromofluoromethane	99		97		75 - 121		
Toluene-d8 (Surr)	102		102		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-171163**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171163/15  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 2009  
Date Prepared: 06/09/2010 2009

Units: ug/L

LCSD Lab Sample ID: LCSD 680-171163/16  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 2030  
Date Prepared: 06/09/2010 2030

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	133	131
Benzene	50.0	50.0	49.5	50.1
Bromoform	50.0	50.0	51.6	52.2
Bromomethane	50.0	50.0	34.8	35.6
2-Butanone (MEK)	100	100	114	109
Carbon disulfide	50.0	50.0	43.8	42.9
Carbon tetrachloride	50.0	50.0	53.5	54.4
Chlorobenzene	50.0	50.0	47.0	46.4
Chlorodibromomethane	50.0	50.0	41.5	41.7
Chloroethane	50.0	50.0	51.8	49.0
Chloroform	50.0	50.0	46.2	45.3
Chloromethane	50.0	50.0	42.9	42.1
cis-1,3-Dichloropropene	50.0	50.0	49.5	49.7
1,2-Dibromo-3-Chloropropane	50.0	50.0	49.8	49.6
Dibromomethane	50.0	50.0	51.0	50.3
Dichlorobromomethane	50.0	50.0	48.7	50.2
Dichlorodifluoromethane	50.0	50.0	45.4	44.8
1,1-Dichloroethane	50.0	50.0	52.2	50.3
1,2-Dichloroethane	50.0	50.0	51.0	51.4
1,1-Dichloroethene	50.0	50.0	52.1	50.4
1,2-Dichloropropane	50.0	50.0	49.4	49.9
Ethylbenzene	50.0	50.0	49.6	48.6
Ethylene Dibromide	50.0	50.0	48.4	48.9
2-Hexanone	100	100	115	118
Methylene Chloride	50.0	50.0	48.8	48.1
4-Methyl-2-pentanone (MIBK)	100	100	112	113
Styrene	50.0	50.0	50.4	50.0
1,1,1,2-Tetrachloroethane	50.0	50.0	50.7	51.4
1,1,2,2-Tetrachloroethane	50.0	50.0	52.3	52.5
Tetrachloroethene	50.0	50.0	49.1	49.6
Toluene	50.0	50.0	49.3	49.5
trans-1,2-Dichloroethene	50.0	50.0	51.4	49.5
trans-1,3-Dichloropropene	50.0	50.0	41.0	42.5
1,1,1-Trichloroethane	50.0	50.0	51.5	51.6
1,1,2-Trichloroethane	50.0	50.0	48.1	49.1
Trichloroethene	50.0	50.0	47.1	47.6
Trichlorofluoromethane	50.0	50.0	56.9	54.0
1,2,3-Trichloropropane	50.0	50.0	49.6	49.5
Vinyl acetate	100	100	117	114
Vinyl chloride	50.0	50.0	50.5	47.4
Xylenes, Total	150	150	150	149



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Method Blank - Batch: 680-171185

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171185/14

Analysis Batch: 680-171185

Instrument ID: MSO

Client Matrix: Water

Prep Batch: N/A

Lab File ID: oq299.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/10/2010 1122

Final Weight/Volume: 5 mL

Date Prepared: 06/10/2010 1122

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Method Blank - Batch: 680-171185

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171185/14

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 06/10/2010 1122

Date Prepared: 06/10/2010 1122

Analysis Batch: 680-171185

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO

Lab File ID: oq299.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	94	75 - 120
Dibromofluoromethane	98	75 - 121
Toluene-d8 (Surr)	105	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 680-171185

Method: 8260B

Preparation: 5030B

LCS Lab Sample ID: LCS 680-171185/11  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 0959  
Date Prepared: 06/10/2010 0959

Analysis Batch: 680-171185  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq295.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171185/12  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 1019  
Date Prepared: 06/10/2010 1019

Analysis Batch: 680-171185  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq296.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	99	104	17 - 175	5	50		
Benzene	101	102	77 - 119	1	30		
Bromoform	109	108	62 - 133	1	30		
Bromomethane	100	101	12 - 184	1	50		
2-Butanone (MEK)	94	90	33 - 157	4	30		
Carbon disulfide	94	93	55 - 131	1	30		
Carbon tetrachloride	107	107	71 - 135	0	30		
Chlorobenzene	94	93	85 - 116	0	30		
Chlorodibromomethane	83	81	75 - 133	2	30		
Chloroethane	120	110	40 - 165	8	50		
Chloroform	98	97	82 - 120	1	30		
Chloromethane	100	99	48 - 142	1	50		
cis-1,3-Dichloropropene	103	100	76 - 126	3	30		
1,2-Dibromo-3-Chloropropane	97	99	49 - 140	2	30		
Dibromomethane	101	98	78 - 119	2	30		
Dichlorobromomethane	106	105	78 - 127	1	30		
Dichlorodifluoromethane	99	97	34 - 154	2	30		
1,1-Dichloroethane	104	101	74 - 127	3	30		
1,2-Dichloroethane	103	104	66 - 132	1	30		
1,1-Dichloroethene	96	94	62 - 141	2	30		
1,2-Dichloropropane	101	98	73 - 124	3	30		
Ethylbenzene	100	99	86 - 116	1	30		
Ethylene Dibromide	96	95	80 - 121	1	30		
2-Hexanone	96	97	34 - 161	1	30		
Methylene Chloride	96	93	70 - 125	3	30		
4-Methyl-2-pentanone (MIBK)	102	103	40 - 151	0	30		
Styrene	98	98	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	105	102	81 - 128	3	30		
1,1,2,2-Tetrachloroethane	96	94	69 - 129	2	30		
Tetrachloroethene	95	94	76 - 126	1	30		
Toluene	102	101	81 - 117	1	30		
trans-1,2-Dichloroethene	95	94	72 - 131	0	30		
trans-1,3-Dichloropropene	85	83	73 - 128	2	30		
1,1,1-Trichloroethane	103	103	76 - 127	1	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-171185**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171185/11  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 0959  
Date Prepared: 06/10/2010 0959

Analysis Batch: 680-171185  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq295.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171185/12  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 1019  
Date Prepared: 06/10/2010 1019

Analysis Batch: 680-171185  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq296.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	96	97	75 - 121	0	30		
Trichloroethene	98	96	84 - 115	2	30		
Trichlorofluoromethane	124	120	58 - 149	3	50		
1,2,3-Trichloropropane	95	94	70 - 130	1	30		
Vinyl acetate	152	148	10 - 217	3	30		
Vinyl chloride	106	106	59 - 144	0	50		
Xylenes, Total	98	97	84 - 118	1	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	97		95		75 - 120		
Dibromofluoromethane	97		94		75 - 121		
Toluene-d8 (Surr)	102		101		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-171185**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171185/11  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 0959  
Date Prepared: 06/10/2010 0959

Units: ug/L

LCSD Lab Sample ID: LCSD 680-171185/12  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/10/2010 1019  
Date Prepared: 06/10/2010 1019

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	99.3	104
Benzene	50.0	50.0	50.5	50.8
Bromoform	50.0	50.0	54.6	53.8
Bromomethane	50.0	50.0	49.9	50.3
2-Butanone (MEK)	100	100	94.0	89.9
Carbon disulfide	50.0	50.0	47.1	46.5
Carbon tetrachloride	50.0	50.0	53.7	53.5
Chlorobenzene	50.0	50.0	46.8	46.7
Chlorodibromomethane	50.0	50.0	41.5	40.6
Chloroethane	50.0	50.0	60.0	55.2
Chloroform	50.0	50.0	49.2	48.7
Chloromethane	50.0	50.0	50.0	49.3
cis-1,3-Dichloropropene	50.0	50.0	51.3	49.8
1,2-Dibromo-3-Chloropropane	50.0	50.0	48.7	49.7
Dibromomethane	50.0	50.0	50.3	49.1
Dichlorobromomethane	50.0	50.0	52.9	52.6
Dichlorodifluoromethane	50.0	50.0	49.5	48.7
1,1-Dichloroethane	50.0	50.0	52.0	50.4
1,2-Dichloroethane	50.0	50.0	51.5	51.8
1,1-Dichloroethene	50.0	50.0	47.9	47.2
1,2-Dichloropropane	50.0	50.0	50.7	49.0
Ethylbenzene	50.0	50.0	50.0	49.3
Ethylene Dibromide	50.0	50.0	48.0	47.5
2-Hexanone	100	100	96.2	96.8
Methylene Chloride	50.0	50.0	48.2	46.7
4-Methyl-2-pentanone (MIBK)	100	100	102	103
Styrene	50.0	50.0	49.2	48.8
1,1,1,2-Tetrachloroethane	50.0	50.0	52.3	50.8
1,1,2,2-Tetrachloroethane	50.0	50.0	48.0	47.2
Tetrachloroethene	50.0	50.0	47.6	46.9
Toluene	50.0	50.0	51.0	50.5
trans-1,2-Dichloroethene	50.0	50.0	47.3	47.2
trans-1,3-Dichloropropene	50.0	50.0	42.6	41.6
1,1,1-Trichloroethane	50.0	50.0	51.7	51.4
1,1,2-Trichloroethane	50.0	50.0	48.2	48.3
Trichloroethene	50.0	50.0	49.0	48.2
Trichlorofluoromethane	50.0	50.0	62.0	60.0
1,2,3-Trichloropropane	50.0	50.0	47.4	46.8
Vinyl acetate	100	100	152	148
Vinyl chloride	50.0	50.0	53.2	53.2
Xylenes, Total	150	150	147	146



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Method Blank - Batch: 680-170727

Method: 8081A\_8082  
Preparation: 3520C

Lab Sample ID: MB 680-170727/15-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1745  
Date Prepared: 06/07/2010 1421

Analysis Batch: 680-171114  
Prep Batch: 680-170727  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mf08088.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	72	14 - 115
Tetrachloro-m-xylene	71	35 - 120

### Lab Control Sample - Batch: 680-170727

Method: 8081A\_8082  
Preparation: 3520C

Lab Sample ID: LCS 680-170727/20-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1922  
Date Prepared: 06/07/2010 1421

Analysis Batch: 680-171114  
Prep Batch: 680-170727  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mf08093.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Toxaphene, Total	10.0	6.74	67	30 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	73	14 - 115
Tetrachloro-m-xylene	68	35 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Method Blank - Batch: 680-170727

**Method: 8081B/8082A**  
**Preparation: 3520C**

Lab Sample ID: MB 680-170727/15-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1745  
Date Prepared: 06/07/2010 1421

Analysis Batch: 680-171118  
Prep Batch: 680-170727  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mf08088.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	64	14 - 115
Tetrachloro-m-xylene	82	35 - 120

### Lab Control Sample - Batch: 680-170727

**Method: 8081B/8082A**  
**Preparation: 3520C**

Lab Sample ID: LCS 680-170727/20-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/09/2010 1922  
Date Prepared: 06/07/2010 1421

Analysis Batch: 680-171118  
Prep Batch: 680-170727  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mf08093.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Toxaphene, Technical	10.0	8.08	81	30 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	73	14 - 115
Tetrachloro-m-xylene	68	35 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Method Blank - Batch: 680-171282

Lab Sample ID: MB 680-171282/21-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 1543  
Date Prepared: 06/11/2010 1157

Analysis Batch: 680-171623  
Prep Batch: 680-171282  
Units: ug/L

### Method: 6010B Preparation: 3005A Total Recoverable

Instrument ID: ICPD  
Lab File ID: 061510.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	10	U	2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Lab Control Sample - Batch: 680-171282

**Method: 6010B**  
**Preparation: 3005A**  
**Total Recoverable**

Lab Sample ID: LCS 680-171282/22-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 1548  
Date Prepared: 06/11/2010 1157

Analysis Batch: 680-171623  
Prep Batch: 680-171282  
Units: ug/L

Instrument ID: ICPD  
Lab File ID: 061510.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	500	500	100	75 - 125	
Arsenic	2000	1980	99	75 - 125	
Barium	2000	2000	100	75 - 125	
Beryllium	50.0	50.0	100	75 - 125	
Cadmium	50.0	50.9	102	75 - 125	
Chromium	200	200	100	75 - 125	
Cobalt	500	496	99	75 - 125	
Copper	250	242	97	75 - 125	
Lead	500	504	101	75 - 125	
Nickel	500	490	98	75 - 125	
Selenium	2000	2050	102	75 - 125	
Silver	50.0	48.7	97	75 - 125	
Thallium	2000	2070	104	75 - 125	
Tin	1000	954	95	75 - 125	
Vanadium	500	483	97	75 - 125	
Zinc	500	502	100	75 - 125	



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Method Blank - Batch: 680-171421

**Method: 7470A**  
**Preparation: 7470A**

Lab Sample ID: MB 680-171421/23-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1834  
Date Prepared: 06/14/2010 1106

Analysis Batch: 680-171505  
Prep Batch: 680-171421  
Units: ug/L

Instrument ID: LEEMAN1  
Lab File ID: b061410.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.091	0.20

### Lab Control Sample - Batch: 680-171421

**Method: 7470A**  
**Preparation: 7470A**

Lab Sample ID: LCS 680-171421/24-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1837  
Date Prepared: 06/14/2010 1106

Analysis Batch: 680-171505  
Prep Batch: 680-171421  
Units: ug/L

Instrument ID: LEEMAN1  
Lab File ID: b061410.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	2.50	2.45	98	80 - 120	

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 680-171421

**Method: 7470A**  
**Preparation: 7470A**

MS Lab Sample ID: 680-58279-16  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1949  
Date Prepared: 06/14/2010 1106

Analysis Batch: 680-171505  
Prep Batch: 680-171421

Instrument ID: LEEMAN1  
Lab File ID: b061410.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 680-58279-16  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1952  
Date Prepared: 06/14/2010 1106

Analysis Batch: 680-171505  
Prep Batch: 680-171421

Instrument ID: LEEMAN1  
Lab File ID: b061410.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Mercury	113	109	80 - 120	4	20		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 680-171421**

**Method: 7470A  
Preparation: 7470A**

MS Lab Sample ID: 680-58279-16      Units: ug/L  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1949  
Date Prepared: 06/14/2010 1106

MSD Lab Sample ID: 680-58279-16  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1952  
Date Prepared: 06/14/2010 1106

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	0.20	U	1.00	1.00	1.13	1.09



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Laboratory Chronicle

Lab ID: 680-58279-1

Client ID: MW2D

Sample Date/Time: 06/03/2010 07:50

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-B-1		680-171163		06/10/2010 01:28	5	TAL SAV	WJC
A:8260B	680-58279-B-1		680-171163		06/10/2010 01:28	5	TAL SAV	WJC

Lab ID: 680-58279-2

Client ID: MW44I

Sample Date/Time: 06/03/2010 10:00

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-D-2		680-171000		06/09/2010 16:28	1	TAL SAV	JW
A:8260B	680-58279-D-2		680-171000		06/09/2010 16:28	1	TAL SAV	JW
P:3520C	680-58279-A-2-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58279-A-2-A		680-171114	680-170727	06/09/2010 21:38	1	TAL SAV	JK
P:3520C	680-58279-A-2-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58279-A-2-A		680-171118	680-170727	06/09/2010 21:38	1	TAL SAV	JK
P:3005A	680-58279-C-2-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58279-C-2-A		680-171623	680-171282	06/15/2010 17:20	1	TAL SAV	BCB
P:7470A	680-58279-A-2-B		680-171505	680-171421	06/14/2010 11:06	1	TAL SAV	DH
A:7470A	680-58279-A-2-B		680-171505	680-171421	06/14/2010 19:26	1	TAL SAV	CE

Lab ID: 680-58279-3

Client ID: MW44ID

Sample Date/Time: 06/03/2010 11:30

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-F-3		680-171185		06/10/2010 13:31	5	TAL SAV	RB
A:8260B	680-58279-F-3		680-171185		06/10/2010 13:31	5	TAL SAV	RB
P:3520C	680-58279-B-3-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58279-B-3-A		680-171114	680-170727	06/09/2010 21:58	1	TAL SAV	JK
P:3520C	680-58279-B-3-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58279-B-3-A		680-171118	680-170727	06/09/2010 21:58	1	TAL SAV	JK
P:3005A	680-58279-C-3-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58279-C-3-A		680-171623	680-171282	06/15/2010 17:25	1	TAL SAV	BCB
P:7470A	680-58279-A-3-A		680-171505	680-171421	06/14/2010 11:06	1	TAL SAV	DH
A:7470A	680-58279-A-3-A		680-171505	680-171421	06/14/2010 19:29	1	TAL SAV	CE



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Laboratory Chronicle

Lab ID: 680-58279-4

Client ID: MW44D

Sample Date/Time: 06/03/2010 14:00

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-E-4		680-171163		06/10/2010 01:48	2	TAL SAV	WJC
A:8260B	680-58279-E-4		680-171163		06/10/2010 01:48	2	TAL SAV	WJC
P:3520C	680-58279-A-4-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58279-A-4-A		680-171114	680-170727	06/09/2010 22:17	1	TAL SAV	JK
P:3520C	680-58279-A-4-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58279-A-4-A		680-171118	680-170727	06/09/2010 22:17	1	TAL SAV	JK
P:3005A	680-58279-C-4-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58279-C-4-A		680-171623	680-171282	06/15/2010 17:40	1	TAL SAV	BCB
P:7470A	680-58279-A-4-B		680-171505	680-171421	06/14/2010 11:06	1	TAL SAV	DH
A:7470A	680-58279-A-4-B		680-171505	680-171421	06/14/2010 19:32	1	TAL SAV	CE

Lab ID: 680-58279-5

Client ID: MW2S

Sample Date/Time: 06/03/2010 07:45

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-B-5		680-171185		06/10/2010 13:52	5	TAL SAV	RB
A:8260B	680-58279-B-5		680-171185		06/10/2010 13:52	5	TAL SAV	RB

Lab ID: 680-58279-6

Client ID: MW1S

Sample Date/Time: 06/03/2010 08:20

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-A-6		680-171163		06/10/2010 03:32	1	TAL SAV	WJC
A:8260B	680-58279-A-6		680-171163		06/10/2010 03:32	1	TAL SAV	WJC

Lab ID: 680-58279-7

Client ID: MW25S

Sample Date/Time: 06/03/2010 08:55

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-D-7		680-171185		06/10/2010 12:50	1	TAL SAV	RB
A:8260B	680-58279-D-7		680-171185		06/10/2010 12:50	1	TAL SAV	RB
P:3520C	680-58279-B-7-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58279-B-7-A		680-171114	680-170727	06/09/2010 22:36	1	TAL SAV	JK
P:3520C	680-58279-B-7-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58279-B-7-A		680-171118	680-170727	06/09/2010 22:36	1	TAL SAV	JK



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Laboratory Chronicle

Lab ID: 680-58279-8

Client ID: MW25D

Sample Date/Time: 06/03/2010 09:30

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-C-8		680-171003		06/09/2010 16:42	1	TAL SAV	JW
A:8260B	680-58279-C-8		680-171003		06/09/2010 16:42	1	TAL SAV	JW
P:3520C	680-58279-A-8-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58279-A-8-A		680-171114	680-170727	06/09/2010 22:56	1	TAL SAV	JK
P:3520C	680-58279-A-8-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58279-A-8-A		680-171118	680-170727	06/09/2010 22:56	1	TAL SAV	JK

Lab ID: 680-58279-9

Client ID: MW14S

Sample Date/Time: 06/03/2010 11:00

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-D-9		680-171185		06/10/2010 11:47	1	TAL SAV	RB
A:8260B	680-58279-D-9		680-171185		06/10/2010 11:47	1	TAL SAV	RB

Lab ID: 680-58279-10

Client ID: MW14D

Sample Date/Time: 06/03/2010 11:50

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-C-10		680-171185		06/10/2010 12:08	1	TAL SAV	RB
A:8260B	680-58279-C-10		680-171185		06/10/2010 12:08	1	TAL SAV	RB

Lab ID: 680-58279-11

Client ID: MW15S

Sample Date/Time: 06/03/2010 17:20

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-A-11		680-171003		06/09/2010 19:33	1	TAL SAV	JW
A:8260B	680-58279-A-11		680-171003		06/09/2010 19:33	1	TAL SAV	JW



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Laboratory Chronicle

Lab ID: 680-58279-12

Client ID: Equip Blank (Mega Monsoon)

Sample Date/Time: 06/02/2010 18:00

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-D-12		680-170853		06/08/2010 15:42	1	TAL SAV	CL
A:8260B	680-58279-D-12		680-170853		06/08/2010 15:42	1	TAL SAV	CL
P:3520C	680-58279-B-12-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58279-B-12-A		680-171114	680-170727	06/09/2010 23:15	1	TAL SAV	JK
P:3520C	680-58279-B-12-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58279-B-12-A		680-171118	680-170727	06/09/2010 23:15	1	TAL SAV	JK
P:3005A	680-58279-C-12-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58279-C-12-A		680-171623	680-171282	06/15/2010 17:46	1	TAL SAV	BCB
P:7470A	680-58279-A-12-A		680-171505	680-171421	06/14/2010 11:06	1	TAL SAV	DH
A:7470A	680-58279-A-12-A		680-171505	680-171421	06/14/2010 19:40	1	TAL SAV	CE

Lab ID: 680-58279-13

Client ID: Equip Blank (PP)

Sample Date/Time: 06/02/2010 18:30

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-D-13		680-170853		06/08/2010 16:11	1	TAL SAV	CL
A:8260B	680-58279-D-13		680-170853		06/08/2010 16:11	1	TAL SAV	CL
P:3520C	680-58279-A-13-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58279-A-13-A		680-171114	680-170727	06/09/2010 23:35	1	TAL SAV	JK
P:3520C	680-58279-A-13-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58279-A-13-A		680-171118	680-170727	06/09/2010 23:35	1	TAL SAV	JK
P:3005A	680-58279-C-13-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58279-C-13-A		680-171623	680-171282	06/15/2010 17:51	1	TAL SAV	BCB
P:7470A	680-58279-A-13-B		680-171505	680-171421	06/14/2010 11:06	1	TAL SAV	DH
A:7470A	680-58279-A-13-B		680-171505	680-171421	06/14/2010 19:43	1	TAL SAV	CE

Lab ID: 680-58279-14

Client ID: Field Blank 1

Sample Date/Time: 06/03/2010 16:30

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-A-14		680-171000		06/09/2010 14:35	1	TAL SAV	JW
A:8260B	680-58279-A-14		680-171000		06/09/2010 14:35	1	TAL SAV	JW

Lab ID: 680-58279-15

Client ID: Trip Blank Lot 051110

Sample Date/Time: 06/03/2010 00:00

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-A-15		680-171000		06/09/2010 15:03	1	TAL SAV	JW
A:8260B	680-58279-A-15		680-171000		06/09/2010 15:03	1	TAL SAV	JW



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Laboratory Chronicle

Lab ID: 680-58279-16

Client ID: MW-44S

Sample Date/Time: 06/03/2010 14:00

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-A-16		680-171185		06/10/2010 12:29	1	TAL SAV	RB
A:8260B	680-58279-A-16		680-171185		06/10/2010 12:29	1	TAL SAV	RB
P:3520C	680-58279-B-16-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	680-58279-B-16-A		680-171114	680-170727	06/09/2010 23:54	1	TAL SAV	JK
P:3520C	680-58279-B-16-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	680-58279-B-16-A		680-171118	680-170727	06/09/2010 23:54	1	TAL SAV	JK
P:3005A	680-58279-C-16-B		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58279-C-16-B		680-171623	680-171282	06/15/2010 17:56	1	TAL SAV	BCB
P:7470A	680-58279-A-16-A		680-171505	680-171421	06/14/2010 11:06	1	TAL SAV	DH
A:7470A	680-58279-A-16-A		680-171505	680-171421	06/14/2010 19:46	1	TAL SAV	CE

Lab ID: 680-58279-16 MS

Client ID: MW-44S

Sample Date/Time: 06/03/2010 14:00

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7470A	680-58279-A-16-B MS		680-171505	680-171421	06/14/2010 11:06	1	TAL SAV	DH
A:7470A	680-58279-A-16-B MS		680-171505	680-171421	06/14/2010 19:49	1	TAL SAV	CE

Lab ID: 680-58279-16 MSD

Client ID: MW-44S

Sample Date/Time: 06/03/2010 14:00

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:7470A	680-58279-A-16-C MSD		680-171505	680-171421	06/14/2010 11:06	1	TAL SAV	DH
A:7470A	680-58279-A-16-C MSD		680-171505	680-171421	06/14/2010 19:52	1	TAL SAV	CE

Lab ID: 680-58279-17

Client ID: MW-1D

Sample Date/Time: 06/03/2010 09:00

Received Date/Time: 06/04/2010 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58279-A-17		680-171185		06/10/2010 14:13	2	TAL SAV	RB
A:8260B	680-58279-A-17		680-171185		06/10/2010 14:13	2	TAL SAV	RB



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Laboratory Chronicle

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 680-170853/9		680-170853		06/08/2010 12:11	1	TAL SAV	CL
A:8260B	MB 680-170853/9		680-170853		06/08/2010 12:11	1	TAL SAV	CL
P:5030B	MB 680-171000/10		680-171000		06/09/2010 11:47	1	TAL SAV	JW
A:8260B	MB 680-171000/10		680-171000		06/09/2010 11:47	1	TAL SAV	JW
P:5030B	MB 680-171003/8		680-171003		06/09/2010 12:01	1	TAL SAV	JW
A:8260B	MB 680-171003/8		680-171003		06/09/2010 12:01	1	TAL SAV	JW
P:5030B	MB 680-171163/18		680-171163		06/09/2010 21:33	1	TAL SAV	WJC
A:8260B	MB 680-171163/18		680-171163		06/09/2010 21:33	1	TAL SAV	WJC
P:5030B	MB 680-171185/14		680-171185		06/10/2010 11:22	1	TAL SAV	RB
A:8260B	MB 680-171185/14		680-171185		06/10/2010 11:22	1	TAL SAV	RB
P:3520C	MB 680-170727/15-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	MB 680-170727/15-A		680-171114	680-170727	06/09/2010 17:45	1	TAL SAV	JK
P:3520C	MB 680-170727/15-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	MB 680-170727/15-A		680-171118	680-170727	06/09/2010 17:45	1	TAL SAV	JK
P:3005A	MB 680-171282/21-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	MB 680-171282/21-A		680-171623	680-171282	06/15/2010 15:43	1	TAL SAV	BCB
P:7470A	MB 680-171421/23-A		680-171505	680-171421	06/14/2010 11:06	1	TAL SAV	DH
A:7470A	MB 680-171421/23-A		680-171505	680-171421	06/14/2010 18:34	1	TAL SAV	CE

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 680-170853/6		680-170853		06/08/2010 10:13	1	TAL SAV	CL
A:8260B	LCS 680-170853/6		680-170853		06/08/2010 10:13	1	TAL SAV	CL
P:5030B	LCS 680-171000/4		680-171000		06/09/2010 09:28	1	TAL SAV	JW
A:8260B	LCS 680-171000/4		680-171000		06/09/2010 09:28	1	TAL SAV	JW
P:5030B	LCS 680-171003/5		680-171003		06/09/2010 09:42	1	TAL SAV	JW
A:8260B	LCS 680-171003/5		680-171003		06/09/2010 09:42	1	TAL SAV	JW
P:5030B	LCS 680-171163/15		680-171163		06/09/2010 20:09	1	TAL SAV	WJC
A:8260B	LCS 680-171163/15		680-171163		06/09/2010 20:09	1	TAL SAV	WJC
P:5030B	LCS 680-171185/11		680-171185		06/10/2010 09:59	1	TAL SAV	RB
A:8260B	LCS 680-171185/11		680-171185		06/10/2010 09:59	1	TAL SAV	RB
P:3520C	LCS 680-170727/20-A		680-171114	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081A_8082	LCS 680-170727/20-A		680-171114	680-170727	06/09/2010 19:22	1	TAL SAV	JK
P:3520C	LCS 680-170727/20-A		680-171118	680-170727	06/07/2010 14:21	1	TAL SAV	RBS
A:8081B/8082A	LCS 680-170727/20-A		680-171118	680-170727	06/09/2010 19:22	1	TAL SAV	JK
P:3005A	LCS 680-171282/22-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	LCS 680-171282/22-A		680-171623	680-171282	06/15/2010 15:48	1	TAL SAV	BCB
P:7470A	LCS 680-171421/24-A		680-171505	680-171421	06/14/2010 11:06	1	TAL SAV	DH
A:7470A	LCS 680-171421/24-A		680-171505	680-171421	06/14/2010 18:37	1	TAL SAV	CE



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58279-1

### Laboratory Chronicle

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCSD 680-170853/7		680-170853		06/08/2010 10:42	1	TAL SAV	CL
A:8260B	LCSD 680-170853/7		680-170853		06/08/2010 10:42	1	TAL SAV	CL
P:5030B	LCSD 680-171000/5		680-171000		06/09/2010 10:23	1	TAL SAV	JW
A:8260B	LCSD 680-171000/5		680-171000		06/09/2010 10:23	1	TAL SAV	JW
P:5030B	LCSD 680-171003/6		680-171003		06/09/2010 10:37	1	TAL SAV	JW
A:8260B	LCSD 680-171003/6		680-171003		06/09/2010 10:37	1	TAL SAV	JW
P:5030B	LCSD 680-171163/16		680-171163		06/09/2010 20:30	1	TAL SAV	WJC
A:8260B	LCSD 680-171163/16		680-171163		06/09/2010 20:30	1	TAL SAV	WJC
P:5030B	LCSD 680-171185/12		680-171185		06/10/2010 10:19	1	TAL SAV	RB
A:8260B	LCSD 680-171185/12		680-171185		06/10/2010 10:19	1	TAL SAV	RB

#### Lab References:

TAL SAV = TestAmerica Savannah



Serial Number 031421

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah  
5102 LaRoche Avenue  
Savannah, GA 31404Website: www.testamericainc.com  
Phone: (912) 354-7858  
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:  
Fax:

8034222129

Ryan McLain

PROJECT REFERENCE		PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSIS		PAGE	OF
Asland Brunswick		309848009	GA	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	Metals		1	2
TAL (LAB) PROJECT MANAGER		P.O. NUMBER	CONTRACT NO.		VOC's		STANDARD REPORT DELIVERY	
Lidia Gilizia		450138047			Toxicology		DATE DUE	
CLIENT (SITE) PM		CLIENT PHONE	CLIENT FAX		Reservative		EXPEDITED REPORT DELIVERY (SURCHARGE)	
Tim Hesseff						DATE DUE		
CLIENT NAME		CLIENT E-MAIL						
Ashland Hercules								
CLIENT ADDRESS		2508 Cook St Brunswick GA						
COMPANY CONTRACTING THIS WORK (if applicable)								
SAMPLE		SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS SUBMITTED		REMARKS		
DATE	TIME							
6/3/10	750	MW 2D		3				
116	1600	MW 44I		3	2	1		
OF	1130	MW 44ID		3	2	1		
118	1400	MW 44D		3	2	1		
	0745	MW 2S		3				
	0820	MW 1S		3				
	0855	MW 25S		3	2			
	0930	MW 25D		3	2			
	1100	MW 14S		3				
	1150	MW 14D		3				
	1400	MW 12S		3				
6/3/10	1720	MW 15S		3				
RELINQUISHED BY: (SIGNATURE)		DATE	TIME	RELINQUISHED BY: (SIGNATURE)		DATE	TIME	
[Signature]		6/3/10	920					
RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME	
[Signature]		6/4/10	0920					

## LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES NO	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[Signature]	6/4/10	1030	YES NO		680-58279	2.0/1.6/1.3







## Login Sample Receipt Check List

Client: Ashland Inc.

Job Number: 680-58279-1

**Login Number: 58279**

**List Source: TestAmerica Savannah**

**Creator: Conner, Keaton**

**List Number: 1**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	Rec'd 3 coolers on ice.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0, 1.6, 1.3 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	ID & Volume discrepancies, confirmed with client by PM (see narr).
Samples are received within Holding Time.	True	
Sample containers have legible labels.	False	MW44D - one L rec'd with time only, no other info.
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	MS/MSD not requested (no additional volume provided).
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified	True	



## ANALYTICAL REPORT

Job Number: 680-58386-1

Job Description: Ashland Brunswick RFI GW June 2010

For:  
Ashland Inc.  
500 Hercules Road  
Wilmington, DE 19894  
Attention: Timothy Hassett



Approved for release.  
Lidya Gulizia  
Project Manager I  
6/23/2010 5:35 PM

---

Lidya Gulizia  
Project Manager I  
lidya.gulizia@testamericainc.com  
06/23/2010

cc: Kelley Baker  
Mr. Leroy Bishop  
Mr. Dennis Brunner  
Ryan Cate  
Mr. Tony Mancini  
Ms. Charlene Rivard

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; AZ: AZ0741; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

**TestAmerica Laboratories, Inc.**

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404

Tel (912) 354-7858 Fax (912) 352-0165 [www.testamericainc.com](http://www.testamericainc.com)





**Job Narrative**  
**680-58386-1**

**Receipt**

Method(s) 8260B: The container label for the following sample(s) did not match the information listed on the Chain-of-Custody (COC): FB(MW24D) (680-58386-3). The container labels list FB(MW24). The COC lists FB(MW24D).

All other samples were received in good condition within temperature requirements.

**GC/MS VOA**

Method(s) 8260B: The field blank associated with these samples contained a detection above the method detection limit (MDL) for the following analyte: 2-butanone.

No other analytical or quality issues were noted.

**GC Semi VOA**

Method(s) 8081A\_8082: Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample(s) contained an allowable number of surrogate compounds outside limits: MW45I (680-58386-7), MW46I (680-58386-6). These results have been reported and qualified.

Method(s) 8081B/8082A: This method incorporates the use of second column confirmation. Corrective action for unacceptable percent recovery is not taken for surrogate or spike compounds unless the results from both columns are outside criteria. Any results which fall outside criteria are qualified and reported.

No other analytical or quality issues were noted.

**Metals**

No analytical or quality issues were noted.

**Comments**

No additional comments.



## METHOD SUMMARY

Client: Ashland Inc.

Job Number: 680-58386-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030B
Organochlorine Pesticides & PCBs (GC)	TAL SAV	SW846 8081A_8082	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	TAL SAV	SW846 8081B/8082A	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Metals (ICP)	TAL SAV	SW846 6010B	
Preparation, Metals	TAL SAV		SW846 3005A
Mercury (CVAA)	TAL SAV	SW846 7470A	
Preparation, Mercury	TAL SAV		SW846 7470A

### Lab References:

TAL SAV = TestAmerica Savannah

### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.



## METHOD / ANALYST SUMMARY

Client: Ashland Inc.

Job Number: 680-58386-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB
SW846 8081A_8082	Kellar, Joshua	JK
SW846 8081B/8082A	Kellar, Joshua	JK
SW846 6010B	Bland, Brian	BCB
SW846 7470A	Eaton, Cliff	CE



## SAMPLE SUMMARY

Client: Ashland Inc.

Job Number: 680-58386-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-58386-1EB	EB(4)	Water	06/07/2010 1730	06/09/2010 0919
680-58386-2EB	EB(5)	Water	06/07/2010 1800	06/09/2010 0919
680-58386-3FB	FB(MW24D)	Water	06/07/2010 1700	06/09/2010 0919
680-58386-4FB	FB(MW44)	Water	06/07/2010 1639	06/09/2010 0919
680-58386-5FB	FB(MW48)	Water	06/07/2010 1600	06/09/2010 0919
680-58386-6	MW46I	Water	06/08/2010 0930	06/09/2010 0919
680-58386-7	MW45I	Water	06/08/2010 1030	06/09/2010 0919
680-58386-8TB	051110 Trip Blank	Water	06/08/2010 0000	06/09/2010 0919
680-58386-9	MW34	Water	06/08/2010 1230	06/09/2010 0919
680-58386-10	MW35D	Water	06/08/2010 1525	06/09/2010 0919
680-58386-11	MW31D	Water	06/08/2010 1330	06/09/2010 0919
680-58386-12	MW28D	Water	06/08/2010 1620	06/09/2010 0919



# **SAMPLE RESULTS**



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58386-1

Client Sample ID: EB(4)

Lab Sample ID: 680-58386-1EB

Client Matrix: Water

Date Sampled: 06/07/2010 1730

Date Received: 06/09/2010 0919

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0012.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 1443		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 1443			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** EB(4)

Lab Sample ID: 680-58386-1EB

Client Matrix: Water

Date Sampled: 06/07/2010 1730

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0012.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 1443		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 1443			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	93		75 - 120
Dibromofluoromethane	96		75 - 121
Toluene-d8 (Surr)	101		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** EB(5)

Lab Sample ID: 680-58386-2EB

Date Sampled: 06/07/2010 1800

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0014.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 1512		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 1512			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** EB(5)

Lab Sample ID: 680-58386-2EB

Date Sampled: 06/07/2010 1800

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0014.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 1512		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 1512			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	93		75 - 120
Dibromofluoromethane	98		75 - 121
Toluene-d8 (Surr)	99		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** FB(MW24D)

Lab Sample ID: 680-58386-3FB

Date Sampled: 06/07/2010 1700

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0016.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 1541		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 1541			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	1.2	J	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** FB(MW24D)

Lab Sample ID: 680-58386-3FB

Date Sampled: 06/07/2010 1700

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0016.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 1541		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 1541			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	93		75 - 120
Dibromofluoromethane	98		75 - 121
Toluene-d8 (Surr)	99		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** FB(MW44)

Lab Sample ID: 680-58386-4FB

Date Sampled: 06/07/2010 1639

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0018.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 1611		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 1611			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	1.4	J	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** FB(MW44)

Lab Sample ID: 680-58386-4FB

Date Sampled: 06/07/2010 1639

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0018.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 1611		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 1611			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	93		75 - 120
Dibromofluoromethane	98		75 - 121
Toluene-d8 (Surr)	101		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** FB(MW48)

Lab Sample ID: 680-58386-5FB

Date Sampled: 06/07/2010 1600

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0020.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 1641		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 1641			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	1.4	J	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** FB(MW48)

Lab Sample ID: 680-58386-5FB

Date Sampled: 06/07/2010 1600

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0020.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 1641		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 1641			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	94		75 - 120
Dibromofluoromethane	98		75 - 121
Toluene-d8 (Surr)	100		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58386-1

Client Sample ID: MW461

Lab Sample ID: 680-58386-6

Client Matrix: Water

Date Sampled: 06/08/2010 0930

Date Received: 06/09/2010 0919

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171611	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0049.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/15/2010 1325		Final Weight/Volume:	5 mL
Date Prepared:	06/15/2010 1325			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	38		5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	5.0		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	3.1		0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.6		0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.24	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID: MW46I**

Lab Sample ID: 680-58386-6

Date Sampled: 06/08/2010 0930

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171611	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0049.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/15/2010 1325		Final Weight/Volume:	5 mL
Date Prepared:	06/15/2010 1325			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	1.6	J	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	101		75 - 121
Toluene-d8 (Surr)	101		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW45I

Lab Sample ID: 680-58386-7

Date Sampled: 06/08/2010 1030

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0032.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 1936		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 1936			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	0.19	J	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW45I

Lab Sample ID: 680-58386-7

Date Sampled: 06/08/2010 1030

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0032.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 1936		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 1936			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	96		75 - 121
Toluene-d8 (Surr)	99		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** 051110 Trip Blank

Lab Sample ID: 680-58386-8TB

Date Sampled: 06/08/2010 0000

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0022.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 1710		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 1710			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** 051110 Trip Blank

Lab Sample ID: 680-58386-8TB

Date Sampled: 06/08/2010 0000

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0022.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 1710		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 1710			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	96		75 - 121
Toluene-d8 (Surr)	101		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW34

Lab Sample ID: 680-58386-9

Date Sampled: 06/08/2010 1230

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0034.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 2005		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 2005			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	0.11	J	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW34

Lab Sample ID: 680-58386-9

Date Sampled: 06/08/2010 1230

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0034.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 2005		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 2005			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	95		75 - 121
Toluene-d8 (Surr)	101		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW35D

Lab Sample ID: 680-58386-10

Client Matrix: Water

Date Sampled: 06/08/2010 1525

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0036.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 2034		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 2034			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW35D

Lab Sample ID: 680-58386-10

Date Sampled: 06/08/2010 1525

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0036.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 2034		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 2034			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	93		75 - 120
Dibromofluoromethane	98		75 - 121
Toluene-d8 (Surr)	102		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW31D

Lab Sample ID: 680-58386-11

Date Sampled: 06/08/2010 1330

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0038.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 2104		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 2104			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.6		0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	2.2		0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.8		0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW31D

Lab Sample ID: 680-58386-11

Date Sampled: 06/08/2010 1330

Client Matrix: Water

Date Received: 06/09/2010 0919

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**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171498	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0038.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 2104		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 2104			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	97		75 - 121
Toluene-d8 (Surr)	100		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58386-1

Client Sample ID: MW28D

Lab Sample ID: 680-58386-12

Client Matrix: Water

Date Sampled: 06/08/2010 1620

Date Received: 06/09/2010 0919

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171499	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0037.d
Dilution:	20		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 2049		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 2049			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	500	U	100	500
Acetonitrile	800	U	200	800
Acrolein	400	U	150	400
Acrylonitrile	400	U	140	400
Benzene	1200		5.0	20
Bromoform	20	U	10	20
Bromomethane	20	U	16	20
2-Butanone (MEK)	200	U	20	200
Carbon disulfide	40	U	12	40
Carbon tetrachloride	20	U	10	20
Chlorobenzene	2000		5.0	20
2-Chloro-1,3-butadiene	20	U	6.0	20
Chlorodibromomethane	20	U	2.0	20
Chloroethane	20	U	20	20
Chloroform	21000	E	2.8	20
Chloromethane	20	U	6.6	20
3-Chloro-1-propene	20	U	4.0	20
cis-1,3-Dichloropropene	20	U	2.2	20
1,2-Dibromo-3-Chloropropane	20	U	8.8	20
Dibromomethane	20	U	4.0	20
Dichlorobromomethane	20	U	5.0	20
Dichlorodifluoromethane	20	U	5.0	20
1,1-Dichloroethane	20	U	5.0	20
1,2-Dichloroethane	20	U	2.0	20
1,1-Dichloroethene	20	U	2.2	20
1,2-Dichloropropane	20	U	2.6	20
Ethylbenzene	8.4	J	2.2	20
Ethylene Dibromide	20	U	5.0	20
Ethyl methacrylate	20	U	5.0	20
2-Hexanone	200	U	20	200
Iodomethane	100	U	20	100
Isobutyl alcohol	800	U	220	800
Methacrylonitrile	400	U	66	400
Methylene Chloride	3600		20	100
Methyl methacrylate	20	U	9.6	20
4-Methyl-2-pentanone (MIBK)	200	U	20	200
Pentachloroethane	100	U	24	100
Propionitrile	400	U	92	400
Styrene	20	U	2.2	20
1,1,1,2-Tetrachloroethane	20	U	6.6	20
1,1,2,2-Tetrachloroethane	20	U	3.6	20
Tetrachloroethene	15	J	3.0	20
Toluene	88		6.6	20
trans-1,4-Dichloro-2-butene	40	U	10	40
trans-1,2-Dichloroethene	20	U	4.0	20
trans-1,3-Dichloropropene	20	U	4.2	20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID: MW28D**

Lab Sample ID: 680-58386-12

Date Sampled: 06/08/2010 1620

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171499	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0037.d
Dilution:	20		Initial Weight/Volume:	5 mL
Date Analyzed:	06/14/2010 2049		Final Weight/Volume:	5 mL
Date Prepared:	06/14/2010 2049			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	20	U	10	20
1,1,2-Trichloroethane	20	U	2.6	20
Trichloroethene	20	U	2.6	20
Trichlorofluoromethane	20	U	5.0	20
1,2,3-Trichloropropane	20	U	8.2	20
Vinyl acetate	40	U	5.6	40
Vinyl chloride	7.2	J	3.6	20
Xylenes, Total	37	J	4.0	40

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	93		75 - 121
Toluene-d8 (Surr)	104		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID: MW28D**

Lab Sample ID: 680-58386-12

Date Sampled: 06/08/2010 1620

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171611	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0051.d
Dilution:	200		Initial Weight/Volume:	5 mL
Date Analyzed:	06/15/2010 1354	Run Type: DL	Final Weight/Volume:	5 mL
Date Prepared:	06/15/2010 1354			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5000	U	1000	5000
Acetonitrile	8000	U	2000	8000
Acrolein	4000	U	1500	4000
Acrylonitrile	4000	U	1400	4000
Benzene	1100	D	50	200
Bromoform	200	U	100	200
Bromomethane	200	U	160	200
2-Butanone (MEK)	2000	U	200	2000
Carbon disulfide	400	U	120	400
Carbon tetrachloride	200	U	100	200
Chlorobenzene	1800	D	50	200
2-Chloro-1,3-butadiene	200	U	60	200
Chlorodibromomethane	200	U	20	200
Chloroethane	200	U	200	200
Chloroform	15000	D	28	200
Chloromethane	200	U	66	200
3-Chloro-1-propene	200	U	40	200
cis-1,3-Dichloropropene	200	U	22	200
1,2-Dibromo-3-Chloropropane	200	U	88	200
Dibromomethane	200	U	40	200
Dichlorobromomethane	200	U	50	200
Dichlorodifluoromethane	200	U	50	200
1,1-Dichloroethane	200	U	50	200
1,2-Dichloroethane	200	U	20	200
1,1-Dichloroethene	200	U	22	200
1,2-Dichloropropane	200	U	26	200
Ethylbenzene	200	U	22	200
Ethylene Dibromide	200	U	50	200
Ethyl methacrylate	200	U	50	200
2-Hexanone	2000	U	200	2000
Iodomethane	1000	U	200	1000
Isobutyl alcohol	8000	U	2200	8000
Methacrylonitrile	4000	U	660	4000
Methylene Chloride	9200	D	200	1000
Methyl methacrylate	200	U	96	200
4-Methyl-2-pentanone (MIBK)	2000	U	200	2000
Pentachloroethane	1000	U	240	1000
Propionitrile	4000	U	920	4000
Styrene	200	U	22	200
1,1,1,2-Tetrachloroethane	200	U	66	200
1,1,2,2-Tetrachloroethane	200	U	36	200
Tetrachloroethene	200	U	30	200
Toluene	110	J D	66	200
trans-1,4-Dichloro-2-butene	400	U	100	400
trans-1,2-Dichloroethene	200	U	40	200
trans-1,3-Dichloropropene	200	U	42	200



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID: MW28D**

Lab Sample ID: 680-58386-12

Date Sampled: 06/08/2010 1620

Client Matrix: Water

Date Received: 06/09/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171611	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0051.d
Dilution:	200		Initial Weight/Volume:	5 mL
Date Analyzed:	06/15/2010 1354	Run Type: DL	Final Weight/Volume:	5 mL
Date Prepared:	06/15/2010 1354			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	200	U	100	200
1,1,2-Trichloroethane	200	U	26	200
Trichloroethene	200	U	26	200
Trichlorofluoromethane	200	U	50	200
1,2,3-Trichloropropane	200	U	82	200
Vinyl acetate	400	U	56	400
Vinyl chloride	200	U	36	200
Xylenes, Total	400	U	40	400

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	99		75 - 121
Toluene-d8 (Surr)	102		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** EB(4)

Lab Sample ID: 680-58386-1EB

Date Sampled: 06/07/2010 1730

Client Matrix: Water

Date Received: 06/09/2010 0919

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171403	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/12/2010 0510		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	1.8	J	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	42		14 - 115
Tetrachloro-m-xylene	69		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** EB(5)

Lab Sample ID: 680-58386-2EB

Date Sampled: 06/07/2010 1800

Client Matrix: Water

Date Received: 06/09/2010 0919

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171403	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/12/2010 0529		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	2.1	J	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	72		14 - 115
Tetrachloro-m-xylene	87		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW46I

Lab Sample ID: 680-58386-6

Date Sampled: 06/08/2010 0930

Client Matrix: Water

Date Received: 06/09/2010 0919

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171403	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/12/2010 0549		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	1.5	J	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	11	X	14 - 115
Tetrachloro-m-xylene	110		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW45I

Lab Sample ID: 680-58386-7

Date Sampled: 06/08/2010 1030

Client Matrix: Water

Date Received: 06/09/2010 0919

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**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171403	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/12/2010 0608		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	4.9	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	37		14 - 115
Tetrachloro-m-xylene	381	E X	35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW35D

Lab Sample ID: 680-58386-10

Date Sampled: 06/08/2010 1525

Client Matrix: Water

Date Received: 06/09/2010 0919

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-171403	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	06/12/2010 0627		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	34		14 - 115
Tetrachloro-m-xylene	74		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** EB(4)

Lab Sample ID: 680-58386-1EB

Date Sampled: 06/07/2010 1730

Client Matrix: Water

Date Received: 06/09/2010 0919

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171402	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/12/2010 0510		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.7	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	34		14 - 115
Tetrachloro-m-xylene	60		35 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-58386-1

Client Sample ID: EB(4)

Lab Sample ID: 680-58386-1EB

Date Sampled: 06/07/2010 1730

Client Matrix: Water

Date Received: 06/09/2010 0919

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### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-171402	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/12/2010 0510		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	30		14 - 115
Tetrachloro-m-xylene	48		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** EB(5)

Lab Sample ID: 680-58386-2EB

Date Sampled: 06/07/2010 1800

Client Matrix: Water

Date Received: 06/09/2010 0919

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171402	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/12/2010 0529		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.9	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	47		14 - 115
Tetrachloro-m-xylene	64		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** EB(5)

Lab Sample ID: 680-58386-2EB

Date Sampled: 06/07/2010 1800

Client Matrix: Water

Date Received: 06/09/2010 0919

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**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171402	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/12/2010 0529		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	47		14 - 115
Tetrachloro-m-xylene	63		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW46I

Lab Sample ID: 680-58386-6

Date Sampled: 06/08/2010 0930

Client Matrix: Water

Date Received: 06/09/2010 0919

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171402	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/12/2010 0549		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.7	U	0.47	4.7

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	15		14 - 115
Tetrachloro-m-xylene	97	p	35 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-58386-1

Client Sample ID: MW46I

Lab Sample ID: 680-58386-6

Date Sampled: 06/08/2010 0930

Client Matrix: Water

Date Received: 06/09/2010 0919

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### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-171402	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	1060 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/12/2010 0549		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	11	X	14 - 115
Tetrachloro-m-xylene	205	X	35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW45I

Lab Sample ID: 680-58386-7

Date Sampled: 06/08/2010 1030

Client Matrix: Water

Date Received: 06/09/2010 0919

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171402	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/12/2010 0608		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.9	U	0.49	4.9

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	37		14 - 115
Tetrachloro-m-xylene	80	p	35 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-58386-1

Client Sample ID: MW45I

Lab Sample ID: 680-58386-7

Date Sampled: 06/08/2010 1030

Client Matrix: Water

Date Received: 06/09/2010 0919

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### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-171402	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	1030 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/12/2010 0608		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	30		14 - 115
Tetrachloro-m-xylene	381	E X	35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW35D

Lab Sample ID: 680-58386-10

Date Sampled: 06/08/2010 1525

Client Matrix: Water

Date Received: 06/09/2010 0919

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-171402	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	06/12/2010 0627		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	24		14 - 115
Tetrachloro-m-xylene	52		35 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-58386-1

Client Sample ID: MW35D

Lab Sample ID: 680-58386-10

Date Sampled: 06/08/2010 1525

Client Matrix: Water

Date Received: 06/09/2010 0919

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### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Method:	8081B/8082A	Analysis Batch: 680-171402	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-171149	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	06/12/2010 0627		Injection Volume:	2 uL
Date Prepared:	06/10/2010 1425		Result Type:	SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	22		14 - 115
Tetrachloro-m-xylene	46		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** EB(4)

Lab Sample ID: 680-58386-1EB

Client Matrix: Water

Date Sampled: 06/07/2010 1730

Date Received: 06/09/2010 0919

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1801		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	13		2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-172022	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171597	Lab File ID:	b061810.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/18/2010 1607		Final Weight/Volume:	50 mL
Date Prepared:	06/15/2010 1526			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** EB(5)

Lab Sample ID: 680-58386-2EB

Client Matrix: Water

Date Sampled: 06/07/2010 1800

Date Received: 06/09/2010 0919

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1810		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	13		2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	6.8	J	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-172022	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171597	Lab File ID:	b061810.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/18/2010 1609		Final Weight/Volume:	50 mL
Date Prepared:	06/15/2010 1526			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID: MW46I**

Lab Sample ID: 680-58386-6

Date Sampled: 06/08/2010 0930

Client Matrix: Water

Date Received: 06/09/2010 0919

**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1816		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	100		2.0	10
Beryllium	3.4	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	96		2.0	10
Cobalt	1.5	J	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	9.6	J	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	59		3.0	10
Zinc	19	J	6.3	20

**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-172022	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171597	Lab File ID:	b061810.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/18/2010 1619		Final Weight/Volume:	50 mL
Date Prepared:	06/15/2010 1526			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58386-1

**Client Sample ID:** MW45I

Lab Sample ID: 680-58386-7

Client Matrix: Water

Date Sampled: 06/08/2010 1030

Date Received: 06/09/2010 0919

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**6010B Metals (ICP)-Total Recoverable**

Method:	6010B	Analysis Batch: 680-171623	Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171282	Lab File ID:	061510.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/15/2010 1821		Final Weight/Volume:	50 mL
Date Prepared:	06/11/2010 1157			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	53		2.0	10
Beryllium	0.75	J	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	23		2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	6.7	J	3.0	10
Zinc	7.4	J	6.3	20

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**7470A Mercury (CVAA)**

Method:	7470A	Analysis Batch: 680-172022	Instrument ID:	LEEMAN1
Preparation:	7470A	Prep Batch: 680-171597	Lab File ID:	b061810.chr
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/18/2010 1622		Final Weight/Volume:	50 mL
Date Prepared:	06/15/2010 1526			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.091	0.20



## DATA REPORTING QUALIFIERS

Client: Ashland Inc.

Job Number: 680-58386-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Indicates the analyte was analyzed for but not detected.
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
GC Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
	p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
Metals		
	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.



# QUALITY CONTROL RESULTS



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:680-171498</b>					
LCS 680-171498/4	Lab Control Sample	T	Water	8260B	
LCSD 680-171498/5	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-171498/11	Method Blank	T	Water	8260B	
680-58386-1EB	EB(4)	T	Water	8260B	
680-58386-2EB	EB(5)	T	Water	8260B	
680-58386-3FB	FB(MW24D)	T	Water	8260B	
680-58386-4FB	FB(MW44)	T	Water	8260B	
680-58386-5FB	FB(MW48)	T	Water	8260B	
680-58386-7	MW45I	T	Water	8260B	
680-58386-8TB	051110 Trip Blank	T	Water	8260B	
680-58386-9	MW34	T	Water	8260B	
680-58386-10	MW35D	T	Water	8260B	
680-58386-11	MW31D	T	Water	8260B	
<b>Analysis Batch:680-171499</b>					
LCS 680-171499/6	Lab Control Sample	T	Water	8260B	
LCSD 680-171499/7	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-171499/9	Method Blank	T	Water	8260B	
680-58386-12	MW28D	T	Water	8260B	
<b>Analysis Batch:680-171611</b>					
LCS 680-171611/5	Lab Control Sample	T	Water	8260B	
LCSD 680-171611/6	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-171611/8	Method Blank	T	Water	8260B	
680-58386-6	MW46I	T	Water	8260B	
680-58386-12DL	MW28D	T	Water	8260B	

#### Report Basis

T = Total



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC Semi VOA</b>					
<b>Prep Batch: 680-171149</b>					
LCS 680-171149/25-A	Lab Control Sample	T	Water	3520C	
LCSD 680-171149/26-A	Lab Control Sample Duplicate	T	Water	3520C	
MB 680-171149/16-A	Method Blank	T	Water	3520C	
680-58386-1EB	EB(4)	T	Water	3520C	
680-58386-2EB	EB(5)	T	Water	3520C	
680-58386-6	MW46I	T	Water	3520C	
680-58386-7	MW45I	T	Water	3520C	
680-58386-10	MW35D	T	Water	3520C	
680-58386-10MS	Matrix Spike	T	Water	3520C	
680-58386-10MSD	Matrix Spike Duplicate	T	Water	3520C	
<b>Analysis Batch:680-171402</b>					
LCS 680-171149/25-A	Lab Control Sample	T	Water	8081B/8082A	680-171149
LCSD 680-171149/26-A	Lab Control Sample Duplicate	T	Water	8081B/8082A	680-171149
MB 680-171149/16-A	Method Blank	T	Water	8081B/8082A	680-171149
680-58386-1EB	EB(4)	T	Water	8081B/8082A	680-171149
680-58386-2EB	EB(5)	T	Water	8081B/8082A	680-171149
680-58386-6	MW46I	T	Water	8081B/8082A	680-171149
680-58386-7	MW45I	T	Water	8081B/8082A	680-171149
680-58386-10	MW35D	T	Water	8081B/8082A	680-171149
680-58386-10MS	Matrix Spike	T	Water	8081B/8082A	680-171149
680-58386-10MSD	Matrix Spike Duplicate	T	Water	8081B/8082A	680-171149
<b>Analysis Batch:680-171403</b>					
LCS 680-171149/25-A	Lab Control Sample	T	Water	8081A_8082	680-171149
LCSD 680-171149/26-A	Lab Control Sample Duplicate	T	Water	8081A_8082	680-171149
MB 680-171149/16-A	Method Blank	T	Water	8081A_8082	680-171149
680-58386-1EB	EB(4)	T	Water	8081A_8082	680-171149
680-58386-2EB	EB(5)	T	Water	8081A_8082	680-171149
680-58386-6	MW46I	T	Water	8081A_8082	680-171149
680-58386-7	MW45I	T	Water	8081A_8082	680-171149
680-58386-10	MW35D	T	Water	8081A_8082	680-171149
680-58386-10MS	Matrix Spike	T	Water	8081A_8082	680-171149
680-58386-10MSD	Matrix Spike Duplicate	T	Water	8081A_8082	680-171149

#### Report Basis

T = Total



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 680-171282</b>					
LCS 680-171282/22-A	Lab Control Sample	R	Water	3005A	
MB 680-171282/21-A	Method Blank	R	Water	3005A	
680-58386-1EB	EB(4)	R	Water	3005A	
680-58386-2EB	EB(5)	R	Water	3005A	
680-58386-6	MW46I	R	Water	3005A	
680-58386-7	MW45I	R	Water	3005A	
<b>Prep Batch: 680-171597</b>					
LCS 680-171597/22-A	Lab Control Sample	T	Water	7470A	
MB 680-171597/21-A	Method Blank	T	Water	7470A	
680-58386-1EB	EB(4)	T	Water	7470A	
680-58386-2EB	EB(5)	T	Water	7470A	
680-58386-6	MW46I	T	Water	7470A	
680-58386-7	MW45I	T	Water	7470A	
<b>Analysis Batch:680-171623</b>					
LCS 680-171282/22-A	Lab Control Sample	R	Water	6010B	680-171282
MB 680-171282/21-A	Method Blank	R	Water	6010B	680-171282
680-58386-1EB	EB(4)	R	Water	6010B	680-171282
680-58386-2EB	EB(5)	R	Water	6010B	680-171282
680-58386-6	MW46I	R	Water	6010B	680-171282
680-58386-7	MW45I	R	Water	6010B	680-171282
<b>Analysis Batch:680-172022</b>					
LCS 680-171597/22-A	Lab Control Sample	T	Water	7470A	680-171597
MB 680-171597/21-A	Method Blank	T	Water	7470A	680-171597
680-58386-1EB	EB(4)	T	Water	7470A	680-171597
680-58386-2EB	EB(5)	T	Water	7470A	680-171597
680-58386-6	MW46I	T	Water	7470A	680-171597
680-58386-7	MW45I	T	Water	7470A	680-171597

#### Report Basis

R = Total Recoverable

T = Total



Client: Ashland Inc.

Job Number: 680-58386-1

**Surrogate Recovery Report****8260B Volatile Organic Compounds (GC/MS)****Client Matrix: Water**

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-58386-1	EB(4)	93	L6	101
680-58386-2	EB(5)	93	98	99
680-58386-3	FB(MW24D)	93	98	99
680-58386-4	FB(MW44)	93	98	101
680-58386-5	FB(MW48)	94	98	100
680-58386-6	MW46I	96	101	101
680-58386-7	MW45I	95	96	99
680-58386-8	051110 Trip Blank	95	96	101
680-58386-9	MW34	95	95	101
680-58386-10	MW35D	93	98	102
680-58386-11	MW31D	95	97	100
680-58386-12	MW28D	97	93	104
680-58386-12 DL	MW28D DL	97	99	102
MB 680-171498/11		94	97	100
MB 680-171499/9		98	100	103
MB 680-171611/8		95	103	104
LCS 680-171498/4		99	101	96
LCS 680-171499/6		101	105	99
LCS 680-171611/5		97	103	101
LCSD 680-171498/5		99	101	97
LCSD 680-171499/7		102	103	100
LCSD 680-171611/6		98	102	98

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120



Client: Ashland Inc.

Job Number: 680-58386-1

## Surrogate Recovery Report

### 8081A 8082 Organochlorine Pesticides & PCBs (GC)

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	TCX1 %Rec
680-58386-1	EB(4)	42	69
680-58386-2	EB(5)	72	87
680-58386-6	MW46I	11X	110
680-58386-7	MW45I	37	381E X
680-58386-10	MW35D	34	74
MB 680-171149/16-A		58	66
LCS 680-171149/25-A		62	71
LCSD		66	66
680-171149/26-A			
680-58386-10 MS	MW35D MS	35	59
680-58386-10 MSD	MW35D MSD	40	71

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



Client: Ashland Inc.

Job Number: 680-58386-1

## Surrogate Recovery Report

### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	Mo W2 %Rec	TCX1 %Rec	TCX2 %Rec
680-58386-1	EB(4)	34	30	60	48
680-58386-2	EB(5)	47	47	64	63
680-58386-6	MW46I	11X	15	97p	205X
680-58386-7	MW45I	37	30	381E X	80p
680-58386-10	MW35D	24	22	52	46
MB 680-171149/16-A		62	56	76	76
LCS 680-171149/25-A		61	62	70	77
LCSD		64	59	67	67
680-171149/26-A					
680-58386-10 MS	MW35D MS	30	25	46	55
680-58386-10 MSD	MW35D MSD	31	21p	50	47

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

**Method Blank - Batch: 680-171498**

**Method: 8260B**

**Preparation: 5030B**

Lab Sample ID: MB 680-171498/11

Analysis Batch: 680-171498

Instrument ID: MSO2

Client Matrix: W0mA

Prep Batch: N/A

Lab File ID: oq032.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/14/2010 1413

Final Weight/Volume: 5 mL

Date Prepared: 06/14/2010 1413

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Method Blank - Batch: 680-171498

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171498/11

Analysis Batch: 680-171498

Instrument ID: MSO2

Client Matrix: Water

Prep Batch: N/A

Lab File ID: oq032.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/14/2010 1413

Final Weight/Volume: 5 mL

Date Prepared: 06/14/2010 1413

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	94	75 - 120
Dibromofluoromethane	97	75 - 121
Toluene-d8 (Surr)	100	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 680-171498

Method: 8260B

Preparation: 5030B

LCS Lab Sample ID: LCS 680-171498/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1216  
Date Prepared: 06/14/2010 1216

Analysis Batch: 680-171498  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq024.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171498/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1245  
Date Prepared: 06/14/2010 1245

Analysis Batch: 680-171498  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq026.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	109	111	17 - 175	2	50		
Benzene	99	100	77 - 119	1	30		
Bromoform	103	103	62 - 133	0	30		
Bromomethane	85	86	12 - 184	1	50		
2-Butanone (MEK)	105	106	33 - 157	1	30		
Carbon disulfide	105	103	55 - 131	2	30		
Carbon tetrachloride	102	101	71 - 135	2	30		
Chlorobenzene	96	97	85 - 116	1	30		
Chlorodibromomethane	104	104	75 - 133	1	30		
Chloroethane	86	82	40 - 165	5	50		
Chloroform	101	101	82 - 120	0	30		
Chloromethane	79	80	48 - 142	1	50		
cis-1,3-Dichloropropene	102	102	76 - 126	1	30		
1,2-Dibromo-3-Chloropropane	111	113	49 - 140	2	30		
Dibromomethane	98	96	78 - 119	1	30		
Dichlorobromomethane	100	100	78 - 127	0	30		
Dichlorodifluoromethane	101	101	34 - 154	0	30		
1,1-Dichloroethane	102	103	74 - 127	0	30		
1,2-Dichloroethane	95	98	66 - 132	4	30		
1,1-Dichloroethene	106	103	62 - 141	2	30		
1,2-Dichloropropane	98	100	73 - 124	2	30		
Ethylbenzene	101	99	86 - 116	2	30		
Ethylene Dibromide	100	103	80 - 121	2	30		
2-Hexanone	109	111	34 - 161	2	30		
Methylene Chloride	100	100	70 - 125	0	30		
4-Methyl-2-pentanone (MIBK)	102	104	40 - 151	2	30		
Styrene	99	99	82 - 122	0	30		
1,1,1,2-Tetrachloroethane	99	99	81 - 128	1	30		
1,1,2,2-Tetrachloroethane	101	99	69 - 129	2	30		
Tetrachloroethene	99	98	76 - 126	2	30		
Toluene	101	101	81 - 117	1	30		
trans-1,2-Dichloroethene	100	99	72 - 131	1	30		
trans-1,3-Dichloropropene	107	107	73 - 128	0	30		
1,1,1-Trichloroethane	103	102	76 - 127	1	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 680-171498

Method: 8260B

Preparation: 5030B

LCS Lab Sample ID: LCS 680-171498/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1216  
Date Prepared: 06/14/2010 1216

Analysis Batch: 680-171498  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq024.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171498/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1245  
Date Prepared: 06/14/2010 1245

Analysis Batch: 680-171498  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq026.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	96	97	75 - 121	2	30		
Trichloroethene	98	98	84 - 115	0	30		
Trichlorofluoromethane	88	84	58 - 149	5	50		
1,2,3-Trichloropropane	104	103	70 - 130	1	30		
Vinyl acetate	110	109	10 - 217	0	30		
Vinyl chloride	91	88	59 - 144	4	50		
Xylenes, Total	100	98	84 - 118	2	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	99		99		75 - 120		
Dibromofluoromethane	101		101		75 - 121		
Toluene-d8 (Surr)	96		97		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-171498**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171498/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1216  
Date Prepared: 06/14/2010 1216

Units: ug/L

LCSD Lab Sample ID: LCSD 680-171498/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1245  
Date Prepared: 06/14/2010 1245

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	109	111
Benzene	50.0	50.0	49.5	49.9
Bromoform	50.0	50.0	51.7	51.7
Bromomethane	50.0	50.0	42.5	42.8
2-Butanone (MEK)	100	100	105	106
Carbon disulfide	50.0	50.0	52.3	51.3
Carbon tetrachloride	50.0	50.0	51.1	50.3
Chlorobenzene	50.0	50.0	47.8	48.3
Chlorodibromomethane	50.0	50.0	52.1	51.8
Chloroethane	50.0	50.0	43.2	40.9
Chloroform	50.0	50.0	50.4	50.5
Chloromethane	50.0	50.0	39.5	39.8
cis-1,3-Dichloropropene	50.0	50.0	51.1	50.8
1,2-Dibromo-3-Chloropropane	50.0	50.0	55.3	56.4
Dibromomethane	50.0	50.0	48.9	48.1
Dichlorobromomethane	50.0	50.0	50.2	50.2
Dichlorodifluoromethane	50.0	50.0	50.6	50.4
1,1-Dichloroethane	50.0	50.0	51.2	51.4
1,2-Dichloroethane	50.0	50.0	47.3	49.1
1,1-Dichloroethene	50.0	50.0	52.9	51.7
1,2-Dichloropropane	50.0	50.0	49.1	50.1
Ethylbenzene	50.0	50.0	50.7	49.6
Ethylene Dibromide	50.0	50.0	50.2	51.3
2-Hexanone	100	100	109	111
Methylene Chloride	50.0	50.0	50.0	50.0
4-Methyl-2-pentanone (MIBK)	100	100	102	104
Styrene	50.0	50.0	49.7	49.6
1,1,1,2-Tetrachloroethane	50.0	50.0	49.7	49.4
1,1,2,2-Tetrachloroethane	50.0	50.0	50.3	49.5
Tetrachloroethene	50.0	50.0	49.6	48.8
Toluene	50.0	50.0	50.3	50.6
trans-1,2-Dichloroethene	50.0	50.0	49.9	49.4
trans-1,3-Dichloropropene	50.0	50.0	53.5	53.5
1,1,1-Trichloroethane	50.0	50.0	51.3	50.8
1,1,2-Trichloroethane	50.0	50.0	48.0	48.7
Trichloroethene	50.0	50.0	48.8	48.9
Trichlorofluoromethane	50.0	50.0	44.1	42.1
1,2,3-Trichloropropane	50.0	50.0	52.2	51.4
Vinyl acetate	100	100	110	109
Vinyl chloride	50.0	50.0	45.6	44.1
Xylenes, Total	150	150	150	147



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Method Blank - Batch: 680-171499

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171499/9

Analysis Batch: 680-171499

Instrument ID: MSO

Client Matrix: Water

Prep Batch: N/A

Lab File ID: oq031.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/14/2010 1359

Final Weight/Volume: 5 mL

Date Prepared: 06/14/2010 1359

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Method Blank - Batch: 680-171499

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171499/9

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 06/14/2010 1359

Date Prepared: 06/14/2010 1359

Analysis Batch: 680-171499

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO

Lab File ID: oq031.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	98	75 - 120
Dibromofluoromethane	100	75 - 121
Toluene-d8 (Surr)	103	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 680-171499

Method: 8260B

Preparation: 5030B

LCS Lab Sample ID: LCS 680-171499/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1201  
Date Prepared: 06/14/2010 1201

Analysis Batch: 680-171499  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq023.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171499/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1231  
Date Prepared: 06/14/2010 1231

Analysis Batch: 680-171499  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq025.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	121	119	17 - 175	1	50		
Benzene	100	100	77 - 119	0	30		
Bromoform	107	109	62 - 133	1	30		
Bromomethane	76	79	12 - 184	3	50		
2-Butanone (MEK)	106	107	33 - 157	1	30		
Carbon disulfide	109	107	55 - 131	2	30		
Carbon tetrachloride	105	104	71 - 135	1	30		
Chlorobenzene	98	99	85 - 116	1	30		
Chlorodibromomethane	101	106	75 - 133	5	30		
Chloroethane	125	118	40 - 165	6	50		
Chloroform	102	100	82 - 120	2	30		
Chloromethane	87	85	48 - 142	2	50		
cis-1,3-Dichloropropene	107	105	76 - 126	2	30		
1,2-Dibromo-3-Chloropropane	112	113	49 - 140	1	30		
Dibromomethane	100	100	78 - 119	0	30		
Dichlorobromomethane	102	102	78 - 127	0	30		
Dichlorodifluoromethane	109	107	34 - 154	2	30		
1,1-Dichloroethane	104	105	74 - 127	1	30		
1,2-Dichloroethane	99	96	66 - 132	3	30		
1,1-Dichloroethene	108	108	62 - 141	1	30		
1,2-Dichloropropane	102	101	73 - 124	1	30		
Ethylbenzene	101	103	86 - 116	2	30		
Ethylene Dibromide	104	103	80 - 121	1	30		
2-Hexanone	113	111	34 - 161	1	30		
Methylene Chloride	107	107	70 - 125	0	30		
4-Methyl-2-pentanone (MIBK)	110	108	40 - 151	2	30		
Styrene	100	103	82 - 122	3	30		
1,1,1,2-Tetrachloroethane	102	105	81 - 128	3	30		
1,1,2,2-Tetrachloroethane	101	101	69 - 129	0	30		
Tetrachloroethene	100	100	76 - 126	1	30		
Toluene	100	101	81 - 117	1	30		
trans-1,2-Dichloroethene	102	100	72 - 131	2	30		
trans-1,3-Dichloropropene	106	105	73 - 128	1	30		
1,1,1-Trichloroethane	105	104	76 - 127	1	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-171499**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171499/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1201  
Date Prepared: 06/14/2010 1201

Analysis Batch: 680-171499  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq023.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171499/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1231  
Date Prepared: 06/14/2010 1231

Analysis Batch: 680-171499  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq025.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	99	98	75 - 121	0	30		
Trichloroethene	99	100	84 - 115	1	30		
Trichlorofluoromethane	91	89	58 - 149	2	50		
1,2,3-Trichloropropane	103	105	70 - 130	2	30		
Vinyl acetate	112	109	10 - 217	3	30		
Vinyl chloride	89	88	59 - 144	1	50		
Xylenes, Total	101	102	84 - 118	2	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	101		102		75 - 120		
Dibromofluoromethane	105		103		75 - 121		
Toluene-d8 (Surr)	99		100		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-171499**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171499/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1201  
Date Prepared: 06/14/2010 1201

Units: ug/L

LCSD Lab Sample ID: LCSD 680-171499/7  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/14/2010 1231  
Date Prepared: 06/14/2010 1231

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	121	119
Benzene	50.0	50.0	49.9	49.9
Bromoform	50.0	50.0	53.6	54.3
Bromomethane	50.0	50.0	38.2	39.3
2-Butanone (MEK)	100	100	106	107
Carbon disulfide	50.0	50.0	54.7	53.6
Carbon tetrachloride	50.0	50.0	52.7	52.2
Chlorobenzene	50.0	50.0	48.8	49.5
Chlorodibromomethane	50.0	50.0	50.3	52.9
Chloroethane	50.0	50.0	62.7	59.2
Chloroform	50.0	50.0	51.0	50.2
Chloromethane	50.0	50.0	43.4	42.7
cis-1,3-Dichloropropene	50.0	50.0	53.5	52.7
1,2-Dibromo-3-Chloropropane	50.0	50.0	55.8	56.4
Dibromomethane	50.0	50.0	50.1	50.1
Dichlorobromomethane	50.0	50.0	51.1	51.2
Dichlorodifluoromethane	50.0	50.0	54.6	53.6
1,1-Dichloroethane	50.0	50.0	51.9	52.3
1,2-Dichloroethane	50.0	50.0	49.4	48.0
1,1-Dichloroethene	50.0	50.0	54.2	53.8
1,2-Dichloropropane	50.0	50.0	51.0	50.7
Ethylbenzene	50.0	50.0	50.5	51.7
Ethylene Dibromide	50.0	50.0	52.0	51.4
2-Hexanone	100	100	113	111
Methylene Chloride	50.0	50.0	53.5	53.6
4-Methyl-2-pentanone (MIBK)	100	100	110	108
Styrene	50.0	50.0	50.0	51.3
1,1,1,2-Tetrachloroethane	50.0	50.0	51.0	52.5
1,1,2,2-Tetrachloroethane	50.0	50.0	50.7	50.5
Tetrachloroethene	50.0	50.0	49.9	50.2
Toluene	50.0	50.0	49.8	50.4
trans-1,2-Dichloroethene	50.0	50.0	50.8	50.0
trans-1,3-Dichloropropene	50.0	50.0	52.8	52.6
1,1,1-Trichloroethane	50.0	50.0	52.7	52.2
1,1,2-Trichloroethane	50.0	50.0	49.4	49.2
Trichloroethene	50.0	50.0	49.6	50.1
Trichlorofluoromethane	50.0	50.0	45.4	44.6
1,2,3-Trichloropropane	50.0	50.0	51.4	52.5
Vinyl acetate	100	100	112	109
Vinyl chloride	50.0	50.0	44.6	44.0
Xylenes, Total	150	150	151	154



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Method Blank - Batch: 680-171611

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171611/8

Analysis Batch: 680-171611

Instrument ID: MSO

Client Matrix: Water

Prep Batch: N/A

Lab File ID: oq045.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 06/15/2010 1130

Final Weight/Volume: 5 mL

Date Prepared: 06/15/2010 1130

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Method Blank - Batch: 680-171611

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171611/8  
 Client Matrix: Water  
 Dilution: 1.0  
 Date Analyzed: 06/15/2010 1130  
 Date Prepared: 06/15/2010 1130

Analysis Batch: 680-171611  
 Prep Batch: N/A  
 Units: ug/L

Instrument ID: MSO  
 Lab File ID: oq045.d  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	95	75 - 120
Dibromofluoromethane	103	75 - 121
Toluene-d8 (Surr)	104	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 680-171611

Method: 8260B

Preparation: 5030B

LCS Lab Sample ID: LCS 680-171611/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 0935  
Date Prepared: 06/15/2010 0935

Analysis Batch: 680-171611  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq037.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171611/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 1004  
Date Prepared: 06/15/2010 1004

Analysis Batch: 680-171611  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq039.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	94	95	17 - 175	1	50		
Benzene	100	98	77 - 119	2	30		
Bromoform	100	101	62 - 133	1	30		
Bromomethane	110	83	12 - 184	27	50		
2-Butanone (MEK)	86	87	33 - 157	1	30		
Carbon disulfide	109	107	55 - 131	2	30		
Carbon tetrachloride	108	104	71 - 135	3	30		
Chlorobenzene	94	95	85 - 116	1	30		
Chlorodibromomethane	100	101	75 - 133	1	30		
Chloroethane	144	109	40 - 165	27	50		
Chloroform	104	103	82 - 120	1	30		
Chloromethane	94	91	48 - 142	3	50		
cis-1,3-Dichloropropene	106	105	76 - 126	1	30		
1,2-Dibromo-3-Chloropropane	92	92	49 - 140	1	30		
Dibromomethane	96	97	78 - 119	1	30		
Dichlorobromomethane	103	102	78 - 127	2	30		
Dichlorodifluoromethane	108	101	34 - 154	7	30		
1,1-Dichloroethane	106	103	74 - 127	3	30		
1,2-Dichloroethane	96	95	66 - 132	1	30		
1,1-Dichloroethene	110	110	62 - 141	0	30		
1,2-Dichloropropane	102	99	73 - 124	3	30		
Ethylbenzene	99	100	86 - 116	1	30		
Ethylene Dibromide	97	98	80 - 121	1	30		
2-Hexanone	88	91	34 - 161	3	30		
Methylene Chloride	108	109	70 - 125	1	30		
4-Methyl-2-pentanone (MIBK)	90	90	40 - 151	0	30		
Styrene	100	100	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	101	103	81 - 128	2	30		
1,1,2,2-Tetrachloroethane	90	90	69 - 129	1	30		
Tetrachloroethene	95	96	76 - 126	1	30		
Toluene	102	99	81 - 117	3	30		
trans-1,2-Dichloroethene	103	99	72 - 131	3	30		
trans-1,3-Dichloropropene	105	103	73 - 128	3	30		
1,1,1-Trichloroethane	105	103	76 - 127	2	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-171611**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171611/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 0935  
Date Prepared: 06/15/2010 0935

Analysis Batch: 680-171611  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq037.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171611/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 1004  
Date Prepared: 06/15/2010 1004

Analysis Batch: 680-171611  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO  
Lab File ID: oq039.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	98	93	75 - 121	5	30		
Trichloroethene	99	97	84 - 115	3	30		
Trichlorofluoromethane	96	91	58 - 149	5	50		
1,2,3-Trichloropropane	88	90	70 - 130	3	30		
Vinyl acetate	109	107	10 - 217	1	30		
Vinyl chloride	92	87	59 - 144	5	50		
Xylenes, Total	99	100	84 - 118	1	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	97		98		75 - 120		
Dibromofluoromethane	103		102		75 - 121		
Toluene-d8 (Surr)	101		98		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-171611**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171611/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 0935  
Date Prepared: 06/15/2010 0935

Units: ug/L

LCSD Lab Sample ID: LCSD 680-171611/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 1004  
Date Prepared: 06/15/2010 1004

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	94.0	95.2
Benzene	50.0	50.0	50.0	49.2
Bromoform	50.0	50.0	49.9	50.5
Bromomethane	50.0	50.0	54.8	41.6
2-Butanone (MEK)	100	100	86.2	86.8
Carbon disulfide	50.0	50.0	54.6	53.5
Carbon tetrachloride	50.0	50.0	53.9	52.1
Chlorobenzene	50.0	50.0	47.0	47.6
Chlorodibromomethane	50.0	50.0	50.1	50.7
Chloroethane	50.0	50.0	71.9	54.6
Chloroform	50.0	50.0	51.8	51.4
Chloromethane	50.0	50.0	46.8	45.6
cis-1,3-Dichloropropene	50.0	50.0	53.2	52.6
1,2-Dibromo-3-Chloropropane	50.0	50.0	46.1	45.9
Dibromomethane	50.0	50.0	47.8	48.4
Dichlorobromomethane	50.0	50.0	51.7	50.9
Dichlorodifluoromethane	50.0	50.0	54.0	50.5
1,1-Dichloroethane	50.0	50.0	53.1	51.3
1,2-Dichloroethane	50.0	50.0	48.2	47.6
1,1-Dichloroethene	50.0	50.0	54.8	54.8
1,2-Dichloropropane	50.0	50.0	51.1	49.3
Ethylbenzene	50.0	50.0	49.7	49.9
Ethylene Dibromide	50.0	50.0	48.3	48.8
2-Hexanone	100	100	87.8	90.5
Methylene Chloride	50.0	50.0	53.8	54.4
4-Methyl-2-pentanone (MIBK)	100	100	90.3	90.1
Styrene	50.0	50.0	49.8	50.1
1,1,1,2-Tetrachloroethane	50.0	50.0	50.4	51.5
1,1,2,2-Tetrachloroethane	50.0	50.0	44.8	45.2
Tetrachloroethene	50.0	50.0	47.6	48.2
Toluene	50.0	50.0	50.9	49.3
trans-1,2-Dichloroethene	50.0	50.0	51.3	49.6
trans-1,3-Dichloropropene	50.0	50.0	52.7	51.4
1,1,1-Trichloroethane	50.0	50.0	52.6	51.5
1,1,2-Trichloroethane	50.0	50.0	48.8	46.6
Trichloroethene	50.0	50.0	49.6	48.4
Trichlorofluoromethane	50.0	50.0	47.8	45.5
1,2,3-Trichloropropane	50.0	50.0	43.8	45.2
Vinyl acetate	100	100	109	107
Vinyl chloride	50.0	50.0	46.1	43.7
Xylenes, Total	150	150	149	150



**Quality Control Results**

Client: Ashland Inc.

Job Number: 680-58386-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Method Blank - Batch: 680-171149

Lab Sample ID: MB 680-171149/16-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/12/2010 0314  
Date Prepared: 06/10/2010 1425

Analysis Batch: 680-171403  
Prep Batch: 680-171149  
Units: ug/L

### Method: 8081A\_8082 Preparation: 3520C

Instrument ID: SGM  
Lab File ID: mf11033.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	58	14 - 115
Tetrachloro-m-xylene	66	35 - 120

### Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 680-171149

LCS Lab Sample ID: LCS 680-171149/25-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/12/2010 0412  
Date Prepared: 06/10/2010 1425

Analysis Batch: 680-171403  
Prep Batch: 680-171149  
Units: ug/L

### Method: 8081A\_8082 Preparation: 3520C

Instrument ID: SGM  
Lab File ID: mf11036.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Toxaphene, Total	68	74	30 - 120	8	40		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
DCB Decachlorobiphenyl	62		66		14 - 115		
Tetrachloro-m-xylene	71		66		35 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Laboratory Control/ Laboratory Duplicate Data Report - Batch: 680-171149

Method: 8081A\_8082  
Preparation: 3520C

LCS Lab Sample ID: LCS 680-171149/25-A Units: ug/L  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/12/2010 0412  
Date Prepared: 06/10/2010 1425

LCSD Lab Sample ID: LCSD 680-171149/26-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/12/2010 0431  
Date Prepared: 06/10/2010 1425

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Toxaphene, Total	10.0	10.0	6.79	7.40

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 680-171149

Method: 8081A\_8082  
Preparation: 3520C

MS Lab Sample ID: 680-58386-10 Analysis Batch: 680-171403  
Client Matrix: Water Prep Batch: 680-171149  
Dilution: 1.0  
Date Analyzed: 06/12/2010 1137  
Date Prepared: 06/10/2010 1425

Instrument ID: SGM  
Lab File ID: mf11059.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 680-58386-10 Analysis Batch: 680-171403  
Client Matrix: Water Prep Batch: 680-171149  
Dilution: 1.0  
Date Analyzed: 06/12/2010 1156  
Date Prepared: 06/10/2010 1425

Instrument ID: SGM  
Lab File ID: mf11060.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Toxaphene, Total	57	76	30 - 120	28	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	35	40	14 - 115
Tetrachloro-m-xylene	59	71	35 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 680-171149**

**Method: 8081A\_8082  
Preparation: 3520C**

MS Lab Sample ID: 680-58386-10      Units: ug/L  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/12/2010 1137  
Date Prepared: 06/10/2010 1425

MSD Lab Sample ID: 680-58386-10  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/12/2010 1156  
Date Prepared: 06/10/2010 1425

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Toxaphene, Total	5.0	U	10.0	10.0	5.74	7.59



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Method Blank - Batch: 680-171149

**Method: 8081B/8082A**  
**Preparation: 3520C**

Lab Sample ID: MB 680-171149/16-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/12/2010 0314  
Date Prepared: 06/10/2010 1425

Analysis Batch: 680-171402  
Prep Batch: 680-171149  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mf11033.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0
Surrogate	% Rec		Acceptance Limits	
DCB Decachlorobiphenyl	62		14 - 115	
Tetrachloro-m-xylene	76		35 - 120	
Surrogate	% Rec		Acceptance Limits	
DCB Decachlorobiphenyl	56		14 - 115	
Tetrachloro-m-xylene	76		35 - 120	

### Lab Control Sample - Batch: 680-171149

**Method: 8081B/8082A**  
**Preparation: 3520C**

Lab Sample ID: LCS 680-171149/25-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/12/2010 0412  
Date Prepared: 06/10/2010 1425

Analysis Batch: 680-171402  
Prep Batch: 680-171149  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mf11036.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Toxaphene, Technical	10.0	8.98	90	30 - 120	
Surrogate	% Rec			Acceptance Limits	
DCB Decachlorobiphenyl	62			14 - 115	
Tetrachloro-m-xylene	77			35 - 120	
Surrogate	% Rec			Acceptance Limits	
DCB Decachlorobiphenyl	61			14 - 115	
Tetrachloro-m-xylene	70			35 - 120	



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 680-171149**

**Method: 8081B/8082A  
Preparation: 3520C**

MS Lab Sample ID: 680-58386-10  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/12/2010 1137  
Date Prepared: 06/10/2010 1425

Analysis Batch: 680-171402  
Prep Batch: 680-171149

Instrument ID: SGM  
Lab File ID: mf11059.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 680-58386-10  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/12/2010 1156  
Date Prepared: 06/10/2010 1425

Analysis Batch: 680-171402  
Prep Batch: 680-171149

Instrument ID: SGM  
Lab File ID: mf11060.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Toxaphene, Technical	55	53	30 - 120	3	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits	
DCB Decachlorobiphenyl	30	21	p	14 - 115
Tetrachloro-m-xylene	55	50		35 - 120

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits	
DCB Decachlorobiphenyl	25	31		14 - 115
Tetrachloro-m-xylene	46	47		35 - 120

**Matrix Spike/  
Matrix Spike Duplicate Data Report - Batch: 680-171149**

**Method: 8081B/8082A  
Preparation: 3520C**

MS Lab Sample ID: 680-58386-10  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/12/2010 1137  
Date Prepared: 06/10/2010 1425

Units: ug/L

MSD Lab Sample ID: 680-58386-10  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/12/2010 1156  
Date Prepared: 06/10/2010 1425

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Toxaphene, Technical	5.0 U	10.0	10.0	5.50	5.31



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Method Blank - Batch: 680-171282

Lab Sample ID: MB 680-171282/21-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 1543  
Date Prepared: 06/11/2010 1157

Analysis Batch: 680-171623  
Prep Batch: 680-171282  
Units: ug/L

### Method: 6010B Preparation: 3005A Total Recoverable

Instrument ID: ICPD  
Lab File ID: 061510.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Antimony	20	U	5.2	20
Arsenic	20	U	10	20
Barium	10	U	2.0	10
Beryllium	4.0	U	0.10	4.0
Cadmium	5.0	U	2.0	5.0
Chromium	10	U	2.0	10
Cobalt	10	U	1.0	10
Copper	20	U	5.0	20
Lead	10	U	3.4	10
Nickel	40	U	4.0	40
Selenium	20	U	6.4	20
Silver	10	U	0.97	10
Thallium	25	U	8.7	25
Tin	50	U	5.4	50
Vanadium	10	U	3.0	10
Zinc	20	U	6.3	20



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Lab Control Sample - Batch: 680-171282

**Method: 6010B**  
**Preparation: 3005A**  
**Total Recoverable**

Lab Sample ID: LCS 680-171282/22-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 1548  
Date Prepared: 06/11/2010 1157

Analysis Batch: 680-171623  
Prep Batch: 680-171282  
Units: ug/L

Instrument ID: ICPD  
Lab File ID: 061510.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	500	500	100	75 - 125	
Arsenic	2000	1980	99	75 - 125	
Barium	2000	2000	100	75 - 125	
Beryllium	50.0	50.0	100	75 - 125	
Cadmium	50.0	50.9	102	75 - 125	
Chromium	200	200	100	75 - 125	
Cobalt	500	496	99	75 - 125	
Copper	250	242	97	75 - 125	
Lead	500	504	101	75 - 125	
Nickel	500	490	98	75 - 125	
Selenium	2000	2050	102	75 - 125	
Silver	50.0	48.7	97	75 - 125	
Thallium	2000	2070	104	75 - 125	
Tin	1000	954	95	75 - 125	
Vanadium	500	483	97	75 - 125	
Zinc	500	502	100	75 - 125	



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Method Blank - Batch: 680-171597

Method: 7470A

Preparation: 7470A

Lab Sample ID: MB 680-171597/21-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/18/2010 1518  
Date Prepared: 06/15/2010 1526

Analysis Batch: 680-172022  
Prep Batch: 680-171597  
Units: ug/L

Instrument ID: LEEMAN1  
Lab File ID: b061810.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.091	0.20

### Lab Control Sample - Batch: 680-171597

Method: 7470A

Preparation: 7470A

Lab Sample ID: LCS 680-171597/22-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/18/2010 1521  
Date Prepared: 06/15/2010 1526

Analysis Batch: 680-172022  
Prep Batch: 680-171597  
Units: ug/L

Instrument ID: LEEMAN1  
Lab File ID: b061810.chr  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	2.50	2.26	90	80 - 120	



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Laboratory Chronicle

Lab ID: 680-58386-1

Client ID: EB(4)

Sample Date/Time: 06/07/2010 17:30

Received Date/Time: 06/09/2010 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58386-D-1		680-171498		06/14/2010 14:43	1	TAL SAV	RB
A:8260B	680-58386-D-1		680-171498		06/14/2010 14:43	1	TAL SAV	RB
P:3520C	680-58386-A-1-A		680-171403	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081A_8082	680-58386-A-1-A		680-171403	680-171149	06/12/2010 05:10	1	TAL SAV	JK
P:3520C	680-58386-A-1-A		680-171402	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081B/8082A	680-58386-A-1-A		680-171402	680-171149	06/12/2010 05:10	1	TAL SAV	JK
P:3005A	680-58386-C-1-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58386-C-1-A		680-171623	680-171282	06/15/2010 18:01	1	TAL SAV	BCB
P:7470A	680-58386-A-1-B		680-172022	680-171597	06/15/2010 15:26	1	TAL SAV	DH
A:7470A	680-58386-A-1-B		680-172022	680-171597	06/18/2010 16:07	1	TAL SAV	CE

Lab ID: 680-58386-2

Client ID: EB(5)

Sample Date/Time: 06/07/2010 18:00

Received Date/Time: 06/09/2010 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58386-D-2		680-171498		06/14/2010 15:12	1	TAL SAV	RB
A:8260B	680-58386-D-2		680-171498		06/14/2010 15:12	1	TAL SAV	RB
P:3520C	680-58386-A-2-A		680-171403	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081A_8082	680-58386-A-2-A		680-171403	680-171149	06/12/2010 05:29	1	TAL SAV	JK
P:3520C	680-58386-A-2-A		680-171402	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081B/8082A	680-58386-A-2-A		680-171402	680-171149	06/12/2010 05:29	1	TAL SAV	JK
P:3005A	680-58386-C-2-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58386-C-2-A		680-171623	680-171282	06/15/2010 18:10	1	TAL SAV	BCB
P:7470A	680-58386-A-2-B		680-172022	680-171597	06/15/2010 15:26	1	TAL SAV	DH
A:7470A	680-58386-A-2-B		680-172022	680-171597	06/18/2010 16:09	1	TAL SAV	CE

Lab ID: 680-58386-3

Client ID: FB(MW24D)

Sample Date/Time: 06/07/2010 17:00

Received Date/Time: 06/09/2010 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58386-A-3		680-171498		06/14/2010 15:41	1	TAL SAV	RB
A:8260B	680-58386-A-3		680-171498		06/14/2010 15:41	1	TAL SAV	RB

Lab ID: 680-58386-4

Client ID: FB(MW44)

Sample Date/Time: 06/07/2010 16:39

Received Date/Time: 06/09/2010 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58386-A-4		680-171498		06/14/2010 16:11	1	TAL SAV	RB
A:8260B	680-58386-A-4		680-171498		06/14/2010 16:11	1	TAL SAV	RB



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Laboratory Chronicle

Lab ID: 680-58386-5

Client ID: FB(MW48)

Sample Date/Time: 06/07/2010 16:00

Received Date/Time: 06/09/2010 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58386-A-5		680-171498		06/14/2010 16:41	1	TAL SAV	RB
A:8260B	680-58386-A-5		680-171498		06/14/2010 16:41	1	TAL SAV	RB

Lab ID: 680-58386-6

Client ID: MW46I

Sample Date/Time: 06/08/2010 09:30

Received Date/Time: 06/09/2010 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58386-D-6		680-171611		06/15/2010 13:25	1	TAL SAV	RB
A:8260B	680-58386-D-6		680-171611		06/15/2010 13:25	1	TAL SAV	RB
P:3520C	680-58386-A-6-A		680-171403	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081A_8082	680-58386-A-6-A		680-171403	680-171149	06/12/2010 05:49	1	TAL SAV	JK
P:3520C	680-58386-A-6-A		680-171402	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081B/8082A	680-58386-A-6-A		680-171402	680-171149	06/12/2010 05:49	1	TAL SAV	JK
P:3005A	680-58386-C-6-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58386-C-6-A		680-171623	680-171282	06/15/2010 18:16	1	TAL SAV	BCB
P:7470A	680-58386-A-6-B		680-172022	680-171597	06/15/2010 15:26	1	TAL SAV	DH
A:7470A	680-58386-A-6-B		680-172022	680-171597	06/18/2010 16:19	1	TAL SAV	CE

Lab ID: 680-58386-7

Client ID: MW45I

Sample Date/Time: 06/08/2010 10:30

Received Date/Time: 06/09/2010 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58386-D-7		680-171498		06/14/2010 19:36	1	TAL SAV	RB
A:8260B	680-58386-D-7		680-171498		06/14/2010 19:36	1	TAL SAV	RB
P:3520C	680-58386-B-7-A		680-171403	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081A_8082	680-58386-B-7-A		680-171403	680-171149	06/12/2010 06:08	1	TAL SAV	JK
P:3520C	680-58386-B-7-A		680-171402	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081B/8082A	680-58386-B-7-A		680-171402	680-171149	06/12/2010 06:08	1	TAL SAV	JK
P:3005A	680-58386-C-7-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	680-58386-C-7-A		680-171623	680-171282	06/15/2010 18:21	1	TAL SAV	BCB
P:7470A	680-58386-A-7-A		680-172022	680-171597	06/15/2010 15:26	1	TAL SAV	DH
A:7470A	680-58386-A-7-A		680-172022	680-171597	06/18/2010 16:22	1	TAL SAV	CE

Lab ID: 680-58386-8

Client ID: 051110 Trip Blank

Sample Date/Time: 06/08/2010 00:00

Received Date/Time: 06/09/2010 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58386-A-8		680-171498		06/14/2010 17:10	1	TAL SAV	RB
A:8260B	680-58386-A-8		680-171498		06/14/2010 17:10	1	TAL SAV	RB



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Laboratory Chronicle

Lab ID: 680-58386-9

Client ID: MW34

Sample Date/Time: 06/08/2010 12:30

Received Date/Time: 06/09/2010 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58386-B-9		680-171498		06/14/2010 20:05	1	TAL SAV	RB
A:8260B	680-58386-B-9		680-171498		06/14/2010 20:05	1	TAL SAV	RB

Lab ID: 680-58386-10

Client ID: MW35D

Sample Date/Time: 06/08/2010 15:25

Received Date/Time: 06/09/2010 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58386-D-10		680-171498		06/14/2010 20:34	1	TAL SAV	RB
A:8260B	680-58386-D-10		680-171498		06/14/2010 20:34	1	TAL SAV	RB
P:3520C	680-58386-B-10-A		680-171403	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081A_8082	680-58386-B-10-A		680-171403	680-171149	06/12/2010 06:27	1	TAL SAV	JK
P:3520C	680-58386-B-10-A		680-171402	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081B/8082A	680-58386-B-10-A		680-171402	680-171149	06/12/2010 06:27	1	TAL SAV	JK

Lab ID: 680-58386-10 MS

Client ID: MW35D

Sample Date/Time: 06/08/2010 15:25

Received Date/Time: 06/09/2010 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	680-58386-A-10-A MS		680-171403	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081A_8082	680-58386-A-10-A MS		680-171403	680-171149	06/12/2010 11:37	1	TAL SAV	JK
P:3520C	680-58386-A-10-A MS		680-171402	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081B/8082A	680-58386-A-10-A MS		680-171402	680-171149	06/12/2010 11:37	1	TAL SAV	JK

Lab ID: 680-58386-10 MSD

Client ID: MW35D

Sample Date/Time: 06/08/2010 15:25

Received Date/Time: 06/09/2010 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	680-58386-A-10-B MSD		680-171403	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081A_8082	680-58386-A-10-B MSD		680-171403	680-171149	06/12/2010 11:56	1	TAL SAV	JK
P:3520C	680-58386-A-10-B MSD		680-171402	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081B/8082A	680-58386-A-10-B MSD		680-171402	680-171149	06/12/2010 11:56	1	TAL SAV	JK



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Laboratory Chronicle

Lab ID: 680-58386-11

Client ID: MW31D

Sample Date/Time: 06/08/2010 13:30

Received Date/Time: 06/09/2010 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58386-A-11		680-171498		06/14/2010 21:04	1	TAL SAV	RB
A:8260B	680-58386-A-11		680-171498		06/14/2010 21:04	1	TAL SAV	RB

Lab ID: 680-58386-12

Client ID: MW28D

Sample Date/Time: 06/08/2010 16:20

Received Date/Time: 06/09/2010 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58386-B-12		680-171499		06/14/2010 20:49	20	TAL SAV	RB
A:8260B	680-58386-B-12		680-171499		06/14/2010 20:49	20	TAL SAV	RB
P:5030B	680-58386-B-12	DL	680-171611		06/15/2010 13:54	200	TAL SAV	RB
A:8260B	680-58386-B-12	DL	680-171611		06/15/2010 13:54	200	TAL SAV	RB

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 680-171499/9		680-171499		06/14/2010 13:59	1	TAL SAV	RB
A:8260B	MB 680-171499/9		680-171499		06/14/2010 13:59	1	TAL SAV	RB
P:5030B	MB 680-171498/11		680-171498		06/14/2010 14:13	1	TAL SAV	RB
A:8260B	MB 680-171498/11		680-171498		06/14/2010 14:13	1	TAL SAV	RB
P:5030B	MB 680-171611/8		680-171611		06/15/2010 11:30	1	TAL SAV	RB
A:8260B	MB 680-171611/8		680-171611		06/15/2010 11:30	1	TAL SAV	RB
P:3520C	MB 680-171149/16-A		680-171403	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081A_8082	MB 680-171149/16-A		680-171403	680-171149	06/12/2010 03:14	1	TAL SAV	JK
P:3520C	MB 680-171149/16-A		680-171402	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081B/8082A	MB 680-171149/16-A		680-171402	680-171149	06/12/2010 03:14	1	TAL SAV	JK
P:3005A	MB 680-171282/21-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	MB 680-171282/21-A		680-171623	680-171282	06/15/2010 15:43	1	TAL SAV	BCB
P:7470A	MB 680-171597/21-A		680-172022	680-171597	06/15/2010 15:26	1	TAL SAV	DH
A:7470A	MB 680-171597/21-A		680-172022	680-171597	06/18/2010 15:18	1	TAL SAV	CE



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58386-1

### Laboratory Chronicle

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 680-171499/6		680-171499		06/14/2010 12:01	1	TAL SAV	RB
A:8260B	LCS 680-171499/6		680-171499		06/14/2010 12:01	1	TAL SAV	RB
P:5030B	LCS 680-171498/4		680-171498		06/14/2010 12:16	1	TAL SAV	RB
A:8260B	LCS 680-171498/4		680-171498		06/14/2010 12:16	1	TAL SAV	RB
P:5030B	LCS 680-171611/5		680-171611		06/15/2010 09:35	1	TAL SAV	RB
A:8260B	LCS 680-171611/5		680-171611		06/15/2010 09:35	1	TAL SAV	RB
P:3520C	LCS 680-171149/25-A		680-171403	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081A_8082	LCS 680-171149/25-A		680-171403	680-171149	06/12/2010 04:12	1	TAL SAV	JK
P:3520C	LCS 680-171149/25-A		680-171402	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081B/8082A	LCS 680-171149/25-A		680-171402	680-171149	06/12/2010 04:12	1	TAL SAV	JK
P:3005A	LCS 680-171282/22-A		680-171623	680-171282	06/11/2010 11:57	1	TAL SAV	RA
A:6010B	LCS 680-171282/22-A		680-171623	680-171282	06/15/2010 15:48	1	TAL SAV	BCB
P:7470A	LCS 680-171597/22-A		680-172022	680-171597	06/15/2010 15:26	1	TAL SAV	DH
A:7470A	LCS 680-171597/22-A		680-172022	680-171597	06/18/2010 15:21	1	TAL SAV	CE

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCSD 680-171499/7		680-171499		06/14/2010 12:31	1	TAL SAV	RB
A:8260B	LCSD 680-171499/7		680-171499		06/14/2010 12:31	1	TAL SAV	RB
P:5030B	LCSD 680-171498/5		680-171498		06/14/2010 12:45	1	TAL SAV	RB
A:8260B	LCSD 680-171498/5		680-171498		06/14/2010 12:45	1	TAL SAV	RB
P:5030B	LCSD 680-171611/6		680-171611		06/15/2010 10:04	1	TAL SAV	RB
A:8260B	LCSD 680-171611/6		680-171611		06/15/2010 10:04	1	TAL SAV	RB
P:3520C	LCSD 680-171149/26-A		680-171403	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081A_8082	LCSD 680-171149/26-A		680-171403	680-171149	06/12/2010 04:31	1	TAL SAV	JK
P:3520C	LCSD 680-171149/26-A		680-171402	680-171149	06/10/2010 14:25	1	TAL SAV	RBS
A:8081B/8082A	LCSD 680-171149/26-A		680-171402	680-171149	06/12/2010 04:31	1	TAL SAV	JK

#### Lab References:

TAL SAV = TestAmerica Savannah



Serial Number 031431

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

## TestAmerica

Website: www.testamericainc.com  
Phone: (912) 354-7858  
Fax: (912) 352-0165

TestAmerica Savannah  
5102 LaRoche Avenue  
Savannah, GA 31404

Alternate Laboratory Name/Location

Phone:  
Fax:

### THE LEADER IN ENVIRONMENTAL TESTING

PROJECT REFERENCE <b>ASHland Brunswick</b>		PROJECT NO. <b>30984909</b>	PROJECT LOCATION (STATE)		MATRIX TYPE	REQUIRED ANALYSIS		PAGE	OF
TAL (LAB) PROJECT MANAGER <b>Lidia Gilizia</b>		P.O. NUMBER <b>45-01306047</b>	CONTRACT NO.		NONAQUEOUS LIQUID (OIL, SOLVENT, ...) AIR SOLID OR SEMISOLID AQUEOUS (WATER) COMPOSITE (C) OR GRAB (G) INDICATE	<div>Metals</div> <div>Total &amp; Technical</div> <div>VOC's</div> <div>Preservative</div>		STANDARD REPORT DELIVERY	DATE DUE
CLIENT (SITE) PM <b>Tim Hassett</b>		CLIENT PHONE	CLIENT FAX					EXPEDITED REPORT DELIVERY (SURCHARGE)	DATE DUE
CLIENT NAME <b>Ashland Brunswick</b>		CLIENT E-MAIL						NUMBER OF COOLERS SUBMITTED PER SHIPMENT	
CLIENT ADDRESS <b>2508 Block 57</b>									
COMPANY CONTRACTING THIS WORK (if applicable)									
SAMPLE IDENTIFICATION									
DATE	TIME								
6/7/10	1730	Equip Blanks EB(4)		GX					
6/7/10	1800	1		1					
6/7/10	1700	FB (MW 2 HD)		1					
6/7/10	1600	FB (MW 44)		1					
6/7/10	1600	FB (MW 48)		1					
6/8/10	930	MW 46 I		GX					
6/8/10	1030	MW 45 I		1					
6/8/10		05-1110 Trip Blank		1					
6/8/10	1230	MW 34		1					
6/8/10	1525	MW 35 D		1					
6/8/10	1330	MW 31 D		1					
6/8/10	1620	MW 28 D		GX					
RELINQUISHED BY: (SIGNATURE)		DATE	TIME	RELINQUISHED BY: (SIGNATURE)		DATE	TIME		
<b>B. M. [Signature]</b>		6/8/10	1700						
RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME		
<b>[Signature]</b>									

RECEIVED FOR LABORATORY BY: (SIGNATURE)		DATE	TIME	CUSTODY INTACT YES <input type="radio"/> NO <input type="radio"/>		CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
<b>[Signature]</b>		6/9/10	0919				680-53386	3.1°C



## Login Sample Receipt Check List

Client: Ashland Inc.

Job Number: 680-58386-1

**Login Number: 58386**

**List Source: TestAmerica Savannah**

**Creator: Conner, Keaton**

**List Number: 1**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.1 C
COC is present.	True	
C2 C is filled out in ink and legible.	True	
C2 C is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	-6 and -7 only 1 liter label has ID--times matched to COC
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	MS/MSD not requested (no additional volume provided).
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	N/A	
Sample Preservation Verified	True	



## ANALYTICAL REPORT

Job Number: 680-58415-1

Job Description: Ashland Brunswick RFI GW June 2010

For:  
Ashland Inc.  
500 Hercules Road  
Wilmington, DE 19894  
Attention: Timothy Hassett



Approved for release.  
Lidya Gulizia  
Project Manager I  
6/23/2010 5:40 PM

---

Lidya Gulizia  
Project Manager I  
lidya.gulizia@testamericainc.com  
06/23/2010

cc: Kelley Baker  
Mr. Leroy Bishop  
Mr. Dennis Brunner  
Ryan Cate  
Mr. Tony Mancini  
Ms. Charlene Rivard

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; AZ: AZ0741; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

**TestAmerica Laboratories, Inc.**

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404  
Tel (912) 354-7858 Fax (912) 352-0165 [www.testamericainc.com](http://www.testamericainc.com)





**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

No analytical or quality issues were noted.

**VOA Prep**

No analytical or quality issues were noted.

**Comments**

No additional comments.



## METHOD SUMMARY

Client: Ashland Inc.

Job Number: 680-58415-1

Description	Lab Location	Method	Preparation Method
Matrix    WcSe			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030B

### Lab References:

TAL SAV = TestAmerica Savannah

### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.



## METHOD / ANALYST SUMMARY

Client: Ashland Inc.

Job Number: 680-58415-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB



## SAMPLE SUMMARY

Client: Ashland Inc.

Job Number: 680-58415-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-58415-1	MW15D	Water	06/08/2010 1300	06/10/2010 0810



# **SAMPLE RESULTS**



# Analytical Data

Client: Ashland Inc.

Job Number: 680-58415-1

Client Sample ID: MW15D

Lab Sample ID: 680-58415-1

Client Matrix: Water

Date Sampled: 06/08/2010 1300

Sample Received: 06/09/2010 0830

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171613	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0058.d
Dilution:	50		Initial Weight/Volume:	5 mL
Date Analyzed:	06/15/2010 1700		Final Weight/Volume:	5 mL
Date Prepared:	06/15/2010 1700			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	310	J	250	1200
Acetonitrile	2000	U	500	2000
Acrolein	1000	U	370	1000
Acrylonitrile	1000	U	360	1000
Benzene	3000		12	50
Bromoform	50	U	25	50
Bromomethane	50	U	40	50
2-Butanone (MEK)	500	U	50	500
Carbon disulfide	100	U	30	100
Carbon tetrachloride	50	U	25	50
Chlorobenzene	1600		12	50
2-Chloro-1,3-butadiene	50	U	15	50
Chlorodibromomethane	50	U	5.0	50
Chloroethane	50	U	50	50
Chloroform	2500		7.0	50
Chloromethane	50	U	16	50
3-Chloro-1-propene	50	U	10	50
cis-1,3-Dichloropropene	50	U	5.5	50
1,2-Dibromo-3-Chloropropane	50	U	22	50
Dibromomethane	50	U	10	50
Dichlorobromomethane	50	U	12	50
Dichlorodifluoromethane	50	U	12	50
1,1-Dichloroethane	50	U	12	50
1,2-Dichloroethane	50	U	5.0	50
1,1-Dichloroethene	50	U	5.5	50
1,2-Dichloropropane	50	U	6.5	50
Ethylbenzene	380		5.5	50
Ethylene Dibromide	50	U	12	50
Ethyl methacrylate	50	U	12	50
2-Hexanone	500	U	50	500
Iodomethane	250	U	50	250
Isobutyl alcohol	2000	U	550	2000
Methacrylonitrile	1000	U	160	1000
Methylene Chloride	2700		50	250
Methyl methacrylate	50	U	24	50
4-Methyl-2-pentanone (MIBK)	140	J	50	500
Pentachloroethane	250	U	60	250
Propionitrile	1000	U	230	1000
Styrene	50	U	5.5	50
1,1,1,2-Tetrachloroethane	50	U	16	50
1,1,2,2-Tetrachloroethane	50	U	9.0	50
Tetrachloroethene	9.7	J	7.5	50
Toluene	1000		16	50
trans-1,4-Dichloro-2-butene	100	U	25	100
trans-1,2-Dichloroethene	50	U	10	50
trans-1,3-Dichloropropene	50	U	10	50



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-58415-1

**Client Sample ID: MW15D**

Lab Sample ID: 680-58415-1

Date Sampled: 06/08/2010 1400

Client Matrix: Water

Date Received: 06/10/2010 0810

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-171613	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0058.d
Dilution:	50		Initial Weight/Volume:	5 mL
Date Analyzed:	06/15/2010 1700		Final Weight/Volume:	5 mL
Date Prepared:	06/15/2010 1700			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	50	U	25	50
1,1,2-Trichloroethane	50	U	6.5	50
Trichloroethene	50	U	6.5	50
Trichlorofluoromethane	50	U	12	50
1,2,3-Trichloropropane	50	U	20	50
Vinyl acetate	100	U	14	100
Vinyl chloride	50	U	9.0	50
Xylenes, Total	1800		10	100

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	94		75 - 121
Toluene-d8 (Surr)	101		75 - 120



## DATA REPORTING QUALIFIERS

Client: Ashland Inc.

Job Number: 680-58415-1

Lab Section	Qualifier	Description
GC/MS VOA	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.



# QUALITY CONTROL RESULTS



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58415-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report			Prep Batch
		Basis	Client Matrix	Method	
GC/MS VOA					
Analysis Batch:680-171613					
LCS 680-171613/10	Lab Control Sample	T	Water	8260B	
LCSD 680-171613/11	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-171613/13	Method Blank	T	Water	8260B	
680-58415-1	MW15D	T	Water	8260B	

#### Report Basis

T = Total



Client: Ashland Inc.

Job Number: 680-58415-1

## Surrogate Recovery Report

### 8260B Volatile Organic Compounds (GC/MS)

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-58415-1	MW15D	95	94	101
MB 680-171613/13		92	97	101
LCS 680-171613/10		97	102	97
LCSD 680-171613/11		96	102	99

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58415-1

### Method Blank - Batch: 680-171613

Lab Sample ID: MB 680-171613/13  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 1144  
Date Prepared: 06/15/2010 1144

Analysis Batch: 680-171613  
Prep Batch: N/A  
Units: ug/L

### Method: 8260B Preparation: 5030B

Instrument ID: MSO2  
Lab File ID: oq046.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58415-1

### Method Blank - Batch: 680-171613

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-171613/13

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 06/15/2010 1144

Date Prepared: 06/15/2010 1144

Analysis Batch: 680-171613

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO2

Lab File ID: oq046.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	92	75 - 120
Dibromofluoromethane	97	75 - 121
Toluene-d8 (Surr)	101	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58415-1

### Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 680-171613

Method: 8260B

Preparation: 5030B

LCS Lab Sample ID: LCS 680-171613/10  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 0950  
Date Prepared: 06/15/2010 0950

Analysis Batch: 680-171613  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq038.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171613/11  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 1018  
Date Prepared: 06/15/2010 1018

Analysis Batch: 680-171613  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq040.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Acetone	97	95	17 - 175	2	50		
Benzene	99	99	77 - 119	0	30		
Bromoform	96	94	62 - 133	2	30		
Bromomethane	94	93	12 - 184	0	50		
2-Butanone (MEK)	89	91	33 - 157	3	30		
Carbon disulfide	104	103	55 - 131	1	30		
Carbon tetrachloride	102	99	71 - 135	3	30		
Chlorobenzene	95	93	85 - 116	2	30		
Chlorodibromomethane	102	99	75 - 133	2	30		
Chloroethane	99	95	40 - 165	4	50		
Chloroform	102	102	82 - 120	0	30		
Chloromethane	90	90	48 - 142	0	50		
cis-1,3-Dichloropropene	104	104	76 - 126	0	30		
1,2-Dibromo-3-Chloropropane	93	95	49 - 140	2	30		
Dibromomethane	96	95	78 - 119	0	30		
Dichlorobromomethane	102	101	78 - 127	1	30		
Dichlorodifluoromethane	100	100	34 - 154	1	30		
1,1-Dichloroethane	103	103	74 - 127	0	30		
1,2-Dichloroethane	97	96	66 - 132	0	30		
1,1-Dichloroethene	109	105	62 - 141	3	30		
1,2-Dichloropropane	101	100	73 - 124	2	30		
Ethylbenzene	99	97	86 - 116	2	30		
Ethylene Dibromide	97	99	80 - 121	2	30		
2-Hexanone	89	90	34 - 161	1	30		
Methylene Chloride	100	100	70 - 125	0	30		
4-Methyl-2-pentanone (MIBK)	87	88	40 - 151	1	30		
Styrene	98	97	82 - 122	1	30		
1,1,1,2-Tetrachloroethane	96	97	81 - 128	0	30		
1,1,2,2-Tetrachloroethane	88	89	69 - 129	1	30		
Tetrachloroethene	97	94	76 - 126	2	30		
Toluene	101	101	81 - 117	1	30		
trans-1,2-Dichloroethene	99	98	72 - 131	1	30		
trans-1,3-Dichloropropene	107	107	73 - 128	0	30		
1,1,1-Trichloroethane	104	102	76 - 127	2	30		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58415-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 680-171613**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171613/10  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 0950  
Date Prepared: 06/15/2010 0950

Analysis Batch: 680-171613  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq038.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-171613/11  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 1018  
Date Prepared: 06/15/2010 1018

Analysis Batch: 680-171613  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq040.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,2-Trichloroethane	96	95	75 - 121	1	30		
Trichloroethene	97	97	84 - 115	1	30		
Trichlorofluoromethane	93	91	58 - 149	2	50		
1,2,3-Trichloropropane	90	91	70 - 130	2	30		
Vinyl acetate	107	108	10 - 217	1	30		
Vinyl chloride	92	90	59 - 144	2	50		
Xylenes, Total	97	97	84 - 118	1	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	97		96		75 - 120		
Dibromofluoromethane	102		102		75 - 121		
Toluene-d8 (Surr)	97		99		75 - 120		



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58415-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 680-171613**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-171613/10  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 0950  
Date Prepared: 06/15/2010 0950

Units: ug/L

LCSD Lab Sample ID: LCSD 680-171613/11  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 06/15/2010 1018  
Date Prepared: 06/15/2010 1018

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Acetone	100	100	97.1	94.8
Benzene	50.0	50.0	49.5	49.4
Bromoform	50.0	50.0	48.1	47.2
Bromomethane	50.0	50.0	46.8	46.6
2-Butanone (MEK)	100	100	89.1	91.4
Carbon disulfide	50.0	50.0	51.8	51.3
Carbon tetrachloride	50.0	50.0	50.8	49.4
Chlorobenzene	50.0	50.0	47.3	46.5
Chlorodibromomethane	50.0	50.0	50.8	49.5
Chloroethane	50.0	50.0	49.3	47.3
Chloroform	50.0	50.0	50.9	51.0
Chloromethane	50.0	50.0	45.0	44.8
cis-1,3-Dichloropropene	50.0	50.0	51.9	51.8
1,2-Dibromo-3-Chloropropane	50.0	50.0	46.7	47.7
Dibromomethane	50.0	50.0	47.9	47.7
Dichlorobromomethane	50.0	50.0	50.8	50.5
Dichlorodifluoromethane	50.0	50.0	49.9	50.1
1,1-Dichloroethane	50.0	50.0	51.5	51.7
1,2-Dichloroethane	50.0	50.0	48.3	48.1
1,1-Dichloroethene	50.0	50.0	54.3	52.7
1,2-Dichloropropane	50.0	50.0	50.7	49.8
Ethylbenzene	50.0	50.0	49.3	48.4
Ethylene Dibromide	50.0	50.0	48.7	49.6
2-Hexanone	100	100	89.5	90.1
Methylene Chloride	50.0	50.0	49.8	49.9
4-Methyl-2-pentanone (MIBK)	100	100	87.4	88.3
Styrene	50.0	50.0	48.9	48.5
1,1,1,2-Tetrachloroethane	50.0	50.0	48.2	48.3
1,1,2,2-Tetrachloroethane	50.0	50.0	43.8	44.4
Tetrachloroethene	50.0	50.0	48.4	47.2
Toluene	50.0	50.0	50.6	50.3
trans-1,2-Dichloroethene	50.0	50.0	49.6	49.0
trans-1,3-Dichloropropene	50.0	50.0	53.6	53.5
1,1,1-Trichloroethane	50.0	50.0	52.0	50.9
1,1,2-Trichloroethane	50.0	50.0	48.1	47.5
Trichloroethene	50.0	50.0	48.6	48.3
Trichlorofluoromethane	50.0	50.0	46.3	45.4
1,2,3-Trichloropropane	50.0	50.0	44.8	45.5
Vinyl acetate	100	100	107	108
Vinyl chloride	50.0	50.0	46.2	45.2
Xylenes, Total	150	150	146	145



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58415-1



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-58415-1

### Laboratory Chronicle

Lab ID: 680-58415-1

Client ID: MW15D

Sample Date/Time: 06/08/2010 14:00

Received Date/Time: 06/10/2010 08:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-58415-A-1		680-171613		06/15/2010 1k:00	50	TAL SAV	RB
A:8260B	680-58415-A-1		680-171613		06/15/2010 17:00	50	TAL SAV	RB

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 680-171613/13		680-171613		06/15/2010 11:44	1	TAL SAV	RB
A:8260B	MB 680-171613/13		680-171613		06/15/2010 11:44	1	TAL SAV	RB

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 680-171613/10		680-171613		06/15/2010 09:50	1	TAL SAV	RB
A:8260B	LCS 680-171613/10		680-171613		06/15/2010 09:50	1	TAL SAV	RB

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCSD 680-171613/11		680-171613		06/15/2010 10:18	1	TAL SAV	RB
A:8260B	LCSD 680-171613/11		680-171613		06/15/2010 10:18	1	TAL SAV	RB

#### Lab References:

TAL SAV = TestAmerica Savannah







## Login Sample Receipt Check List

Client: Ashland Inc.

Job Number: 680-58415-1

Login Number: 58415

List Source: TestAmerica Savannah

Creator: Conner, Keaton

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.0 C
COC is present.	True	
C2 C is filled out in ink and legible.	True	
C2 C is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	MS/MSD not requested (no additional volume provided).
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	N/A	
Sample Preservation Verified	True	



## ANALYTICAL REPORT

Job Number: 680-59939-1

Job Description: Brunswick RFI Resample MW-44D/10D

For:  
Ashland Inc.  
500 Hercules Road  
Wilmington, DE 19894  
Attention: Timothy Hassett



Approved for release.  
Lidya Gulizia  
Project Manager I  
8/13/2010 11:48 AM

---

Lidya Gulizia  
Project Manager I  
lidya.gulizia@testamericainc.com  
08/13/2010

cc: Kelley Baker  
Mr. Leroy Bishop  
Mr. Dennis Brunner  
Ryan Cate  
Mr. Tony Mancini  
Ms. Charlene Rivard

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; AZ: AZ0741; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

**TestAmerica Laboratories, Inc.**

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404  
Tel (912) 354-7858 Fax (912) 352-0165 [www.testamericainc.com](http://www.testamericainc.com)





**Job Narrative**  
**680-59939-1**

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

No analytical or quality issues were noted.

**GC Semi VOA**

Method(s) 8081B/8082A: Internal standard (ISTD) response for the following sample(s) exceeded the control limit on Column two: MW-10D\_20100731 (680-59939-5), MW-44D\_20100731 (680-59939-3) and the associated MS/MSD (680-59939-3 MS and 680-59939-3 MSD). As such, the sample results associated with this ISTD were reported from the other column, which met ISTD acceptance criteria.

No other analytical or quality issues were noted.

**Comments**

No additional comments.



## METHOD SUMMARY

Client: Ashland Inc.

Job Number: 680-59939-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030B
Organochlorine Pesticides & PCBs (GC)	TAL SAV	SW846 8081A_8082	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C
Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	TAL SAV	SW846 8081B/8082A	
Liquid-Liquid Extraction (Continuous)	TAL SAV		SW846 3520C

### Lab References:

TAL SAV = TestAmerica Savannah

### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.



## METHOD / ANALYST SUMMARY

Client: Ashland Inc.

Job Number: 680-59939-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB
SW846 8081A_8082	Kellar, Joshua	JK
SW846 8081B/8082A	Kellar, Joshua	JK



## SAMPLE SUMMARY

Client: Ashland Inc.

Job Number: 680-59939-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-59939-1TB	TB1_20100731	Water	07/29/2010 0000	07/30/2010 0938
680-59939-2FB	FB1_20100731	Water	07/29/2010 1415	07/30/2010 0938
680-59939-3	MW-44D_20100731	Water	07/29/2010 1336	07/30/2010 0938
680-59939-4EB	EB1_20100731	Water	07/29/2010 1425	07/30/2010 0938
680-59939-5	MW-10D_20100731	Water	07/29/2010 1602	07/30/2010 0938



# **SAMPLE RESULTS**



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

Client Sample ID: TB1\_20100731

Lab Sample ID: 680-59939-1TB

Client Matrix: Water

Date Sampled: 07/29/2010 0000

Date Received: 07/30/2010 0938

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-176139	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0154.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	08/03/2010 1335		Final Weight/Volume:	5 mL
Date Prepared:	08/03/2010 1335			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,2-Dichloroethene	1.0	U	0.15	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

**Client Sample ID:** TB1\_20100731

Lab Sample ID: 680-59939-1TB

Client Matrix: Water

Date Sampled: 07/29/2010 0000

Date Received: 07/30/2010 0938

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-176139	Instrument ID:	MS02
Preparation:	5030B		Lab File ID:	o0154.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	08/03/2010 1335		Final Weight/Volume:	5 mL
Date Prepared:	08/03/2010 1335			

Analyte	Result (ug/L)	Qualifier	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U *	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	92		75 - 120
Dibromofluoromethane	98		75 - 121
Toluene-d8 (Surr)	99		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

Client Sample ID: FB1\_20100731

Lab Sample ID: 680-59939-2FB

Client Matrix: Water

Date Sampled: 07/29/2010 1415

Date Received: 07/30/2010 0938

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-176139	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0156.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	08/03/2010 1403		Final Weight/Volume:	5 mL
Date Prepared:	08/03/2010 1403			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,2-Dichloroethene	1.0	U	0.15	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

Client Sample ID: FB1\_20100731

Lab Sample ID: 680-59939-2FB

Client Matrix: Water

Date Sampled: 07/29/2010 1415

Date Received: 07/30/2010 0938

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-176139	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0156.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	08/03/2010 1403		Final Weight/Volume:	5 mL
Date Prepared:	08/03/2010 1403			

Analyte	Result (ug/L)	Qualifier	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U *	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	94		75 - 120
Dibromofluoromethane	99		75 - 121
Toluene-d8 (Surr)	100		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

**Client Sample ID: MW-44D\_20100731**

Lab Sample ID: 680-59939-3

Date Sampled: 07/29/2010 1336

Client Matrix: Water

Date Received: 07/30/2010 0938

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-176139	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0158.d
Dilution:	2.0		Initial Weight/Volume:	5 mL
Date Analyzed:	08/03/2010 1432		Final Weight/Volume:	5 mL
Date Prepared:	08/03/2010 1432			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	50	U	10	50
Acetonitrile	80	U	20	80
Acrolein	40	U	15	40
Acrylonitrile	40	U	14	40
Benzene	730	E	0.50	2.0
Bromoform	2.0	U	1.0	2.0
Bromomethane	2.0	U	1.6	2.0
2-Butanone (MEK)	20	U	2.0	20
Carbon disulfide	4.0	U	1.2	4.0
Carbon tetrachloride	2.0	U	1.0	2.0
Chlorobenzene	140		0.50	2.0
2-Chloro-1,3-butadiene	2.0	U	0.60	2.0
Chlorodibromomethane	2.0	U	0.20	2.0
Chloroethane	2.0	U	2.0	2.0
Chloroform	2.0	U	0.28	2.0
Chloromethane	2.0	U	0.66	2.0
3-Chloro-1-propene	2.0	U	0.40	2.0
cis-1,2-Dichloroethene	1.1	J	0.30	2.0
cis-1,3-Dichloropropene	2.0	U	0.22	2.0
1,2-Dibromo-3-Chloropropane	2.0	U	0.88	2.0
Dibromomethane	2.0	U	0.40	2.0
Dichlorobromomethane	2.0	U	0.50	2.0
Dichlorodifluoromethane	2.0	U	0.50	2.0
1,1-Dichloroethane	2.0	U	0.50	2.0
1,2-Dichloroethane	18		0.20	2.0
1,1-Dichloroethene	2.0	U	0.22	2.0
1,2-Dichloropropane	2.0	U	0.26	2.0
Ethylbenzene	9.5		0.22	2.0
Ethylene Dibromide	2.0	U	0.50	2.0
Ethyl methacrylate	2.0	U	0.50	2.0
2-Hexanone	20	U	2.0	20
Iodomethane	10	U	2.0	10
Isobutyl alcohol	80	U	22	80
Methacrylonitrile	40	U	6.6	40
Methylene Chloride	10	U	2.0	10
Methyl methacrylate	2.0	U	0.96	2.0
4-Methyl-2-pentanone (MIBK)	20	U	2.0	20
Pentachloroethane	10	U	2.4	10
Propionitrile	40	U	9.2	40
Styrene	2.0	U	0.22	2.0
1,1,1,2-Tetrachloroethane	2.0	U	0.66	2.0
1,1,2,2-Tetrachloroethane	2.0	U	0.36	2.0
Tetrachloroethene	2.0	U	0.30	2.0
Toluene	7.1		0.66	2.0
trans-1,4-Dichloro-2-butene	4.0	U	1.0	4.0
trans-1,2-Dichloroethene	2.0	U	0.40	2.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

**Client Sample ID:** MW-44D\_20100731

Lab Sample ID: 680-59939-3

Date Sampled: 07/29/2010 1336

Client Matrix: Water

Date Received: 07/30/2010 0938

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-176139	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0158.d
Dilution:	2.0		Initial Weight/Volume:	5 mL
Date Analyzed:	08/03/2010 1432		Final Weight/Volume:	5 mL
Date Prepared:	08/03/2010 1432			

Analyte	Result (ug/L)	Qualifier	MDL	RL
trans-1,3-Dichloropropene	2.0	U	0.42	2.0
1,1,1-Trichloroethane	2.0	U	1.0	2.0
1,1,2-Trichloroethane	2.0	U	0.26	2.0
Trichloroethene	2.0	U	0.26	2.0
Trichlorofluoromethane	2.0	U	0.50	2.0
1,2,3-Trichloropropane	2.0	U	0.82	2.0
Vinyl acetate	4.0	U *	0.56	4.0
Vinyl chloride	2.0	U	0.36	2.0
Xylenes, Total	4.9		0.40	4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	85		75 - 121
Toluene-d8 (Surr)	100		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

**Client Sample ID:** MW-44D\_20100731

Lab Sample ID: 680-59939-3

Date Sampled: 07/29/2010 1336

Client Matrix: Water

Date Received: 07/30/2010 0938

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-176139	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0164.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	08/03/2010 1557	Run Type: DL	Final Weight/Volume:	5 mL
Date Prepared:	08/03/2010 1557			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	120	U	25	120
Acetonitrile	200	U	50	200
Acrolein	100	U	37	100
Acrylonitrile	100	U	36	100
Benzene	540	D	1.2	5.0
Bromoform	5.0	U	2.5	5.0
Bromomethane	5.0	U	4.0	5.0
2-Butanone (MEK)	50	U	5.0	50
Carbon disulfide	10	U	3.0	10
Carbon tetrachloride	5.0	U	2.5	5.0
Chlorobenzene	130	D	1.2	5.0
2-Chloro-1,3-butadiene	5.0	U	1.5	5.0
Chlorodibromomethane	5.0	U	0.50	5.0
Chloroethane	5.0	U	5.0	5.0
Chloroform	0.90	J D	0.70	5.0
Chloromethane	5.0	U	1.6	5.0
3-Chloro-1-propene	5.0	U	1.0	5.0
cis-1,2-Dichloroethene	1.3	J D	0.75	5.0
cis-1,3-Dichloropropene	5.0	U	0.55	5.0
1,2-Dibromo-3-Chloropropane	5.0	U	2.2	5.0
Dibromomethane	5.0	U	1.0	5.0
Dichlorobromomethane	5.0	U	1.2	5.0
Dichlorodifluoromethane	5.0	U	1.2	5.0
1,1-Dichloroethane	5.0	U	1.2	5.0
1,2-Dichloroethane	13	D	0.50	5.0
1,1-Dichloroethene	5.0	U	0.55	5.0
1,2-Dichloropropane	5.0	U	0.65	5.0
Ethylbenzene	8.7	D	0.55	5.0
Ethylene Dibromide	5.0	U	1.2	5.0
Ethyl methacrylate	5.0	U	1.2	5.0
2-Hexanone	50	U	5.0	50
Iodomethane	25	U	5.0	25
Isobutyl alcohol	200	U	55	200
Methacrylonitrile	100	U	16	100
Methylene Chloride	25	U	5.0	25
Methyl methacrylate	5.0	U	2.4	5.0
4-Methyl-2-pentanone (MIBK)	50	U	5.0	50
Pentachloroethane	25	U	6.0	25
Propionitrile	100	U	23	100
Styrene	5.0	U	0.55	5.0
1,1,1,2-Tetrachloroethane	5.0	U	1.6	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.90	5.0
Tetrachloroethene	5.0	U	0.75	5.0
Toluene	6.2	D	1.6	5.0
trans-1,4-Dichloro-2-butene	10	U	2.5	10
trans-1,2-Dichloroethene	5.0	U	1.0	5.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

**Client Sample ID:** MW-44D\_20100731

Lab Sample ID: 680-59939-3

Date Sampled: 07/29/2010 1336

Client Matrix: Water

Date Received: 07/30/2010 0938

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-176139	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0164.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	08/03/2010 1557	Run Type: DL	Final Weight/Volume:	5 mL
Date Prepared:	08/03/2010 1557			

Analyte	Result (ug/L)	Qualifier	MDL	RL
trans-1,3-Dichloropropene	5.0	U	1.0	5.0
1,1,1-Trichloroethane	5.0	U	2.5	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.65	5.0
Trichlorofluoromethane	5.0	U	1.2	5.0
1,2,3-Trichloropropane	5.0	U	2.0	5.0
Vinyl acetate	10	U *	1.4	10
Vinyl chloride	5.0	U	0.90	5.0
Xylenes, Total	5.3	J D	1.0	10

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	90		75 - 121
Toluene-d8 (Surr)	99		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

Client Sample ID: EB1\_20100731

Lab Sample ID: 680-59939-4EB

Date Sampled: 07/29/2010 1425

Client Matrix: Water

Date Received: 07/30/2010 0938

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-176139	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0160.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	08/03/2010 1500		Final Weight/Volume:	5 mL
Date Prepared:	08/03/2010 1500			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,2-Dichloroethene	1.0	U	0.15	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

Client Sample ID: EB1\_20100731

Lab Sample ID: 680-59939-4EB

Date Sampled: 07/29/2010 1425

Client Matrix: Water

Date Received: 07/30/2010 0938

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-176139	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0160.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	08/03/2010 1500		Final Weight/Volume:	5 mL
Date Prepared:	08/03/2010 1500			

Analyte	Result (ug/L)	Qualifier	MDL	RL
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U *	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	98		75 - 121
Toluene-d8 (Surr)	100		75 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

**Client Sample ID:** MW-10D\_20100731

Lab Sample ID: 680-59939-5

Date Sampled: 07/29/2010 1602

Client Matrix: Water

Date Received: 07/30/2010 0938

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-176139	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0162.d
Dilution:	100		Initial Weight/Volume:	5 mL
Date Analyzed:	08/03/2010 1529		Final Weight/Volume:	5 mL
Date Prepared:	08/03/2010 1529			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	2500	U	500	2500
Acetonitrile	4000	U	1000	4000
Acrolein	2000	U	740	2000
Acrylonitrile	2000	U	720	2000
Benzene	780		25	100
Bromoform	100	U	50	100
Bromomethane	100	U	80	100
2-Butanone (MEK)	1000	U	100	1000
Carbon disulfide	200	U	60	200
Carbon tetrachloride	100	U	50	100
Chlorobenzene	1700		25	100
2-Chloro-1,3-butadiene	100	U	30	100
Chlorodibromomethane	100	U	10	100
Chloroethane	100	U	100	100
Chloroform	49000	E	14	100
Chloromethane	100	U	33	100
3-Chloro-1-propene	100	U	20	100
cis-1,2-Dichloroethene	100	U	15	100
cis-1,3-Dichloropropene	100	U	11	100
1,2-Dibromo-3-Chloropropane	100	U	44	100
Dibromomethane	100	U	20	100
Dichlorobromomethane	100	U	25	100
Dichlorodifluoromethane	100	U	25	100
1,1-Dichloroethane	100	U	25	100
1,2-Dichloroethane	100	U	10	100
1,1-Dichloroethene	100	U	11	100
1,2-Dichloropropane	100	U	13	100
Ethylbenzene	19	J	11	100
Ethylene Dibromide	100	U	25	100
Ethyl methacrylate	100	U	25	100
2-Hexanone	1000	U	100	1000
Iodomethane	500	U	100	500
Isobutyl alcohol	4000	U	1100	4000
Methacrylonitrile	2000	U	330	2000
Methylene Chloride	8800		100	500
Methyl methacrylate	100	U	48	100
4-Methyl-2-pentanone (MIBK)	1000	U	100	1000
Pentachloroethane	500	U	120	500
Propionitrile	2000	U	460	2000
Styrene	100	U	11	100
1,1,1,2-Tetrachloroethane	100	U	33	100
1,1,2,2-Tetrachloroethane	100	U	18	100
Tetrachloroethene	27	J	15	100
Toluene	70	J	33	100
trans-1,4-Dichloro-2-butene	200	U	50	200
trans-1,2-Dichloroethene	100	U	20	100



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

**Client Sample ID:** MW-10D\_20100731

Lab Sample ID: 680-59939-5

Date Sampled: 07/29/2010 1602

Client Matrix: Water

Date Received: 07/30/2010 0938

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-176139	Instrument ID:	MS02
Preparation:	5030B		Lab File ID:	o0162.d
Dilution:	100		Initial Weight/Volume:	5 mL
Date Analyzed:	08/03/2010 1529		Final Weight/Volume:	5 mL
Date Prepared:	08/03/2010 1529			

Analyte	Result (ug/L)	Qualifier	MDL	RL
trans-1,3-Dichloropropene	100	U	21	100
1,1,1-Trichloroethane	100	U	50	100
1,1,2-Trichloroethane	100	U	13	100
Trichloroethene	100	U	13	100
Trichlorofluoromethane	100	U	25	100
1,2,3-Trichloropropane	100	U	41	100
Vinyl acetate	200	U *	28	200
Vinyl chloride	100	U	18	100
Xylenes, Total	100	J	20	200

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	91		75 - 120
Dibromofluoromethane	95		75 - 121
Toluene-d8 (Surr)	97		75 - 120



# Analytical Data

Client: Ashland Inc.

Job Number: 680-59939-1

Client Sample ID: MW-10D\_20100731

Lab Sample ID: 680-59939-5

Date Sampled: 07/29/2010 1602

Client Matrix: Water

Date Received: 07/30/2010 0938

## 8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	680-176139	Instrument ID:	MSO2
Preparation:	5030B			Lab File ID:	o0168.d
Dilution:	500			Initial Weight/Volume:	5 mL
Date Analyzed:	08/03/2010 1655	Run Type:	DL	Final Weight/Volume:	5 mL
Date Prepared:	08/03/2010 1655				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	12000	U	2500	12000
Acetonitrile	20000	U	5000	20000
Acrolein	10000	U	3700	10000
Acrylonitrile	10000	U	3600	10000
Benzene	870	D	120	500
Bromoform	500	U	250	500
Bromomethane	500	U	400	500
2-Butanone (MEK)	5000	U	500	5000
Carbon disulfide	1000	U	300	1000
Carbon tetrachloride	500	U	250	500
Chlorobenzene	1800	D	120	500
2-Chloro-1,3-butadiene	500	U	150	500
Chlorodibromomethane	500	U	50	500
Chloroethane	500	U	500	500
Chloroform	41000	D	70	500
Chloromethane	500	U	160	500
3-Chloro-1-propene	500	U	100	500
cis-1,2-Dichloroethene	500	U	75	500
cis-1,3-Dichloropropene	500	U	55	500
1,2-Dibromo-3-Chloropropane	500	U	220	500
Dibromomethane	500	U	100	500
Dichlorobromomethane	500	U	120	500
Dichlorodifluoromethane	500	U	120	500
1,1-Dichloroethane	500	U	120	500
1,2-Dichloroethane	500	U	50	500
1,1-Dichloroethene	500	U	55	500
1,2-Dichloropropane	500	U	65	500
Ethylbenzene	500	U	55	500
Ethylene Dibromide	500	U	120	500
Ethyl methacrylate	500	U	120	500
2-Hexanone	5000	U	500	5000
Iodomethane	2500	U	500	2500
Isobutyl alcohol	20000	U	5500	20000
Methacrylonitrile	10000	U	1600	10000
Methylene Chloride	8700	D	500	2500
Methyl methacrylate	500	U	240	500
4-Methyl-2-pentanone (MIBK)	5000	U	500	5000
Pentachloroethane	2500	U	600	2500
Propionitrile	10000	U	2300	10000
Styrene	500	U	55	500
1,1,1,2-Tetrachloroethane	500	U	160	500
1,1,2,2-Tetrachloroethane	500	U	90	500
Tetrachloroethene	500	U	75	500
Toluene	500	U	160	500
trans-1,4-Dichloro-2-butene	1000	U	250	1000
trans-1,2-Dichloroethene	500	U	100	500



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

**Client Sample ID:** MW-10D\_20100731

Lab Sample ID: 680-59939-5

Date Sampled: 07/29/2010 1602

Client Matrix: Water

Date Received: 07/30/2010 0938

**8260B Volatile Organic Compounds (GC/MS)**

Method:	8260B	Analysis Batch: 680-176139	Instrument ID:	MSO2
Preparation:	5030B		Lab File ID:	o0168.d
Dilution:	500		Initial Weight/Volume:	5 mL
Date Analyzed:	08/03/2010 1655	Run Type: DL	Final Weight/Volume:	5 mL
Date Prepared:	08/03/2010 1655			

Analyte	Result (ug/L)	Qualifier	MDL	RL
trans-1,3-Dichloropropene	500	U	100	500
1,1,1-Trichloroethane	500	U	250	500
1,1,2-Trichloroethane	500	U	65	500
Trichloroethene	500	U	65	500
Trichlorofluoromethane	500	U	120	500
1,2,3-Trichloropropane	500	U	200	500
Vinyl acetate	1000	U *	140	1000
Vinyl chloride	500	U	90	500
Xylenes, Total	110	J D	100	1000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		75 - 120
Dibromofluoromethane	95		75 - 121
Toluene-d8 (Surr)	98		75 - 120



## Analytical Data

Client: Ashland Inc.

Job Number: 680-59939-1

Client Sample ID: MW-44D\_20100731

Lab Sample ID: 680-59939-3

Date Sampled: 07/29/2010 1336

Client Matrix: Water

Date Received: 07/30/2010 0938

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### 8081A\_8082 Organochlorine Pesticides & PCBs (GC)

Method:	8081A_8082	Analysis Batch: 680-176464	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-176188	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	08/05/2010 1642		Injection Volume:	2 uL
Date Prepared:	08/04/2010 1347		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	3.9	J	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	57		14 - 115
Tetrachloro-m-xylene	43		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

**Client Sample ID:** MW-10D\_20100731

Lab Sample ID: 680-59939-5

Date Sampled: 07/29/2010 1602

Client Matrix: Water

Date Received: 07/30/2010 0938

**8081A\_8082 Organochlorine Pesticides & PCBs (GC)**

Method:	8081A_8082	Analysis Batch: 680-176464	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-176188	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	08/05/2010 1722		Injection Volume:	2 uL
Date Prepared:	08/04/2010 1347		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Total	38		0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	11	X	14 - 115
Tetrachloro-m-xylene	81		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

**Client Sample ID:** MW-44D\_20100731

Lab Sample ID: 680-59939-3

Date Sampled: 07/29/2010 1336

Client Matrix: Water

Date Received: 07/30/2010 0938

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-176450	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-176188	Initial Weight/Volume:	500 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	08/05/2010 1642		Injection Volume:	2 uL
Date Prepared:	08/04/2010 1347		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	65		14 - 115
Tetrachloro-m-xylene	43		35 - 120



**Analytical Data**

Client: Ashland Inc.

Job Number: 680-59939-1

**Client Sample ID:** MW-10D\_20100731

Lab Sample ID: 680-59939-5

Date Sampled: 07/29/2010 1602

Client Matrix: Water

Date Received: 07/30/2010 0938

**8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography**

Method:	8081B/8082A	Analysis Batch: 680-176450	Instrument ID:	SGM
Preparation:	3520C	Prep Batch: 680-176188	Initial Weight/Volume:	1050 mL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	08/05/2010 1722		Injection Volume:	2 uL
Date Prepared:	08/04/2010 1347		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toxaphene, Technical	4.8	U	0.48	4.8

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	11	X	14 - 115
Tetrachloro-m-xylene	81		35 - 120



## DATA REPORTING QUALIFIERS

Client: Ashland Inc.

Job Number: 680-59939-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Indicates the analyte was analyzed for but not detected.
	*	LCS or LCSD exceeds the control limits
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
GC Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits



# QUALITY CONTROL RESULTS



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-59939-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:680-176139</b>					
LCS 680-176139/7	Lab Control Sample	T	Water	8260B	
MB 680-176139/9	Method Blank	T	Water	8260B	
680-59939-1TB	TB1_20100731	T	Water	8260B	
680-59939-2FB	FB1_20100731	T	Water	8260B	
680-59939-3	MW-44D_20100731	T	Water	8260B	
680-59939-3DL	MW-44D_20100731	T	Water	8260B	
680-59939-4EB	EB1_20100731	T	Water	8260B	
680-59939-5	MW-10D_20100731	T	Water	8260B	
680-59939-5DL	MW-10D_20100731	T	Water	8260B	

#### Report Basis

T = Total

### GC Semi VOA

<b>Prep Batch: 680-176188</b>					
LCS 680-176188/12-A	Lab Control Sample	T	Water	3520C	
MB 680-176188/5-A	Method Blank	T	Water	3520C	
680-59939-3	MW-44D_20100731	T	Water	3520C	
680-59939-3MS	Matrix Spike	T	Water	3520C	
680-59939-3MSD	Matrix Spike Duplicate	T	Water	3520C	
680-59939-5	MW-10D_20100731	T	Water	3520C	
<b>Analysis Batch:680-176450</b>					
LCS 680-176188/12-A	Lab Control Sample	T	Water	8081B/8082A	680-176188
MB 680-176188/5-A	Method Blank	T	Water	8081B/8082A	680-176188
680-59939-3	MW-44D_20100731	T	Water	8081B/8082A	680-176188
680-59939-3MS	Matrix Spike	T	Water	8081B/8082A	680-176188
680-59939-3MSD	Matrix Spike Duplicate	T	Water	8081B/8082A	680-176188
680-59939-5	MW-10D_20100731	T	Water	8081B/8082A	680-176188
<b>Analysis Batch:680-176464</b>					
LCS 680-176188/12-A	Lab Control Sample	T	Water	8081A_8082	680-176188
MB 680-176188/5-A	Method Blank	T	Water	8081A_8082	680-176188
680-59939-3	MW-44D_20100731	T	Water	8081A_8082	680-176188
680-59939-3MS	Matrix Spike	T	Water	8081A_8082	680-176188
680-59939-3MSD	Matrix Spike Duplicate	T	Water	8081A_8082	680-176188
680-59939-5	MW-10D_20100731	T	Water	8081A_8082	680-176188

#### Report Basis

T = Total

TestAmerica Savannah



Client: Ashland Inc.

Job Number: 680-59939-1

## Surrogate Recovery Report

### 8260B Volatile Organic Compounds (GC/MS)

#### Client Matrix: Water

L-16: pNAD	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-59939-1	TB1_20100731	92	28	22
680-59939-2	FB1_20100731	94	99	100
680-59939-3	MW-44D_20100731	96	85	100
680-59939-3 DL	MW-44D_20100731 DL	97	90	99
680-59939-4	EB1_20100731	95	98	100
680-59939-5	MW-10D_20100731	91	95	97
680-59939-5 DL	MW-10D_20100731 DL	96	95	98
MB 680-176139/9		93	97	101
LCS 680-176139/7		99	102	100

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120



Client: Ashland Inc.

Job Number: 680-59939-1

## Surrogate Recovery Report

### 8081A 8082 Organochlorine Pesticides & PCBs (GC)

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	TCX1 %Rec
680-59939-3	MW-44D_20100731	57	43
680-59939-5	MW-10D_20100731	11X	81
MB 680-176188/5-A		71	88
LCS 680-176188/12-A		71	86
680-59939-3 MS	MW-44D_20100731 MS	55	45
680-59939-3 MSD	MW-44D_20100731 MSD	58	47

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



Client: Ashland Inc.

Job Number: 680-59939-1

## Surrogate Recovery Report

### 8081B/8082A Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

#### Client Matrix: Water

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec	TCX1 %Rec	TCX2 %Rec
680-59939-3	MW-44D_20100731	65		43	
680-59939-5	MW-10D_20100731	11X		81	
MB 680-176188/5-A			91		93
LCS 680-176188/12-A			77		94
680-59939-3 MS	MW-44D_20100731 MS	55		45	
680-59939-3 MSD	MW-44D_20100731 MSD	58		47	

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-115
TCX = Tetrachloro-m-xylene	35-120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-59939-1

**Method Blank - Batch: 680-176139**

**Method: 8260B**

**Preparation: 5030B**

Lab Sample ID: MB 680-176139/9

Analysis Batch: 680-176139

Instrument ID: MSO2

Client Matrix: WdAer

Prep Batch: N/A

Lab File ID: oq264.d

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 08/03/2010 1141

Final Weight/Volume: 5 mL

Date Prepared: 08/03/2010 1141

Analyte	Result	Qual	MDL	RL
Acetone	25	U	5.0	25
Acetonitrile	40	U	10	40
Acrolein	20	U	7.4	20
Acrylonitrile	20	U	7.2	20
Benzene	1.0	U	0.25	1.0
Bromoform	1.0	U	0.50	1.0
Bromomethane	1.0	U	0.80	1.0
2-Butanone (MEK)	10	U	1.0	10
Carbon disulfide	2.0	U	0.60	2.0
Carbon tetrachloride	1.0	U	0.50	1.0
Chlorobenzene	1.0	U	0.25	1.0
2-Chloro-1,3-butadiene	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.10	1.0
Chloroethane	1.0	U	1.0	1.0
Chloroform	1.0	U	0.14	1.0
Chloromethane	1.0	U	0.33	1.0
3-Chloro-1-propene	1.0	U	0.20	1.0
cis-1,2-Dichloroethene	1.0	U	0.15	1.0
cis-1,3-Dichloropropene	1.0	U	0.11	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.44	1.0
Dibromomethane	1.0	U	0.20	1.0
Dichlorobromomethane	1.0	U	0.25	1.0
Dichlorodifluoromethane	1.0	U	0.25	1.0
1,1-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloroethane	1.0	U	0.10	1.0
1,1-Dichloroethene	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.13	1.0
Ethylbenzene	1.0	U	0.11	1.0
Ethylene Dibromide	1.0	U	0.25	1.0
Ethyl methacrylate	1.0	U	0.25	1.0
2-Hexanone	10	U	1.0	10
Iodomethane	5.0	U	1.0	5.0
Isobutyl alcohol	40	U	11	40
Methacrylonitrile	20	U	3.3	20
Methylene Chloride	5.0	U	1.0	5.0
Methyl methacrylate	1.0	U	0.48	1.0
4-Methyl-2-pentanone (MIBK)	10	U	1.0	10
Pentachloroethane	5.0	U	1.2	5.0
Propionitrile	20	U	4.6	20
Styrene	1.0	U	0.11	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.18	1.0
Tetrachloroethene	1.0	U	0.15	1.0



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-59939-1

### Method Blank - Batch: 680-176139

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-176139/9

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 08/03/2010 1141

Date Prepared: 08/03/2010 1141

Analysis Batch: 680-176139

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO2

Lab File ID: oq264.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Toluene	1.0	U	0.33	1.0
trans-1,4-Dichloro-2-butene	2.0	U	0.50	2.0
trans-1,2-Dichloroethene	1.0	U	0.20	1.0
trans-1,3-Dichloropropene	1.0	U	0.21	1.0
1,1,1-Trichloroethane	1.0	U	0.50	1.0
1,1,2-Trichloroethane	1.0	U	0.13	1.0
Trichloroethene	1.0	U	0.13	1.0
Trichlorofluoromethane	1.0	U	0.25	1.0
1,2,3-Trichloropropane	1.0	U	0.41	1.0
Vinyl acetate	2.0	U	0.28	2.0
Vinyl chloride	1.0	U	0.18	1.0
Xylenes, Total	2.0	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	93	75 - 120
Dibromofluoromethane	97	75 - 121
Toluene-d8 (Surr)	101	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-59939-1

### Lab Control Sample - Batch: 680-176139

Method: 8260B  
Preparation: 5030B

Lab Sample ID: LCS 680-176139/7  
Client Matrix: WdAer  
Dilution: 1.0  
Date Analyzed: 08/03/2010 1005  
Date Prepared: 08/03/2010 1005

Analysis Batch: 680-176139  
Prep Batch: N/A  
Units: ug/L

Instrument ID: MSO2  
Lab File ID: oq258.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	100	89.3	89	17 - 175	
Benzene	50.0	49.4	99	77 - 119	
Bromoform	50.0	51.5	103	62 - 133	
Bromomethane	50.0	28.8	58	12 - 184	
2-Butanone (MEK)	100	96.6	97	33 - 157	
Carbon disulfide	50.0	47.7	95	55 - 131	
Carbon tetrachloride	50.0	51.6	103	71 - 135	
Chlorobenzene	50.0	49.5	99	85 - 116	
Chlorodibromomethane	50.0	52.3	105	75 - 133	
Chloroethane	50.0	36.7	73	40 - 165	
Chloroform	50.0	51.7	103	82 - 120	
Chloromethane	50.0	40.1	80	48 - 142	
cis-1,2-Dichloroethene	50.0	50.1	100	69 - 134	
cis-1,3-Dichloropropene	50.0	50.9	102	76 - 126	
1,2-Dibromo-3-Chloropropane	50.0	54.3	109	49 - 140	
Dibromomethane	50.0	46.8	94	78 - 119	
Dichlorobromomethane	50.0	50.6	101	78 - 127	
Dichlorodifluoromethane	50.0	42.2	84	34 - 154	
1,1-Dichloroethane	50.0	52.2	104	74 - 127	
1,2-Dichloroethane	50.0	48.8	98	66 - 132	
1,1-Dichloroethene	50.0	48.1	96	62 - 141	
1,2-Dichloropropane	50.0	49.5	99	73 - 124	
Ethylbenzene	50.0	51.2	102	86 - 116	
Ethylene Dibromide	50.0	49.6	99	80 - 121	
2-Hexanone	100	104	104	34 - 161	
Methylene Chloride	50.0	49.5	99	70 - 125	
4-Methyl-2-pentanone (MIBK)	100	97.7	98	40 - 151	
Styrene	50.0	48.6	97	82 - 122	
1,1,1,2-Tetrachloroethane	50.0	48.9	98	81 - 128	
1,1,2,2-Tetrachloroethane	50.0	50.0	100	69 - 129	
Tetrachloroethene	50.0	50.5	101	76 - 126	
Toluene	50.0	49.3	99	81 - 117	
trans-1,2-Dichloroethene	50.0	48.4	97	72 - 131	
trans-1,3-Dichloropropene	50.0	52.6	105	73 - 128	
1,1,1-Trichloroethane	50.0	50.7	101	76 - 127	
1,1,2-Trichloroethane	50.0	49.9	100	75 - 121	
Trichloroethene	50.0	48.9	98	84 - 115	
Trichlorofluoromethane	50.0	43.8	88	58 - 149	
1,2,3-Trichloropropane	50.0	49.6	99	70 - 130	
Vinyl acetate	100	218	218	10 - 217	*
Vinyl chloride	50.0	45.9	92	59 - 144	
Xylenes, Total	150	144	96	84 - 118	



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-59939-1

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	99	75 - 120
Dibromofluoromethane	102	75 - 121
Toluene-d8 (Surr)	100	75 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-59939-1

### Method Blank - Batch: 680-176188

Lab Sample ID: MB 680-176188/5-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Date Analyzed: 08/05/2010 1326  
 Date Prepared: 08/04/2010 1347

Analysis Batch: 680-176464  
 Prep Batch: 680-176188  
 Units: ug/L

### Method: 8081A\_8082 Preparation: 3520C

Instrument ID: SGM  
 Lab File ID: mh04074.d  
 Initial Weight/Volume: 1000 mL  
 Final Weight/Volume: 10 mL  
 Injection Volume: 2 uL  
 Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Total	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	71	14 - 115
Tetrachloro-m-xylene	88	35 - 120

### Lab Control Sample - Batch: 680-176188

Lab Sample ID: LCS 680-176188/12-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Date Analyzed: 08/05/2010 1524  
 Date Prepared: 08/04/2010 1347

Analysis Batch: 680-176464  
 Prep Batch: 680-176188  
 Units: ug/L

### Method: 8081A\_8082 Preparation: 3520C

Instrument ID: SGM  
 Lab File ID: mh04080.d  
 Initial Weight/Volume: 1000 mL  
 Final Weight/Volume: 10 mL  
 Injection Volume: 2 uL  
 Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Toxaphene, Total	10.0	7.06	71	30 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	71	14 - 115
Tetrachloro-m-xylene	86	35 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-59939-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 680-176188**

**Method: 8081A\_8082  
Preparation: 3520C**

MS Lab Sample ID: 680-59939-3  
Client Matrix: Water  
Bilution: 1.0  
Date Analyzed: 08/05/2010 1900  
Date Prepared: 08/04/2010 1347

Analysis Batch: 680-176464  
Prep Batch: 680-176188

Instrument ID: SGM  
Lab File ID: mh04091.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 680-59939-3  
Client Matrix: Water  
Bilution: 1.0  
Date Analyzed: 08/05/2010 1919  
Date Prepared: 08/04/2010 1347

Analysis Batch: 680-176464  
Prep Batch: 680-176188

Instrument ID: SGM  
Lab File ID: mh04092.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Toxaphene, Total	61	27	30 - 120	40	40		F
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
DCB Decachlorobiphenyl	55		58	14 - 115			
Tetrachloro-m-xylene	45		47	35 - 120			

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 680-176188**

**Method: 8081A\_8082  
Preparation: 3520C**

MS Lab Sample ID: 680-59939-3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 08/05/2010 1900  
Date Prepared: 08/04/2010 1347

Units: ug/L

MSD Lab Sample ID: 680-59939-3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 08/05/2010 1919  
Date Prepared: 08/04/2010 1347

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Toxaphene, Total	3.9 J	10.0	10.0	9.96	6.63 F



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-59939-1

### Method Blank - Batch: 680-176188

**Method: 8081B/8082A**  
**Preparation: 3520C**

Lab Sample ID: MB 680-176188/5-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 08/05/2010 1326  
Date Prepared: 08/04/2010 1347

Analysis Batch: 680-176450  
Prep Batch: 680-176188  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mh04074.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Toxaphene, Technical	5.0	U	0.50	5.0

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	91	14 - 115
Tetrachloro-m-xylene	93	35 - 120

### Lab Control Sample - Batch: 680-176188

**Method: 8081B/8082A**  
**Preparation: 3520C**

Lab Sample ID: LCS 680-176188/12-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 08/05/2010 1524  
Date Prepared: 08/04/2010 1347

Analysis Batch: 680-176450  
Prep Batch: 680-176188  
Units: ug/L

Instrument ID: SGM  
Lab File ID: mh04080.d  
Initial Weight/Volume: 1000 mL  
Final Weight/Volume: 10 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Toxaphene, Technical	10.0	10.6	106	30 - 120	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	77	14 - 115
Tetrachloro-m-xylene	94	35 - 120



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-59939-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 680-176188**

**Method: 8081B/8082A  
Preparation: 3520C**

MS Lab Sample ID: 680-59939-3  
Client Matrix: Water  
Bilution: 1.0  
Date Analyzed: 08/05/2010 1900  
Date Prepared: 08/04/2010 1347

Analysis Batch: 680-176450  
Prep Batch: 680-176188

Instrument ID: SGM  
Lab File ID: mh04091.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 680-59939-3  
Client Matrix: Water  
Bilution: 1.0  
Date Analyzed: 08/05/2010 1919  
Date Prepared: 08/04/2010 1347

Analysis Batch: 680-176450  
Prep Batch: 680-176188

Instrument ID: SGM  
Lab File ID: mh04092.d  
Initial Weight/Volume: 500 mL  
Final Weight/Volume: 5 mL  
Injection Volume: 2 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Toxaphene, Technical	83	71	30 - 120	16	40		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
DCB Decachlorobiphenyl		55	58			14 - 115	
Tetrachloro-m-xylene		45	47			35 - 120	

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 680-176188**

**Method: 8081B/8082A  
Preparation: 3520C**

MS Lab Sample ID: 680-59939-3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 08/05/2010 1900  
Date Prepared: 08/04/2010 1347

Units: ug/L

MSD Lab Sample ID: 680-59939-3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 08/05/2010 1919  
Date Prepared: 08/04/2010 1347

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Toxaphene, Technical	5.0 U	10.0	10.0	8.28	7.07



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-59939-1

### Laboratory Chronicle

Lab ID: 680-59939-1

Client ID: TB1\_20100731

Sample Date/Time: 07/29/2010 00:00

Received Date/Time: 07/30/2010 09:38

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-59939-A-1		680-176139		08/03/2010 13:35	1	TAL SAV	RB
A:8260B	680-59939-A-1		680-176139		08/03/2010 13:35	1	TAL SAV	RB

Lab ID: 680-59939-2

Client ID: FB1\_20100731

Sample Date/Time: 07/29/2010 14:15

Received Date/Time: 07/30/2010 09:38

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-59939-A-2		680-176139		08/03/2010 14:03	1	TAL SAV	RB
A:8260B	680-59939-A-2		680-176139		08/03/2010 14:03	1	TAL SAV	RB

Lab ID: 680-59939-3

Client ID: MW-44D\_20100731

Sample Date/Time: 07/29/2010 13:36

Received Date/Time: 07/30/2010 09:38

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-59939-C-3		680-176139		08/03/2010 14:32	2	TAL SAV	RB
A:8260B	680-59939-C-3		680-176139		08/03/2010 14:32	2	TAL SAV	RB
P:5030B	680-59939-D-3	DL	680-176139		08/03/2010 15:57	5	TAL SAV	RB
A:8260B	680-59939-D-3	DL	680-176139		08/03/2010 15:57	5	TAL SAV	RB
P:3520C	680-59939-A-3-A		680-176464	680-176188	08/04/2010 13:47	1	TAL SAV	RBS
A:8081A_8082	680-59939-A-3-A		680-176464	680-176188	08/05/2010 16:42	1	TAL SAV	JK
P:3520C	680-59939-A-3-A		680-176450	680-176188	08/04/2010 13:47	1	TAL SAV	RBS
A:8081B/8082A	680-59939-A-3-A		680-176450	680-176188	08/05/2010 16:42	1	TAL SAV	JK

Lab ID: 680-59939-3 MS

Client ID: MW-44D\_20100731

Sample Date/Time: 07/29/2010 13:36

Received Date/Time: 07/30/2010 09:38

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	680-59939-B-3-A MS		680-176464	680-176188	08/04/2010 13:47	1	TAL SAV	RBS
A:8081A_8082	680-59939-B-3-A MS		680-176464	680-176188	08/05/2010 19:00	1	TAL SAV	JK
P:3520C	680-59939-B-3-A MS		680-176450	680-176188	08/04/2010 13:47	1	TAL SAV	RBS
A:8081B/8082A	680-59939-B-3-A MS		680-176450	680-176188	08/05/2010 19:00	1	TAL SAV	JK



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-59939-1

### Laboratory Chronicle

Lab ID: 680-59939-3 MSD

Client ID: MW-44D\_20100731

Sample Date/Time: 07/29/2010 13:36

Received Date/Time: 07/30/2010 09:38

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	680-59939-B-3-B MSD		680-176464	680-176188	08/04/2010 13:47	1	TAL SAV	RBS
A:8081A_8082	680-59939-B-3-B MSD		680-176464	680-176188	08/05/2010 19:19	1	TAL SAV	JK
P:3520C	680-59939-B-3-B MSD		680-176450	680-176188	08/04/2010 13:47	1	TAL SAV	RBS
A:8081B/8082A	680-59939-B-3-B MSD		680-176450	680-176188	08/05/2010 19:19	1	TAL SAV	JK

Lab ID: 680-59939-4

Client ID: EB1\_20100731

Sample Date/Time: 07/29/2010 14:25

Received Date/Time: 07/30/2010 09:38

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-59939-A-4		680-176139		08/03/2010 15:00	1	TAL SAV	RB
A:8260B	680-59939-A-4		680-176139		08/03/2010 15:00	1	TAL SAV	RB

Lab ID: 680-59939-5

Client ID: MW-10D\_20100731

Sample Date/Time: 07/29/2010 16:02

Received Date/Time: 07/30/2010 09:38

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	680-59939-C-5		680-176139		08/03/2010 15:29	100	TAL SAV	RB
A:8260B	680-59939-C-5		680-176139		08/03/2010 15:29	100	TAL SAV	RB
P:5030B	680-59939-C-5	DL	680-176139		08/03/2010 16:55	500	TAL SAV	RB
A:8260B	680-59939-C-5	DL	680-176139		08/03/2010 16:55	500	TAL SAV	RB
P:3520C	680-59939-A-5-A		680-176464	680-176188	08/04/2010 13:47	1	TAL SAV	RBS
A:8081A_8082	680-59939-A-5-A		680-176464	680-176188	08/05/2010 17:22	1	TAL SAV	JK
P:3520C	680-59939-A-5-A		680-176450	680-176188	08/04/2010 13:47	1	TAL SAV	RBS
A:8081B/8082A	680-59939-A-5-A		680-176450	680-176188	08/05/2010 17:22	1	TAL SAV	JK

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 680-176139/9		680-176139		08/03/2010 11:41	1	TAL SAV	RB
A:8260B	MB 680-176139/9		680-176139		08/03/2010 11:41	1	TAL SAV	RB
P:3520C	MB 680-176188/5-A		680-176464	680-176188	08/04/2010 13:47	1	TAL SAV	RBS
A:8081A_8082	MB 680-176188/5-A		680-176464	680-176188	08/05/2010 13:26	1	TAL SAV	JK
P:3520C	MB 680-176188/5-A		680-176450	680-176188	08/04/2010 13:47	1	TAL SAV	RBS
A:8081B/8082A	MB 680-176188/5-A		680-176450	680-176188	08/05/2010 13:26	1	TAL SAV	JK



## Quality Control Results

Client: Ashland Inc.

Job Number: 680-59939-1

### Laboratory Chronicle

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 680-176139/7		680-176139		08/03/2010 10:05	1	TAL SAV	RB
A:8260B	LCS 680-176139/7		680-176139		08/03/2010 10:05	1	TAL SAV	RB
P:3520C	LCS 680-176188/12-A		680-176464	680-176188	08/04/2010 13:47	1	TAL SAV	RBS
A:8081A_8082	LCS 680-176188/12-A		680-176464	680-176188	08/05/2010 15:24	1	TAL SAV	JK
P:3520C	LCS 680-176188/12-A		680-176450	680-176188	08/04/2010 13:47	1	TAL SAV	RBS
A:8081B/8082A	LCS 680-176188/12-A		680-176450	680-176188	08/05/2010 15:24	1	TAL SAV	JK

#### Lab References:

TAL SAV = TestAmerica Savannah







## Login Sample Receipt Check List

Client: Ashland Inc.

Job Number: 680-59939-1

Login Number: 59939

List Source: TestAmerica Savannah

Creator: Conner, Keaton

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	



## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-79571-1

Client Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

For:

Ashland Inc.

Ashland Hercules Research Center

500 Hercules Rd Bldg 8139

Wilmington, Delaware 19808

Attn: Timothy Hassett



Authorized for release by:

6/7/2012 4:36:42 PM

Lidya Gulizia

Project Manager II

[lidya.gulizia@testamericainc.com](mailto:lidya.gulizia@testamericainc.com)

cc: Tony Mancini

### LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Case Narrative . . . . .	3
Sample Summary . . . . .	5
Method Summary . . . . .	6
Definitions . . . . .	7
Detection Summary . . . . .	8
Client Sample Results . . . . .	11
Surrogate Summary . . . . .	51
QC Sample Results . . . . .	53
QC Association . . . . .	80
Chronicle . . . . .	85
Chain of Custody . . . . .	90
Receipt Checklists . . . . .	92
Certification Summary . . . . .	93





## Case Narrative

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Job ID: 680-79571-1**

**Laboratory: TestAmerica Savannah**

**Narrative**

### CASE NARRATIVE

**Client: Ashland Inc.**

**Project: HERC Brunswick Ph 3 RFI - GW MAY 2012**

**Report Number: 680-79571-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

#### **RECEIPT**

The samples were received on 05/17/2012; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 2.0° C, 2.2° C, 4.0° C, 4.0° C and 4.2° C.

Chloroethane failed the recovery criteria low for LCSD 680-238122/5. Refer to the QC report for details.

#### **VOLATILE ORGANIC COMPOUNDS (GC-MS)**

Sample MW-42S (680-79571-16) was analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/22/2012.

No difficulties were encountered during the volatiles analysis.

All quality control parameters were within the acceptance limits.

#### **VOLATILE ORGANIC COMPOUNDS (GC-MS)**

Samples MW-42I (680-79571-1), MW-42D (680-79571-2), MW-43S (680-79571-3), MW-43I (680-79571-4), MW-43D (680-79571-5), MW-49S (680-79571-6), MW-49I (680-79571-7), MW-49D (680-79571-8), Dup-1 (680-79571-9), Trip Blank 2 (680-79571-10), FB-1 (680-79571-11), EB-1 (680-79571-12), EB-2 (680-79571-13) and EB-3 (680-79571-14) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/18/2012, 05/19/2012 and 05/20/2012.

The continuing calibration verification (CCV) for analytical batch(s) 237953, 237899 and 237819 exceeded average % Drift (%D) control criteria. These are in-house criteria established because limits for these compounds are not specified in the reference method. The %RSDs for all analytes of concern were within established in-house limits; therefore, the data have been reported.

The following analyte recovered outside control limits for the LCS/LCSD associated with batch 238122: chloroethane.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for batch 238266 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria. Refer to the QC report for details.

Samples MW-42I (680-79571-1)[50X], MW-42D (680-79571-2)[5X] and MW-43D (680-79571-5)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.



## Case Narrative

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

### Job ID: 680-79571-1 (Continued)

#### Laboratory: TestAmerica Savannah (Continued)

No other difficulties were encountered during the volatiles analyses.

All other quality control parameters were within the acceptance limits.

#### **PESTICIDES AND PCBs**

Samples MW-42I (680-79571-1), MW-42D (680-79571-2), MW-43S (680-79571-3), MW-43I (680-79571-4), MW-43D (680-79571-5), Dup-1 (680-79571-9), EB-1 (680-79571-12), EB-2 (680-79571-13), EB-3 (680-79571-14) and MW-42S (680-79571-15) were analyzed for Pesticides and PCBs in accordance with EPA SW846 Method 8081A\_8082. The samples were prepared on 05/18/2012 and 05/28/2012 and analyzed on 05/24/2012, 05/25/2012 and 05/31/2012.

This method incorporates 2nd column confirmation. Corrective action is not taken for surrogate/spike compounds unless results from both columns are unacceptable. Results outside criteria are qualified.

Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: MW-43S (680-79571-3), EB-3 (680-79571-14), MW-43I (680-79571-4), MW-43S (680-79571-3), Dup-1 (680-79571-9), Dup-1 (680-79571-9 MS), Dup-1 (680-79571-9 MSD), EB-1 (680-79571-12), EB-2 (680-79571-13). These results have been reported and qualified.

Due to the level of dilution required for the following sample(s), surrogate recoveries are not reported: MW-42D (680-79571-2), MW-42I (680-79571-1), MW-42S (680-79571-15), MW-43D (680-79571-5).

Surrogate recovery for the following sample(s) was outside control limits: (LCS 680-237769/21-A), (MB 680-237769/17-A). All associated samples were re-extracted outside of holding time with acceptable results. Both sets of data were reported.

Toxaphene, Technical failed the recovery criteria high for the MS and MSD of sample Dup-1MS (680-79571-9) in batch 680-238799. Refer to the QC report for details.

The following sample was diluted due to the nature of the sample matrix: MW-42D (680-79571-2), MW-42I (680-79571-1), MW-42S (680-79571-15), MW-43D (680-79571-5). As such, surrogate recoveries are not reported, and elevated reporting limits (RLs) are provided.

Samples MW-42I (680-79571-1)[10X], MW-42D (680-79571-2)[10X], MW-43D (680-79571-5)[10X], MW-42S (680-79571-15)[50X] and MW-42S (680-79571-15)[500X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Pesticides and PCBs analyses.

All other quality control parameters were within the acceptance limits.

#### **METALS (ICP)**

Samples MW-42I (680-79571-1), MW-42D (680-79571-2), MW-43S (680-79571-3), MW-43I (680-79571-4), MW-43D (680-79571-5), Dup-1 (680-79571-9), EB-1 (680-79571-12), EB-2 (680-79571-13) and EB-3 (680-79571-14) were analyzed for Metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 05/21/2012 and 05/25/2012 and analyzed on 05/23/2012 and 05/25/2012.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

#### **TOTAL MERCURY**

Samples MW-42I (680-79571-1), MW-42D (680-79571-2), MW-43S (680-79571-3), MW-43I (680-79571-4), MW-43D (680-79571-5), Dup-1 (680-79571-9), EB-1 (680-79571-12), EB-2 (680-79571-13) and EB-3 (680-79571-14) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/18/2012 and analyzed on 05/22/2012.

No difficulties were encountered during the mercury analyses.

All quality control parameters were within the acceptance limits.



## Sample Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-79571-1	MW-42I	Water	05/16/12 15:50	05/17/12 10:35
680-79571-2	MW-42D	Water	05/16/12 15:30	05/17/12 10:35
680-79571-3	MW-43S	Water	05/16/12 13:30	05/17/12 10:35
680-79571-4	MW-43I	Water	05/16/12 13:20	05/17/12 10:35
680-79571-5	MW-43D	Water	05/16/12 13:00	05/17/12 10:35
680-79571-6	MW-49S	Water	05/16/12 14:50	05/17/12 10:35
680-79571-7	MW-49I	Water	05/16/12 14:40	05/17/12 10:35
680-79571-8	MW-49D	Water	05/16/12 14:20	05/17/12 10:35
680-79571-9	Dup-1	Water	05/16/12 00:00	05/17/12 10:35
680-79571-10	Trip Blank 2	Water	05/16/12 00:00	05/17/12 10:35
680-79571-11	FB-1	Water	05/16/12 00:00	05/17/12 10:35
680-79571-12	EB-1	Water	05/16/12 11:15	05/17/12 10:35
680-79571-13	EB-2	Water	05/16/12 11:30	05/17/12 10:35
680-79571-14	EB-3	Water	05/16/12 11:45	05/17/12 10:35
680-79571-15	MW-42S	Water	05/16/12 19:30	05/17/12 10:35
680-79571-16	MW-42S	Waste	05/16/12 19:30	05/17/12 10:35



## Method Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8081A_8082	Organochlorine Pesticides & PCBs (GC)	SW846	TAL SAV
6010B	Metals (ICP)	SW846	TAL SAV
7470A	Mercury (CVAA)	SW846	TAL SAV

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



## Definitions/Glossary

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits
F	MS or MSD exceeds the control limits
F	RPD of the MS and MSD exceeds the control limits

#### GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
H	Sample was prepped or analyzed beyond the specified holding time
X	Surrogate is outside control limits
F	MS or MSD exceeds the control limits

#### Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



## Detection Summary

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

### Client Sample ID: MW-42I

### Lab Sample ID: 680-79571-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3100		1300	250	ug/L	50		8260B	Total/NA
Benzene	2800		50	13	ug/L	50		8260B	Total/NA
Carbon disulfide	520		100	30	ug/L	50		8260B	Total/NA
Carbon tetrachloride	8400		50	25	ug/L	50		8260B	Total/NA
Chloroform	4600		50	7.0	ug/L	50		8260B	Total/NA
1,1-Dichloroethene	11	J	50	5.5	ug/L	50		8260B	Total/NA
Ethylbenzene	280		50	5.5	ug/L	50		8260B	Total/NA
Methylene Chloride	280		250	50	ug/L	50		8260B	Total/NA
2-Butanone (MEK)	100	J	500	50	ug/L	50		8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	760		500	50	ug/L	50		8260B	Total/NA
Tetrachloroethene	14	J	50	7.5	ug/L	50		8260B	Total/NA
Toluene	120		50	17	ug/L	50		8260B	Total/NA
Xylenes, Total	190		100	10	ug/L	50		8260B	Total/NA
Toxaphene, TAUC, Parlar 11-69	28	J p	48	4.8	ug/L	10		8081A_8082	Total/NA
Toxaphene, TAUC, Parlar 11-69 - RE	99	H	48	4.8	ug/L	10		8081A_8082	Total/NA
Barium	0.19		0.010	0.0020	mg/L	1		6010B	Total Recoverable
Chromium	0.0026	J	0.010	0.0020	mg/L	1		6010B	Total Recoverable
Zinc	0.011	J	0.020	0.0063	mg/L	1		6010B	Total Recoverable

### Client Sample ID: MW-42D

### Lab Sample ID: 680-79571-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	200		5.0	1.3	ug/L	5		8260B	Total/NA
Chlorobenzene	34		5.0	1.3	ug/L	5		8260B	Total/NA
Chloroform	350		5.0	0.70	ug/L	5		8260B	Total/NA
1,1-Dichloroethene	2.9	J	5.0	0.55	ug/L	5		8260B	Total/NA
Ethylbenzene	26		5.0	0.55	ug/L	5		8260B	Total/NA
Methylene Chloride	30		25	5.0	ug/L	5		8260B	Total/NA
Tetrachloroethene	8.9		5.0	0.75	ug/L	5		8260B	Total/NA
Toluene	110		5.0	1.7	ug/L	5		8260B	Total/NA
Xylenes, Total	19		10	1.0	ug/L	5		8260B	Total/NA
Toxaphene, TAUC, Parlar 11-69	130		48	4.8	ug/L	10		8081A_8082	Total/NA
Toxaphene, Technical - RE	610	H	48	4.8	ug/L	10		8081A_8082	Total/NA
Toxaphene, TAUC, Parlar 11-69 - RE	720	H	48	4.8	ug/L	10		8081A_8082	Total/NA
Barium	1.1		0.010	0.0020	mg/L	1		6010B	Total Recoverable
Vanadium	0.0044	J	0.010	0.0030	mg/L	1		6010B	Total Recoverable

### Client Sample ID: MW-43S

### Lab Sample ID: 680-79571-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.083		0.010	0.0020	mg/L	1		6010B	Total Recoverable
Vanadium	0.0031	J	0.010	0.0030	mg/L	1		6010B	Total Recoverable

### Client Sample ID: MW-43I

### Lab Sample ID: 680-79571-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	0.27	J	1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	0.35	J	1.0	0.14	ug/L	1		8260B	Total/NA



## Detection Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

### Client Sample ID: MW-43I (Continued)

Lab Sample ID: 680-79571-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.18	J	1.0	0.15	ug/L	1		8260B	Total/NA
Xylenes, Total	1.0	J	2.0	0.20	ug/L	1		8260B	Total/NA
Toxaphene, TAUC, Parlar 11-69	2.4	J	4.9	0.49	ug/L	1		8081A_8082	Total/NA
Toxaphene, TAUC, Parlar 11-69 - RE	2.9	J H	4.8	0.48	ug/L	1		8081A_8082	Total/NA
Barium	0.17		0.010	0.0020	mg/L	1		6010B	Total Recoverable
Chromium	0.0054	J	0.010	0.0020	mg/L	1		6010B	Total Recoverable
Vanadium	0.0059	J	0.010	0.0030	mg/L	1		6010B	Total Recoverable

### Client Sample ID: MW-43D

Lab Sample ID: 680-79571-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	270		50	13	ug/L	50		8260B	Total/NA
Chlorobenzene	410		50	13	ug/L	50		8260B	Total/NA
Chloroform	8000		50	7.0	ug/L	50		8260B	Total/NA
Ethylbenzene	8.3	J	50	5.5	ug/L	50		8260B	Total/NA
Methylene Chloride	2100		250	50	ug/L	50		8260B	Total/NA
Tetrachloroethene	13	J	50	7.5	ug/L	50		8260B	Total/NA
Toluene	44	J	50	17	ug/L	50		8260B	Total/NA
Xylenes, Total	18	J	100	10	ug/L	50		8260B	Total/NA
Toxaphene, TAUC, Parlar 11-69	24	J p	48	4.8	ug/L	10		8081A_8082	Total/NA
Toxaphene, TAUC, Parlar 11-69 - RE	98	H	48	4.8	ug/L	10		8081A_8082	Total/NA
Barium	0.44		0.010	0.0020	mg/L	1		6010B	Total Recoverable
Vanadium	0.0035	J	0.010	0.0030	mg/L	1		6010B	Total Recoverable

### Client Sample ID: MW-49S

Lab Sample ID: 680-79571-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	1.9		1.0	0.33	ug/L	1		8260B	Total/NA

### Client Sample ID: MW-49I

Lab Sample ID: 680-79571-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	15		1.0	0.25	ug/L	1		8260B	Total/NA
Carbon disulfide	1.9	J	2.0	0.60	ug/L	1		8260B	Total/NA
Chlorobenzene	1.7		1.0	0.25	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	0.18	J	1.0	0.15	ug/L	1		8260B	Total/NA
Ethylbenzene	0.43	J	1.0	0.11	ug/L	1		8260B	Total/NA
Trichloroethene	0.17	J	1.0	0.13	ug/L	1		8260B	Total/NA
Xylenes, Total	0.91	J	2.0	0.20	ug/L	1		8260B	Total/NA

### Client Sample ID: MW-49D

Lab Sample ID: 680-79571-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.77	J	1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	0.23	J	1.0	0.14	ug/L	1		8260B	Total/NA
Tetrachloroethene	0.17	J	1.0	0.15	ug/L	1		8260B	Total/NA
Xylenes, Total	0.21	J	2.0	0.20	ug/L	1		8260B	Total/NA

### Client Sample ID: Dup-1

Lab Sample ID: 680-79571-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.77	J	1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	0.23	J	1.0	0.14	ug/L	1		8260B	Total/NA
Tetrachloroethene	0.17	J	1.0	0.15	ug/L	1		8260B	Total/NA
Xylenes, Total	0.21	J	2.0	0.20	ug/L	1		8260B	Total/NA



## Detection Summary

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

### Client Sample ID: Dup-1 (Continued)

Lab Sample ID: 680-79571-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4.4		1.0	0.25	ug/L	1		8260B	Total/NA
Chlorobenzene	0.45	J	1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	0.30	J	1.0	0.14	ug/L	1		8260B	Total/NA
Ethylbenzene	0.12	J	1.0	0.11	ug/L	1		8260B	Total/NA
Xylenes, Total	1.4	J	2.0	0.20	ug/L	1		8260B	Total/NA
Toxaphene, TAUC, Parlar 11-69	4.2	J	5.0	0.50	ug/L	1		8081A_8082	Total/NA
Toxaphene, TAUC, Parlar 11-69 - RE	3.6	J H	4.9	0.49	ug/L	1		8081A_8082	Total/NA
Barium	0.16		0.010	0.0020	mg/L	1		6010B	Total Recoverable
Chromium	0.0051	J	0.010	0.0020	mg/L	1		6010B	Total Recoverable
Selenium	0.0064	J	0.020	0.0064	mg/L	1		6010B	Total Recoverable
Vanadium	0.0056	J	0.010	0.0030	mg/L	1		6010B	Total Recoverable

### Client Sample ID: Trip Blank 2

Lab Sample ID: 680-79571-10

No Detections

### Client Sample ID: FB-1

Lab Sample ID: 680-79571-11

No Detections

### Client Sample ID: EB-1

Lab Sample ID: 680-79571-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toxaphene, TAUC, Parlar 11-69	0.90	J	4.7	0.47	ug/L	1		8081A_8082	Total/NA

### Client Sample ID: EB-2

Lab Sample ID: 680-79571-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toxaphene, TAUC, Parlar 11-69	0.94	J	4.8	0.48	ug/L	1		8081A_8082	Total/NA

### Client Sample ID: EB-3

Lab Sample ID: 680-79571-14

No Detections

### Client Sample ID: MW-42S

Lab Sample ID: 680-79571-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toxaphene, TAUC, Parlar 11-69	1000	J	2500	250	ug/L	500		8081A_8082	Total/NA
Toxaphene, Technical - RE	1200	H	250	25	ug/L	50		8081A_8082	Total/NA
Toxaphene, TAUC, Parlar 11-69 - RE	640	H	250	25	ug/L	50		8081A_8082	Total/NA

### Client Sample ID: MW-42S

Lab Sample ID: 680-79571-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5500		2100	2100	ug/Kg	40		8260B	Total/NA
Chlorobenzene	2400		2100	2100	ug/Kg	40		8260B	Total/NA
Chloroform	36000		2100	2100	ug/Kg	40		8260B	Total/NA



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-421**

**Lab Sample ID: 680-79571-1**

**Date Collected: 05/16/12 15:50**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>3100</b>		1300	250	ug/L			05/19/12 16:09	50
Acetonitrile	2000	U	2000	500	ug/L			05/19/12 16:09	50
Acrolein	1000	U	1000	370	ug/L			05/19/12 16:09	50
Acrylonitrile	1000	U	1000	360	ug/L			05/19/12 16:09	50
<b>Benzene</b>	<b>2800</b>		50	13	ug/L			05/19/12 16:09	50
Bromoform	50	U	50	25	ug/L			05/19/12 16:09	50
Bromomethane	50	U	50	40	ug/L			05/19/12 16:09	50
<b>Carbon disulfide</b>	<b>520</b>		100	30	ug/L			05/19/12 16:09	50
<b>Carbon tetrachloride</b>	<b>8400</b>		50	25	ug/L			05/19/12 16:09	50
Chlorobenzene	50	U	50	13	ug/L			05/19/12 16:09	50
2-Chloro-1,3-butadiene	50	U	50	15	ug/L			05/19/12 16:09	50
Chlorodibromomethane	50	U	50	5.0	ug/L			05/19/12 16:09	50
Chloroethane	50	U	50	50	ug/L			05/19/12 16:09	50
<b>Chloroform</b>	<b>4600</b>		50	7.0	ug/L			05/19/12 16:09	50
Chloromethane	50	U	50	17	ug/L			05/19/12 16:09	50
3-Chloro-1-propene	50	U	50	10	ug/L			05/19/12 16:09	50
cis-1,2-Dichloroethene	50	U	50	7.5	ug/L			05/19/12 16:09	50
cis-1,3-Dichloropropene	50	U	50	5.5	ug/L			05/19/12 16:09	50
1,2-Dibromo-3-Chloropropane	50	U	50	22	ug/L			05/19/12 16:09	50
Dibromomethane	50	U	50	10	ug/L			05/19/12 16:09	50
Dichlorobromomethane	50	U	50	13	ug/L			05/19/12 16:09	50
Dichlorodifluoromethane	50	U	50	13	ug/L			05/19/12 16:09	50
1,1-Dichloroethane	50	U	50	13	ug/L			05/19/12 16:09	50
1,2-Dichloroethane	50	U	50	5.0	ug/L			05/19/12 16:09	50
<b>1,1-Dichloroethene</b>	<b>11</b>	<b>J</b>	50	5.5	ug/L			05/19/12 16:09	50
1,2-Dichloropropane	50	U	50	6.5	ug/L			05/19/12 16:09	50
<b>Ethylbenzene</b>	<b>280</b>		50	5.5	ug/L			05/19/12 16:09	50
Ethylene Dibromide	50	U	50	13	ug/L			05/19/12 16:09	50
Ethyl methacrylate	50	U	50	13	ug/L			05/19/12 16:09	50
2-Hexanone	500	U	500	50	ug/L			05/19/12 16:09	50
Iodomethane	250	U	250	50	ug/L			05/19/12 16:09	50
Isobutyl alcohol	2000	U	2000	550	ug/L			05/19/12 16:09	50
Methacrylonitrile	1000	U	1000	170	ug/L			05/19/12 16:09	50
<b>Methylene Chloride</b>	<b>280</b>		250	50	ug/L			05/19/12 16:09	50
<b>2-Butanone (MEK)</b>	<b>100</b>	<b>J</b>	500	50	ug/L			05/19/12 16:09	50
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>760</b>		500	50	ug/L			05/19/12 16:09	50
Methyl methacrylate	50	U	50	24	ug/L			05/19/12 16:09	50
Pentachloroethane	250	U	250	60	ug/L			05/19/12 16:09	50
Propionitrile	1000	U	1000	230	ug/L			05/19/12 16:09	50
Styrene	50	U	50	5.5	ug/L			05/19/12 16:09	50
1,1,1,2-Tetrachloroethane	50	U	50	17	ug/L			05/19/12 16:09	50
1,1,2,2-Tetrachloroethane	50	U	50	9.0	ug/L			05/19/12 16:09	50
<b>Tetrachloroethene</b>	<b>14</b>	<b>J</b>	50	7.5	ug/L			05/19/12 16:09	50
<b>Toluene</b>	<b>120</b>		50	17	ug/L			05/19/12 16:09	50
trans-1,4-Dichloro-2-butene	100	U	100	25	ug/L			05/19/12 16:09	50
trans-1,2-Dichloroethene	50	U	50	10	ug/L			05/19/12 16:09	50
trans-1,3-Dichloropropene	50	U	50	11	ug/L			05/19/12 16:09	50
1,1,1-Trichloroethane	50	U	50	25	ug/L			05/19/12 16:09	50
1,1,2-Trichloroethane	50	U	50	6.5	ug/L			05/19/12 16:09	50
Trichloroethene	50	U	50	6.5	ug/L			05/19/12 16:09	50
Trichlorofluoromethane	50	U	50	13	ug/L			05/19/12 16:09	50



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-42I**

**Lab Sample ID: 680-79571-1**

**Date Collected: 05/16/12 15:50**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	50	U	50	21	ug/L			05/19/12 16:09	50
Vinyl acetate	100	U	100	14	ug/L			05/19/12 16:09	50
Vinyl chloride	50	U	50	9.0	ug/L			05/19/12 16:09	50
<b>Xylenes, Total</b>	<b>190</b>		100	10	ug/L			05/19/12 16:09	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		70 - 130					05/19/12 16:09	50
Dibromofluoromethane	97		70 - 130					05/19/12 16:09	50
Toluene-d8 (Surr)	110		70 - 130					05/19/12 16:09	50

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	48	U	48	4.8	ug/L		05/18/12 15:41	05/24/12 19:59	10
<b>Toxaphene, TAUC, Parlar 11-69</b>	<b>28</b>	<b>J p</b>	48	4.8	ug/L		05/18/12 15:41	05/24/12 19:59	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	0	D	40 - 130				05/18/12 15:41	05/24/12 19:59	10
DCB Decachlorobiphenyl	0	D	40 - 130				05/18/12 15:41	05/24/12 19:59	10
Tetrachloro-m-xylene	0	D	36 - 130				05/18/12 15:41	05/24/12 19:59	10
Tetrachloro-m-xylene	0	D	36 - 130				05/18/12 15:41	05/24/12 19:59	10

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	48	U H	48	4.8	ug/L		05/28/12 15:21	05/31/12 20:24	10
<b>Toxaphene, TAUC, Parlar 11-69</b>	<b>99</b>	<b>H</b>	48	4.8	ug/L		05/28/12 15:21	05/31/12 20:24	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	0	D	40 - 130				05/28/12 15:21	05/31/12 20:24	10
DCB Decachlorobiphenyl	0	D	40 - 130				05/28/12 15:21	05/31/12 20:24	10
Tetrachloro-m-xylene	0	D	36 - 130				05/28/12 15:21	05/31/12 20:24	10
Tetrachloro-m-xylene	0	D	36 - 130				05/28/12 15:21	05/31/12 20:24	10

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 02:07	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 02:07	1
<b>Barium</b>	<b>0.19</b>		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:07	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 02:07	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 02:07	1
<b>Chromium</b>	<b>0.0026</b>	<b>J</b>	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:07	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 02:07	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 02:07	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 02:07	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 02:07	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 02:07	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 02:07	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 02:07	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 02:07	1
Vanadium	0.010	U	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 02:07	1
<b>Zinc</b>	<b>0.011</b>	<b>J</b>	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 02:07	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

**Client Sample ID: MW-42I**

**Lab Sample ID: 680-79571-1**

**Date Collected: 05/16/12 15:50**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 10:34	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-42D**

**Lab Sample ID: 680-79571-2**

**Date Collected: 05/16/12 15:30**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	130	U	130	25	ug/L			05/20/12 21:29	5
Acetonitrile	200	U	200	50	ug/L			05/20/12 21:29	5
Acrolein	100	U	100	37	ug/L			05/20/12 21:29	5
Acrylonitrile	100	U	100	36	ug/L			05/20/12 21:29	5
<b>Benzene</b>	<b>200</b>		5.0	1.3	ug/L			05/20/12 21:29	5
Bromoform	5.0	U	5.0	2.5	ug/L			05/20/12 21:29	5
Bromomethane	5.0	U	5.0	4.0	ug/L			05/20/12 21:29	5
Carbon disulfide	10	U	10	3.0	ug/L			05/20/12 21:29	5
Carbon tetrachloride	5.0	U	5.0	2.5	ug/L			05/20/12 21:29	5
<b>Chlorobenzene</b>	<b>34</b>		5.0	1.3	ug/L			05/20/12 21:29	5
2-Chloro-1,3-butadiene	5.0	U	5.0	1.5	ug/L			05/20/12 21:29	5
Chlorodibromomethane	5.0	U	5.0	0.50	ug/L			05/20/12 21:29	5
Chloroethane	5.0	U	5.0	5.0	ug/L			05/20/12 21:29	5
<b>Chloroform</b>	<b>350</b>		5.0	0.70	ug/L			05/20/12 21:29	5
Chloromethane	5.0	U	5.0	1.7	ug/L			05/20/12 21:29	5
3-Chloro-1-propene	5.0	U	5.0	1.0	ug/L			05/20/12 21:29	5
cis-1,2-Dichloroethene	5.0	U	5.0	0.75	ug/L			05/20/12 21:29	5
cis-1,3-Dichloropropene	5.0	U	5.0	0.55	ug/L			05/20/12 21:29	5
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	2.2	ug/L			05/20/12 21:29	5
Dibromomethane	5.0	U	5.0	1.0	ug/L			05/20/12 21:29	5
Dichlorobromomethane	5.0	U	5.0	1.3	ug/L			05/20/12 21:29	5
Dichlorodifluoromethane	5.0	U	5.0	1.3	ug/L			05/20/12 21:29	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			05/20/12 21:29	5
1,2-Dichloroethane	5.0	U	5.0	0.50	ug/L			05/20/12 21:29	5
<b>1,1-Dichloroethene</b>	<b>2.9</b>	<b>J</b>	5.0	0.55	ug/L			05/20/12 21:29	5
1,2-Dichloropropane	5.0	U	5.0	0.65	ug/L			05/20/12 21:29	5
<b>Ethylbenzene</b>	<b>26</b>		5.0	0.55	ug/L			05/20/12 21:29	5
Ethylene Dibromide	5.0	U	5.0	1.3	ug/L			05/20/12 21:29	5
Ethyl methacrylate	5.0	U	5.0	1.3	ug/L			05/20/12 21:29	5
2-Hexanone	50	U	50	5.0	ug/L			05/20/12 21:29	5
Iodomethane	25	U	25	5.0	ug/L			05/20/12 21:29	5
Isobutyl alcohol	200	U	200	55	ug/L			05/20/12 21:29	5
Methacrylonitrile	100	U	100	17	ug/L			05/20/12 21:29	5
<b>Methylene Chloride</b>	<b>30</b>		25	5.0	ug/L			05/20/12 21:29	5
2-Butanone (MEK)	50	U	50	5.0	ug/L			05/20/12 21:29	5
4-Methyl-2-pentanone (MIBK)	50	U	50	5.0	ug/L			05/20/12 21:29	5
Methyl methacrylate	5.0	U	5.0	2.4	ug/L			05/20/12 21:29	5
Pentachloroethane	25	U	25	6.0	ug/L			05/20/12 21:29	5
Propionitrile	100	U	100	23	ug/L			05/20/12 21:29	5
Styrene	5.0	U	5.0	0.55	ug/L			05/20/12 21:29	5
1,1,1,2-Tetrachloroethane	5.0	U	5.0	1.7	ug/L			05/20/12 21:29	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.90	ug/L			05/20/12 21:29	5
<b>Tetrachloroethene</b>	<b>8.9</b>		5.0	0.75	ug/L			05/20/12 21:29	5
<b>Toluene</b>	<b>110</b>		5.0	1.7	ug/L			05/20/12 21:29	5
trans-1,4-Dichloro-2-butene	10	U	10	2.5	ug/L			05/20/12 21:29	5
trans-1,2-Dichloroethene	5.0	U	5.0	1.0	ug/L			05/20/12 21:29	5
trans-1,3-Dichloropropene	5.0	U	5.0	1.1	ug/L			05/20/12 21:29	5
1,1,1-Trichloroethane	5.0	U	5.0	2.5	ug/L			05/20/12 21:29	5
1,1,2-Trichloroethane	5.0	U	5.0	0.65	ug/L			05/20/12 21:29	5
Trichloroethene	5.0	U	5.0	0.65	ug/L			05/20/12 21:29	5
Trichlorofluoromethane	5.0	U	5.0	1.3	ug/L			05/20/12 21:29	5



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-42D**

**Lab Sample ID: 680-79571-2**

**Date Collected: 05/16/12 15:30**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	5.0	U	5.0	2.1	ug/L			05/20/12 21:29	5
Vinyl acetate	10	U	10	1.4	ug/L			05/20/12 21:29	5
Vinyl chloride	5.0	U	5.0	0.90	ug/L			05/20/12 21:29	5
<b>Xylenes, Total</b>	<b>19</b>		10	1.0	ug/L			05/20/12 21:29	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130					05/20/12 21:29	5
Dibromofluoromethane	98		70 - 130					05/20/12 21:29	5
Toluene-d8 (Surr)	108		70 - 130					05/20/12 21:29	5

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	48	U	48	4.8	ug/L		05/18/12 15:41	05/24/12 20:18	10
<b>Toxaphene, TAUC, Parlar 11-69</b>	<b>130</b>		48	4.8	ug/L		05/18/12 15:41	05/24/12 20:18	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	0	D	40 - 130				05/18/12 15:41	05/24/12 20:18	10
DCB Decachlorobiphenyl	0	D	40 - 130				05/18/12 15:41	05/24/12 20:18	10
Tetrachloro-m-xylene	0	D	36 - 130				05/18/12 15:41	05/24/12 20:18	10
Tetrachloro-m-xylene	0	D	36 - 130				05/18/12 15:41	05/24/12 20:18	10

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	610	H	48	4.8	ug/L		05/28/12 15:21	05/31/12 20:44	10
<b>Toxaphene, TAUC, Parlar 11-69</b>	<b>720</b>	<b>H</b>	48	4.8	ug/L		05/28/12 15:21	05/31/12 20:44	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	0	D	40 - 130				05/28/12 15:21	05/31/12 20:44	10
DCB Decachlorobiphenyl	0	D	40 - 130				05/28/12 15:21	05/31/12 20:44	10
Tetrachloro-m-xylene	0	D	36 - 130				05/28/12 15:21	05/31/12 20:44	10
Tetrachloro-m-xylene	0	D	36 - 130				05/28/12 15:21	05/31/12 20:44	10

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 02:11	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 02:11	1
<b>Barium</b>	<b>1.1</b>		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:11	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 02:11	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 02:11	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:11	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 02:11	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 02:11	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 02:11	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 02:11	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 02:11	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 02:11	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 02:11	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 02:11	1
<b>Vanadium</b>	<b>0.0044</b>	<b>J</b>	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 02:11	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 02:11	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

**Client Sample ID: MW-42D**

**Lab Sample ID: 680-79571-2**

**Date Collected: 05/16/12 15:30**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 10:37	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-43S**

**Date Collected: 05/16/12 13:30**

**Date Received: 05/17/12 10:35**

**Lab Sample ID: 680-79571-3**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/20/12 19:34	1
Acetonitrile	40	U	40	10	ug/L			05/20/12 19:34	1
Acrolein	20	U	20	7.4	ug/L			05/20/12 19:34	1
Acrylonitrile	20	U	20	7.2	ug/L			05/20/12 19:34	1
Benzene	1.0	U	1.0	0.25	ug/L			05/20/12 19:34	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/20/12 19:34	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/20/12 19:34	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/20/12 19:34	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/20/12 19:34	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/20/12 19:34	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/20/12 19:34	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/20/12 19:34	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/20/12 19:34	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/20/12 19:34	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/20/12 19:34	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/20/12 19:34	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/20/12 19:34	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/20/12 19:34	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/20/12 19:34	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/20/12 19:34	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/20/12 19:34	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/20/12 19:34	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/20/12 19:34	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/20/12 19:34	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/20/12 19:34	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/20/12 19:34	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/20/12 19:34	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/20/12 19:34	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/20/12 19:34	1
2-Hexanone	10	U	10	1.0	ug/L			05/20/12 19:34	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/20/12 19:34	1
Isobutyl alcohol	40	U	40	11	ug/L			05/20/12 19:34	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/20/12 19:34	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/20/12 19:34	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/20/12 19:34	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/20/12 19:34	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/20/12 19:34	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/20/12 19:34	1
Propionitrile	20	U	20	4.6	ug/L			05/20/12 19:34	1
Styrene	1.0	U	1.0	0.11	ug/L			05/20/12 19:34	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/20/12 19:34	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/20/12 19:34	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/20/12 19:34	1
Toluene	1.0	U	1.0	0.33	ug/L			05/20/12 19:34	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/20/12 19:34	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/20/12 19:34	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/20/12 19:34	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/20/12 19:34	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/20/12 19:34	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/20/12 19:34	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/20/12 19:34	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-43S**

**Lab Sample ID: 680-79571-3**

**Date Collected: 05/16/12 13:30**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/20/12 19:34	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/20/12 19:34	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/20/12 19:34	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/20/12 19:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		70 - 130					05/20/12 19:34	1
Dibromofluoromethane	105		70 - 130					05/20/12 19:34	1
Toluene-d8 (Surr)	106		70 - 130					05/20/12 19:34	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.7	U	4.7	0.47	ug/L		05/18/12 15:41	05/24/12 21:36	1
Toxaphene, TAUC, Parlar 11-69	4.7	U	4.7	0.47	ug/L		05/18/12 15:41	05/24/12 21:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	21	X	40 - 130				05/18/12 15:41	05/24/12 21:36	1
DCB Decachlorobiphenyl	17	X	40 - 130				05/18/12 15:41	05/24/12 21:36	1
Tetrachloro-m-xylene	52		36 - 130				05/18/12 15:41	05/24/12 21:36	1
Tetrachloro-m-xylene	61		36 - 130				05/18/12 15:41	05/24/12 21:36	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.8	U H	4.8	0.48	ug/L		05/28/12 15:21	05/31/12 21:03	1
Toxaphene, TAUC, Parlar 11-69	4.8	U H	4.8	0.48	ug/L		05/28/12 15:21	05/31/12 21:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	16	X	40 - 130				05/28/12 15:21	05/31/12 21:03	1
DCB Decachlorobiphenyl	17	X	40 - 130				05/28/12 15:21	05/31/12 21:03	1
Tetrachloro-m-xylene	63		36 - 130				05/28/12 15:21	05/31/12 21:03	1
Tetrachloro-m-xylene	69		36 - 130				05/28/12 15:21	05/31/12 21:03	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 02:15	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 02:15	1
Barium	0.083		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:15	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 02:15	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 02:15	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:15	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 02:15	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 02:15	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 02:15	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 02:15	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 02:15	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 02:15	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 02:15	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 02:15	1
Vanadium	0.0031	J	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 02:15	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 02:15	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

**Client Sample ID: MW-43S**

**Lab Sample ID: 680-79571-3**

**Date Collected: 05/16/12 13:30**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 10:40	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-43I**

**Lab Sample ID: 680-79571-4**

**Date Collected: 05/16/12 13:20**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/20/12 20:03	1
Acetonitrile	40	U	40	10	ug/L			05/20/12 20:03	1
Acrolein	20	U	20	7.4	ug/L			05/20/12 20:03	1
Acrylonitrile	20	U	20	7.2	ug/L			05/20/12 20:03	1
Benzene	1.0	U	1.0	0.25	ug/L			05/20/12 20:03	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/20/12 20:03	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/20/12 20:03	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/20/12 20:03	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/20/12 20:03	1
<b>Chlorobenzene</b>	<b>0.27</b>	<b>J</b>	1.0	0.25	ug/L			05/20/12 20:03	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/20/12 20:03	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/20/12 20:03	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/20/12 20:03	1
<b>Chloroform</b>	<b>0.35</b>	<b>J</b>	1.0	0.14	ug/L			05/20/12 20:03	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/20/12 20:03	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/20/12 20:03	1
<b>cis-1,2-Dichloroethene</b>	<b>0.18</b>	<b>J</b>	1.0	0.15	ug/L			05/20/12 20:03	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/20/12 20:03	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/20/12 20:03	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/20/12 20:03	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/20/12 20:03	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/20/12 20:03	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/20/12 20:03	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/20/12 20:03	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/20/12 20:03	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/20/12 20:03	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/20/12 20:03	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/20/12 20:03	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/20/12 20:03	1
2-Hexanone	10	U	10	1.0	ug/L			05/20/12 20:03	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/20/12 20:03	1
Isobutyl alcohol	40	U	40	11	ug/L			05/20/12 20:03	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/20/12 20:03	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/20/12 20:03	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/20/12 20:03	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/20/12 20:03	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/20/12 20:03	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/20/12 20:03	1
Propionitrile	20	U	20	4.6	ug/L			05/20/12 20:03	1
Styrene	1.0	U	1.0	0.11	ug/L			05/20/12 20:03	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/20/12 20:03	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/20/12 20:03	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/20/12 20:03	1
Toluene	1.0	U	1.0	0.33	ug/L			05/20/12 20:03	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/20/12 20:03	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/20/12 20:03	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/20/12 20:03	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/20/12 20:03	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/20/12 20:03	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/20/12 20:03	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/20/12 20:03	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-43I**

**Lab Sample ID: 680-79571-4**

**Date Collected: 05/16/12 13:20**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/20/12 20:03	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/20/12 20:03	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/20/12 20:03	1
<b>Xylenes, Total</b>	<b>1.0</b>	<b>J</b>	2.0	0.20	ug/L			05/20/12 20:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		70 - 130					05/20/12 20:03	1
Dibromofluoromethane	106		70 - 130					05/20/12 20:03	1
Toluene-d8 (Surr)	107		70 - 130					05/20/12 20:03	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.9	U	4.9	0.49	ug/L		05/18/12 15:41	05/24/12 21:55	1
<b>Toxaphene, TAUC, Parlar 11-69</b>	<b>2.4</b>	<b>J</b>	4.9	0.49	ug/L		05/18/12 15:41	05/24/12 21:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	24	X	40 - 130				05/18/12 15:41	05/24/12 21:55	1
DCB Decachlorobiphenyl	12	p X	40 - 130				05/18/12 15:41	05/24/12 21:55	1
Tetrachloro-m-xylene	42		36 - 130				05/18/12 15:41	05/24/12 21:55	1
Tetrachloro-m-xylene	54		36 - 130				05/18/12 15:41	05/24/12 21:55	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.8	U H	4.8	0.48	ug/L		05/28/12 15:21	05/31/12 21:23	1
<b>Toxaphene, TAUC, Parlar 11-69</b>	<b>2.9</b>	<b>J H</b>	4.8	0.48	ug/L		05/28/12 15:21	05/31/12 21:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	46		40 - 130				05/28/12 15:21	05/31/12 21:23	1
DCB Decachlorobiphenyl	26	X	40 - 130				05/28/12 15:21	05/31/12 21:23	1
Tetrachloro-m-xylene	60		36 - 130				05/28/12 15:21	05/31/12 21:23	1
Tetrachloro-m-xylene	73		36 - 130				05/28/12 15:21	05/31/12 21:23	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 02:20	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 02:20	1
<b>Barium</b>	<b>0.17</b>		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:20	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 02:20	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 02:20	1
<b>Chromium</b>	<b>0.0054</b>	<b>J</b>	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:20	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 02:20	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 02:20	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 02:20	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 02:20	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 02:20	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 02:20	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 02:20	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 02:20	1
<b>Vanadium</b>	<b>0.0059</b>	<b>J</b>	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 02:20	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 02:20	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

**Client Sample ID: MW-43I**

**Lab Sample ID: 680-79571-4**

**Date Collected: 05/16/12 13:20**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 10:44	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-43D**

**Lab Sample ID: 680-79571-5**

**Date Collected: 05/16/12 13:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1300	U	1300	250	ug/L			05/19/12 16:38	50
Acetonitrile	2000	U	2000	500	ug/L			05/19/12 16:38	50
Acrolein	1000	U	1000	370	ug/L			05/19/12 16:38	50
Acrylonitrile	1000	U	1000	360	ug/L			05/19/12 16:38	50
<b>Benzene</b>	<b>270</b>		50	13	ug/L			05/19/12 16:38	50
Bromoform	50	U	50	25	ug/L			05/19/12 16:38	50
Bromomethane	50	U	50	40	ug/L			05/19/12 16:38	50
Carbon disulfide	100	U	100	30	ug/L			05/19/12 16:38	50
Carbon tetrachloride	50	U	50	25	ug/L			05/19/12 16:38	50
<b>Chlorobenzene</b>	<b>410</b>		50	13	ug/L			05/19/12 16:38	50
2-Chloro-1,3-butadiene	50	U	50	15	ug/L			05/19/12 16:38	50
Chlorodibromomethane	50	U	50	5.0	ug/L			05/19/12 16:38	50
Chloroethane	50	U	50	50	ug/L			05/19/12 16:38	50
<b>Chloroform</b>	<b>8000</b>		50	7.0	ug/L			05/19/12 16:38	50
Chloromethane	50	U	50	17	ug/L			05/19/12 16:38	50
3-Chloro-1-propene	50	U	50	10	ug/L			05/19/12 16:38	50
cis-1,2-Dichloroethene	50	U	50	7.5	ug/L			05/19/12 16:38	50
cis-1,3-Dichloropropene	50	U	50	5.5	ug/L			05/19/12 16:38	50
1,2-Dibromo-3-Chloropropane	50	U	50	22	ug/L			05/19/12 16:38	50
Dibromomethane	50	U	50	10	ug/L			05/19/12 16:38	50
Dichlorobromomethane	50	U	50	13	ug/L			05/19/12 16:38	50
Dichlorodifluoromethane	50	U	50	13	ug/L			05/19/12 16:38	50
1,1-Dichloroethane	50	U	50	13	ug/L			05/19/12 16:38	50
1,2-Dichloroethane	50	U	50	5.0	ug/L			05/19/12 16:38	50
1,1-Dichloroethene	50	U	50	5.5	ug/L			05/19/12 16:38	50
1,2-Dichloropropane	50	U	50	6.5	ug/L			05/19/12 16:38	50
<b>Ethylbenzene</b>	<b>8.3</b>	<b>J</b>	50	5.5	ug/L			05/19/12 16:38	50
Ethylene Dibromide	50	U	50	13	ug/L			05/19/12 16:38	50
Ethyl methacrylate	50	U	50	13	ug/L			05/19/12 16:38	50
2-Hexanone	500	U	500	50	ug/L			05/19/12 16:38	50
Iodomethane	250	U	250	50	ug/L			05/19/12 16:38	50
Isobutyl alcohol	2000	U	2000	550	ug/L			05/19/12 16:38	50
Methacrylonitrile	1000	U	1000	170	ug/L			05/19/12 16:38	50
<b>Methylene Chloride</b>	<b>2100</b>		250	50	ug/L			05/19/12 16:38	50
2-Butanone (MEK)	500	U	500	50	ug/L			05/19/12 16:38	50
4-Methyl-2-pentanone (MIBK)	500	U	500	50	ug/L			05/19/12 16:38	50
Methyl methacrylate	50	U	50	24	ug/L			05/19/12 16:38	50
Pentachloroethane	250	U	250	60	ug/L			05/19/12 16:38	50
Propionitrile	1000	U	1000	230	ug/L			05/19/12 16:38	50
Styrene	50	U	50	5.5	ug/L			05/19/12 16:38	50
1,1,1,2-Tetrachloroethane	50	U	50	17	ug/L			05/19/12 16:38	50
1,1,2,2-Tetrachloroethane	50	U	50	9.0	ug/L			05/19/12 16:38	50
<b>Tetrachloroethene</b>	<b>13</b>	<b>J</b>	50	7.5	ug/L			05/19/12 16:38	50
<b>Toluene</b>	<b>44</b>	<b>J</b>	50	17	ug/L			05/19/12 16:38	50
trans-1,4-Dichloro-2-butene	100	U	100	25	ug/L			05/19/12 16:38	50
trans-1,2-Dichloroethene	50	U	50	10	ug/L			05/19/12 16:38	50
trans-1,3-Dichloropropene	50	U	50	11	ug/L			05/19/12 16:38	50
1,1,1-Trichloroethane	50	U	50	25	ug/L			05/19/12 16:38	50
1,1,2-Trichloroethane	50	U	50	6.5	ug/L			05/19/12 16:38	50
Trichloroethene	50	U	50	6.5	ug/L			05/19/12 16:38	50
Trichlorofluoromethane	50	U	50	13	ug/L			05/19/12 16:38	50



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-43D**

**Lab Sample ID: 680-79571-5**

**Date Collected: 05/16/12 13:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	50	U	50	21	ug/L			05/19/12 16:38	50
Vinyl acetate	100	U	100	14	ug/L			05/19/12 16:38	50
Vinyl chloride	50	U	50	9.0	ug/L			05/19/12 16:38	50
<b>Xylenes, Total</b>	<b>18</b>	<b>J</b>	100	10	ug/L			05/19/12 16:38	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		70 - 130					05/19/12 16:38	50
Dibromofluoromethane	102		70 - 130					05/19/12 16:38	50
Toluene-d8 (Surr)	108		70 - 130					05/19/12 16:38	50

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	48	U	48	4.8	ug/L		05/18/12 15:41	05/24/12 20:38	10
<b>Toxaphene, TAUC, Parlar 11-69</b>	<b>24</b>	<b>J p</b>	48	4.8	ug/L		05/18/12 15:41	05/24/12 20:38	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	0	D	40 - 130				05/18/12 15:41	05/24/12 20:38	10
DCB Decachlorobiphenyl	0	D	40 - 130				05/18/12 15:41	05/24/12 20:38	10
Tetrachloro-m-xylene	0	D	36 - 130				05/18/12 15:41	05/24/12 20:38	10
Tetrachloro-m-xylene	0	D	36 - 130				05/18/12 15:41	05/24/12 20:38	10

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	48	U H	48	4.8	ug/L		05/28/12 15:21	05/31/12 21:42	10
<b>Toxaphene, TAUC, Parlar 11-69</b>	<b>98</b>	<b>H</b>	48	4.8	ug/L		05/28/12 15:21	05/31/12 21:42	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	0	D	40 - 130				05/28/12 15:21	05/31/12 21:42	10
DCB Decachlorobiphenyl	0	D	40 - 130				05/28/12 15:21	05/31/12 21:42	10
Tetrachloro-m-xylene	0	D	36 - 130				05/28/12 15:21	05/31/12 21:42	10
Tetrachloro-m-xylene	0	D	36 - 130				05/28/12 15:21	05/31/12 21:42	10

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 02:24	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 02:24	1
<b>Barium</b>	<b>0.44</b>		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:24	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 02:24	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 02:24	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:24	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 02:24	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 02:24	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 02:24	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 02:24	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 02:24	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 02:24	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 02:24	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 02:24	1
<b>Vanadium</b>	<b>0.0035</b>	<b>J</b>	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 02:24	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 02:24	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

**Client Sample ID: MW-43D**

**Lab Sample ID: 680-79571-5**

**Date Collected: 05/16/12 13:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 10:47	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-49S**

**Lab Sample ID: 680-79571-6**

**Date Collected: 05/16/12 14:50**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 13:03	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 13:03	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 13:03	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 13:03	1
Benzene	1.0	U	1.0	0.25	ug/L			05/19/12 13:03	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 13:03	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 13:03	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/19/12 13:03	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 13:03	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/19/12 13:03	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 13:03	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 13:03	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 13:03	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/19/12 13:03	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 13:03	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 13:03	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 13:03	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 13:03	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 13:03	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 13:03	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 13:03	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 13:03	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 13:03	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 13:03	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 13:03	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/19/12 13:03	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/19/12 13:03	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 13:03	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 13:03	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 13:03	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 13:03	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 13:03	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 13:03	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 13:03	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 13:03	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 13:03	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 13:03	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 13:03	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 13:03	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 13:03	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 13:03	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 13:03	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 13:03	1
<b>Toluene</b>	<b>1.9</b>		1.0	0.33	ug/L			05/19/12 13:03	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 13:03	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 13:03	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 13:03	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 13:03	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 13:03	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/19/12 13:03	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 13:03	1



## Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-49S**

**Lab Sample ID: 680-79571-6**

**Date Collected: 05/16/12 14:50**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 13:03	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 13:03	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 13:03	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/19/12 13:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		70 - 130		05/19/12 13:03	1
Dibromofluoromethane	97		70 - 130		05/19/12 13:03	1
Toluene-d8 (Surr)	105		70 - 130		05/19/12 13:03	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-49I**

**Lab Sample ID: 680-79571-7**

**Date Collected: 05/16/12 14:40**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 13:31	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 13:31	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 13:31	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 13:31	1
<b>Benzene</b>	<b>15</b>		1.0	0.25	ug/L			05/19/12 13:31	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 13:31	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 13:31	1
<b>Carbon disulfide</b>	<b>1.9 J</b>		2.0	0.60	ug/L			05/19/12 13:31	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 13:31	1
<b>Chlorobenzene</b>	<b>1.7</b>		1.0	0.25	ug/L			05/19/12 13:31	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 13:31	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 13:31	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 13:31	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/19/12 13:31	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 13:31	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 13:31	1
<b>cis-1,2-Dichloroethene</b>	<b>0.18 J</b>		1.0	0.15	ug/L			05/19/12 13:31	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 13:31	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 13:31	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 13:31	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 13:31	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 13:31	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 13:31	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 13:31	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 13:31	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/19/12 13:31	1
<b>Ethylbenzene</b>	<b>0.43 J</b>		1.0	0.11	ug/L			05/19/12 13:31	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 13:31	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 13:31	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 13:31	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 13:31	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 13:31	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 13:31	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 13:31	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 13:31	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 13:31	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 13:31	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 13:31	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 13:31	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 13:31	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 13:31	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 13:31	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 13:31	1
Toluene	1.0	U	1.0	0.33	ug/L			05/19/12 13:31	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 13:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 13:31	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 13:31	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 13:31	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 13:31	1
<b>Trichloroethene</b>	<b>0.17 J</b>		1.0	0.13	ug/L			05/19/12 13:31	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 13:31	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-49I**

**Lab Sample ID: 680-79571-7**

**Date Collected: 05/16/12 14:40**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 13:31	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 13:31	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 13:31	1
<b>Xylenes, Total</b>	<b>0.91</b>	<b>J</b>	2.0	0.20	ug/L			05/19/12 13:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		70 - 130		05/19/12 13:31	1
Dibromofluoromethane	97		70 - 130		05/19/12 13:31	1
Toluene-d8 (Surr)	105		70 - 130		05/19/12 13:31	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-49D**

**Lab Sample ID: 680-79571-8**

**Date Collected: 05/16/12 14:20**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 14:00	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 14:00	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 14:00	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 14:00	1
<b>Benzene</b>	<b>0.77</b>	<b>J</b>	1.0	0.25	ug/L			05/19/12 14:00	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 14:00	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 14:00	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/19/12 14:00	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 14:00	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/19/12 14:00	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 14:00	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 14:00	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 14:00	1
<b>Chloroform</b>	<b>0.23</b>	<b>J</b>	1.0	0.14	ug/L			05/19/12 14:00	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 14:00	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 14:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 14:00	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 14:00	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 14:00	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 14:00	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 14:00	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 14:00	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 14:00	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 14:00	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 14:00	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/19/12 14:00	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/19/12 14:00	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 14:00	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 14:00	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 14:00	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 14:00	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 14:00	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 14:00	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 14:00	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 14:00	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 14:00	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 14:00	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 14:00	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 14:00	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 14:00	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 14:00	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 14:00	1
<b>Tetrachloroethene</b>	<b>0.17</b>	<b>J</b>	1.0	0.15	ug/L			05/19/12 14:00	1
Toluene	1.0	U	1.0	0.33	ug/L			05/19/12 14:00	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 14:00	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 14:00	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 14:00	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 14:00	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 14:00	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/19/12 14:00	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 14:00	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-49D**

**Lab Sample ID: 680-79571-8**

**Date Collected: 05/16/12 14:20**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 14:00	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 14:00	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 14:00	1
<b>Xylenes, Total</b>	<b>0.21</b>	<b>J</b>	2.0	0.20	ug/L			05/19/12 14:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		70 - 130		05/19/12 14:00	1
Dibromofluoromethane	96		70 - 130		05/19/12 14:00	1
Toluene-d8 (Surr)	105		70 - 130		05/19/12 14:00	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: Dup-1**

**Date Collected: 05/16/12 00:00**

**Date Received: 05/17/12 10:35**

**Lab Sample ID: 680-79571-9**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 14:29	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 14:29	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 14:29	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 14:29	1
<b>Benzene</b>	<b>4.4</b>		1.0	0.25	ug/L			05/19/12 14:29	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 14:29	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 14:29	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/19/12 14:29	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 14:29	1
<b>Chlorobenzene</b>	<b>0.45</b>	<b>J</b>	1.0	0.25	ug/L			05/19/12 14:29	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 14:29	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 14:29	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 14:29	1
<b>Chloroform</b>	<b>0.30</b>	<b>J</b>	1.0	0.14	ug/L			05/19/12 14:29	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 14:29	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 14:29	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 14:29	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 14:29	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 14:29	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 14:29	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 14:29	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 14:29	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 14:29	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 14:29	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 14:29	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/19/12 14:29	1
<b>Ethylbenzene</b>	<b>0.12</b>	<b>J</b>	1.0	0.11	ug/L			05/19/12 14:29	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 14:29	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 14:29	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 14:29	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 14:29	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 14:29	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 14:29	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 14:29	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 14:29	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 14:29	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 14:29	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 14:29	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 14:29	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 14:29	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 14:29	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 14:29	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 14:29	1
Toluene	1.0	U	1.0	0.33	ug/L			05/19/12 14:29	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 14:29	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 14:29	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 14:29	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 14:29	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 14:29	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/19/12 14:29	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 14:29	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: Dup-1**

**Lab Sample ID: 680-79571-9**

**Date Collected: 05/16/12 00:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 14:29	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 14:29	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 14:29	1
<b>Xylenes, Total</b>	<b>1.4</b>	<b>J</b>	2.0	0.20	ug/L			05/19/12 14:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		70 - 130					05/19/12 14:29	1
Dibromofluoromethane	97		70 - 130					05/19/12 14:29	1
Toluene-d8 (Surr)	106		70 - 130					05/19/12 14:29	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	5.0	U	5.0	0.50	ug/L		05/18/12 15:41	05/25/12 00:11	1
<b>Toxaphene, TAUC, Parlar 11-69</b>	<b>4.2</b>	<b>J</b>	5.0	0.50	ug/L		05/18/12 15:41	05/25/12 00:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	51		40 - 130				05/18/12 15:41	05/25/12 00:11	1
DCB Decachlorobiphenyl	25	p X	40 - 130				05/18/12 15:41	05/25/12 00:11	1
Tetrachloro-m-xylene	70		36 - 130				05/18/12 15:41	05/25/12 00:11	1
Tetrachloro-m-xylene	69		36 - 130				05/18/12 15:41	05/25/12 00:11	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.9	U H	4.9	0.49	ug/L		05/28/12 15:21	05/31/12 22:01	1
<b>Toxaphene, TAUC, Parlar 11-69</b>	<b>3.6</b>	<b>J H</b>	4.9	0.49	ug/L		05/28/12 15:21	05/31/12 22:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	49		40 - 130				05/28/12 15:21	05/31/12 22:01	1
DCB Decachlorobiphenyl	28	X	40 - 130				05/28/12 15:21	05/31/12 22:01	1
Tetrachloro-m-xylene	63		36 - 130				05/28/12 15:21	05/31/12 22:01	1
Tetrachloro-m-xylene	76		36 - 130				05/28/12 15:21	05/31/12 22:01	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/25/12 11:41	05/25/12 22:21	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/25/12 11:41	05/25/12 22:21	1
<b>Barium</b>	<b>0.16</b>		0.010	0.0020	mg/L		05/25/12 11:41	05/25/12 22:21	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/25/12 11:41	05/25/12 22:21	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/25/12 11:41	05/25/12 22:21	1
<b>Chromium</b>	<b>0.0051</b>	<b>J</b>	0.010	0.0020	mg/L		05/25/12 11:41	05/25/12 22:21	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/25/12 11:41	05/25/12 22:21	1
Copper	0.020	U	0.020	0.0050	mg/L		05/25/12 11:41	05/25/12 22:21	1
Lead	0.010	U	0.010	0.0034	mg/L		05/25/12 11:41	05/25/12 22:21	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/25/12 11:41	05/25/12 22:21	1
<b>Selenium</b>	<b>0.0064</b>	<b>J</b>	0.020	0.0064	mg/L		05/25/12 11:41	05/25/12 22:21	1
Silver	0.010	U	0.010	0.00097	mg/L		05/25/12 11:41	05/25/12 22:21	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/25/12 11:41	05/25/12 22:21	1
Tin	0.050	U	0.050	0.0054	mg/L		05/25/12 11:41	05/25/12 22:21	1
<b>Vanadium</b>	<b>0.0056</b>	<b>J</b>	0.010	0.0030	mg/L		05/25/12 11:41	05/25/12 22:21	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/25/12 11:41	05/25/12 22:21	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

**Client Sample ID: Dup-1**

**Lab Sample ID: 680-79571-9**

**Date Collected: 05/16/12 00:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 10:51	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: Trip Blank 2**

**Lab Sample ID: 680-79571-10**

**Date Collected: 05/16/12 00:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/18/12 15:29	1
Acetonitrile	40	U	40	10	ug/L			05/18/12 15:29	1
Acrolein	20	U	20	7.4	ug/L			05/18/12 15:29	1
Acrylonitrile	20	U	20	7.2	ug/L			05/18/12 15:29	1
Benzene	1.0	U	1.0	0.25	ug/L			05/18/12 15:29	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/18/12 15:29	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/18/12 15:29	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/18/12 15:29	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/18/12 15:29	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/18/12 15:29	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/18/12 15:29	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/18/12 15:29	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/18/12 15:29	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/18/12 15:29	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/18/12 15:29	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/18/12 15:29	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/18/12 15:29	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/18/12 15:29	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/18/12 15:29	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/18/12 15:29	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/18/12 15:29	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/18/12 15:29	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/18/12 15:29	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/18/12 15:29	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/18/12 15:29	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/18/12 15:29	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/18/12 15:29	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/18/12 15:29	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/18/12 15:29	1
2-Hexanone	10	U	10	1.0	ug/L			05/18/12 15:29	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/18/12 15:29	1
Isobutyl alcohol	40	U	40	11	ug/L			05/18/12 15:29	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/18/12 15:29	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/18/12 15:29	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/18/12 15:29	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/18/12 15:29	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/18/12 15:29	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/18/12 15:29	1
Propionitrile	20	U	20	4.6	ug/L			05/18/12 15:29	1
Styrene	1.0	U	1.0	0.11	ug/L			05/18/12 15:29	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/18/12 15:29	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/18/12 15:29	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/18/12 15:29	1
Toluene	1.0	U	1.0	0.33	ug/L			05/18/12 15:29	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/18/12 15:29	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/18/12 15:29	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/18/12 15:29	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/18/12 15:29	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/18/12 15:29	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/18/12 15:29	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/18/12 15:29	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: Trip Blank 2**

**Lab Sample ID: 680-79571-10**

**Date Collected: 05/16/12 00:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/18/12 15:29	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/18/12 15:29	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/18/12 15:29	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/18/12 15:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		70 - 130		05/18/12 15:29	1
Dibromofluoromethane	106		70 - 130		05/18/12 15:29	1
Toluene-d8 (Surr)	105		70 - 130		05/18/12 15:29	1



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

**Client Sample ID: FB-1**

**Lab Sample ID: 680-79571-11**

**Date Collected: 05/16/12 00:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/18/12 16:26	1
Acetonitrile	40	U	40	10	ug/L			05/18/12 16:26	1
Acrolein	20	U	20	7.4	ug/L			05/18/12 16:26	1
Acrylonitrile	20	U	20	7.2	ug/L			05/18/12 16:26	1
Benzene	1.0	U	1.0	0.25	ug/L			05/18/12 16:26	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/18/12 16:26	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/18/12 16:26	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/18/12 16:26	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/18/12 16:26	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/18/12 16:26	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/18/12 16:26	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/18/12 16:26	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/18/12 16:26	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/18/12 16:26	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/18/12 16:26	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/18/12 16:26	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/18/12 16:26	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/18/12 16:26	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/18/12 16:26	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/18/12 16:26	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/18/12 16:26	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/18/12 16:26	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/18/12 16:26	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/18/12 16:26	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/18/12 16:26	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/18/12 16:26	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/18/12 16:26	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/18/12 16:26	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/18/12 16:26	1
2-Hexanone	10	U	10	1.0	ug/L			05/18/12 16:26	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/18/12 16:26	1
Isobutyl alcohol	40	U	40	11	ug/L			05/18/12 16:26	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/18/12 16:26	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/18/12 16:26	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/18/12 16:26	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/18/12 16:26	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/18/12 16:26	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/18/12 16:26	1
Propionitrile	20	U	20	4.6	ug/L			05/18/12 16:26	1
Styrene	1.0	U	1.0	0.11	ug/L			05/18/12 16:26	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/18/12 16:26	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/18/12 16:26	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/18/12 16:26	1
Toluene	1.0	U	1.0	0.33	ug/L			05/18/12 16:26	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/18/12 16:26	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/18/12 16:26	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/18/12 16:26	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/18/12 16:26	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/18/12 16:26	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/18/12 16:26	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/18/12 16:26	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

**Client Sample ID: FB-1**

**Lab Sample ID: 680-79571-11**

**Date Collected: 05/16/12 00:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/18/12 16:26	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/18/12 16:26	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/18/12 16:26	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/18/12 16:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		70 - 130		05/18/12 16:26	1
Dibromofluoromethane	105		70 - 130		05/18/12 16:26	1
Toluene-d8 (Surr)	106		70 - 130		05/18/12 16:26	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: EB-1**

**Lab Sample ID: 680-79571-12**

**Date Collected: 05/16/12 11:15**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/18/12 15:57	1
Acetonitrile	40	U	40	10	ug/L			05/18/12 15:57	1
Acrolein	20	U	20	7.4	ug/L			05/18/12 15:57	1
Acrylonitrile	20	U	20	7.2	ug/L			05/18/12 15:57	1
Benzene	1.0	U	1.0	0.25	ug/L			05/18/12 15:57	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/18/12 15:57	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/18/12 15:57	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/18/12 15:57	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/18/12 15:57	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/18/12 15:57	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/18/12 15:57	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/18/12 15:57	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/18/12 15:57	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/18/12 15:57	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/18/12 15:57	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/18/12 15:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/18/12 15:57	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/18/12 15:57	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/18/12 15:57	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/18/12 15:57	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/18/12 15:57	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/18/12 15:57	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/18/12 15:57	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/18/12 15:57	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/18/12 15:57	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/18/12 15:57	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/18/12 15:57	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/18/12 15:57	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/18/12 15:57	1
2-Hexanone	10	U	10	1.0	ug/L			05/18/12 15:57	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/18/12 15:57	1
Isobutyl alcohol	40	U	40	11	ug/L			05/18/12 15:57	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/18/12 15:57	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/18/12 15:57	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/18/12 15:57	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/18/12 15:57	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/18/12 15:57	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/18/12 15:57	1
Propionitrile	20	U	20	4.6	ug/L			05/18/12 15:57	1
Styrene	1.0	U	1.0	0.11	ug/L			05/18/12 15:57	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/18/12 15:57	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/18/12 15:57	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/18/12 15:57	1
Toluene	1.0	U	1.0	0.33	ug/L			05/18/12 15:57	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/18/12 15:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/18/12 15:57	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/18/12 15:57	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/18/12 15:57	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/18/12 15:57	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/18/12 15:57	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/18/12 15:57	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

Client Sample ID: EB-1

Lab Sample ID: 680-79571-12

Date Collected: 05/16/12 11:15

Matrix: Water

Date Received: 05/17/12 10:35

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/18/12 15:57	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/18/12 15:57	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/18/12 15:57	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/18/12 15:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		70 - 130		05/18/12 15:57	1
Dibromofluoromethane	106		70 - 130		05/18/12 15:57	1
Toluene-d8 (Surr)	108		70 - 130		05/18/12 15:57	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.7	U	4.7	0.47	ug/L		05/18/12 15:41	05/25/12 00:30	1
Toxaphene, TAUC, Parlar 11-69	0.90	J	4.7	0.47	ug/L		05/18/12 15:41	05/25/12 00:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	46		40 - 130	05/18/12 15:41	05/25/12 00:30	1
DCB Decachlorobiphenyl	34	X	40 - 130	05/18/12 15:41	05/25/12 00:30	1
Tetrachloro-m-xylene	79		36 - 130	05/18/12 15:41	05/25/12 00:30	1
Tetrachloro-m-xylene	80		36 - 130	05/18/12 15:41	05/25/12 00:30	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.7	U H	4.7	0.47	ug/L		05/28/12 15:21	05/31/12 22:21	1
Toxaphene, TAUC, Parlar 11-69	4.7	U H	4.7	0.47	ug/L		05/28/12 15:21	05/31/12 22:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	58		40 - 130	05/28/12 15:21	05/31/12 22:21	1
DCB Decachlorobiphenyl	50		40 - 130	05/28/12 15:21	05/31/12 22:21	1
Tetrachloro-m-xylene	71		36 - 130	05/28/12 15:21	05/31/12 22:21	1
Tetrachloro-m-xylene	79		36 - 130	05/28/12 15:21	05/31/12 22:21	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 02:41	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 02:41	1
Barium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:41	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 02:41	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 02:41	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:41	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 02:41	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 02:41	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 02:41	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 02:41	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 02:41	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 02:41	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 02:41	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 02:41	1
Vanadium	0.010	U	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 02:41	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 02:41	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

**Client Sample ID: EB-1**

**Lab Sample ID: 680-79571-12**

**Date Collected: 05/16/12 11:15**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 11:07	1



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

**Client Sample ID: EB-2**

**Lab Sample ID: 680-79571-13**

**Date Collected: 05/16/12 11:30**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/18/12 15:00	1
Acetonitrile	40	U	40	10	ug/L			05/18/12 15:00	1
Acrolein	20	U	20	7.4	ug/L			05/18/12 15:00	1
Acrylonitrile	20	U	20	7.2	ug/L			05/18/12 15:00	1
Benzene	1.0	U	1.0	0.25	ug/L			05/18/12 15:00	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/18/12 15:00	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/18/12 15:00	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/18/12 15:00	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/18/12 15:00	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/18/12 15:00	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/18/12 15:00	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/18/12 15:00	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/18/12 15:00	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/18/12 15:00	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/18/12 15:00	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/18/12 15:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/18/12 15:00	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/18/12 15:00	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/18/12 15:00	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/18/12 15:00	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/18/12 15:00	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/18/12 15:00	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/18/12 15:00	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/18/12 15:00	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/18/12 15:00	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/18/12 15:00	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/18/12 15:00	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/18/12 15:00	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/18/12 15:00	1
2-Hexanone	10	U	10	1.0	ug/L			05/18/12 15:00	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/18/12 15:00	1
Isobutyl alcohol	40	U	40	11	ug/L			05/18/12 15:00	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/18/12 15:00	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/18/12 15:00	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/18/12 15:00	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/18/12 15:00	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/18/12 15:00	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/18/12 15:00	1
Propionitrile	20	U	20	4.6	ug/L			05/18/12 15:00	1
Styrene	1.0	U	1.0	0.11	ug/L			05/18/12 15:00	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/18/12 15:00	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/18/12 15:00	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/18/12 15:00	1
Toluene	1.0	U	1.0	0.33	ug/L			05/18/12 15:00	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/18/12 15:00	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/18/12 15:00	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/18/12 15:00	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/18/12 15:00	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/18/12 15:00	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/18/12 15:00	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/18/12 15:00	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: EB-2**

**Lab Sample ID: 680-79571-13**

**Date Collected: 05/16/12 11:30**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/18/12 15:00	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/18/12 15:00	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/18/12 15:00	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/18/12 15:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		70 - 130					05/18/12 15:00	1
Dibromofluoromethane	106		70 - 130					05/18/12 15:00	1
Toluene-d8 (Surr)	108		70 - 130					05/18/12 15:00	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.8	U	4.8	0.48	ug/L		05/18/12 15:41	05/25/12 00:49	1
Toxaphene, TAUC, Parlar 11-69	0.94	J	4.8	0.48	ug/L		05/18/12 15:41	05/25/12 00:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	24	X	40 - 130				05/18/12 15:41	05/25/12 00:49	1
DCB Decachlorobiphenyl	22	X	40 - 130				05/18/12 15:41	05/25/12 00:49	1
Tetrachloro-m-xylene	77		36 - 130				05/18/12 15:41	05/25/12 00:49	1
Tetrachloro-m-xylene	64		36 - 130				05/18/12 15:41	05/25/12 00:49	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.7	U H	4.7	0.47	ug/L		05/28/12 15:21	05/31/12 22:40	1
Toxaphene, TAUC, Parlar 11-69	4.7	U H	4.7	0.47	ug/L		05/28/12 15:21	05/31/12 22:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	47		40 - 130				05/28/12 15:21	05/31/12 22:40	1
DCB Decachlorobiphenyl	44		40 - 130				05/28/12 15:21	05/31/12 22:40	1
Tetrachloro-m-xylene	71		36 - 130				05/28/12 15:21	05/31/12 22:40	1
Tetrachloro-m-xylene	81		36 - 130				05/28/12 15:21	05/31/12 22:40	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 02:45	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 02:45	1
Barium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:45	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 02:45	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 02:45	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:45	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 02:45	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 02:45	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 02:45	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 02:45	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 02:45	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 02:45	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 02:45	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 02:45	1
Vanadium	0.010	U	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 02:45	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 02:45	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

**Client Sample ID: EB-2**

**Lab Sample ID: 680-79571-13**

**Date Collected: 05/16/12 11:30**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 11:11	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: EB-3**

**Lab Sample ID: 680-79571-14**

**Date Collected: 05/16/12 11:45**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/18/12 14:31	1
Acetonitrile	40	U	40	10	ug/L			05/18/12 14:31	1
Acrolein	20	U	20	7.4	ug/L			05/18/12 14:31	1
Acrylonitrile	20	U	20	7.2	ug/L			05/18/12 14:31	1
Benzene	1.0	U	1.0	0.25	ug/L			05/18/12 14:31	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/18/12 14:31	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/18/12 14:31	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/18/12 14:31	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/18/12 14:31	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/18/12 14:31	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/18/12 14:31	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/18/12 14:31	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/18/12 14:31	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/18/12 14:31	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/18/12 14:31	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/18/12 14:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/18/12 14:31	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/18/12 14:31	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/18/12 14:31	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/18/12 14:31	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/18/12 14:31	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/18/12 14:31	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/18/12 14:31	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/18/12 14:31	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/18/12 14:31	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/18/12 14:31	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/18/12 14:31	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/18/12 14:31	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/18/12 14:31	1
2-Hexanone	10	U	10	1.0	ug/L			05/18/12 14:31	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/18/12 14:31	1
Isobutyl alcohol	40	U	40	11	ug/L			05/18/12 14:31	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/18/12 14:31	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/18/12 14:31	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/18/12 14:31	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/18/12 14:31	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/18/12 14:31	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/18/12 14:31	1
Propionitrile	20	U	20	4.6	ug/L			05/18/12 14:31	1
Styrene	1.0	U	1.0	0.11	ug/L			05/18/12 14:31	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/18/12 14:31	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/18/12 14:31	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/18/12 14:31	1
Toluene	1.0	U	1.0	0.33	ug/L			05/18/12 14:31	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/18/12 14:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/18/12 14:31	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/18/12 14:31	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/18/12 14:31	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/18/12 14:31	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/18/12 14:31	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/18/12 14:31	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: EB-3**

**Lab Sample ID: 680-79571-14**

**Date Collected: 05/16/12 11:45**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/18/12 14:31	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/18/12 14:31	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/18/12 14:31	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/18/12 14:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		70 - 130		05/18/12 14:31	1
Dibromofluoromethane	107		70 - 130		05/18/12 14:31	1
Toluene-d8 (Surr)	107		70 - 130		05/18/12 14:31	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.7	U	4.7	0.47	ug/L		05/18/12 15:41	05/25/12 01:09	1
Toxaphene, TAUC, Parlar 11-69	4.7	U	4.7	0.47	ug/L		05/18/12 15:41	05/25/12 01:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	27	X	40 - 130	05/18/12 15:41	05/25/12 01:09	1
DCB Decachlorobiphenyl	23	X	40 - 130	05/18/12 15:41	05/25/12 01:09	1
Tetrachloro-m-xylene	66		36 - 130	05/18/12 15:41	05/25/12 01:09	1
Tetrachloro-m-xylene	61		36 - 130	05/18/12 15:41	05/25/12 01:09	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	5.0	U H	5.0	0.50	ug/L		05/28/12 15:21	05/31/12 23:00	1
Toxaphene, TAUC, Parlar 11-69	5.0	U H	5.0	0.50	ug/L		05/28/12 15:21	05/31/12 23:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	41		40 - 130	05/28/12 15:21	05/31/12 23:00	1
DCB Decachlorobiphenyl	38	X	40 - 130	05/28/12 15:21	05/31/12 23:00	1
Tetrachloro-m-xylene	77		36 - 130	05/28/12 15:21	05/31/12 23:00	1
Tetrachloro-m-xylene	80		36 - 130	05/28/12 15:21	05/31/12 23:00	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 02:50	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 02:50	1
Barium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:50	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 02:50	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 02:50	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:50	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 02:50	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 02:50	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 02:50	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 02:50	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 02:50	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 02:50	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 02:50	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 02:50	1
Vanadium	0.010	U	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 02:50	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 02:50	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

**Client Sample ID: EB-3**

**Lab Sample ID: 680-79571-14**

**Date Collected: 05/16/12 11:45**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 11:15	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-42S**

**Lab Sample ID: 680-79571-15**

**Date Collected: 05/16/12 19:30**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	2500	U	2500	250	ug/L		05/18/12 15:41	05/24/12 20:57	500
Toxaphene, TAUC, Parlar 11-69	1000	J	2500	250	ug/L		05/18/12 15:41	05/24/12 20:57	500
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	0	D	40 - 130				05/18/12 15:41	05/24/12 20:57	500
DCB Decachlorobiphenyl	0	D	40 - 130				05/18/12 15:41	05/24/12 20:57	500
Tetrachloro-m-xylene	0	D	36 - 130				05/18/12 15:41	05/24/12 20:57	500
Tetrachloro-m-xylene	0	D	36 - 130				05/18/12 15:41	05/24/12 20:57	500

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	1200	H	250	25	ug/L		05/28/12 15:21	05/31/12 23:19	50
Toxaphene, TAUC, Parlar 11-69	640	H	250	25	ug/L		05/28/12 15:21	05/31/12 23:19	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	0	D	40 - 130				05/28/12 15:21	05/31/12 23:19	50
DCB Decachlorobiphenyl	0	D	40 - 130				05/28/12 15:21	05/31/12 23:19	50
Tetrachloro-m-xylene	0	D	36 - 130				05/28/12 15:21	05/31/12 23:19	50
Tetrachloro-m-xylene	0	D	36 - 130				05/28/12 15:21	05/31/12 23:19	50



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

**Client Sample ID: MW-42S**

**Lab Sample ID: 680-79571-16**

**Date Collected: 05/16/12 19:30**

**Matrix: Waste**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	21000	U	21000	21000	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Acetonitrile	84000	U	84000	84000	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Acrolein	42000	U	42000	42000	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Acrylonitrile	42000	U	42000	42000	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Allyl chloride	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
<b>Benzene</b>	<b>5500</b>		2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Bromodichloromethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Bromoform	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Bromomethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
2-Butanone	11000	U	11000	11000	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Carbon disulfide	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Carbon tetrachloride	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
<b>Chlorobenzene</b>	<b>2400</b>		2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Chloroethane	2100	U *	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
<b>Chloroform</b>	<b>36000</b>		2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Chloromethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Chloroprene	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
cis-1,3-Dichloropropene	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Dibromochloromethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,2-Dibromo-3-Chloropropane	4200	U	4200	4200	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,2-Dibromoethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Dibromomethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,4-Dichlorobenzene	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,3-Dichlorobenzene	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,2-Dichlorobenzene	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Dichlorodifluoromethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,2-Dichloroethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,1-Dichloroethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,1-Dichloroethene	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,2-Dichloropropane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,4-Dioxane	21000	U	21000	21000	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Ethylbenzene	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Ethyl methacrylate	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
2-Hexanone	11000	U	11000	11000	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Iodomethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Isobutanol	84000	U	84000	84000	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Methacrylonitrile	42000	U	42000	42000	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Methylene Chloride	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Methyl methacrylate	4200	U	4200	4200	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
4-Methyl-2-pentanone	11000	U	11000	11000	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Pentachloroethane	11000	U	11000	11000	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Propionitrile	42000	U	42000	42000	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Styrene	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,1,1,2-Tetrachloroethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,1,2,2-Tetrachloroethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Tetrachloroethene	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Toluene	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
trans-1,4-Dichloro-2-butene	4200	U	4200	4200	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
trans-1,2-Dichloroethene	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
trans-1,3-Dichloropropene	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,2,4-Trichlorobenzene	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-42S**

**Lab Sample ID: 680-79571-16**

**Date Collected: 05/16/12 19:30**

**Matrix: Waste**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,1,2-Trichloroethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Trichloroethene	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Trichlorofluoromethane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
1,2,3-Trichloropropane	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Vinyl acetate	4200	U	4200	4200	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Vinyl chloride	2100	U	2100	2100	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Xylenes, Total	4200	U	4200	4200	ug/Kg		05/21/12 11:30	05/22/12 13:18	40
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		30 - 130				05/21/12 11:30	05/22/12 13:18	40
Dibromofluoromethane	105		30 - 130				05/21/12 11:30	05/22/12 13:18	40
Toluene-d8 (Surr)	100		30 - 130				05/21/12 11:30	05/22/12 13:18	40



# Surrogate Summary

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Waste

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (30-130)	DBFM (30-130)	TOL (30-130)
680-79571-16	MW-42S	101	105	100
LCSD 680-238122/5	Lab Control Sample Dup	94	112	96
MB 680-238122/7	Method Blank	100	109	100

**Surrogate Legend**

BFB = 4-Bromofluorobenzene  
DBFM = Dibromofluoromethane  
TOL = Toluene-d8 (Surr)

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (70-130)	DBFM (70-130)	TOL (70-130)
680-79571-1	MW-42I	98	97	110
680-79571-2	MW-42D	101	98	108
680-79571-3	MW-43S	92	105	106
680-79571-4	MW-43I	93	106	107
680-79571-5	MW-43D	95	102	108
680-79571-6	MW-49S	96	97	105
680-79571-7	MW-49I	96	97	105
680-79571-8	MW-49D	93	96	105
680-79571-9	Dup-1	95	97	106
680-79571-9 MS	Dup-1	97	104	106
680-79571-9 MSD	Dup-1	102	108	109
680-79571-10	Trip Blank 2	93	106	105
680-79571-11	FB-1	95	105	106
680-79571-12	EB-1	92	106	108
680-79571-13	EB-2	91	106	108
680-79571-14	EB-3	92	107	107
LCS 680-237819/4	Lab Control Sample	101	104	107
LCS 680-237898/4	Lab Control Sample	100	104	106
LCS 680-237899/1	Lab Control Sample	100	109	111
LCS 680-237953/4	Lab Control Sample	101	108	111
LCS 680-238266/4	Lab Control Sample	104	104	105
LCSD 680-237819/5	Lab Control Sample Dup	102	103	107
LCSD 680-237898/5	Lab Control Sample Dup	99	99	103
LCSD 680-237899/2	Lab Control Sample Dup	101	107	108
LCSD 680-237953/5	Lab Control Sample Dup	98	107	110
LCSD 680-238266/5	Lab Control Sample Dup	104	100	107
MB 680-237819/7	Method Blank	94	105	108
MB 680-237898/7	Method Blank	95	100	106
MB 680-237899/8	Method Blank	91	107	106
MB 680-237953/7	Method Blank	94	104	107
MB 680-238266/7	Method Blank	92	108	106

**Surrogate Legend**

BFB = 4-Bromofluorobenzene  
DBFM = Dibromofluoromethane  
TOL = Toluene-d8 (Surr)



# Surrogate Summary

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (40-130)	DCB2 (40-130)	TCX1 (36-130)	TCX2 (36-130)
680-79571-1	MW-42I	0 D	0 D	0 D	0 D
680-79571-1 - RE	MW-42I	0 D	0 D	0 D	0 D
680-79571-2	MW-42D	0 D	0 D	0 D	0 D
680-79571-2 - RE	MW-42D	0 D	0 D	0 D	0 D
680-79571-3	MW-43S	21 X	17 X	52	61
680-79571-3 - RE	MW-43S	16 X	17 X	63	69
680-79571-4	MW-43I	24 X	12 p X	42	54
680-79571-4 - RE	MW-43I	46	26 X	60	73
680-79571-5	MW-43D	0 D	0 D	0 D	0 D
680-79571-5 - RE	MW-43D	0 D	0 D	0 D	0 D
680-79571-9	Dup-1	51	25 p X	70	69
680-79571-9 - RE	Dup-1	49	28 X	63	76
680-79571-9 MS	Dup-1	49	21 p X	65	86
680-79571-9 MSD	Dup-1	66	21 p X	52	76
680-79571-12	EB-1	46	34 X	79	80
680-79571-12 - RE	EB-1	58	50	71	79
680-79571-13	EB-2	24 X	22 X	77	64
680-79571-13 - RE	EB-2	47	44	71	81
680-79571-14	EB-3	27 X	23 X	66	61
680-79571-14 - RE	EB-3	41	38 X	77	80
680-79571-15	MW-42S	0 D	0 D	0 D	0 D
680-79571-15 - RE	MW-42S	0 D	0 D	0 D	0 D
LCS 680-237769/21-A	Lab Control Sample	35 X	32 X	85	76
LCS 680-238605/18-A	Lab Control Sample	46	41	77	72
LCSD 680-238605/19-A	Lab Control Sample Dup	55	49	87	85
MB 680-237769/17-A	Method Blank	19 X	20 X	66	74
MB 680-238605/17-A	Method Blank	57	52	82	82

### Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-237819/7

Matrix: Water

Analysis Batch: 237819

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/18/12 13:05	1
Acetonitrile	40	U	40	10	ug/L			05/18/12 13:05	1
Acrolein	20	U	20	7.4	ug/L			05/18/12 13:05	1
Acrylonitrile	20	U	20	7.2	ug/L			05/18/12 13:05	1
Benzene	1.0	U	1.0	0.25	ug/L			05/18/12 13:05	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/18/12 13:05	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/18/12 13:05	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/18/12 13:05	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/18/12 13:05	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/18/12 13:05	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/18/12 13:05	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/18/12 13:05	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/18/12 13:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/18/12 13:05	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/18/12 13:05	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/18/12 13:05	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/18/12 13:05	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/18/12 13:05	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/18/12 13:05	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/18/12 13:05	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/18/12 13:05	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/18/12 13:05	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/18/12 13:05	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/18/12 13:05	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/18/12 13:05	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/18/12 13:05	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/18/12 13:05	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/18/12 13:05	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/18/12 13:05	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/18/12 13:05	1
2-Hexanone	10	U	10	1.0	ug/L			05/18/12 13:05	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/18/12 13:05	1
Isobutyl alcohol	40	U	40	11	ug/L			05/18/12 13:05	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/18/12 13:05	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/18/12 13:05	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/18/12 13:05	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/18/12 13:05	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/18/12 13:05	1
Propionitrile	20	U	20	4.6	ug/L			05/18/12 13:05	1
Styrene	1.0	U	1.0	0.11	ug/L			05/18/12 13:05	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/18/12 13:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/18/12 13:05	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/18/12 13:05	1
Toluene	1.0	U	1.0	0.33	ug/L			05/18/12 13:05	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/18/12 13:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/18/12 13:05	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/18/12 13:05	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/18/12 13:05	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/18/12 13:05	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-237819/7

Matrix: Water

Analysis Batch: 237819

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/18/12 13:05	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/18/12 13:05	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/18/12 13:05	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/18/12 13:05	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/18/12 13:05	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/18/12 13:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		70 - 130		05/18/12 13:05	1
Dibromofluoromethane	105		70 - 130		05/18/12 13:05	1
Toluene-d8 (Surr)	108		70 - 130		05/18/12 13:05	1

Lab Sample ID: LCS 680-237819/4

Matrix: Water

Analysis Batch: 237819

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	110		ug/L		110	26 - 180
Benzene	50.0	50.5		ug/L		101	70 - 130
Bromoform	50.0	41.6		ug/L		83	70 - 130
Bromomethane	50.0	47.3		ug/L		95	23 - 165
Carbon disulfide	50.0	46.4		ug/L		93	54 - 132
Carbon tetrachloride	50.0	56.2		ug/L		112	70 - 130
Chlorobenzene	50.0	48.8		ug/L		98	70 - 130
Chloroethane	50.0	45.7		ug/L		91	56 - 152
Chloroform	50.0	48.8		ug/L		98	70 - 130
cis-1,2-Dichloroethene	50.0	50.1		ug/L		100	70 - 130
Chloromethane	50.0	56.9		ug/L		114	70 - 130
cis-1,3-Dichloropropene	50.0	61.0		ug/L		122	70 - 130
Chlorodibromomethane	50.0	51.8		ug/L		104	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	49.8		ug/L		100	70 - 130
Dichlorobromomethane	50.0	53.9		ug/L		108	70 - 130
Dibromomethane	50.0	52.2		ug/L		104	70 - 130
Dichlorodifluoromethane	50.0	50.7		ug/L		101	44 - 146
1,2-Dichloroethane	50.0	55.6		ug/L		111	70 - 130
Ethylene Dibromide	50.0	52.9		ug/L		106	70 - 130
1,1-Dichloroethane	50.0	51.7		ug/L		103	70 - 130
1,1-Dichloroethene	50.0	48.4		ug/L		97	66 - 131
1,2-Dichloropropane	50.0	53.2		ug/L		106	70 - 130
Ethylbenzene	50.0	50.5		ug/L		101	70 - 130
2-Butanone (MEK)	100	103		ug/L		103	49 - 172
2-Hexanone	100	103		ug/L		103	42 - 185
Methylene Chloride	50.0	48.2		ug/L		96	67 - 130
4-Methyl-2-pentanone (MIBK)	100	104		ug/L		104	70 - 130
Styrene	50.0	51.4		ug/L		103	70 - 130
1,1,1,2-Tetrachloroethane	50.0	54.3		ug/L		109	70 - 130
1,1,2,2-Tetrachloroethane	50.0	49.8		ug/L		100	70 - 130
Tetrachloroethene	50.0	49.9		ug/L		100	70 - 130
Toluene	50.0	52.0		ug/L		104	70 - 130



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-237819/4

Matrix: Water

Analysis Batch: 237819

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	50.0	52.2		ug/L		104	70 - 130
trans-1,3-Dichloropropene	50.0	53.7		ug/L		107	70 - 130
1,1,1-Trichloroethane	50.0	56.6		ug/L		113	70 - 130
1,1,2-Trichloroethane	50.0	51.6		ug/L		103	70 - 130
Trichloroethene	50.0	52.3		ug/L		105	70 - 130
Trichlorofluoromethane	50.0	51.2		ug/L		102	55 - 156
1,2,3-Trichloropropane	50.0	48.8		ug/L		98	70 - 130
Vinyl acetate	100	117		ug/L		117	60 - 176
Vinyl chloride	50.0	49.0		ug/L		98	67 - 134
Xylenes, Total	150	153		ug/L		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	101		70 - 130
Dibromofluoromethane	104		70 - 130
Toluene-d8 (Surr)	107		70 - 130

Lab Sample ID: LCSD 680-237819/5

Matrix: Water

Analysis Batch: 237819

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	105		ug/L		105	26 - 180	5	50
Benzene	50.0	49.1		ug/L		98	70 - 130	3	30
Bromoform	50.0	41.3		ug/L		83	70 - 130	1	30
Bromomethane	50.0	64.3		ug/L		129	23 - 165	30	50
Carbon disulfide	50.0	45.3		ug/L		91	54 - 132	3	30
Carbon tetrachloride	50.0	55.5		ug/L		111	70 - 130	1	30
Chlorobenzene	50.0	49.6		ug/L		99	70 - 130	2	30
Chloroethane	50.0	44.8		ug/L		90	56 - 152	2	40
Chloroform	50.0	48.5		ug/L		97	70 - 130	1	30
cis-1,2-Dichloroethene	50.0	50.2		ug/L		100	70 - 130	0	30
Chloromethane	50.0	56.1		ug/L		112	70 - 130	1	30
cis-1,3-Dichloropropene	50.0	61.2		ug/L		122	70 - 130	0	30
Chlorodibromomethane	50.0	51.7		ug/L		103	70 - 130	0	50
1,2-Dibromo-3-Chloropropane	50.0	48.3		ug/L		97	70 - 130	3	50
Dichlorobromomethane	50.0	53.5		ug/L		107	70 - 130	1	30
Dibromomethane	50.0	50.2		ug/L		100	70 - 130	4	30
Dichlorodifluoromethane	50.0	50.6		ug/L		101	44 - 146	0	50
1,2-Dichloroethane	50.0	53.6		ug/L		107	70 - 130	4	30
Ethylene Dibromide	50.0	51.0		ug/L		102	70 - 130	4	30
1,1-Dichloroethane	50.0	51.8		ug/L		104	70 - 130	0	30
1,1-Dichloroethene	50.0	47.9		ug/L		96	66 - 131	1	30
1,2-Dichloropropane	50.0	51.4		ug/L		103	70 - 130	3	30
Ethylbenzene	50.0	50.3		ug/L		101	70 - 130	0	30
2-Butanone (MEK)	100	103		ug/L		103	49 - 172	0	30
2-Hexanone	100	106		ug/L		106	42 - 185	3	30
Methylene Chloride	50.0	48.3		ug/L		97	67 - 130	0	30
4-Methyl-2-pentanone (MIBK)	100	103		ug/L		103	70 - 130	1	30
Styrene	50.0	52.3		ug/L		105	70 - 130	2	30



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-237819/5

Matrix: Water

Analysis Batch: 237819

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	50.0	53.2		ug/L		106	70 - 130	2	30
1,1,2,2-Tetrachloroethane	50.0	50.0		ug/L		100	70 - 130	0	30
Tetrachloroethene	50.0	49.5		ug/L		99	70 - 130	1	30
Toluene	50.0	51.3		ug/L		103	70 - 130	1	30
trans-1,2-Dichloroethene	50.0	51.6		ug/L		103	70 - 130	1	30
trans-1,3-Dichloropropene	50.0	53.0		ug/L		106	70 - 130	1	50
1,1,1-Trichloroethane	50.0	56.3		ug/L		113	70 - 130	1	30
1,1,2-Trichloroethane	50.0	51.3		ug/L		103	70 - 130	0	30
Trichloroethene	50.0	52.1		ug/L		104	70 - 130	1	30
Trichlorofluoromethane	50.0	48.4		ug/L		97	55 - 156	6	30
1,2,3-Trichloropropane	50.0	48.4		ug/L		97	70 - 130	1	30
Vinyl acetate	100	118		ug/L		118	60 - 176	1	30
Vinyl chloride	50.0	47.8		ug/L		96	67 - 134	2	30
Xylenes, Total	150	155		ug/L		103	70 - 130	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	102		70 - 130
Dibromofluoromethane	103		70 - 130
Toluene-d8 (Surr)	107		70 - 130

Lab Sample ID: MB 680-237898/7

Matrix: Water

Analysis Batch: 237898

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 09:43	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 09:43	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 09:43	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 09:43	1
Benzene	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 09:43	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 09:43	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/19/12 09:43	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 09:43	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 09:43	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 09:43	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/19/12 09:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 09:43	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 09:43	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 09:43	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 09:43	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 09:43	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 09:43	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 09:43	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 09:43	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-237898/7

Matrix: Water

Analysis Batch: 237898

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 09:43	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/19/12 09:43	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/19/12 09:43	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 09:43	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 09:43	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 09:43	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 09:43	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 09:43	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 09:43	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 09:43	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 09:43	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 09:43	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 09:43	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 09:43	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 09:43	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 09:43	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 09:43	1
Toluene	1.0	U	1.0	0.33	ug/L			05/19/12 09:43	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 09:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 09:43	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 09:43	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 09:43	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 09:43	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/19/12 09:43	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 09:43	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 09:43	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 09:43	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/19/12 09:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		70 - 130		05/19/12 09:43	1
Dibromofluoromethane	100		70 - 130		05/19/12 09:43	1
Toluene-d8 (Surr)	106		70 - 130		05/19/12 09:43	1

Lab Sample ID: LCS 680-237898/4

Matrix: Water

Analysis Batch: 237898

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	87.2		ug/L		87	26 - 180
Benzene	50.0	50.2		ug/L		100	70 - 130
Bromoform	50.0	41.5		ug/L		83	70 - 130
Bromomethane	50.0	41.5		ug/L		83	23 - 165
Carbon disulfide	50.0	47.8		ug/L		96	54 - 132
Carbon tetrachloride	50.0	47.7		ug/L		95	70 - 130
Chlorobenzene	50.0	47.7		ug/L		95	70 - 130



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-237898/4

Matrix: Water

Analysis Batch: 237898

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroethane	50.0	49.2		ug/L		98	56 - 152
Chloroform	50.0	50.5		ug/L		101	70 - 130
cis-1,2-Dichloroethene	50.0	50.5		ug/L		101	70 - 130
Chloromethane	50.0	58.7		ug/L		117	70 - 130
cis-1,3-Dichloropropene	50.0	53.0		ug/L		106	70 - 130
Chlorodibromomethane	50.0	43.7		ug/L		87	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	48.6		ug/L		97	70 - 130
Dichlorobromomethane	50.0	53.9		ug/L		108	70 - 130
Dibromomethane	50.0	51.6		ug/L		103	70 - 130
Dichlorodifluoromethane	50.0	49.1		ug/L		98	44 - 146
1,2-Dichloroethane	50.0	53.9		ug/L		108	70 - 130
Ethylene Dibromide	50.0	52.6		ug/L		105	70 - 130
1,1-Dichloroethane	50.0	54.9		ug/L		110	70 - 130
1,1-Dichloroethene	50.0	50.1		ug/L		100	66 - 131
1,2-Dichloropropane	50.0	53.5		ug/L		107	70 - 130
Ethylbenzene	50.0	48.7		ug/L		97	70 - 130
2-Butanone (MEK)	100	91.6		ug/L		92	49 - 172
2-Hexanone	100	94.1		ug/L		94	42 - 185
Methylene Chloride	50.0	48.3		ug/L		97	67 - 130
4-Methyl-2-pentanone (MIBK)	100	103		ug/L		103	70 - 130
Styrene	50.0	49.5		ug/L		99	70 - 130
1,1,1,2-Tetrachloroethane	50.0	47.0		ug/L		94	70 - 130
1,1,2,2-Tetrachloroethane	50.0	51.5		ug/L		103	70 - 130
Tetrachloroethene	50.0	48.9		ug/L		98	70 - 130
Toluene	50.0	53.7		ug/L		107	70 - 130
trans-1,2-Dichloroethene	50.0	51.9		ug/L		104	70 - 130
trans-1,3-Dichloropropene	50.0	45.7		ug/L		91	70 - 130
1,1,1-Trichloroethane	50.0	57.3		ug/L		115	70 - 130
1,1,2-Trichloroethane	50.0	54.2		ug/L		108	70 - 130
Trichloroethene	50.0	52.0		ug/L		104	70 - 130
Trichlorofluoromethane	50.0	53.5		ug/L		107	55 - 156
1,2,3-Trichloropropane	50.0	49.8		ug/L		100	70 - 130
Vinyl acetate	100	110		ug/L		110	60 - 176
Vinyl chloride	50.0	49.6		ug/L		99	67 - 134
Xylenes, Total	150	146		ug/L		97	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	100		70 - 130
Dibromofluoromethane	104		70 - 130
Toluene-d8 (Surr)	106		70 - 130

Lab Sample ID: LCSD 680-237898/5

Matrix: Water

Analysis Batch: 237898

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	79.6		ug/L		80	26 - 180	9	50
Benzene	50.0	50.1		ug/L		100	70 - 130	0	30
Bromoform	50.0	40.9		ug/L		82	70 - 130	1	30



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-237898/5

Matrix: Water

Analysis Batch: 237898

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane	50.0	44.9		ug/L		90	23 - 165	8	50
Carbon disulfide	50.0	45.8		ug/L		92	54 - 132	4	30
Carbon tetrachloride	50.0	46.5		ug/L		93	70 - 130	2	30
Chlorobenzene	50.0	47.1		ug/L		94	70 - 130	1	30
Chloroethane	50.0	51.0		ug/L		102	56 - 152	4	40
Chloroform	50.0	49.6		ug/L		99	70 - 130	2	30
cis-1,2-Dichloroethene	50.0	48.9		ug/L		98	70 - 130	3	30
Chloromethane	50.0	57.8		ug/L		116	70 - 130	2	30
cis-1,3-Dichloropropene	50.0	52.4		ug/L		105	70 - 130	1	30
Chlorodibromomethane	50.0	42.6		ug/L		85	70 - 130	3	50
1,2-Dibromo-3-Chloropropane	50.0	47.4		ug/L		95	70 - 130	2	50
Dichlorobromomethane	50.0	53.9		ug/L		108	70 - 130	0	30
Dibromomethane	50.0	50.8		ug/L		102	70 - 130	2	30
Dichlorodifluoromethane	50.0	48.4		ug/L		97	44 - 146	1	50
1,2-Dichloroethane	50.0	54.3		ug/L		109	70 - 130	1	30
Ethylene Dibromide	50.0	52.6		ug/L		105	70 - 130	0	30
1,1-Dichloroethane	50.0	52.9		ug/L		106	70 - 130	4	30
1,1-Dichloroethene	50.0	48.4		ug/L		97	66 - 131	3	30
1,2-Dichloropropane	50.0	52.6		ug/L		105	70 - 130	2	30
Ethylbenzene	50.0	48.4		ug/L		97	70 - 130	0	30
2-Butanone (MEK)	100	88.4		ug/L		88	49 - 172	4	30
2-Hexanone	100	92.7		ug/L		93	42 - 185	1	30
Methylene Chloride	50.0	46.6		ug/L		93	67 - 130	3	30
4-Methyl-2-pentanone (MIBK)	100	103		ug/L		103	70 - 130	0	30
Styrene	50.0	49.9		ug/L		100	70 - 130	1	30
1,1,1,2-Tetrachloroethane	50.0	45.7		ug/L		91	70 - 130	3	30
1,1,2,2-Tetrachloroethane	50.0	50.9		ug/L		102	70 - 130	1	30
Tetrachloroethene	50.0	47.7		ug/L		95	70 - 130	2	30
Toluene	50.0	52.2		ug/L		104	70 - 130	3	30
trans-1,2-Dichloroethene	50.0	50.4		ug/L		101	70 - 130	3	30
trans-1,3-Dichloropropene	50.0	45.6		ug/L		91	70 - 130	0	50
1,1,1-Trichloroethane	50.0	57.1		ug/L		114	70 - 130	0	30
1,1,2-Trichloroethane	50.0	53.8		ug/L		108	70 - 130	1	30
Trichloroethene	50.0	51.1		ug/L		102	70 - 130	2	30
Trichlorofluoromethane	50.0	50.3		ug/L		101	55 - 156	6	30
1,2,3-Trichloropropane	50.0	49.3		ug/L		99	70 - 130	1	30
Vinyl acetate	100	106		ug/L		106	60 - 176	4	30
Vinyl chloride	50.0	48.1		ug/L		96	67 - 134	3	30
Xylenes, Total	150	144		ug/L		96	70 - 130	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	99		70 - 130
Dibromofluoromethane	99		70 - 130
Toluene-d8 (Surr)	103		70 - 130



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-237899/8

Matrix: Water

Analysis Batch: 237899

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 09:57	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 09:57	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 09:57	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 09:57	1
Benzene	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 09:57	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 09:57	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/19/12 09:57	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 09:57	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 09:57	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 09:57	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/19/12 09:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 09:57	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 09:57	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 09:57	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 09:57	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 09:57	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 09:57	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 09:57	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 09:57	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 09:57	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/19/12 09:57	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/19/12 09:57	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 09:57	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 09:57	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 09:57	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 09:57	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 09:57	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 09:57	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 09:57	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 09:57	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 09:57	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 09:57	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 09:57	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 09:57	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 09:57	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 09:57	1
Toluene	1.0	U	1.0	0.33	ug/L			05/19/12 09:57	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 09:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 09:57	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 09:57	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 09:57	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 09:57	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-237899/8

Matrix: Water

Analysis Batch: 237899

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/19/12 09:57	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 09:57	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 09:57	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 09:57	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/19/12 09:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		70 - 130		05/19/12 09:57	1
Dibromofluoromethane	107		70 - 130		05/19/12 09:57	1
Toluene-d8 (Surr)	106		70 - 130		05/19/12 09:57	1

Lab Sample ID: LCS 680-237899/1

Matrix: Water

Analysis Batch: 237899

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	122		ug/L		122	26 - 180
Benzene	50.0	50.8		ug/L		102	70 - 130
Bromoform	50.0	42.2		ug/L		84	70 - 130
Bromomethane	50.0	60.7		ug/L		121	23 - 165
Carbon disulfide	50.0	47.1		ug/L		94	54 - 132
Carbon tetrachloride	50.0	57.7		ug/L		115	70 - 130
Chlorobenzene	50.0	49.1		ug/L		98	70 - 130
Chloroethane	50.0	46.4		ug/L		93	56 - 152
Chloroform	50.0	51.1		ug/L		102	70 - 130
cis-1,2-Dichloroethene	50.0	52.4		ug/L		105	70 - 130
Chloromethane	50.0	52.1		ug/L		104	70 - 130
cis-1,3-Dichloropropene	50.0	64.5		ug/L		129	70 - 130
Chlorodibromomethane	50.0	51.1		ug/L		102	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	47.3		ug/L		95	70 - 130
Dichlorobromomethane	50.0	56.3		ug/L		113	70 - 130
Dibromomethane	50.0	51.8		ug/L		104	70 - 130
Dichlorodifluoromethane	50.0	49.2		ug/L		98	44 - 146
1,2-Dichloroethane	50.0	55.7		ug/L		111	70 - 130
Ethylene Dibromide	50.0	52.6		ug/L		105	70 - 130
1,1-Dichloroethane	50.0	53.5		ug/L		107	70 - 130
1,1-Dichloroethene	50.0	49.7		ug/L		99	66 - 131
1,2-Dichloropropane	50.0	53.5		ug/L		107	70 - 130
Ethylbenzene	50.0	50.3		ug/L		101	70 - 130
2-Butanone (MEK)	100	111		ug/L		111	49 - 172
2-Hexanone	100	105		ug/L		105	42 - 185
Methylene Chloride	50.0	49.8		ug/L		100	67 - 130
4-Methyl-2-pentanone (MIBK)	100	104		ug/L		104	70 - 130
Styrene	50.0	51.6		ug/L		103	70 - 130
1,1,1,2-Tetrachloroethane	50.0	55.4		ug/L		111	70 - 130
1,1,2,2-Tetrachloroethane	50.0	48.2		ug/L		96	70 - 130
Tetrachloroethene	50.0	48.4		ug/L		97	70 - 130
Toluene	50.0	53.8		ug/L		108	70 - 130



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-237899/1

Matrix: Water

Analysis Batch: 237899

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	50.0	53.3		ug/L		107	70 - 130
trans-1,3-Dichloropropene	50.0	56.6		ug/L		113	70 - 130
1,1,1-Trichloroethane	50.0	58.5		ug/L		117	70 - 130
1,1,2-Trichloroethane	50.0	52.4		ug/L		105	70 - 130
Trichloroethene	50.0	53.5		ug/L		107	70 - 130
Trichlorofluoromethane	50.0	50.3		ug/L		101	55 - 156
1,2,3-Trichloropropane	50.0	46.6		ug/L		93	70 - 130
Vinyl acetate	100	117		ug/L		117	60 - 176
Vinyl chloride	50.0	47.3		ug/L		95	67 - 134
Xylenes, Total	150	154		ug/L		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	100		70 - 130
Dibromofluoromethane	109		70 - 130
Toluene-d8 (Surr)	111		70 - 130

Lab Sample ID: LCSD 680-237899/2

Matrix: Water

Analysis Batch: 237899

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	118		ug/L		118	26 - 180	4	50
Benzene	50.0	50.0		ug/L		100	70 - 130	1	30
Bromoform	50.0	41.5		ug/L		83	70 - 130	2	30
Bromomethane	50.0	62.0		ug/L		124	23 - 165	2	50
Carbon disulfide	50.0	45.4		ug/L		91	54 - 132	4	30
Carbon tetrachloride	50.0	57.0		ug/L		114	70 - 130	1	30
Chlorobenzene	50.0	48.0		ug/L		96	70 - 130	2	30
Chloroethane	50.0	45.8		ug/L		92	56 - 152	1	40
Chloroform	50.0	50.5		ug/L		101	70 - 130	1	30
cis-1,2-Dichloroethene	50.0	51.6		ug/L		103	70 - 130	1	30
Chloromethane	50.0	50.5		ug/L		101	70 - 130	3	30
cis-1,3-Dichloropropene	50.0	63.3		ug/L		127	70 - 130	2	30
Chlorodibromomethane	50.0	50.6		ug/L		101	70 - 130	1	50
1,2-Dibromo-3-Chloropropane	50.0	46.9		ug/L		94	70 - 130	1	50
Dichlorobromomethane	50.0	54.3		ug/L		109	70 - 130	4	30
Dibromomethane	50.0	51.0		ug/L		102	70 - 130	1	30
Dichlorodifluoromethane	50.0	47.5		ug/L		95	44 - 146	4	50
1,2-Dichloroethane	50.0	55.3		ug/L		111	70 - 130	1	30
Ethylene Dibromide	50.0	52.1		ug/L		104	70 - 130	1	30
1,1-Dichloroethane	50.0	53.1		ug/L		106	70 - 130	1	30
1,1-Dichloroethene	50.0	47.8		ug/L		96	66 - 131	4	30
1,2-Dichloropropane	50.0	52.9		ug/L		106	70 - 130	1	30
Ethylbenzene	50.0	50.4		ug/L		101	70 - 130	0	30
2-Butanone (MEK)	100	107		ug/L		107	49 - 172	3	30
2-Hexanone	100	103		ug/L		103	42 - 185	2	30
Methylene Chloride	50.0	49.1		ug/L		98	67 - 130	1	30
4-Methyl-2-pentanone (MIBK)	100	103		ug/L		103	70 - 130	1	30
Styrene	50.0	52.5		ug/L		105	70 - 130	2	30



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-237899/2

Matrix: Water

Analysis Batch: 237899

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	50.0	54.3		ug/L		109	70 - 130	2	30
1,1,2,2-Tetrachloroethane	50.0	47.9		ug/L		96	70 - 130	1	30
Tetrachloroethene	50.0	47.0		ug/L		94	70 - 130	3	30
Toluene	50.0	52.7		ug/L		105	70 - 130	2	30
trans-1,2-Dichloroethene	50.0	51.9		ug/L		104	70 - 130	3	30
trans-1,3-Dichloropropene	50.0	54.7		ug/L		109	70 - 130	3	50
1,1,1-Trichloroethane	50.0	57.6		ug/L		115	70 - 130	2	30
1,1,2-Trichloroethane	50.0	51.7		ug/L		103	70 - 130	1	30
Trichloroethene	50.0	52.2		ug/L		104	70 - 130	3	30
Trichlorofluoromethane	50.0	48.2		ug/L		96	55 - 156	4	30
1,2,3-Trichloropropane	50.0	47.0		ug/L		94	70 - 130	1	30
Vinyl acetate	100	113		ug/L		113	60 - 176	3	30
Vinyl chloride	50.0	45.3		ug/L		91	67 - 134	4	30
Xylenes, Total	150	150		ug/L		100	70 - 130	3	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	101		70 - 130
Dibromofluoromethane	107		70 - 130
Toluene-d8 (Surr)	108		70 - 130

Lab Sample ID: MB 680-237953/7

Matrix: Water

Analysis Batch: 237953

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/20/12 18:36	1
Acetonitrile	40	U	40	10	ug/L			05/20/12 18:36	1
Acrolein	20	U	20	7.4	ug/L			05/20/12 18:36	1
Acrylonitrile	20	U	20	7.2	ug/L			05/20/12 18:36	1
Benzene	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/20/12 18:36	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/20/12 18:36	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/20/12 18:36	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/20/12 18:36	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/20/12 18:36	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/20/12 18:36	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/20/12 18:36	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/20/12 18:36	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/20/12 18:36	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/20/12 18:36	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/20/12 18:36	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/20/12 18:36	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/20/12 18:36	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/20/12 18:36	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/20/12 18:36	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-237953/7

Matrix: Water

Analysis Batch: 237953

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/20/12 18:36	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/20/12 18:36	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/20/12 18:36	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/20/12 18:36	1
2-Hexanone	10	U	10	1.0	ug/L			05/20/12 18:36	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/20/12 18:36	1
Isobutyl alcohol	40	U	40	11	ug/L			05/20/12 18:36	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/20/12 18:36	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/20/12 18:36	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/20/12 18:36	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/20/12 18:36	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/20/12 18:36	1
Propionitrile	20	U	20	4.6	ug/L			05/20/12 18:36	1
Styrene	1.0	U	1.0	0.11	ug/L			05/20/12 18:36	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/20/12 18:36	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/20/12 18:36	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/20/12 18:36	1
Toluene	1.0	U	1.0	0.33	ug/L			05/20/12 18:36	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/20/12 18:36	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/20/12 18:36	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/20/12 18:36	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/20/12 18:36	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/20/12 18:36	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/20/12 18:36	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/20/12 18:36	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/20/12 18:36	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/20/12 18:36	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/20/12 18:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		70 - 130		05/20/12 18:36	1
Dibromofluoromethane	104		70 - 130		05/20/12 18:36	1
Toluene-d8 (Surr)	107		70 - 130		05/20/12 18:36	1

Lab Sample ID: LCS 680-237953/4

Matrix: Water

Analysis Batch: 237953

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	133		ug/L		133	26 - 180
Benzene	50.0	51.6		ug/L		103	70 - 130
Bromoform	50.0	41.6		ug/L		83	70 - 130
Bromomethane	50.0	47.2		ug/L		94	23 - 165
Carbon disulfide	50.0	47.9		ug/L		96	54 - 132
Carbon tetrachloride	50.0	58.5		ug/L		117	70 - 130
Chlorobenzene	50.0	47.8		ug/L		96	70 - 130



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-237953/4

Matrix: Water

Analysis Batch: 237953

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroethane	50.0	45.4		ug/L		91	56 - 152
Chloroform	50.0	51.6		ug/L		103	70 - 130
cis-1,2-Dichloroethene	50.0	52.1		ug/L		104	70 - 130
Chloromethane	50.0	53.5		ug/L		107	70 - 130
cis-1,3-Dichloropropene	50.0	64.9		ug/L		130	70 - 130
Chlorodibromomethane	50.0	51.1		ug/L		102	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	47.4		ug/L		95	70 - 130
Dichlorobromomethane	50.0	56.1		ug/L		112	70 - 130
Dibromomethane	50.0	51.8		ug/L		104	70 - 130
Dichlorodifluoromethane	50.0	50.5		ug/L		101	44 - 146
1,2-Dichloroethane	50.0	56.1		ug/L		112	70 - 130
Ethylene Dibromide	50.0	52.4		ug/L		105	70 - 130
1,1-Dichloroethane	50.0	54.0		ug/L		108	70 - 130
1,1-Dichloroethene	50.0	50.7		ug/L		101	66 - 131
1,2-Dichloropropane	50.0	53.1		ug/L		106	70 - 130
Ethylbenzene	50.0	50.1		ug/L		100	70 - 130
2-Butanone (MEK)	100	126		ug/L		126	49 - 172
2-Hexanone	100	128		ug/L		128	42 - 185
Methylene Chloride	50.0	50.3		ug/L		101	67 - 130
4-Methyl-2-pentanone (MIBK)	100	106		ug/L		106	70 - 130
Styrene	50.0	51.7		ug/L		103	70 - 130
1,1,1,2-Tetrachloroethane	50.0	54.1		ug/L		108	70 - 130
1,1,2,2-Tetrachloroethane	50.0	47.5		ug/L		95	70 - 130
Tetrachloroethene	50.0	46.8		ug/L		94	70 - 130
Toluene	50.0	54.1		ug/L		108	70 - 130
trans-1,2-Dichloroethene	50.0	54.3		ug/L		109	70 - 130
trans-1,3-Dichloropropene	50.0	57.1		ug/L		114	70 - 130
1,1,1-Trichloroethane	50.0	60.5		ug/L		121	70 - 130
1,1,2-Trichloroethane	50.0	51.7		ug/L		103	70 - 130
Trichloroethene	50.0	52.3		ug/L		105	70 - 130
Trichlorofluoromethane	50.0	46.6		ug/L		93	55 - 156
1,2,3-Trichloropropane	50.0	45.8		ug/L		92	70 - 130
Vinyl acetate	100	123		ug/L		123	60 - 176
Vinyl chloride	50.0	45.5		ug/L		91	67 - 134
Xylenes, Total	150	151		ug/L		101	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	101		70 - 130
Dibromofluoromethane	108		70 - 130
Toluene-d8 (Surr)	111		70 - 130

Lab Sample ID: LCSD 680-237953/5

Matrix: Water

Analysis Batch: 237953

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	136		ug/L		136	26 - 180	2	50
Benzene	50.0	50.7		ug/L		101	70 - 130	2	30
Bromoform	50.0	39.6		ug/L		79	70 - 130	5	30



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-237953/5

Matrix: Water

Analysis Batch: 237953

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane	50.0	52.1		ug/L		104	23 - 165	10	50
Carbon disulfide	50.0	47.4		ug/L		95	54 - 132	1	30
Carbon tetrachloride	50.0	58.2		ug/L		116	70 - 130	0	30
Chlorobenzene	50.0	46.0		ug/L		92	70 - 130	4	30
Chloroethane	50.0	40.7		ug/L		81	56 - 152	11	40
Chloroform	50.0	50.8		ug/L		102	70 - 130	2	30
cis-1,2-Dichloroethene	50.0	51.6		ug/L		103	70 - 130	1	30
Chloromethane	50.0	51.8		ug/L		104	70 - 130	3	30
cis-1,3-Dichloropropene	50.0	62.8		ug/L		126	70 - 130	3	30
Chlorodibromomethane	50.0	48.8		ug/L		98	70 - 130	5	50
1,2-Dibromo-3-Chloropropane	50.0	44.7		ug/L		89	70 - 130	6	50
Dichlorobromomethane	50.0	55.0		ug/L		110	70 - 130	2	30
Dibromomethane	50.0	51.2		ug/L		102	70 - 130	1	30
Dichlorodifluoromethane	50.0	51.7		ug/L		103	44 - 146	2	50
1,2-Dichloroethane	50.0	55.2		ug/L		110	70 - 130	2	30
Ethylene Dibromide	50.0	51.5		ug/L		103	70 - 130	2	30
1,1-Dichloroethane	50.0	53.5		ug/L		107	70 - 130	1	30
1,1-Dichloroethene	50.0	49.0		ug/L		98	66 - 131	3	30
1,2-Dichloropropane	50.0	51.1		ug/L		102	70 - 130	4	30
Ethylbenzene	50.0	48.4		ug/L		97	70 - 130	3	30
2-Butanone (MEK)	100	124		ug/L		124	49 - 172	2	30
2-Hexanone	100	123		ug/L		123	42 - 185	4	30
Methylene Chloride	50.0	48.6		ug/L		97	67 - 130	3	30
4-Methyl-2-pentanone (MIBK)	100	105		ug/L		105	70 - 130	1	30
Styrene	50.0	49.6		ug/L		99	70 - 130	4	30
1,1,1,2-Tetrachloroethane	50.0	51.7		ug/L		103	70 - 130	4	30
1,1,2,2-Tetrachloroethane	50.0	47.4		ug/L		95	70 - 130	0	30
Tetrachloroethene	50.0	47.0		ug/L		94	70 - 130	0	30
Toluene	50.0	53.0		ug/L		106	70 - 130	2	30
trans-1,2-Dichloroethene	50.0	54.0		ug/L		108	70 - 130	0	30
trans-1,3-Dichloropropene	50.0	54.2		ug/L		108	70 - 130	5	50
1,1,1-Trichloroethane	50.0	59.9		ug/L		120	70 - 130	1	30
1,1,2-Trichloroethane	50.0	51.0		ug/L		102	70 - 130	1	30
Trichloroethene	50.0	51.3		ug/L		103	70 - 130	2	30
Trichlorofluoromethane	50.0	45.8		ug/L		92	55 - 156	2	30
1,2,3-Trichloropropane	50.0	44.6		ug/L		89	70 - 130	3	30
Vinyl acetate	100	116		ug/L		116	60 - 176	6	30
Vinyl chloride	50.0	44.5		ug/L		89	67 - 134	2	30
Xylenes, Total	150	146		ug/L		97	70 - 130	4	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	98		70 - 130
Dibromofluoromethane	107		70 - 130
Toluene-d8 (Surr)	110		70 - 130



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-238122/7

Matrix: Waste

Analysis Batch: 238122

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	2000	U	2000	2000	ug/Kg			05/22/12 11:43	40
Acetonitrile	8000	U	8000	8000	ug/Kg			05/22/12 11:43	40
Acrolein	4000	U	4000	4000	ug/Kg			05/22/12 11:43	40
Acrylonitrile	4000	U	4000	4000	ug/Kg			05/22/12 11:43	40
Benzene	200	U	200	200	ug/Kg			05/22/12 11:43	40
Bromoform	200	U	200	200	ug/Kg			05/22/12 11:43	40
Bromomethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
Carbon disulfide	200	U	200	200	ug/Kg			05/22/12 11:43	40
Carbon tetrachloride	200	U	200	200	ug/Kg			05/22/12 11:43	40
Chlorobenzene	200	U	200	200	ug/Kg			05/22/12 11:43	40
Allyl chloride	200	U	200	200	ug/Kg			05/22/12 11:43	40
Chloroethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
Chloroform	200	U	200	200	ug/Kg			05/22/12 11:43	40
Chloromethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
Chloroprene	200	U	200	200	ug/Kg			05/22/12 11:43	40
cis-1,3-Dichloropropene	200	U	200	200	ug/Kg			05/22/12 11:43	40
Dibromochloromethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,2-Dibromo-3-Chloropropane	400	U	400	400	ug/Kg			05/22/12 11:43	40
Bromodichloromethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
Dibromomethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,4-Dichlorobenzene	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,3-Dichlorobenzene	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,2-Dichlorobenzene	200	U	200	200	ug/Kg			05/22/12 11:43	40
Dichlorodifluoromethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,2-Dibromoethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,2-Dichloroethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,1-Dichloroethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,1-Dichloroethene	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,2-Dichloropropane	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,4-Dioxane	2000	U	2000	2000	ug/Kg			05/22/12 11:43	40
Ethylbenzene	200	U	200	200	ug/Kg			05/22/12 11:43	40
Ethyl methacrylate	200	U	200	200	ug/Kg			05/22/12 11:43	40
2-Butanone	1000	U	1000	1000	ug/Kg			05/22/12 11:43	40
2-Hexanone	1000	U	1000	1000	ug/Kg			05/22/12 11:43	40
Iodomethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
Isobutanol	8000	U	8000	8000	ug/Kg			05/22/12 11:43	40
Methacrylonitrile	4000	U	4000	4000	ug/Kg			05/22/12 11:43	40
Methylene Chloride	200	U	200	200	ug/Kg			05/22/12 11:43	40
Methyl methacrylate	400	U	400	400	ug/Kg			05/22/12 11:43	40
4-Methyl-2-pentanone	1000	U	1000	1000	ug/Kg			05/22/12 11:43	40
Pentachloroethane	1000	U	1000	1000	ug/Kg			05/22/12 11:43	40
Propionitrile	4000	U	4000	4000	ug/Kg			05/22/12 11:43	40
Styrene	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,1,1,2-Tetrachloroethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,1,1,2,2-Tetrachloroethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
Tetrachloroethene	200	U	200	200	ug/Kg			05/22/12 11:43	40
Toluene	200	U	200	200	ug/Kg			05/22/12 11:43	40
trans-1,4-Dichloro-2-butene	400	U	400	400	ug/Kg			05/22/12 11:43	40
trans-1,2-Dichloroethene	200	U	200	200	ug/Kg			05/22/12 11:43	40



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-238122/7

Matrix: Waste

Analysis Batch: 238122

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,2,4-Trichlorobenzene	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,1,1-Trichloroethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,1,2-Trichloroethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
Trichloroethene	200	U	200	200	ug/Kg			05/22/12 11:43	40
Trichlorofluoromethane	200	U	200	200	ug/Kg			05/22/12 11:43	40
1,2,3-Trichloropropane	200	U	200	200	ug/Kg			05/22/12 11:43	40
Vinyl acetate	400	U	400	400	ug/Kg			05/22/12 11:43	40
Vinyl chloride	200	U	200	200	ug/Kg			05/22/12 11:43	40
Xylenes, Total	400	U	400	400	ug/Kg			05/22/12 11:43	40

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		30 - 130		05/22/12 11:43	40
Dibromofluoromethane	109		30 - 130		05/22/12 11:43	40
Toluene-d8 (Surr)	100		30 - 130		05/22/12 11:43	40

Lab Sample ID: LCSD 680-238122/5

Matrix: Waste

Analysis Batch: 238122

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	5000	5250		ug/Kg		105	30 - 130	1	50
Benzene	2500	2300		ug/Kg		92	30 - 130	1	50
Bromoform	2500	2380		ug/Kg		95	30 - 130	1	50
Bromomethane	2500	2030		ug/Kg		81	30 - 130	0	50
Carbon disulfide	2500	2390		ug/Kg		96	30 - 130	1	50
Carbon tetrachloride	2500	2340		ug/Kg		94	30 - 130	1	50
Chlorobenzene	2500	2540		ug/Kg		102	30 - 130	1	50
Chloroethane	2500	534 *		ug/Kg		21	30 - 130	1	50
Chloroform	2500	2660		ug/Kg		107	30 - 130	1	50
Chloromethane	2500	1740		ug/Kg		70	30 - 130	3	50
cis-1,3-Dichloropropene	2500	2270		ug/Kg		91	30 - 130	2	50
Dibromochloromethane	2500	2490		ug/Kg		100	30 - 130	0	50
1,2-Dibromo-3-Chloropropane	2500	2100		ug/Kg		84	30 - 130	3	50
Bromodichloromethane	2500	2220		ug/Kg		89	30 - 130	1	50
Dibromomethane	2500	2170		ug/Kg		87	30 - 130	3	50
1,4-Dichlorobenzene	2500	2430		ug/Kg		97	30 - 130	1	50
1,3-Dichlorobenzene	2500	2460		ug/Kg		99	30 - 130	0	50
1,2-Dichlorobenzene	2500	2440		ug/Kg		98	30 - 130	0	50
Dichlorodifluoromethane	2500	1670		ug/Kg		67	30 - 130	3	50
1,2-Dibromoethane	2500	2260		ug/Kg		90	30 - 130	0	50
1,2-Dichloroethane	2500	2080		ug/Kg		83	30 - 130	1	50
1,1-Dichloroethane	2500	2630		ug/Kg		105	30 - 130	1	50
1,1-Dichloroethene	2500	2580		ug/Kg		103	30 - 130	2	50
1,2-Dichloropropane	2500	2230		ug/Kg		89	30 - 130	2	50
Ethylbenzene	2500	2520		ug/Kg		101	30 - 130	1	50
2-Butanone	5000	4340		ug/Kg		87	30 - 130	1	50
2-Hexanone	5000	3690		ug/Kg		74	30 - 130	2	50
Methylene Chloride	2500	2530		ug/Kg		101	30 - 130	3	50



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-238122/5

Matrix: Waste

Analysis Batch: 238122

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Methyl-2-pentanone	5000	3470		ug/Kg		69	30 - 130	0	50
Styrene	2500	2520		ug/Kg		101	30 - 130	0	50
1,1,1,2-Tetrachloroethane	2500	2560		ug/Kg		102	30 - 130	2	50
1,1,2,2-Tetrachloroethane	2500	2060		ug/Kg		82	30 - 130	3	50
Tetrachloroethene	2500	2730		ug/Kg		109	30 - 130	1	50
Toluene	2500	2350		ug/Kg		94	30 - 130	2	50
trans-1,2-Dichloroethene	2500	2750		ug/Kg		110	30 - 130	0	50
trans-1,3-Dichloropropene	2500	2180		ug/Kg		87	30 - 130	1	50
1,2,4-Trichlorobenzene	2500	2580		ug/Kg		103	30 - 130	2	50
1,1,1-Trichloroethane	2500	2290		ug/Kg		92	30 - 130	2	50
1,1,2-Trichloroethane	2500	2140		ug/Kg		86	30 - 130	2	50
Trichloroethene	2500	2460		ug/Kg		98	30 - 130	0	50
Trichlorofluoromethane	2500	2090		ug/Kg		84	30 - 130	1	50
1,2,3-Trichloropropane	2500	2220		ug/Kg		89	30 - 130	1	50
Vinyl acetate	5000	4310		ug/Kg		86	30 - 130	1	50
Vinyl chloride	2500	2420		ug/Kg		97	30 - 130	0	50
Xylenes, Total	7500	7780		ug/Kg		104	30 - 130	1	50

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	94		30 - 130
Dibromofluoromethane	112		30 - 130
Toluene-d8 (Surr)	96		30 - 130

Lab Sample ID: MB 680-238266/7

Matrix: Water

Analysis Batch: 238266

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/23/12 12:19	1
Acetonitrile	40	U	40	10	ug/L			05/23/12 12:19	1
Acrolein	20	U	20	7.4	ug/L			05/23/12 12:19	1
Acrylonitrile	20	U	20	7.2	ug/L			05/23/12 12:19	1
Benzene	1.0	U	1.0	0.25	ug/L			05/23/12 12:19	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/23/12 12:19	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/23/12 12:19	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/23/12 12:19	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/23/12 12:19	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/23/12 12:19	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/23/12 12:19	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/23/12 12:19	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/23/12 12:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 12:19	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/23/12 12:19	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/23/12 12:19	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/23/12 12:19	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/23/12 12:19	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/23/12 12:19	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:19	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/23/12 12:19	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-238266/7

Matrix: Water

Analysis Batch: 238266

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:19	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/23/12 12:19	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/23/12 12:19	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:19	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/23/12 12:19	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/23/12 12:19	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/23/12 12:19	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/23/12 12:19	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/12 12:19	1
2-Hexanone	10	U	10	1.0	ug/L			05/23/12 12:19	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/23/12 12:19	1
Isobutyl alcohol	40	U	40	11	ug/L			05/23/12 12:19	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/23/12 12:19	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/23/12 12:19	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/23/12 12:19	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/23/12 12:19	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/23/12 12:19	1
Propionitrile	20	U	20	4.6	ug/L			05/23/12 12:19	1
Styrene	1.0	U	1.0	0.11	ug/L			05/23/12 12:19	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/23/12 12:19	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/23/12 12:19	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 12:19	1
Toluene	1.0	U	1.0	0.33	ug/L			05/23/12 12:19	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/23/12 12:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/23/12 12:19	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/23/12 12:19	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/23/12 12:19	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/23/12 12:19	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/23/12 12:19	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:19	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/23/12 12:19	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/23/12 12:19	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/23/12 12:19	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/23/12 12:19	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		70 - 130					05/23/12 12:19	1
Dibromofluoromethane	108		70 - 130					05/23/12 12:19	1
Toluene-d8 (Surr)	106		70 - 130					05/23/12 12:19	1

Lab Sample ID: LCS 680-238266/4

Matrix: Water

Analysis Batch: 238266

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	120		ug/L		120	26 - 180
Benzene	50.0	49.4		ug/L		99	70 - 130
Bromoform	50.0	41.9		ug/L		84	70 - 130
Bromomethane	50.0	36.5		ug/L		73	23 - 165



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-238266/4

Matrix: Water

Analysis Batch: 238266

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon disulfide	50.0	46.3		ug/L		93	54 - 132
Carbon tetrachloride	50.0	56.4		ug/L		113	70 - 130
Chlorobenzene	50.0	50.0		ug/L		100	70 - 130
Chloroethane	50.0	48.3		ug/L		97	56 - 152
Chloroform	50.0	48.2		ug/L		96	70 - 130
cis-1,2-Dichloroethene	50.0	50.3		ug/L		101	70 - 130
Chloromethane	50.0	52.3		ug/L		105	70 - 130
cis-1,3-Dichloropropene	50.0	61.0		ug/L		122	70 - 130
Chlorodibromomethane	50.0	52.6		ug/L		105	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	47.9		ug/L		96	70 - 130
Dichlorobromomethane	50.0	53.6		ug/L		107	70 - 130
Dibromomethane	50.0	50.5		ug/L		101	70 - 130
Dichlorodifluoromethane	50.0	48.6		ug/L		97	44 - 146
1,2-Dichloroethane	50.0	54.5		ug/L		109	70 - 130
Ethylene Dibromide	50.0	49.7		ug/L		99	70 - 130
1,1-Dichloroethane	50.0	51.7		ug/L		103	70 - 130
1,1-Dichloroethene	50.0	50.2		ug/L		100	66 - 131
1,2-Dichloropropane	50.0	51.6		ug/L		103	70 - 130
Ethylbenzene	50.0	51.2		ug/L		102	70 - 130
2-Butanone (MEK)	100	110		ug/L		110	49 - 172
2-Hexanone	100	124		ug/L		124	42 - 185
Methylene Chloride	50.0	47.7		ug/L		95	67 - 130
4-Methyl-2-pentanone (MIBK)	100	96.3		ug/L		96	70 - 130
Styrene	50.0	53.3		ug/L		107	70 - 130
1,1,1,2-Tetrachloroethane	50.0	56.5		ug/L		113	70 - 130
1,1,2,2-Tetrachloroethane	50.0	47.8		ug/L		96	70 - 130
Tetrachloroethene	50.0	49.9		ug/L		100	70 - 130
Toluene	50.0	50.7		ug/L		101	70 - 130
trans-1,2-Dichloroethene	50.0	52.1		ug/L		104	70 - 130
trans-1,3-Dichloropropene	50.0	53.3		ug/L		107	70 - 130
1,1,1-Trichloroethane	50.0	57.1		ug/L		114	70 - 130
1,1,2-Trichloroethane	50.0	50.0		ug/L		100	70 - 130
Trichloroethene	50.0	50.5		ug/L		101	70 - 130
Trichlorofluoromethane	50.0	51.0		ug/L		102	55 - 156
1,2,3-Trichloropropane	50.0	47.1		ug/L		94	70 - 130
Vinyl acetate	100	116		ug/L		116	60 - 176
Vinyl chloride	50.0	46.8		ug/L		94	67 - 134
Xylenes, Total	150	159		ug/L		106	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	104		70 - 130
Dibromofluoromethane	104		70 - 130
Toluene-d8 (Surr)	105		70 - 130



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-238266/5

Matrix: Water

Analysis Batch: 238266

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	108		ug/L		108	26 - 180	11	50
Benzene	50.0	49.5		ug/L		99	70 - 130	0	30
Bromoform	50.0	42.1		ug/L		84	70 - 130	0	30
Bromomethane	50.0	52.4		ug/L		105	23 - 165	36	50
Carbon disulfide	50.0	45.5		ug/L		91	54 - 132	2	30
Carbon tetrachloride	50.0	56.6		ug/L		113	70 - 130	0	30
Chlorobenzene	50.0	49.6		ug/L		99	70 - 130	1	30
Chloroethane	50.0	45.8		ug/L		92	56 - 152	5	40
Chloroform	50.0	48.0		ug/L		96	70 - 130	0	30
cis-1,2-Dichloroethene	50.0	48.6		ug/L		97	70 - 130	3	30
Chloromethane	50.0	51.5		ug/L		103	70 - 130	2	30
cis-1,3-Dichloropropene	50.0	61.6		ug/L		123	70 - 130	1	30
Chlorodibromomethane	50.0	52.6		ug/L		105	70 - 130	0	50
1,2-Dibromo-3-Chloropropane	50.0	46.3		ug/L		93	70 - 130	3	50
Dichlorobromomethane	50.0	53.3		ug/L		107	70 - 130	1	30
Dibromomethane	50.0	49.6		ug/L		99	70 - 130	2	30
Dichlorodifluoromethane	50.0	47.6		ug/L		95	44 - 146	2	50
1,2-Dichloroethane	50.0	53.9		ug/L		108	70 - 130	1	30
Ethylene Dibromide	50.0	49.9		ug/L		100	70 - 130	0	30
1,1-Dichloroethane	50.0	50.7		ug/L		101	70 - 130	2	30
1,1-Dichloroethene	50.0	48.6		ug/L		97	66 - 131	3	30
1,2-Dichloropropane	50.0	50.9		ug/L		102	70 - 130	1	30
Ethylbenzene	50.0	51.8		ug/L		104	70 - 130	1	30
2-Butanone (MEK)	100	105		ug/L		105	49 - 172	5	30
2-Hexanone	100	122		ug/L		122	42 - 185	2	30
Methylene Chloride	50.0	47.2		ug/L		94	67 - 130	1	30
4-Methyl-2-pentanone (MIBK)	100	96.3		ug/L		96	70 - 130	0	30
Styrene	50.0	53.2		ug/L		106	70 - 130	0	30
1,1,1,2-Tetrachloroethane	50.0	55.8		ug/L		112	70 - 130	1	30
1,1,2,2-Tetrachloroethane	50.0	48.2		ug/L		96	70 - 130	1	30
Tetrachloroethene	50.0	50.8		ug/L		102	70 - 130	2	30
Toluene	50.0	53.0		ug/L		106	70 - 130	4	30
trans-1,2-Dichloroethene	50.0	50.1		ug/L		100	70 - 130	4	30
trans-1,3-Dichloropropene	50.0	54.0		ug/L		108	70 - 130	1	50
1,1,1-Trichloroethane	50.0	58.8		ug/L		118	70 - 130	3	30
1,1,2-Trichloroethane	50.0	48.9		ug/L		98	70 - 130	2	30
Trichloroethene	50.0	51.0		ug/L		102	70 - 130	1	30
Trichlorofluoromethane	50.0	49.2		ug/L		98	55 - 156	4	30
1,2,3-Trichloropropane	50.0	46.4		ug/L		93	70 - 130	1	30
Vinyl acetate	100	112		ug/L		112	60 - 176	3	30
Vinyl chloride	50.0	44.2		ug/L		88	67 - 134	6	30
Xylenes, Total	150	159		ug/L		106	70 - 130	0	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	104		70 - 130
Dibromofluoromethane	100		70 - 130
Toluene-d8 (Surr)	107		70 - 130



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-79571-9 MS

Matrix: Water

Analysis Batch: 238266

Client Sample ID: Dup-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	25	U	100	164		ug/L		164	26 - 180
Benzene	4.4		50.0	51.9		ug/L		95	70 - 130
Bromoform	1.0	U	50.0	48.8		ug/L		98	70 - 130
Bromomethane	1.0	U	50.0	52.9		ug/L		106	23 - 165
Carbon disulfide	2.0	U	50.0	47.7		ug/L		95	54 - 132
Carbon tetrachloride	1.0	U	50.0	58.4		ug/L		117	70 - 130
Chlorobenzene	0.45	J	50.0	50.2		ug/L		99	70 - 130
Chlorodibromomethane	1.0	U	50.0	56.1		ug/L		112	70 - 130
Chloroethane	1.0	U	50.0	50.6		ug/L		101	56 - 152
Chloroform	0.30	J	50.0	51.5		ug/L		102	70 - 130
Chloromethane	1.0	U	50.0	39.4		ug/L		79	70 - 130
cis-1,2-Dichloroethene	1.0	U	50.0	51.2		ug/L		102	70 - 130
cis-1,3-Dichloropropene	1.0	U	50.0	53.1		ug/L		106	70 - 130
1,2-Dibromo-3-Chloropropane	1.0	U	50.0	73.0	F	ug/L		146	70 - 130
Dibromomethane	1.0	U	50.0	51.2		ug/L		102	70 - 130
Dichlorobromomethane	1.0	U	50.0	51.8		ug/L		104	70 - 130
Dichlorodifluoromethane	1.0	U	50.0	51.5		ug/L		103	44 - 146
1,1-Dichloroethane	1.0	U	50.0	50.9		ug/L		102	70 - 130
1,2-Dichloroethane	1.0	U	50.0	51.4		ug/L		103	70 - 130
1,1-Dichloroethene	1.0	U	50.0	54.4		ug/L		109	66 - 131
1,2-Dichloropropane	1.0	U	50.0	50.3		ug/L		101	70 - 130
Ethylbenzene	0.12	J	50.0	51.9		ug/L		104	70 - 130
Ethylene Dibromide	1.0	U	50.0	51.8		ug/L		104	70 - 130
2-Hexanone	10	U	100	141		ug/L		141	42 - 185
Methylene Chloride	5.0	U	50.0	49.4		ug/L		99	67 - 130
2-Butanone (MEK)	10	U	100	148		ug/L		148	49 - 172
4-Methyl-2-pentanone (MIBK)	10	U	100	133	F	ug/L		133	70 - 130
Styrene	1.0	U	50.0	51.8		ug/L		104	70 - 130
1,1,1,2-Tetrachloroethane	1.0	U	50.0	54.3		ug/L		109	70 - 130
1,1,2,2-Tetrachloroethane	1.0	U	50.0	58.1		ug/L		116	70 - 130
Tetrachloroethene	1.0	U	50.0	51.9		ug/L		104	70 - 130
Toluene	1.0	U	50.0	52.5		ug/L		105	70 - 130
trans-1,2-Dichloroethene	1.0	U	50.0	53.6		ug/L		107	70 - 130
trans-1,3-Dichloropropene	1.0	U	50.0	52.1		ug/L		104	70 - 130
1,1,1-Trichloroethane	1.0	U	50.0	55.3		ug/L		111	70 - 130
1,1,2-Trichloroethane	1.0	U	50.0	50.0		ug/L		100	70 - 130
Trichloroethene	1.0	U	50.0	52.2		ug/L		104	70 - 130
Trichlorofluoromethane	1.0	U	50.0	57.5		ug/L		115	55 - 156
1,2,3-Trichloropropane	1.0	U	50.0	58.0		ug/L		116	70 - 130
Vinyl acetate	2.0	U	100	102		ug/L		102	60 - 176
Vinyl chloride	1.0	U	50.0	50.9		ug/L		102	67 - 134
Xylenes, Total	1.4	J	150	156		ug/L		103	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene	97		70 - 130
Dibromofluoromethane	104		70 - 130
Toluene-d8 (Surr)	106		70 - 130



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-79571-9 MSD

Matrix: Water

Analysis Batch: 238266

Client Sample ID: Dup-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	25	U	100	96.7	F	ug/L		97	26 - 180	51	50
Benzene	4.4		50.0	57.8		ug/L		107	70 - 130	11	30
Bromoform	1.0	U	50.0	45.1		ug/L		90	70 - 130	8	30
Bromomethane	1.0	U	50.0	99.1	F	ug/L		198	23 - 165	61	50
Carbon disulfide	2.0	U	50.0	51.7		ug/L		103	54 - 132	8	30
Carbon tetrachloride	1.0	U	50.0	62.3		ug/L		125	70 - 130	6	30
Chlorobenzene	0.45	J	50.0	51.9		ug/L		103	70 - 130	3	30
Chlorodibromomethane	1.0	U	50.0	55.2		ug/L		110	70 - 130	2	50
Chloroethane	1.0	U	50.0	72.6		ug/L		145	56 - 152	36	40
Chloroform	0.30	J	50.0	54.1		ug/L		108	70 - 130	5	30
Chloromethane	1.0	U	50.0	47.1		ug/L		94	70 - 130	18	30
cis-1,2-Dichloroethene	1.0	U	50.0	53.0		ug/L		106	70 - 130	4	30
cis-1,3-Dichloropropene	1.0	U	50.0	55.9		ug/L		112	70 - 130	5	30
1,2-Dibromo-3-Chloropropane	1.0	U	50.0	50.3		ug/L		101	70 - 130	37	50
Dibromomethane	1.0	U	50.0	51.0		ug/L		102	70 - 130	0	30
Dichlorobromomethane	1.0	U	50.0	56.8		ug/L		114	70 - 130	9	30
Dichlorodifluoromethane	1.0	U	50.0	55.2		ug/L		110	44 - 146	7	50
1,1-Dichloroethane	1.0	U	50.0	53.7		ug/L		107	70 - 130	5	30
1,2-Dichloroethane	1.0	U	50.0	52.3		ug/L		105	70 - 130	2	30
1,1-Dichloroethene	1.0	U	50.0	57.6		ug/L		115	66 - 131	6	30
1,2-Dichloropropane	1.0	U	50.0	52.6		ug/L		105	70 - 130	4	30
Ethylbenzene	0.12	J	50.0	53.7		ug/L		107	70 - 130	3	30
Ethylene Dibromide	1.0	U	50.0	48.8		ug/L		98	70 - 130	6	30
2-Hexanone	10	U	100	95.0	F	ug/L		95	42 - 185	39	30
Methylene Chloride	5.0	U	50.0	52.3		ug/L		105	67 - 130	6	30
2-Butanone (MEK)	10	U	100	93.3	F	ug/L		93	49 - 172	45	30
4-Methyl-2-pentanone (MIBK)	10	U	100	96.8	F	ug/L		97	70 - 130	31	30
Styrene	1.0	U	50.0	53.4		ug/L		107	70 - 130	3	30
1,1,1,2-Tetrachloroethane	1.0	U	50.0	55.7		ug/L		111	70 - 130	3	30
1,1,2,2-Tetrachloroethane	1.0	U	50.0	48.5		ug/L		97	70 - 130	18	30
Tetrachloroethene	1.0	U	50.0	52.7		ug/L		105	70 - 130	1	30
Toluene	1.0	U	50.0	53.8		ug/L		108	70 - 130	2	30
trans-1,2-Dichloroethene	1.0	U	50.0	56.2		ug/L		112	70 - 130	5	30
trans-1,3-Dichloropropene	1.0	U	50.0	55.6		ug/L		111	70 - 130	6	50
1,1,1-Trichloroethane	1.0	U	50.0	58.6		ug/L		117	70 - 130	6	30
1,1,2-Trichloroethane	1.0	U	50.0	49.7		ug/L		99	70 - 130	1	30
Trichloroethene	1.0	U	50.0	53.2		ug/L		106	70 - 130	2	30
Trichlorofluoromethane	1.0	U	50.0	63.2		ug/L		126	55 - 156	10	30
1,2,3-Trichloropropane	1.0	U	50.0	46.9		ug/L		94	70 - 130	21	30
Vinyl acetate	2.0	U	100	92.0		ug/L		92	60 - 176	10	30
Vinyl chloride	1.0	U	50.0	55.0		ug/L		110	67 - 134	8	30
Xylenes, Total	1.4	J	150	164		ug/L		108	70 - 130	5	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene	102		70 - 130
Dibromofluoromethane	108		70 - 130
Toluene-d8 (Surr)	109		70 - 130



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Lab Sample ID: MB 680-237769/17-A

Matrix: Water

Analysis Batch: 238224

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 237769

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	5.0	U	5.0	0.50	ug/L		05/18/12 15:41	05/22/12 17:49	1
Toxaphene, TAUC, Parlar 11-69	5.0	U	5.0	0.50	ug/L		05/18/12 15:41	05/22/12 17:49	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	19	X	40 - 130				05/18/12 15:41	05/22/12 17:49	1
DCB Decachlorobiphenyl	20	X	40 - 130				05/18/12 15:41	05/22/12 17:49	1
Tetrachloro-m-xylene	66		36 - 130				05/18/12 15:41	05/22/12 17:49	1
Tetrachloro-m-xylene	74		36 - 130				05/18/12 15:41	05/22/12 17:49	1

Lab Sample ID: LCS 680-237769/21-A

Matrix: Water

Analysis Batch: 238224

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 237769

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene, Technical	10.0	12.5		ug/L		125	35 - 138
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
DCB Decachlorobiphenyl	35	X	40 - 130				
DCB Decachlorobiphenyl	32	X	40 - 130				
Tetrachloro-m-xylene	85		36 - 130				
Tetrachloro-m-xylene	76		36 - 130				

Lab Sample ID: 680-79571-9 MS

Matrix: Water

Analysis Batch: 238799

Client Sample ID: Dup-1

Prep Type: Total/NA

Prep Batch: 237769

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene, Technical	5.0	U	9.76	15.1	F	ug/L		154	35 - 138
Surrogate	MS %Recovery	MS Qualifier	Limits						
DCB Decachlorobiphenyl	49		40 - 130						
DCB Decachlorobiphenyl	21	p X	40 - 130						
Tetrachloro-m-xylene	65		36 - 130						
Tetrachloro-m-xylene	86		36 - 130						

Lab Sample ID: 680-79571-9 MSD

Matrix: Water

Analysis Batch: 238799

Client Sample ID: Dup-1

Prep Type: Total/NA

Prep Batch: 237769

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toxaphene, Technical	5.0	U	9.99	14.8	F	ug/L		148	35 - 138	2	50
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
DCB Decachlorobiphenyl	66		40 - 130								
DCB Decachlorobiphenyl	21	p X	40 - 130								
Tetrachloro-m-xylene	52		36 - 130								
Tetrachloro-m-xylene	76		36 - 130								



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) (Continued)

Lab Sample ID: MB 680-238605/17-A

Matrix: Water

Analysis Batch: 239361

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 238605

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	5.0	U	5.0	0.50	ug/L		05/28/12 15:21	05/31/12 19:26	1
Toxaphene, TAUC, Parlar 11-69	5.0	U	5.0	0.50	ug/L		05/28/12 15:21	05/31/12 19:26	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	57		40 - 130				05/28/12 15:21	05/31/12 19:26	1
DCB Decachlorobiphenyl	52		40 - 130				05/28/12 15:21	05/31/12 19:26	1
Tetrachloro-m-xylene	82		36 - 130				05/28/12 15:21	05/31/12 19:26	1
Tetrachloro-m-xylene	82		36 - 130				05/28/12 15:21	05/31/12 19:26	1

Lab Sample ID: LCS 680-238605/18-A

Matrix: Water

Analysis Batch: 239361

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 238605

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene, Technical	10.0	8.80		ug/L		88	35 - 138
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
DCB Decachlorobiphenyl	46		40 - 130				
DCB Decachlorobiphenyl	41		40 - 130				
Tetrachloro-m-xylene	77		36 - 130				
Tetrachloro-m-xylene	72		36 - 130				

Lab Sample ID: LCSD 680-238605/19-A

Matrix: Water

Analysis Batch: 239361

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 238605

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toxaphene, Technical	10.0	10.5		ug/L		105	35 - 138	17	50
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
DCB Decachlorobiphenyl	55		40 - 130						
DCB Decachlorobiphenyl	49		40 - 130						
Tetrachloro-m-xylene	87		36 - 130						
Tetrachloro-m-xylene	85		36 - 130						

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 680-238027/1-A

Matrix: Water

Analysis Batch: 238198

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 238027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 00:45	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 00:45	1
Barium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 00:45	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 00:45	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 00:45	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 00:45	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 680-238027/1-A

Matrix: Water

Analysis Batch: 238198

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 238027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 00:45	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 00:45	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 00:45	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 00:45	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 00:45	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 00:45	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 00:45	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 00:45	1
Vanadium	0.010	U	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 00:45	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 00:45	1

Lab Sample ID: LCS 680-238027/2-A

Matrix: Water

Analysis Batch: 238198

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 238027

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.490		mg/L		98	75 - 125
Arsenic	2.00	2.13		mg/L		107	75 - 125
Barium	2.00	2.10		mg/L		105	75 - 125
Beryllium	0.0500	0.0526		mg/L		105	75 - 125
Cadmium	0.0500	0.0517		mg/L		103	75 - 125
Chromium	0.200	0.208		mg/L		104	75 - 125
Cobalt	0.500	0.530		mg/L		106	75 - 125
Copper	0.250	0.269		mg/L		107	75 - 125
Lead	0.500	0.517		mg/L		103	75 - 125
Nickel	0.500	0.520		mg/L		104	75 - 125
Selenium	2.00	2.09		mg/L		104	75 - 125
Silver	0.0500	0.0522		mg/L		104	75 - 125
Thallium	2.00	2.17		mg/L		108	75 - 125
Tin	1.00	1.05		mg/L		105	75 - 125
Vanadium	0.500	0.515		mg/L		103	75 - 125
Zinc	0.500	0.515		mg/L		103	75 - 125

Lab Sample ID: MB 680-238497/1-A

Matrix: Water

Analysis Batch: 238551

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 238497

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/25/12 11:41	05/25/12 22:04	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/25/12 11:41	05/25/12 22:04	1
Barium	0.010	U	0.010	0.0020	mg/L		05/25/12 11:41	05/25/12 22:04	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/25/12 11:41	05/25/12 22:04	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/25/12 11:41	05/25/12 22:04	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/25/12 11:41	05/25/12 22:04	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/25/12 11:41	05/25/12 22:04	1
Copper	0.020	U	0.020	0.0050	mg/L		05/25/12 11:41	05/25/12 22:04	1
Lead	0.010	U	0.010	0.0034	mg/L		05/25/12 11:41	05/25/12 22:04	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/25/12 11:41	05/25/12 22:04	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/25/12 11:41	05/25/12 22:04	1
Silver	0.010	U	0.010	0.00097	mg/L		05/25/12 11:41	05/25/12 22:04	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 680-238497/1-A

Matrix: Water

Analysis Batch: 238551

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 238497

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.025	U	0.025	0.0087	mg/L		05/25/12 11:41	05/25/12 22:04	1
Tin	0.050	U	0.050	0.0054	mg/L		05/25/12 11:41	05/25/12 22:04	1
Vanadium	0.010	U	0.010	0.0030	mg/L		05/25/12 11:41	05/25/12 22:04	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/25/12 11:41	05/25/12 22:04	1

Lab Sample ID: LCS 680-238497/2-A

Matrix: Water

Analysis Batch: 238551

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 238497

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.487		mg/L		97	75 - 125
Arsenic	2.00	2.11		mg/L		106	75 - 125
Barium	2.00	2.07		mg/L		103	75 - 125
Beryllium	0.0500	0.0506		mg/L		101	75 - 125
Cadmium	0.0500	0.0505		mg/L		101	75 - 125
Chromium	0.200	0.202		mg/L		101	75 - 125
Cobalt	0.500	0.521		mg/L		104	75 - 125
Copper	0.250	0.270		mg/L		108	75 - 125
Lead	0.500	0.508		mg/L		102	75 - 125
Nickel	0.500	0.511		mg/L		102	75 - 125
Selenium	2.00	2.07		mg/L		104	75 - 125
Silver	0.0500	0.0509		mg/L		102	75 - 125
Thallium	2.00	2.12		mg/L		106	75 - 125
Tin	1.00	1.03		mg/L		103	75 - 125
Vanadium	0.500	0.510		mg/L		102	75 - 125
Zinc	0.500	0.496		mg/L		99	75 - 125

Lab Sample ID: 680-79571-9 MS

Matrix: Water

Analysis Batch: 238551

Client Sample ID: Dup-1

Prep Type: Total Recoverable

Prep Batch: 238497

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.020	U	0.500	0.504		mg/L		101	75 - 125
Arsenic	0.020	U	2.00	2.20		mg/L		110	75 - 125
Barium	0.16		2.00	2.23		mg/L		104	75 - 125
Beryllium	0.0040	U	0.0500	0.0514		mg/L		103	75 - 125
Cadmium	0.0050	U	0.0500	0.0500		mg/L		100	75 - 125
Chromium	0.0051	J	0.200	0.208		mg/L		101	75 - 125
Cobalt	0.010	U	0.500	0.519		mg/L		104	75 - 125
Copper	0.020	U	0.250	0.282		mg/L		113	75 - 125
Lead	0.010	U	0.500	0.505		mg/L		101	75 - 125
Nickel	0.040	U	0.500	0.509		mg/L		102	75 - 125
Selenium	0.0064	J	2.00	2.17		mg/L		108	75 - 125
Silver	0.010	U	0.0500	0.0532		mg/L		106	75 - 125
Thallium	0.025	U	2.00	2.08		mg/L		104	75 - 125
Tin	0.050	U	1.00	1.04		mg/L		104	75 - 125
Vanadium	0.0056	J	0.500	0.521		mg/L		103	75 - 125
Zinc	0.020	U	0.500	0.495		mg/L		99	75 - 125



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 680-79571-9 MSD

Matrix: Water

Analysis Batch: 238551

Client Sample ID: Dup-1  
Prep Type: Total Recoverable  
Prep Batch: 238497

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Antimony	0.020	U	0.500	0.504		mg/L		101	75 - 125	0	20
Arsenic	0.020	U	2.00	2.21		mg/L		110	75 - 125	0	20
Barium	0.16		2.00	2.23		mg/L		104	75 - 125	0	20
Beryllium	0.0040	U	0.0500	0.0514		mg/L		103	75 - 125	0	20
Cadmium	0.0050	U	0.0500	0.0499		mg/L		100	75 - 125	0	20
Chromium	0.0051	J	0.200	0.208		mg/L		101	75 - 125	0	20
Cobalt	0.010	U	0.500	0.520		mg/L		104	75 - 125	0	20
Copper	0.020	U	0.250	0.282		mg/L		113	75 - 125	0	20
Lead	0.010	U	0.500	0.503		mg/L		101	75 - 125	0	20
Nickel	0.040	U	0.500	0.508		mg/L		102	75 - 125	0	20
Selenium	0.0064	J	2.00	2.16		mg/L		108	75 - 125	0	20
Silver	0.010	U	0.0500	0.0532		mg/L		106	75 - 125	0	20
Thallium	0.025	U	2.00	2.08		mg/L		104	75 - 125	0	20
Tin	0.050	U	1.00	1.04		mg/L		104	75 - 125	0	20
Vanadium	0.0056	J	0.500	0.522		mg/L		103	75 - 125	0	20
Zinc	0.020	U	0.500	0.493		mg/L		99	75 - 125	0	20

## Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 680-237806/1-A

Matrix: Water

Analysis Batch: 238210

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 237806

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.00020	U	0.00020	0.000091	mg/L		05/18/12 12:35	05/22/12 10:27	1

Lab Sample ID: LCS 680-237806/2-A

Matrix: Water

Analysis Batch: 238210

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 237806

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
							Limits
Mercury	0.00250	0.00248		mg/L		99	80 - 120

Lab Sample ID: 680-79571-9 MS

Matrix: Water

Analysis Batch: 238210

Client Sample ID: Dup-1  
Prep Type: Total/NA  
Prep Batch: 237806

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Mercury	0.00020	U	0.00100	0.000978		mg/L		98	80 - 120

Lab Sample ID: 680-79571-9 MSD

Matrix: Water

Analysis Batch: 238210

Client Sample ID: Dup-1  
Prep Type: Total/NA  
Prep Batch: 237806

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Mercury	0.00020	U	0.00100	0.000959		mg/L		96	80 - 120	2	20



# QC Association Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

## GC/MS VOA

### Analysis Batch: 237819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-10	Trip Blank 2	Total/NA	Water	8260B	
680-79571-11	FB-1	Total/NA	Water	8260B	
680-79571-12	EB-1	Total/NA	Water	8260B	
680-79571-13	EB-2	Total/NA	Water	8260B	
680-79571-14	EB-3	Total/NA	Water	8260B	
LCS 680-237819/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-237819/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-237819/7	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 237898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-6	MW-49S	Total/NA	Water	8260B	
680-79571-7	MW-49I	Total/NA	Water	8260B	
680-79571-8	MW-49D	Total/NA	Water	8260B	
680-79571-9	Dup-1	Total/NA	Water	8260B	
LCS 680-237898/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-237898/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-237898/7	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 237899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-1	MW-42I	Total/NA	Water	8260B	
680-79571-5	MW-43D	Total/NA	Water	8260B	
LCS 680-237899/1	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-237899/2	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-237899/8	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 237953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-2	MW-42D	Total/NA	Water	8260B	
680-79571-3	MW-43S	Total/NA	Water	8260B	
680-79571-4	MW-43I	Total/NA	Water	8260B	
LCS 680-237953/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-237953/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-237953/7	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 238122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-16	MW-42S	Total/NA	Waste	8260B	238157
LCSD 680-238122/5	Lab Control Sample Dup	Total/NA	Waste	8260B	
MB 680-238122/7	Method Blank	Total/NA	Waste	8260B	

### Prep Batch: 238157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-16	MW-42S	Total/NA	Waste	5030B	

### Analysis Batch: 238266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-9 MS	Dup-1	Total/NA	Water	8260B	
680-79571-9 MSD	Dup-1	Total/NA	Water	8260B	
LCS 680-238266/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-238266/5	Lab Control Sample Dup	Total/NA	Water	8260B	



# QC Association Summary

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## GC/MS VOA (Continued)

### Analysis Batch: 238266 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-238266/7	Method Blank	Total/NA	Water	8260B	

## GC Semi VOA

### Prep Batch: 237769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-1	MW-42I	Total/NA	Water	3520C	
680-79571-2	MW-42D	Total/NA	Water	3520C	
680-79571-3	MW-43S	Total/NA	Water	3520C	
680-79571-4	MW-43I	Total/NA	Water	3520C	
680-79571-5	MW-43D	Total/NA	Water	3520C	
680-79571-9	Dup-1	Total/NA	Water	3520C	
680-79571-9 MS	Dup-1	Total/NA	Water	3520C	
680-79571-9 MSD	Dup-1	Total/NA	Water	3520C	
680-79571-12	EB-1	Total/NA	Water	3520C	
680-79571-13	EB-2	Total/NA	Water	3520C	
680-79571-14	EB-3	Total/NA	Water	3520C	
680-79571-15	MW-42S	Total/NA	Water	3520C	
LCS 680-237769/21-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-237769/17-A	Method Blank	Total/NA	Water	3520C	

### Analysis Batch: 238224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-237769/21-A	Lab Control Sample	Total/NA	Water	8081A_8082	237769
MB 680-237769/17-A	Method Blank	Total/NA	Water	8081A_8082	237769

### Prep Batch: 238605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-1 - RE	MW-42I	Total/NA	Water	3520C	
680-79571-2 - RE	MW-42D	Total/NA	Water	3520C	
680-79571-3 - RE	MW-43S	Total/NA	Water	3520C	
680-79571-4 - RE	MW-43I	Total/NA	Water	3520C	
680-79571-5 - RE	MW-43D	Total/NA	Water	3520C	
680-79571-9 - RE	Dup-1	Total/NA	Water	3520C	
680-79571-12 - RE	EB-1	Total/NA	Water	3520C	
680-79571-13 - RE	EB-2	Total/NA	Water	3520C	
680-79571-14 - RE	EB-3	Total/NA	Water	3520C	
680-79571-15 - RE	MW-42S	Total/NA	Water	3520C	
LCS 680-238605/18-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 680-238605/19-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 680-238605/17-A	Method Blank	Total/NA	Water	3520C	

### Analysis Batch: 238799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-9	Dup-1	Total/NA	Water	8081A_8082	237769
680-79571-9 MS	Dup-1	Total/NA	Water	8081A_8082	237769
680-79571-9 MSD	Dup-1	Total/NA	Water	8081A_8082	237769
680-79571-12	EB-1	Total/NA	Water	8081A_8082	237769
680-79571-13	EB-2	Total/NA	Water	8081A_8082	237769
680-79571-14	EB-3	Total/NA	Water	8081A_8082	237769



# QC Association Summary

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## GC Semi VOA (Continued)

### Analysis Batch: 238804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-1	MW-42I	Total/NA	Water	8081A_8082	237769
680-79571-2	MW-42D	Total/NA	Water	8081A_8082	237769
680-79571-3	MW-43S	Total/NA	Water	8081A_8082	237769
680-79571-4	MW-43I	Total/NA	Water	8081A_8082	237769
680-79571-5	MW-43D	Total/NA	Water	8081A_8082	237769
680-79571-15	MW-42S	Total/NA	Water	8081A_8082	237769

### Analysis Batch: 238855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-1	MW-42I	Total/NA	Water	8081A_8082	237769
680-79571-2	MW-42D	Total/NA	Water	8081A_8082	237769
680-79571-3	MW-43S	Total/NA	Water	8081A_8082	237769
680-79571-4	MW-43I	Total/NA	Water	8081A_8082	237769
680-79571-5	MW-43D	Total/NA	Water	8081A_8082	237769
680-79571-15	MW-42S	Total/NA	Water	8081A_8082	237769

### Analysis Batch: 238857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-9	Dup-1	Total/NA	Water	8081A_8082	237769
680-79571-9 MS	Dup-1	Total/NA	Water	8081A_8082	237769
680-79571-9 MSD	Dup-1	Total/NA	Water	8081A_8082	237769
680-79571-12	EB-1	Total/NA	Water	8081A_8082	237769
680-79571-13	EB-2	Total/NA	Water	8081A_8082	237769
680-79571-14	EB-3	Total/NA	Water	8081A_8082	237769

### Analysis Batch: 239360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-1 - RE	MW-42I	Total/NA	Water	8081A_8082	238605
680-79571-2 - RE	MW-42D	Total/NA	Water	8081A_8082	238605
680-79571-3 - RE	MW-43S	Total/NA	Water	8081A_8082	238605
680-79571-4 - RE	MW-43I	Total/NA	Water	8081A_8082	238605
680-79571-5 - RE	MW-43D	Total/NA	Water	8081A_8082	238605
680-79571-9 - RE	Dup-1	Total/NA	Water	8081A_8082	238605
680-79571-12 - RE	EB-1	Total/NA	Water	8081A_8082	238605
680-79571-13 - RE	EB-2	Total/NA	Water	8081A_8082	238605
680-79571-14 - RE	EB-3	Total/NA	Water	8081A_8082	238605
680-79571-15 - RE	MW-42S	Total/NA	Water	8081A_8082	238605
MB 680-238605/17-A	Method Blank	Total/NA	Water	8081A_8082	238605

### Analysis Batch: 239361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-1 - RE	MW-42I	Total/NA	Water	8081A_8082	238605
680-79571-2 - RE	MW-42D	Total/NA	Water	8081A_8082	238605
680-79571-3 - RE	MW-43S	Total/NA	Water	8081A_8082	238605
680-79571-4 - RE	MW-43I	Total/NA	Water	8081A_8082	238605
680-79571-5 - RE	MW-43D	Total/NA	Water	8081A_8082	238605
680-79571-9 - RE	Dup-1	Total/NA	Water	8081A_8082	238605
680-79571-12 - RE	EB-1	Total/NA	Water	8081A_8082	238605
680-79571-13 - RE	EB-2	Total/NA	Water	8081A_8082	238605
680-79571-14 - RE	EB-3	Total/NA	Water	8081A_8082	238605
680-79571-15 - RE	MW-42S	Total/NA	Water	8081A_8082	238605
LCS 680-238605/18-A	Lab Control Sample	Total/NA	Water	8081A_8082	238605



# QC Association Summary

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## GC Semi VOA (Continued)

### Analysis Batch: 239361 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 680-238605/19-A	Lab Control Sample Dup	Total/NA	Water	8081A_8082	238605
MB 680-238605/17-A	Method Blank	Total/NA	Water	8081A_8082	238605

### Analysis Batch: 239678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-237769/17-A	Method Blank	Total/NA	Water	8081A_8082	237769

## Metals

### Prep Batch: 237806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-1	MW-42I	Total/NA	Water	7470A	
680-79571-2	MW-42D	Total/NA	Water	7470A	
680-79571-3	MW-43S	Total/NA	Water	7470A	
680-79571-4	MW-43I	Total/NA	Water	7470A	
680-79571-5	MW-43D	Total/NA	Water	7470A	
680-79571-9	Dup-1	Total/NA	Water	7470A	
680-79571-9 MS	Dup-1	Total/NA	Water	7470A	
680-79571-9 MSD	Dup-1	Total/NA	Water	7470A	
680-79571-12	EB-1	Total/NA	Water	7470A	
680-79571-13	EB-2	Total/NA	Water	7470A	
680-79571-14	EB-3	Total/NA	Water	7470A	
LCS 680-237806/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 680-237806/1-A	Method Blank	Total/NA	Water	7470A	

### Prep Batch: 238027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-1	MW-42I	Total Recoverable	Water	3005A	
680-79571-2	MW-42D	Total Recoverable	Water	3005A	
680-79571-3	MW-43S	Total Recoverable	Water	3005A	
680-79571-4	MW-43I	Total Recoverable	Water	3005A	
680-79571-5	MW-43D	Total Recoverable	Water	3005A	
680-79571-12	EB-1	Total Recoverable	Water	3005A	
680-79571-13	EB-2	Total Recoverable	Water	3005A	
680-79571-14	EB-3	Total Recoverable	Water	3005A	
LCS 680-238027/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 680-238027/1-A	Method Blank	Total Recoverable	Water	3005A	

### Analysis Batch: 238198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-1	MW-42I	Total Recoverable	Water	6010B	238027
680-79571-2	MW-42D	Total Recoverable	Water	6010B	238027
680-79571-3	MW-43S	Total Recoverable	Water	6010B	238027
680-79571-4	MW-43I	Total Recoverable	Water	6010B	238027
680-79571-5	MW-43D	Total Recoverable	Water	6010B	238027
680-79571-12	EB-1	Total Recoverable	Water	6010B	238027
680-79571-13	EB-2	Total Recoverable	Water	6010B	238027
680-79571-14	EB-3	Total Recoverable	Water	6010B	238027
LCS 680-238027/2-A	Lab Control Sample	Total Recoverable	Water	6010B	238027
MB 680-238027/1-A	Method Blank	Total Recoverable	Water	6010B	238027



## QC Association Summary

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

### Metals (Continued)

#### Analysis Batch: 238210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-1	MW-42I	Total/NA	Water	7470A	237806
680-79571-2	MW-42D	Total/NA	Water	7470A	237806
680-79571-3	MW-43S	Total/NA	Water	7470A	237806
680-79571-4	MW-43I	Total/NA	Water	7470A	237806
680-79571-5	MW-43D	Total/NA	Water	7470A	237806
680-79571-9	Dup-1	Total/NA	Water	7470A	237806
680-79571-9 MS	Dup-1	Total/NA	Water	7470A	237806
680-79571-9 MSD	Dup-1	Total/NA	Water	7470A	237806
680-79571-12	EB-1	Total/NA	Water	7470A	237806
680-79571-13	EB-2	Total/NA	Water	7470A	237806
680-79571-14	EB-3	Total/NA	Water	7470A	237806
LCS 680-237806/2-A	Lab Control Sample	Total/NA	Water	7470A	237806
MB 680-237806/1-A	Method Blank	Total/NA	Water	7470A	237806

#### Prep Batch: 238497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-9	Dup-1	Total Recoverable	Water	3005A	
680-79571-9 MS	Dup-1	Total Recoverable	Water	3005A	
680-79571-9 MSD	Dup-1	Total Recoverable	Water	3005A	
LCS 680-238497/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 680-238497/1-A	Method Blank	Total Recoverable	Water	3005A	

#### Analysis Batch: 238551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79571-9	Dup-1	Total Recoverable	Water	6010B	238497
680-79571-9 MS	Dup-1	Total Recoverable	Water	6010B	238497
680-79571-9 MSD	Dup-1	Total Recoverable	Water	6010B	238497
LCS 680-238497/2-A	Lab Control Sample	Total Recoverable	Water	6010B	238497
MB 680-238497/1-A	Method Blank	Total Recoverable	Water	6010B	238497



# Lab Chronicle

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-42I**

**Date Collected: 05/16/12 15:50**

**Date Received: 05/17/12 10:35**

**Lab Sample ID: 680-79571-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		50	237899	05/19/12 16:09	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		10	238804	05/24/12 19:59	GM	TAL SAV
Total/NA	Analysis	8081A_8082		10	238855	05/24/12 19:59	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	10	239360	05/31/12 20:24	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	10	239361	05/31/12 20:24	JK	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 02:07	BCB	TAL SAV
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 10:34	JKL	TAL SAV

**Client Sample ID: MW-42D**

**Date Collected: 05/16/12 15:30**

**Date Received: 05/17/12 10:35**

**Lab Sample ID: 680-79571-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	237953	05/20/12 21:29	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		10	238804	05/24/12 20:18	GM	TAL SAV
Total/NA	Analysis	8081A_8082		10	238855	05/24/12 20:18	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	10	239360	05/31/12 20:44	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	10	239361	05/31/12 20:44	JK	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 02:11	BCB	TAL SAV
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 10:37	JKL	TAL SAV

**Client Sample ID: MW-43S**

**Date Collected: 05/16/12 13:30**

**Date Received: 05/17/12 10:35**

**Lab Sample ID: 680-79571-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237953	05/20/12 19:34	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1	238804	05/24/12 21:36	GM	TAL SAV
Total/NA	Analysis	8081A_8082		1	238855	05/24/12 21:36	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239360	05/31/12 21:03	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239361	05/31/12 21:03	JK	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 02:15	BCB	TAL SAV



# Lab Chronicle

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: MW-43S**

**Lab Sample ID: 680-79571-3**

**Date Collected: 05/16/12 13:30**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 10:40	JKL	TAL SAV

**Client Sample ID: MW-43I**

**Lab Sample ID: 680-79571-4**

**Date Collected: 05/16/12 13:20**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237953	05/20/12 20:03	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1	238804	05/24/12 21:55	GM	TAL SAV
Total/NA	Analysis	8081A_8082		1	238855	05/24/12 21:55	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239360	05/31/12 21:23	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239361	05/31/12 21:23	JK	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 02:20	BCB	TAL SAV
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 10:44	JKL	TAL SAV

**Client Sample ID: MW-43D**

**Lab Sample ID: 680-79571-5**

**Date Collected: 05/16/12 13:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		50	237899	05/19/12 16:38	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		10	238804	05/24/12 20:38	GM	TAL SAV
Total/NA	Analysis	8081A_8082		10	238855	05/24/12 20:38	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	10	239360	05/31/12 21:42	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	10	239361	05/31/12 21:42	JK	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 02:24	BCB	TAL SAV
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 10:47	JKL	TAL SAV

**Client Sample ID: MW-49S**

**Lab Sample ID: 680-79571-6**

**Date Collected: 05/16/12 14:50**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237898	05/19/12 13:03	RB	TAL SAV



# Lab Chronicle

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

## Client Sample ID: MW-49I

Date Collected: 05/16/12 14:40

Date Received: 05/17/12 10:35

## Lab Sample ID: 680-79571-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237898	05/19/12 13:31	RB	TAL SAV

## Client Sample ID: MW-49D

Date Collected: 05/16/12 14:20

Date Received: 05/17/12 10:35

## Lab Sample ID: 680-79571-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237898	05/19/12 14:00	RB	TAL SAV

## Client Sample ID: Dup-1

Date Collected: 05/16/12 00:00

Date Received: 05/17/12 10:35

## Lab Sample ID: 680-79571-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237898	05/19/12 14:29	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1	238799	05/25/12 00:11	GM	TAL SAV
Total/NA	Analysis	8081A_8082		1	238857	05/25/12 00:11	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239360	05/31/12 22:01	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239361	05/31/12 22:01	JK	TAL SAV
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 10:51	JKL	TAL SAV
Total Recoverable	Prep	3005A			238497	05/25/12 11:41	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238551	05/25/12 22:21	BCB	TAL SAV

## Client Sample ID: Trip Blank 2

Date Collected: 05/16/12 00:00

Date Received: 05/17/12 10:35

## Lab Sample ID: 680-79571-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237819	05/18/12 15:29	RB	TAL SAV

## Client Sample ID: FB-1

Date Collected: 05/16/12 00:00

Date Received: 05/17/12 10:35

## Lab Sample ID: 680-79571-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237819	05/18/12 16:26	RB	TAL SAV



# Lab Chronicle

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: EB-1**

**Lab Sample ID: 680-79571-12**

**Date Collected: 05/16/12 11:15**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237819	05/18/12 15:57	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1	238799	05/25/12 00:30	GM	TAL SAV
Total/NA	Analysis	8081A_8082		1	238857	05/25/12 00:30	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239360	05/31/12 22:21	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239361	05/31/12 22:21	JK	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 02:41	BCB	TAL SAV
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 11:07	JKL	TAL SAV

**Client Sample ID: EB-2**

**Lab Sample ID: 680-79571-13**

**Date Collected: 05/16/12 11:30**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237819	05/18/12 15:00	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1	238799	05/25/12 00:49	GM	TAL SAV
Total/NA	Analysis	8081A_8082		1	238857	05/25/12 00:49	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239360	05/31/12 22:40	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239361	05/31/12 22:40	JK	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 02:45	BCB	TAL SAV
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 11:11	JKL	TAL SAV

**Client Sample ID: EB-3**

**Lab Sample ID: 680-79571-14**

**Date Collected: 05/16/12 11:45**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237819	05/18/12 14:31	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1	238799	05/25/12 01:09	GM	TAL SAV
Total/NA	Analysis	8081A_8082		1	238857	05/25/12 01:09	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239360	05/31/12 23:00	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239361	05/31/12 23:00	JK	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 02:50	BCB	TAL SAV
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV



## Lab Chronicle

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

TestAmerica Job ID: 680-79571-1

**Client Sample ID: EB-3**

**Lab Sample ID: 680-79571-14**

**Date Collected: 05/16/12 11:45**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	238210	05/22/12 11:15	JKL	TAL SAV

**Client Sample ID: MW-42S**

**Lab Sample ID: 680-79571-15**

**Date Collected: 05/16/12 19:30**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		500	238804	05/24/12 20:57	GM	TAL SAV
Total/NA	Analysis	8081A_8082		500	238855	05/24/12 20:57	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	50	239360	05/31/12 23:19	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	50	239361	05/31/12 23:19	JK	TAL SAV

**Client Sample ID: MW-42S**

**Lab Sample ID: 680-79571-16**

**Date Collected: 05/16/12 19:30**

**Matrix: Waste**

**Date Received: 05/17/12 10:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			238157	05/21/12 11:30	ES	TAL SAV
Total/NA	Analysis	8260B		40	238122	05/22/12 13:18	ES	TAL SAV

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



## Chain of Custody Record

**TestAmerica Laboratories, Inc.**

[illegible]







## Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-79571-1

**Login Number: 79571**

**List Source: TestAmerica Savannah**

**List Number: 1**

**Creator: Barnett, Eddie T**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2, 2.0, 4.2, 4.0, 4.0 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	pH of container(s) is out of range: c3, c5, c2, c9, c4
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Certification Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79571-1

Project/Site: HERC Brunswick Ph 3 RFI - GW MAY 2012

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Savannah	A2LA	DoD ELAP		0399-01
TestAmerica Savannah	A2LA	ISO/IEC 17025		399.01
TestAmerica Savannah	Alabama	State Program	4	41450
TestAmerica Savannah	Arkansas DEQ	State Program	6	88-0692
TestAmerica Savannah	California	NELAC	9	3217CA
TestAmerica Savannah	Colorado	State Program	8	N/A
TestAmerica Savannah	Connecticut	State Program	1	PH-0161
TestAmerica Savannah	Florida	NELAC	4	E87052
TestAmerica Savannah	GA Dept. of Agriculture	State Program	4	N/A
TestAmerica Savannah	Georgia	State Program	4	803
TestAmerica Savannah	Georgia	State Program	4	N/A
TestAmerica Savannah	Guam	State Program	9	09-005r
TestAmerica Savannah	Hawaii	State Program	9	N/A
TestAmerica Savannah	Illinois	NELAC	5	200022
TestAmerica Savannah	Indiana	State Program	5	N/A
TestAmerica Savannah	Iowa	State Program	7	353
TestAmerica Savannah	Kentucky	State Program	4	90084
TestAmerica Savannah	Kentucky (UST)	State Program	4	18
TestAmerica Savannah	Louisiana	NELAC	6	30690
TestAmerica Savannah	Louisiana	NELAC	6	LA100015
TestAmerica Savannah	Maine	State Program	1	GA00006
TestAmerica Savannah	Maryland	State Program	3	250
TestAmerica Savannah	Massachusetts	State Program	1	M-GA006
TestAmerica Savannah	Michigan	State Program	5	9925
TestAmerica Savannah	Mississippi	State Program	4	N/A
TestAmerica Savannah	Montana	State Program	8	CERT0081
TestAmerica Savannah	Nebraska	State Program	7	TestAmerica-Savannah
TestAmerica Savannah	New Jersey	NELAC	2	GA769
TestAmerica Savannah	New Mexico	State Program	6	N/A
TestAmerica Savannah	New York	NELAC	2	10842
TestAmerica Savannah	North Carolina DENR	State Program	4	269
TestAmerica Savannah	North Carolina DHHS	State Program	4	13701
TestAmerica Savannah	Oklahoma	State Program	6	9984
TestAmerica Savannah	Pennsylvania	NELAC	3	68-00474
TestAmerica Savannah	Puerto Rico	State Program	2	GA00006
TestAmerica Savannah	Rhode Island	State Program	1	LAO00244
TestAmerica Savannah	South Carolina	State Program	4	98001
TestAmerica Savannah	Tennessee	State Program	4	TN02961
TestAmerica Savannah	Texas	NELAC	6	T104704185-08-TX
TestAmerica Savannah	USDA	Federal		SAV 3-04
TestAmerica Savannah	Vermont	State Program	1	87052
TestAmerica Savannah	Virginia	NELAC	3	460161
TestAmerica Savannah	Washington	State Program	10	C1794
TestAmerica Savannah	West Virginia	State Program	3	9950C
TestAmerica Savannah	West Virginia DEP	State Program	3	94
TestAmerica Savannah	Wisconsin	State Program	5	999819810
TestAmerica Savannah	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-79567-1

Client Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY  
2012

For:

Ashland Inc.

Ashland Hercules Research Center

500 Hercules Rd Bldg 8139

Wilmington, Delaware 19808

Attn: Timothy Hassett



Authorized for release by:

5/31/2012 4:33:17 PM

Lidya Gulizia

Project Manager II

[lidya.gulizia@testamericainc.com](mailto:lidya.gulizia@testamericainc.com)

cc: Tony Mancini

### LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Case Narrative . . . . .	3
Sample Summary . . . . .	4
Method Summary . . . . .	5
Definitions . . . . .	6
Detection Summary . . . . .	7
Client Sample Results . . . . .	8
Surrogate Summary . . . . .	14
QC Sample Results . . . . .	15
QC Association . . . . .	20
Chronicle . . . . .	21
Chain of Custody . . . . .	22
Receipt Checklists . . . . .	23
Certification Summary . . . . .	24





## Case Narrative

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

TestAmerica Job ID: 680-79567-1

**Job ID: 680-79567-1**

**Laboratory: TestAmerica Savannah**

Narrative

### CASE NARRATIVE

**Client: Ashland Inc.**

**Project: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012**

**Report Number: 680-79567-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

#### **RECEIPT**

The samples were received on 05/17/2012; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 2.0° C, 2.2° C, 4.0° C, 4.0° C and 4.2° C.

#### **VOLATILE ORGANIC COMPOUNDS (GC-MS)**

Samples MW-50S (680-79567-1), MW-50I (680-79567-2) and MW-50D (680-79567-3) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/23/2012.

No difficulties were encountered during the volatiles analyses.

All quality control parameters were within the acceptance limits.

#### **METALS (ICP)**

Samples MW-50S (680-79567-1), MW-50I (680-79567-2) and MW-50D (680-79567-3) were analyzed for Metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 05/21/2012 and analyzed on 05/23/2012.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

#### **TOTAL MERCURY**

Samples MW-50S (680-79567-1), MW-50I (680-79567-2) and MW-50D (680-79567-3) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/18/2012 and analyzed on 05/22/2012.

During pH adjustment, the following sample(s) required 1 mL of acid to reach the desired pH: MW-50I (680-79567-2), MW-50S (680-79567-1).

No difficulties were encountered during the mercury analyses.

All quality control parameters were within the acceptance limits.



## Sample Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79567-1

Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-79567-1	MW-50S	Water	05/16/12 09:00	05/17/12 10:35
680-79567-2	MW-50I	Water	05/16/12 09:25	05/17/12 10:35
680-79567-3	MW-50D	Water	05/16/12 09:45	05/17/12 10:35



## Method Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79567-1

Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
6010B	Metals (ICP)	SW846	TAL SAV
7470A	Mercury (CVAA)	SW846	TAL SAV

### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



## Definitions/Glossary

Client: Ashland Inc.

TestAmerica Job ID: 680-79567-1

Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

#### Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



## Detection Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79567-1

Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

### Client Sample ID: MW-50S

### Lab Sample ID: 680-79567-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.030		0.010	0.0020	mg/L	1		6010B	Total
									Recoverable
Beryllium	0.00016	J	0.0040	0.00010	mg/L	1		6010B	Total
									Recoverable
Chromium	0.0056	J	0.010	0.0020	mg/L	1		6010B	Total
									Recoverable
Lead	0.0058	J	0.010	0.0034	mg/L	1		6010B	Total
									Recoverable
Selenium	0.0065	J	0.020	0.0064	mg/L	1		6010B	Total
									Recoverable
Vanadium	0.0082	J	0.010	0.0030	mg/L	1		6010B	Total
									Recoverable

### Client Sample ID: MW-50I

### Lab Sample ID: 680-79567-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.064		0.010	0.0020	mg/L	1		6010B	Total
									Recoverable
Beryllium	0.00012	J	0.0040	0.00010	mg/L	1		6010B	Total
									Recoverable
Chromium	0.0073	J	0.010	0.0020	mg/L	1		6010B	Total
									Recoverable
Selenium	0.0075	J	0.020	0.0064	mg/L	1		6010B	Total
									Recoverable
Vanadium	0.0080	J	0.010	0.0030	mg/L	1		6010B	Total
									Recoverable

### Client Sample ID: MW-50D

### Lab Sample ID: 680-79567-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.033		0.010	0.0020	mg/L	1		6010B	Total
									Recoverable
Chromium	0.0047	J	0.010	0.0020	mg/L	1		6010B	Total
									Recoverable



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79567-1

Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

**Client Sample ID: MW-50S**

**Lab Sample ID: 680-79567-1**

**Date Collected: 05/16/12 09:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/23/12 12:33	1
Acetonitrile	40	U	40	10	ug/L			05/23/12 12:33	1
Acrolein	20	U	20	7.4	ug/L			05/23/12 12:33	1
Acrylonitrile	20	U	20	7.2	ug/L			05/23/12 12:33	1
Benzene	1.0	U	1.0	0.25	ug/L			05/23/12 12:33	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/23/12 12:33	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/23/12 12:33	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/23/12 12:33	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/23/12 12:33	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/23/12 12:33	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/23/12 12:33	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/23/12 12:33	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/23/12 12:33	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/23/12 12:33	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/23/12 12:33	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/23/12 12:33	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 12:33	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/23/12 12:33	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/23/12 12:33	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/23/12 12:33	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:33	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:33	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:33	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/23/12 12:33	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/23/12 12:33	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/23/12 12:33	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/23/12 12:33	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/23/12 12:33	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/23/12 12:33	1
2-Hexanone	10	U	10	1.0	ug/L			05/23/12 12:33	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/23/12 12:33	1
Isobutyl alcohol	40	U	40	11	ug/L			05/23/12 12:33	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/23/12 12:33	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/23/12 12:33	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/12 12:33	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/23/12 12:33	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/23/12 12:33	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/23/12 12:33	1
Propionitrile	20	U	20	4.6	ug/L			05/23/12 12:33	1
Styrene	1.0	U	1.0	0.11	ug/L			05/23/12 12:33	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/23/12 12:33	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/23/12 12:33	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 12:33	1
Toluene	1.0	U	1.0	0.33	ug/L			05/23/12 12:33	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/23/12 12:33	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/23/12 12:33	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/23/12 12:33	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/23/12 12:33	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/23/12 12:33	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/23/12 12:33	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:33	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

TestAmerica Job ID: 680-79567-1

**Client Sample ID: MW-50S**

**Lab Sample ID: 680-79567-1**

**Date Collected: 05/16/12 09:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/23/12 12:33	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/23/12 12:33	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/23/12 12:33	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/23/12 12:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	97		70 - 130					05/23/12 12:33	1
Dibromofluoromethane	95		70 - 130					05/23/12 12:33	1
Toluene-d8 (Surr)	104		70 - 130					05/23/12 12:33	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 01:32	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 01:32	1
Barium	0.030		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 01:32	1
Beryllium	0.00016	J	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 01:32	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 01:32	1
Chromium	0.0056	J	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 01:32	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 01:32	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 01:32	1
Lead	0.0058	J	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 01:32	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 01:32	1
Selenium	0.0065	J	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 01:32	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 01:32	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 01:32	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 01:32	1
Vanadium	0.0082	J	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 01:32	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 01:32	1

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L		05/18/12 10:12	05/22/12 13:09	1



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79567-1

Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

**Client Sample ID: MW-501**

**Lab Sample ID: 680-79567-2**

**Date Collected: 05/16/12 09:25**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/23/12 13:02	1
Acetonitrile	40	U	40	10	ug/L			05/23/12 13:02	1
Acrolein	20	U	20	7.4	ug/L			05/23/12 13:02	1
Acrylonitrile	20	U	20	7.2	ug/L			05/23/12 13:02	1
Benzene	1.0	U	1.0	0.25	ug/L			05/23/12 13:02	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/23/12 13:02	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/23/12 13:02	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/23/12 13:02	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/23/12 13:02	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/23/12 13:02	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/23/12 13:02	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/23/12 13:02	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/23/12 13:02	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/23/12 13:02	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/23/12 13:02	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/23/12 13:02	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 13:02	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/23/12 13:02	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/23/12 13:02	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/23/12 13:02	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/23/12 13:02	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 13:02	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/23/12 13:02	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/23/12 13:02	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/23/12 13:02	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/23/12 13:02	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/23/12 13:02	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/23/12 13:02	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/23/12 13:02	1
2-Hexanone	10	U	10	1.0	ug/L			05/23/12 13:02	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/23/12 13:02	1
Isobutyl alcohol	40	U	40	11	ug/L			05/23/12 13:02	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/23/12 13:02	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/23/12 13:02	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/12 13:02	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/23/12 13:02	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/23/12 13:02	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/23/12 13:02	1
Propionitrile	20	U	20	4.6	ug/L			05/23/12 13:02	1
Styrene	1.0	U	1.0	0.11	ug/L			05/23/12 13:02	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/23/12 13:02	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/23/12 13:02	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 13:02	1
Toluene	1.0	U	1.0	0.33	ug/L			05/23/12 13:02	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/23/12 13:02	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/23/12 13:02	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/23/12 13:02	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/23/12 13:02	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/23/12 13:02	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/23/12 13:02	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 13:02	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

TestAmerica Job ID: 680-79567-1

**Client Sample ID: MW-50I**

**Lab Sample ID: 680-79567-2**

**Date Collected: 05/16/12 09:25**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/23/12 13:02	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/23/12 13:02	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/23/12 13:02	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/23/12 13:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		70 - 130					05/23/12 13:02	1
Dibromofluoromethane	97		70 - 130					05/23/12 13:02	1
Toluene-d8 (Surr)	104		70 - 130					05/23/12 13:02	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 01:37	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 01:37	1
Barium	0.064		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 01:37	1
Beryllium	0.00012	J	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 01:37	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 01:37	1
Chromium	0.0073	J	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 01:37	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 01:37	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 01:37	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 01:37	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 01:37	1
Selenium	0.0075	J	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 01:37	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 01:37	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 01:37	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 01:37	1
Vanadium	0.0080	J	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 01:37	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 01:37	1

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L		05/18/12 10:12	05/22/12 13:12	1



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79567-1

Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

**Client Sample ID: MW-50D**

**Lab Sample ID: 680-79567-3**

**Date Collected: 05/16/12 09:45**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/23/12 13:30	1
Acetonitrile	40	U	40	10	ug/L			05/23/12 13:30	1
Acrolein	20	U	20	7.4	ug/L			05/23/12 13:30	1
Acrylonitrile	20	U	20	7.2	ug/L			05/23/12 13:30	1
Benzene	1.0	U	1.0	0.25	ug/L			05/23/12 13:30	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/23/12 13:30	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/23/12 13:30	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/23/12 13:30	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/23/12 13:30	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/23/12 13:30	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/23/12 13:30	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/23/12 13:30	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/23/12 13:30	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/23/12 13:30	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/23/12 13:30	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/23/12 13:30	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 13:30	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/23/12 13:30	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/23/12 13:30	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/23/12 13:30	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/23/12 13:30	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 13:30	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/23/12 13:30	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/23/12 13:30	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/23/12 13:30	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/23/12 13:30	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/23/12 13:30	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/23/12 13:30	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/23/12 13:30	1
2-Hexanone	10	U	10	1.0	ug/L			05/23/12 13:30	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/23/12 13:30	1
Isobutyl alcohol	40	U	40	11	ug/L			05/23/12 13:30	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/23/12 13:30	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/23/12 13:30	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/12 13:30	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/23/12 13:30	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/23/12 13:30	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/23/12 13:30	1
Propionitrile	20	U	20	4.6	ug/L			05/23/12 13:30	1
Styrene	1.0	U	1.0	0.11	ug/L			05/23/12 13:30	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/23/12 13:30	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/23/12 13:30	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 13:30	1
Toluene	1.0	U	1.0	0.33	ug/L			05/23/12 13:30	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/23/12 13:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/23/12 13:30	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/23/12 13:30	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/23/12 13:30	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/23/12 13:30	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/23/12 13:30	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 13:30	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

TestAmerica Job ID: 680-79567-1

**Client Sample ID: MW-50D**

**Lab Sample ID: 680-79567-3**

**Date Collected: 05/16/12 09:45**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/23/12 13:30	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/23/12 13:30	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/23/12 13:30	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/23/12 13:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		70 - 130					05/23/12 13:30	1
Dibromofluoromethane	97		70 - 130					05/23/12 13:30	1
Toluene-d8 (Surr)	104		70 - 130					05/23/12 13:30	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 01:49	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 01:49	1
Barium	0.033		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 01:49	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 01:49	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 01:49	1
Chromium	0.0047	J	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 01:49	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 01:49	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 01:49	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 01:49	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 01:49	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 01:49	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 01:49	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 01:49	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 01:49	1
Vanadium	0.010	U	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 01:49	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 01:49	1

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L		05/18/12 10:12	05/22/12 13:16	1



## Surrogate Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79567-1

Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	BFB (70-130)	DBFM (70-130)	TOL (70-130)
680-79567-1	MW-50S	97	95	104
680-79567-2	MW-50I	96	97	104
680-79567-3	MW-50D	94	97	104
LCS 680-238252/4	Lab Control Sample	106	103	107
LCSD 680-238252/5	Lab Control Sample Dup	107	99	107
MB 680-238252/8	Method Blank	95	98	105
<b>Surrogate Legend</b>				
BFB = 4-Bromofluorobenzene				
DBFM = Dibromofluoromethane				
TOL = Toluene-d8 (Surr)				



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79567-1

Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-238252/8

Matrix: Water

Analysis Batch: 238252

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/23/12 12:05	1
Acetonitrile	40	U	40	10	ug/L			05/23/12 12:05	1
Acrolein	20	U	20	7.4	ug/L			05/23/12 12:05	1
Acrylonitrile	20	U	20	7.2	ug/L			05/23/12 12:05	1
Benzene	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/23/12 12:05	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/23/12 12:05	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/23/12 12:05	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/23/12 12:05	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/23/12 12:05	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/23/12 12:05	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/23/12 12:05	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/23/12 12:05	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/23/12 12:05	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/23/12 12:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 12:05	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/23/12 12:05	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/23/12 12:05	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/23/12 12:05	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/23/12 12:05	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/23/12 12:05	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/23/12 12:05	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/23/12 12:05	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
2-Hexanone	10	U	10	1.0	ug/L			05/23/12 12:05	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/23/12 12:05	1
Isobutyl alcohol	40	U	40	11	ug/L			05/23/12 12:05	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/23/12 12:05	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/23/12 12:05	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/12 12:05	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/23/12 12:05	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/23/12 12:05	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/23/12 12:05	1
Propionitrile	20	U	20	4.6	ug/L			05/23/12 12:05	1
Styrene	1.0	U	1.0	0.11	ug/L			05/23/12 12:05	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/23/12 12:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/23/12 12:05	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 12:05	1
Toluene	1.0	U	1.0	0.33	ug/L			05/23/12 12:05	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/23/12 12:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/23/12 12:05	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/23/12 12:05	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/23/12 12:05	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/23/12 12:05	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

TestAmerica Job ID: 680-79567-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-238252/8

Matrix: Water

Analysis Batch: 238252

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/23/12 12:05	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/23/12 12:05	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/23/12 12:05	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/23/12 12:05	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/23/12 12:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		70 - 130		05/23/12 12:05	1
Dibromofluoromethane	98		70 - 130		05/23/12 12:05	1
Toluene-d8 (Surr)	105		70 - 130		05/23/12 12:05	1

Lab Sample ID: LCS 680-238252/4

Matrix: Water

Analysis Batch: 238252

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	80.4		ug/L		80	26 - 180
Benzene	50.0	51.2		ug/L		102	70 - 130
Bromoform	50.0	45.4		ug/L		91	70 - 130
Bromomethane	50.0	32.3		ug/L		65	23 - 165
Carbon disulfide	50.0	49.0		ug/L		98	54 - 132
Carbon tetrachloride	50.0	49.7		ug/L		99	70 - 130
Chlorobenzene	50.0	51.0		ug/L		102	70 - 130
Chlorodibromomethane	50.0	47.5		ug/L		95	70 - 130
Chloroethane	50.0	51.6		ug/L		103	56 - 152
Chloroform	50.0	50.2		ug/L		100	70 - 130
Chloromethane	50.0	59.9		ug/L		120	70 - 130
cis-1,2-Dichloroethene	50.0	49.8		ug/L		100	70 - 130
cis-1,3-Dichloropropene	50.0	54.5		ug/L		109	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	52.3		ug/L		105	70 - 130
Dibromomethane	50.0	53.7		ug/L		107	70 - 130
Dichlorobromomethane	50.0	55.2		ug/L		110	70 - 130
Dichlorodifluoromethane	50.0	50.4		ug/L		101	44 - 146
1,1-Dichloroethane	50.0	55.3		ug/L		111	70 - 130
1,2-Dichloroethane	50.0	56.5		ug/L		113	70 - 130
1,1-Dichloroethene	50.0	51.0		ug/L		102	66 - 131
1,2-Dichloropropane	50.0	54.3		ug/L		109	70 - 130
Ethylbenzene	50.0	50.8		ug/L		102	70 - 130
Ethylene Dibromide	50.0	54.2		ug/L		108	70 - 130
2-Hexanone	100	97.8		ug/L		98	42 - 185
Methylene Chloride	50.0	49.1		ug/L		98	67 - 130
2-Butanone (MEK)	100	79.0		ug/L		79	49 - 172
4-Methyl-2-pentanone (MIBK)	100	102		ug/L		102	70 - 130
Styrene	50.0	54.0		ug/L		108	70 - 130
1,1,1,2-Tetrachloroethane	50.0	51.1		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	50.0	54.5		ug/L		109	70 - 130
Tetrachloroethene	50.0	52.0		ug/L		104	70 - 130
Toluene	50.0	54.8		ug/L		110	70 - 130



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79567-1

Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-238252/4

Matrix: Water

Analysis Batch: 238252

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	50.0	52.6		ug/L		105	70 - 130
trans-1,3-Dichloropropene	50.0	47.2		ug/L		94	70 - 130
1,1,1-Trichloroethane	50.0	59.7		ug/L		119	70 - 130
1,1,2-Trichloroethane	50.0	54.2		ug/L		108	70 - 130
Trichloroethene	50.0	53.2		ug/L		106	70 - 130
Trichlorofluoromethane	50.0	55.5		ug/L		111	55 - 156
1,2,3-Trichloropropane	50.0	52.6		ug/L		105	70 - 130
Vinyl acetate	100	111		ug/L		111	60 - 176
Vinyl chloride	50.0	50.2		ug/L		100	67 - 134
Xylenes, Total	150	153		ug/L		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	106		70 - 130
Dibromofluoromethane	103		70 - 130
Toluene-d8 (Surr)	107		70 - 130

Lab Sample ID: LCSD 680-238252/5

Matrix: Water

Analysis Batch: 238252

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	79.3		ug/L		79	26 - 180	1	50
Benzene	50.0	51.9		ug/L		104	70 - 130	1	30
Bromoform	50.0	44.9		ug/L		90	70 - 130	1	30
Bromomethane	50.0	37.6		ug/L		75	23 - 165	15	50
Carbon disulfide	50.0	47.5		ug/L		95	54 - 132	3	30
Carbon tetrachloride	50.0	49.8		ug/L		100	70 - 130	0	30
Chlorobenzene	50.0	51.5		ug/L		103	70 - 130	1	30
Chlorodibromomethane	50.0	47.4		ug/L		95	70 - 130	0	50
Chloroethane	50.0	48.6		ug/L		97	56 - 152	6	40
Chloroform	50.0	48.7		ug/L		97	70 - 130	3	30
Chloromethane	50.0	58.8		ug/L		118	70 - 130	2	30
cis-1,2-Dichloroethene	50.0	49.0		ug/L		98	70 - 130	2	30
cis-1,3-Dichloropropene	50.0	55.0		ug/L		110	70 - 130	1	30
1,2-Dibromo-3-Chloropropane	50.0	52.3		ug/L		105	70 - 130	0	50
Dibromomethane	50.0	54.1		ug/L		108	70 - 130	1	30
Dichlorobromomethane	50.0	56.3		ug/L		113	70 - 130	2	30
Dichlorodifluoromethane	50.0	50.5		ug/L		101	44 - 146	0	50
1,1-Dichloroethane	50.0	53.9		ug/L		108	70 - 130	3	30
1,2-Dichloroethane	50.0	57.8		ug/L		116	70 - 130	2	30
1,1-Dichloroethene	50.0	51.1		ug/L		102	66 - 131	0	30
1,2-Dichloropropane	50.0	55.3		ug/L		111	70 - 130	2	30
Ethylbenzene	50.0	51.2		ug/L		102	70 - 130	1	30
Ethylene Dibromide	50.0	55.1		ug/L		110	70 - 130	2	30
2-Hexanone	100	100		ug/L		100	42 - 185	3	30
Methylene Chloride	50.0	46.5		ug/L		93	67 - 130	6	30
2-Butanone (MEK)	100	77.4		ug/L		77	49 - 172	2	30
4-Methyl-2-pentanone (MIBK)	100	104		ug/L		104	70 - 130	2	30
Styrene	50.0	54.4		ug/L		109	70 - 130	1	30



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

TestAmerica Job ID: 680-79567-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-238252/5

Matrix: Water

Analysis Batch: 238252

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	50.0	50.6		ug/L		101	70 - 130	1	30
1,1,2,2-Tetrachloroethane	50.0	55.2		ug/L		110	70 - 130	1	30
Tetrachloroethene	50.0	50.3		ug/L		101	70 - 130	3	30
Toluene	50.0	53.7		ug/L		107	70 - 130	2	30
trans-1,2-Dichloroethene	50.0	52.2		ug/L		104	70 - 130	1	30
trans-1,3-Dichloropropene	50.0	47.6		ug/L		95	70 - 130	1	50
1,1,1-Trichloroethane	50.0	62.3		ug/L		125	70 - 130	4	30
1,1,2-Trichloroethane	50.0	55.7		ug/L		111	70 - 130	3	30
Trichloroethene	50.0	53.8		ug/L		108	70 - 130	1	30
Trichlorofluoromethane	50.0	54.9		ug/L		110	55 - 156	1	30
1,2,3-Trichloropropane	50.0	52.8		ug/L		106	70 - 130	0	30
Vinyl acetate	100	108		ug/L		108	60 - 176	3	30
Vinyl chloride	50.0	50.0		ug/L		100	67 - 134	0	30
Xylenes, Total	150	154		ug/L		103	70 - 130	0	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	107		70 - 130
Dibromofluoromethane	99		70 - 130
Toluene-d8 (Surr)	107		70 - 130

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 680-238027/1-A

Matrix: Water

Analysis Batch: 238198

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 238027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 00:45	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 00:45	1
Barium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 00:45	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 00:45	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 00:45	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 00:45	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 00:45	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 00:45	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 00:45	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 00:45	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 00:45	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 00:45	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 00:45	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 00:45	1
Vanadium	0.010	U	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 00:45	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 00:45	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

TestAmerica Job ID: 680-79567-1

## Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 680-238027/2-A

Matrix: Water

Analysis Batch: 238198

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 238027

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.490		mg/L		98	75 - 125
Arsenic	2.00	2.13		mg/L		107	75 - 125
Barium	2.00	2.10		mg/L		105	75 - 125
Beryllium	0.0500	0.0526		mg/L		105	75 - 125
Cadmium	0.0500	0.0517		mg/L		103	75 - 125
Chromium	0.200	0.208		mg/L		104	75 - 125
Cobalt	0.500	0.530		mg/L		106	75 - 125
Copper	0.250	0.269		mg/L		107	75 - 125
Lead	0.500	0.517		mg/L		103	75 - 125
Nickel	0.500	0.520		mg/L		104	75 - 125
Selenium	2.00	2.09		mg/L		104	75 - 125
Silver	0.0500	0.0522		mg/L		104	75 - 125
Thallium	2.00	2.17		mg/L		108	75 - 125
Tin	1.00	1.05		mg/L		105	75 - 125
Vanadium	0.500	0.515		mg/L		103	75 - 125
Zinc	0.500	0.515		mg/L		103	75 - 125

## Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 680-237779/1-A

Matrix: Water

Analysis Batch: 238210

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 237779

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L		05/18/12 10:12	05/22/12 11:59	1

Lab Sample ID: LCS 680-237779/2-A

Matrix: Water

Analysis Batch: 238210

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 237779

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.00242		mg/L		97	80 - 120



# QC Association Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79567-1

Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

## GC/MS VOA

### Analysis Batch: 238252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79567-1	MW-50S	Total/NA	Water	8260B	
680-79567-2	MW-50I	Total/NA	Water	8260B	
680-79567-3	MW-50D	Total/NA	Water	8260B	
LCS 680-238252/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-238252/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-238252/8	Method Blank	Total/NA	Water	8260B	

## Metals

### Prep Batch: 237779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79567-1	MW-50S	Total/NA	Water	7470A	
680-79567-2	MW-50I	Total/NA	Water	7470A	
680-79567-3	MW-50D	Total/NA	Water	7470A	
LCS 680-237779/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 680-237779/1-A	Method Blank	Total/NA	Water	7470A	

### Prep Batch: 238027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79567-1	MW-50S	Total Recoverable	Water	3005A	
680-79567-2	MW-50I	Total Recoverable	Water	3005A	
680-79567-3	MW-50D	Total Recoverable	Water	3005A	
LCS 680-238027/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 680-238027/1-A	Method Blank	Total Recoverable	Water	3005A	

### Analysis Batch: 238198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79567-1	MW-50S	Total Recoverable	Water	6010B	238027
680-79567-2	MW-50I	Total Recoverable	Water	6010B	238027
680-79567-3	MW-50D	Total Recoverable	Water	6010B	238027
LCS 680-238027/2-A	Lab Control Sample	Total Recoverable	Water	6010B	238027
MB 680-238027/1-A	Method Blank	Total Recoverable	Water	6010B	238027

### Analysis Batch: 238210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79567-1	MW-50S	Total/NA	Water	7470A	237779
680-79567-2	MW-50I	Total/NA	Water	7470A	237779
680-79567-3	MW-50D	Total/NA	Water	7470A	237779
LCS 680-237779/2-A	Lab Control Sample	Total/NA	Water	7470A	237779
MB 680-237779/1-A	Method Blank	Total/NA	Water	7470A	237779



## Lab Chronicle

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

TestAmerica Job ID: 680-79567-1

**Client Sample ID: MW-50S**

**Date Collected: 05/16/12 09:00**

**Date Received: 05/17/12 10:35**

**Lab Sample ID: 680-79567-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	238252	05/23/12 12:33	RB	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 01:32	BCB	TAL SAV
Total/NA	Prep	7470A			237779	05/18/12 10:12	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 13:09	JKL	TAL SAV

**Client Sample ID: MW-50I**

**Date Collected: 05/16/12 09:25**

**Date Received: 05/17/12 10:35**

**Lab Sample ID: 680-79567-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	238252	05/23/12 13:02	RB	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 01:37	BCB	TAL SAV
Total/NA	Prep	7470A			237779	05/18/12 10:12	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 13:12	JKL	TAL SAV

**Client Sample ID: MW-50D**

**Date Collected: 05/16/12 09:45**

**Date Received: 05/17/12 10:35**

**Lab Sample ID: 680-79567-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	238252	05/23/12 13:30	RB	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 01:49	BCB	TAL SAV
Total/NA	Prep	7470A			237779	05/18/12 10:12	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 13:16	JKL	TAL SAV

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



Savannah, GA 31404  
phone 912.354.7858 fax 912.352.0165

**TestAmerica Laboratories, Inc.**

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## Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-79567-1

**Login Number: 79567**

**List Source: TestAmerica Savannah**

**List Number: 1**

**Creator: Barnett, Eddie T**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2, 2.0, 4.2, 4.0, 4.0 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	pH of container(s) is out of range: A1, A2
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	Insufficient volume received for MS/MSD.
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Certification Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79567-1

Project/Site: HERC Brunswick Ph 3 RFI - MW-50 MAY 2012

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Savannah	A2LA	DoD ELAP		0399-01
TestAmerica Savannah	A2LA	ISO/IEC 17025		399.01
TestAmerica Savannah	Alabama	State Program	4	41450
TestAmerica Savannah	Arkansas	State Program	6	N/A
TestAmerica Savannah	Arkansas DEQ	State Program	6	88-0692
TestAmerica Savannah	California	NELAC	9	3217CA
TestAmerica Savannah	Colorado	State Program	8	N/A
TestAmerica Savannah	Connecticut	State Program	1	PH-0161
TestAmerica Savannah	Florida	NELAC	4	E87052
TestAmerica Savannah	GA Dept. of Agriculture	State Program	4	N/A
TestAmerica Savannah	Georgia	State Program	4	803
TestAmerica Savannah	Georgia	State Program	4	N/A
TestAmerica Savannah	Guam	State Program	9	09-005r
TestAmerica Savannah	Hawaii	State Program	9	N/A
TestAmerica Savannah	Illinois	NELAC	5	200022
TestAmerica Savannah	Indiana	State Program	5	N/A
TestAmerica Savannah	Iowa	State Program	7	353
TestAmerica Savannah	Kentucky	State Program	4	90084
TestAmerica Savannah	Kentucky (UST)	State Program	4	18
TestAmerica Savannah	Louisiana	NELAC	6	30690
TestAmerica Savannah	Louisiana	NELAC	6	LA100015
TestAmerica Savannah	Maine	State Program	1	GA00006
TestAmerica Savannah	Maryland	State Program	3	250
TestAmerica Savannah	Massachusetts	State Program	1	M-GA006
TestAmerica Savannah	Michigan	State Program	5	9925
TestAmerica Savannah	Mississippi	State Program	4	N/A
TestAmerica Savannah	Montana	State Program	8	CERT0081
TestAmerica Savannah	Nebraska	State Program	7	TestAmerica-Savannah
TestAmerica Savannah	New Jersey	NELAC	2	GA769
TestAmerica Savannah	New Mexico	State Program	6	N/A
TestAmerica Savannah	New York	NELAC	2	10842
TestAmerica Savannah	North Carolina DENR	State Program	4	269
TestAmerica Savannah	North Carolina DHHS	State Program	4	13701
TestAmerica Savannah	Oklahoma	State Program	6	9984
TestAmerica Savannah	Pennsylvania	NELAC	3	68-00474
TestAmerica Savannah	Puerto Rico	State Program	2	GA00006
TestAmerica Savannah	Rhode Island	State Program	1	LAO00244
TestAmerica Savannah	South Carolina	State Program	4	98001
TestAmerica Savannah	Tennessee	State Program	4	TN02961
TestAmerica Savannah	Texas	NELAC	6	T104704185-08-TX
TestAmerica Savannah	USDA	Federal		SAV 3-04
TestAmerica Savannah	Vermont	State Program	1	87052
TestAmerica Savannah	Virginia	NELAC	3	460161
TestAmerica Savannah	Washington	State Program	10	C1794
TestAmerica Savannah	West Virginia	State Program	3	9950C
TestAmerica Savannah	West Virginia DEP	State Program	3	94
TestAmerica Savannah	Wisconsin	State Program	5	999819810
TestAmerica Savannah	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-79569-1

Client Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY  
2012

For:

Ashland Inc.

Ashland Hercules Research Center

500 Hercules Rd Bldg 8139

Wilmington, Delaware 19808

Attn: Timothy Hassett



Authorized for release by:

5/31/2012 4:31:25 PM

Lidya Gulizia

Project Manager II

[lidya.gulizia@testamericainc.com](mailto:lidya.gulizia@testamericainc.com)

cc: Tony Mancini

### LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Case Narrative . . . . .	3
Sample Summary . . . . .	4
Method Summary . . . . .	5
Definitions . . . . .	6
Detection Summary . . . . .	7
Client Sample Results . . . . .	8
Surrogate Summary . . . . .	14
QC Sample Results . . . . .	15
QC Association . . . . .	20
Chronicle . . . . .	21
Chain of Custody . . . . .	22
Receipt Checklists . . . . .	23
Certification Summary . . . . .	24





## Case Narrative

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

TestAmerica Job ID: 680-79569-1

**Job ID: 680-79569-1**

**Laboratory: TestAmerica Savannah**

Narrative

### CASE NARRATIVE

**Client: Ashland Inc.**

**Project: HERC Brunswick Ph 3 RFI - MW51- MAY 2012**

**Report Number: 680-79569-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

#### **RECEIPT**

The samples were received on 05/17/2012; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 2.0° C, 2.2° C, 4.0° C, 4.0° C and 4.2° C.

#### **VOLATILE ORGANIC COMPOUNDS (GC-MS)**

Samples MW-51S (680-79569-1), MW-51I (680-79569-2) and MW-51D (680-79569-3) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/23/2012.

No difficulties were encountered during the volatiles analyses.

All quality control parameters were within the acceptance limits.

#### **METALS (ICP)**

Samples MW-51S (680-79569-1), MW-51I (680-79569-2) and MW-51D (680-79569-3) were analyzed for Metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 05/21/2012 and analyzed on 05/23/2012.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

#### **TOTAL MERCURY**

Samples MW-51S (680-79569-1), MW-51I (680-79569-2) and MW-51D (680-79569-3) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/18/2012 and analyzed on 05/22/2012.

During pH adjustment, the following sample(s) required 1 mL of acid to reach the desired pH: MW-51I (680-79569-2).

No difficulties were encountered during the mercury analyses.

All quality control parameters were within the acceptance limits.



## Sample Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79569-1

Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-79569-1	MW-51S	Water	05/16/12 10:55	05/17/12 10:35
680-79569-2	MW-51I	Water	05/16/12 10:50	05/17/12 10:35
680-79569-3	MW-51D	Water	05/16/12 10:35	05/17/12 10:35



## Method Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79569-1

Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
6010B	Metals (ICP)	SW846	TAL SAV
7470A	Mercury (CVAA)	SW846	TAL SAV

### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



## Definitions/Glossary

Client: Ashland Inc.

TestAmerica Job ID: 680-79569-1

Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



## Detection Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79569-1

Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

### Client Sample ID: MW-51S

### Lab Sample ID: 680-79569-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.14		0.010	0.0020	mg/L	1		6010B	Total
									Recoverable
Beryllium	0.00014	J	0.0040	0.00010	mg/L	1		6010B	Total
									Recoverable
Chromium	0.016		0.010	0.0020	mg/L	1		6010B	Total
									Recoverable
Nickel	0.0096	J	0.040	0.0040	mg/L	1		6010B	Total
									Recoverable
Selenium	0.0081	J	0.020	0.0064	mg/L	1		6010B	Total
									Recoverable
Vanadium	0.014		0.010	0.0030	mg/L	1		6010B	Total
									Recoverable

### Client Sample ID: MW-51I

### Lab Sample ID: 680-79569-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.018	J	0.020	0.010	mg/L	1		6010B	Total
									Recoverable
Barium	0.056		0.010	0.0020	mg/L	1		6010B	Total
									Recoverable
Beryllium	0.00051	J	0.0040	0.00010	mg/L	1		6010B	Total
									Recoverable
Chromium	0.048		0.010	0.0020	mg/L	1		6010B	Total
									Recoverable
Cobalt	0.0027	J	0.010	0.0010	mg/L	1		6010B	Total
									Recoverable
Copper	0.0053	J	0.020	0.0050	mg/L	1		6010B	Total
									Recoverable
Lead	0.0053	J	0.010	0.0034	mg/L	1		6010B	Total
									Recoverable
Nickel	0.014	J	0.040	0.0040	mg/L	1		6010B	Total
									Recoverable
Vanadium	0.054		0.010	0.0030	mg/L	1		6010B	Total
									Recoverable
Zinc	0.021		0.020	0.0063	mg/L	1		6010B	Total
									Recoverable

### Client Sample ID: MW-51D

### Lab Sample ID: 680-79569-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.56	J	1.0	0.33	ug/L	1		8260B	Total/NA
Barium	0.085		0.010	0.0020	mg/L	1		6010B	Total
									Recoverable
Chromium	0.010		0.010	0.0020	mg/L	1		6010B	Total
									Recoverable
Nickel	0.0040	J	0.040	0.0040	mg/L	1		6010B	Total
									Recoverable
Vanadium	0.0043	J	0.010	0.0030	mg/L	1		6010B	Total
									Recoverable



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

TestAmerica Job ID: 680-79569-1

**Client Sample ID: MW-51S**

**Lab Sample ID: 680-79569-1**

**Date Collected: 05/16/12 10:55**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/23/12 14:17	1
Acetonitrile	40	U	40	10	ug/L			05/23/12 14:17	1
Acrolein	20	U	20	7.4	ug/L			05/23/12 14:17	1
Acrylonitrile	20	U	20	7.2	ug/L			05/23/12 14:17	1
Benzene	1.0	U	1.0	0.25	ug/L			05/23/12 14:17	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/23/12 14:17	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/23/12 14:17	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/23/12 14:17	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/23/12 14:17	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/23/12 14:17	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/23/12 14:17	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/23/12 14:17	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/23/12 14:17	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/23/12 14:17	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/23/12 14:17	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/23/12 14:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 14:17	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/23/12 14:17	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/23/12 14:17	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/23/12 14:17	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/23/12 14:17	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 14:17	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/23/12 14:17	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/23/12 14:17	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/23/12 14:17	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/23/12 14:17	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/23/12 14:17	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/23/12 14:17	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/23/12 14:17	1
2-Hexanone	10	U	10	1.0	ug/L			05/23/12 14:17	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/23/12 14:17	1
Isobutyl alcohol	40	U	40	11	ug/L			05/23/12 14:17	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/23/12 14:17	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/23/12 14:17	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/12 14:17	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/23/12 14:17	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/23/12 14:17	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/23/12 14:17	1
Propionitrile	20	U	20	4.6	ug/L			05/23/12 14:17	1
Styrene	1.0	U	1.0	0.11	ug/L			05/23/12 14:17	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/23/12 14:17	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/23/12 14:17	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 14:17	1
Toluene	1.0	U	1.0	0.33	ug/L			05/23/12 14:17	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/23/12 14:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/23/12 14:17	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/23/12 14:17	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/23/12 14:17	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/23/12 14:17	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/23/12 14:17	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 14:17	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

TestAmerica Job ID: 680-79569-1

**Client Sample ID: MW-51S**

**Lab Sample ID: 680-79569-1**

**Date Collected: 05/16/12 10:55**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/23/12 14:17	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/23/12 14:17	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/23/12 14:17	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/23/12 14:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		70 - 130		05/23/12 14:17	1
Dibromofluoromethane	96		70 - 130		05/23/12 14:17	1
Toluene-d8 (Surr)	106		70 - 130		05/23/12 14:17	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 01:54	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 01:54	1
Barium	0.14		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 01:54	1
Beryllium	0.00014	J	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 01:54	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 01:54	1
Chromium	0.016		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 01:54	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 01:54	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 01:54	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 01:54	1
Nickel	0.0096	J	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 01:54	1
Selenium	0.0081	J	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 01:54	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 01:54	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 01:54	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 01:54	1
Vanadium	0.014		0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 01:54	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 01:54	1

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L		05/18/12 10:12	05/22/12 13:19	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

TestAmerica Job ID: 680-79569-1

**Client Sample ID: MW-51I**

**Lab Sample ID: 680-79569-2**

**Date Collected: 05/16/12 10:50**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/23/12 14:45	1
Acetonitrile	40	U	40	10	ug/L			05/23/12 14:45	1
Acrolein	20	U	20	7.4	ug/L			05/23/12 14:45	1
Acrylonitrile	20	U	20	7.2	ug/L			05/23/12 14:45	1
Benzene	1.0	U	1.0	0.25	ug/L			05/23/12 14:45	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/23/12 14:45	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/23/12 14:45	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/23/12 14:45	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/23/12 14:45	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/23/12 14:45	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/23/12 14:45	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/23/12 14:45	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/23/12 14:45	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/23/12 14:45	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/23/12 14:45	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/23/12 14:45	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 14:45	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/23/12 14:45	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/23/12 14:45	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/23/12 14:45	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/23/12 14:45	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 14:45	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/23/12 14:45	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/23/12 14:45	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/23/12 14:45	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/23/12 14:45	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/23/12 14:45	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/23/12 14:45	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/23/12 14:45	1
2-Hexanone	10	U	10	1.0	ug/L			05/23/12 14:45	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/23/12 14:45	1
Isobutyl alcohol	40	U	40	11	ug/L			05/23/12 14:45	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/23/12 14:45	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/23/12 14:45	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/12 14:45	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/23/12 14:45	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/23/12 14:45	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/23/12 14:45	1
Propionitrile	20	U	20	4.6	ug/L			05/23/12 14:45	1
Styrene	1.0	U	1.0	0.11	ug/L			05/23/12 14:45	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/23/12 14:45	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/23/12 14:45	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 14:45	1
Toluene	1.0	U	1.0	0.33	ug/L			05/23/12 14:45	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/23/12 14:45	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/23/12 14:45	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/23/12 14:45	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/23/12 14:45	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/23/12 14:45	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/23/12 14:45	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 14:45	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

TestAmerica Job ID: 680-79569-1

**Client Sample ID: MW-51I**

**Lab Sample ID: 680-79569-2**

**Date Collected: 05/16/12 10:50**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/23/12 14:45	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/23/12 14:45	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/23/12 14:45	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/23/12 14:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		70 - 130		05/23/12 14:45	1
Dibromofluoromethane	96		70 - 130		05/23/12 14:45	1
Toluene-d8 (Surr)	104		70 - 130		05/23/12 14:45	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 01:58	1
Arsenic	0.018	J	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 01:58	1
Barium	0.056		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 01:58	1
Beryllium	0.00051	J	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 01:58	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 01:58	1
Chromium	0.048		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 01:58	1
Cobalt	0.0027	J	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 01:58	1
Copper	0.0053	J	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 01:58	1
Lead	0.0053	J	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 01:58	1
Nickel	0.014	J	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 01:58	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 01:58	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 01:58	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 01:58	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 01:58	1
Vanadium	0.054		0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 01:58	1
Zinc	0.021		0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 01:58	1

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L		05/18/12 10:12	05/22/12 13:23	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

TestAmerica Job ID: 680-79569-1

**Client Sample ID: MW-51D**

**Lab Sample ID: 680-79569-3**

**Date Collected: 05/16/12 10:35**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/23/12 15:14	1
Acetonitrile	40	U	40	10	ug/L			05/23/12 15:14	1
Acrolein	20	U	20	7.4	ug/L			05/23/12 15:14	1
Acrylonitrile	20	U	20	7.2	ug/L			05/23/12 15:14	1
Benzene	1.0	U	1.0	0.25	ug/L			05/23/12 15:14	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/23/12 15:14	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/23/12 15:14	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/23/12 15:14	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/23/12 15:14	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/23/12 15:14	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/23/12 15:14	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/23/12 15:14	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/23/12 15:14	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/23/12 15:14	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/23/12 15:14	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/23/12 15:14	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 15:14	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/23/12 15:14	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/23/12 15:14	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/23/12 15:14	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/23/12 15:14	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 15:14	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/23/12 15:14	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/23/12 15:14	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/23/12 15:14	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/23/12 15:14	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/23/12 15:14	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/23/12 15:14	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/23/12 15:14	1
2-Hexanone	10	U	10	1.0	ug/L			05/23/12 15:14	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/23/12 15:14	1
Isobutyl alcohol	40	U	40	11	ug/L			05/23/12 15:14	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/23/12 15:14	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/23/12 15:14	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/12 15:14	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/23/12 15:14	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/23/12 15:14	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/23/12 15:14	1
Propionitrile	20	U	20	4.6	ug/L			05/23/12 15:14	1
Styrene	1.0	U	1.0	0.11	ug/L			05/23/12 15:14	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/23/12 15:14	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/23/12 15:14	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 15:14	1
<b>Toluene</b>	<b>0.56</b>	<b>J</b>	1.0	0.33	ug/L			05/23/12 15:14	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/23/12 15:14	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/23/12 15:14	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/23/12 15:14	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/23/12 15:14	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/23/12 15:14	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/23/12 15:14	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 15:14	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

TestAmerica Job ID: 680-79569-1

**Client Sample ID: MW-51D**

**Lab Sample ID: 680-79569-3**

**Date Collected: 05/16/12 10:35**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/23/12 15:14	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/23/12 15:14	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/23/12 15:14	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/23/12 15:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		70 - 130		05/23/12 15:14	1
Dibromofluoromethane	98		70 - 130		05/23/12 15:14	1
Toluene-d8 (Surr)	103		70 - 130		05/23/12 15:14	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 02:02	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 02:02	1
Barium	0.085		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:02	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 02:02	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 02:02	1
Chromium	0.010		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:02	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 02:02	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 02:02	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 02:02	1
Nickel	0.0040	J	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 02:02	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 02:02	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 02:02	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 02:02	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 02:02	1
Vanadium	0.0043	J	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 02:02	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 02:02	1

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L		05/18/12 10:12	05/22/12 13:27	1



## Surrogate Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79569-1

Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

#### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB	DBFM	TOL
		(70-130)	(70-130)	(70-130)
680-79569-1	MW-51S	94	96	106
680-79569-2	MW-51I	94	96	104
680-79569-3	MW-51D	96	98	103
LCS 680-238252/4	Lab Control Sample	106	103	107
LCSD 680-238252/5	Lab Control Sample Dup	107	99	107
MB 680-238252/8	Method Blank	95	98	105

#### Surrogate Legend

BFB = 4-Bromofluorobenzene

DBFM = Dibromofluoromethane

TOL = Toluene-d8 (Surr)



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79569-1

Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-238252/8

Matrix: Water

Analysis Batch: 238252

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/23/12 12:05	1
Acetonitrile	40	U	40	10	ug/L			05/23/12 12:05	1
Acrolein	20	U	20	7.4	ug/L			05/23/12 12:05	1
Acrylonitrile	20	U	20	7.2	ug/L			05/23/12 12:05	1
Benzene	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/23/12 12:05	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/23/12 12:05	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/23/12 12:05	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/23/12 12:05	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/23/12 12:05	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/23/12 12:05	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/23/12 12:05	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/23/12 12:05	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/23/12 12:05	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/23/12 12:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 12:05	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/23/12 12:05	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/23/12 12:05	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/23/12 12:05	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/23/12 12:05	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/23/12 12:05	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/23/12 12:05	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/23/12 12:05	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
2-Hexanone	10	U	10	1.0	ug/L			05/23/12 12:05	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/23/12 12:05	1
Isobutyl alcohol	40	U	40	11	ug/L			05/23/12 12:05	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/23/12 12:05	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/23/12 12:05	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/12 12:05	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/23/12 12:05	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/23/12 12:05	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/23/12 12:05	1
Propionitrile	20	U	20	4.6	ug/L			05/23/12 12:05	1
Styrene	1.0	U	1.0	0.11	ug/L			05/23/12 12:05	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/23/12 12:05	1
1,1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/23/12 12:05	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/23/12 12:05	1
Toluene	1.0	U	1.0	0.33	ug/L			05/23/12 12:05	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/23/12 12:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/23/12 12:05	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/23/12 12:05	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/23/12 12:05	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/23/12 12:05	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

TestAmerica Job ID: 680-79569-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-238252/8

Matrix: Water

Analysis Batch: 238252

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/23/12 12:05	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/23/12 12:05	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/23/12 12:05	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/23/12 12:05	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/23/12 12:05	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/23/12 12:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		70 - 130		05/23/12 12:05	1
Dibromofluoromethane	98		70 - 130		05/23/12 12:05	1
Toluene-d8 (Surr)	105		70 - 130		05/23/12 12:05	1

Lab Sample ID: LCS 680-238252/4

Matrix: Water

Analysis Batch: 238252

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	80.4		ug/L		80	26 - 180
Benzene	50.0	51.2		ug/L		102	70 - 130
Bromoform	50.0	45.4		ug/L		91	70 - 130
Bromomethane	50.0	32.3		ug/L		65	23 - 165
Carbon disulfide	50.0	49.0		ug/L		98	54 - 132
Carbon tetrachloride	50.0	49.7		ug/L		99	70 - 130
Chlorobenzene	50.0	51.0		ug/L		102	70 - 130
Chlorodibromomethane	50.0	47.5		ug/L		95	70 - 130
Chloroethane	50.0	51.6		ug/L		103	56 - 152
Chloroform	50.0	50.2		ug/L		100	70 - 130
Chloromethane	50.0	59.9		ug/L		120	70 - 130
cis-1,2-Dichloroethene	50.0	49.8		ug/L		100	70 - 130
cis-1,3-Dichloropropene	50.0	54.5		ug/L		109	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	52.3		ug/L		105	70 - 130
Dibromomethane	50.0	53.7		ug/L		107	70 - 130
Dichlorobromomethane	50.0	55.2		ug/L		110	70 - 130
Dichlorodifluoromethane	50.0	50.4		ug/L		101	44 - 146
1,1-Dichloroethane	50.0	55.3		ug/L		111	70 - 130
1,2-Dichloroethane	50.0	56.5		ug/L		113	70 - 130
1,1-Dichloroethene	50.0	51.0		ug/L		102	66 - 131
1,2-Dichloropropane	50.0	54.3		ug/L		109	70 - 130
Ethylbenzene	50.0	50.8		ug/L		102	70 - 130
Ethylene Dibromide	50.0	54.2		ug/L		108	70 - 130
2-Hexanone	100	97.8		ug/L		98	42 - 185
Methylene Chloride	50.0	49.1		ug/L		98	67 - 130
2-Butanone (MEK)	100	79.0		ug/L		79	49 - 172
4-Methyl-2-pentanone (MIBK)	100	102		ug/L		102	70 - 130
Styrene	50.0	54.0		ug/L		108	70 - 130
1,1,1,2-Tetrachloroethane	50.0	51.1		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	50.0	54.5		ug/L		109	70 - 130
Tetrachloroethene	50.0	52.0		ug/L		104	70 - 130
Toluene	50.0	54.8		ug/L		110	70 - 130



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79569-1

Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-238252/4

Matrix: Water

Analysis Batch: 238252

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	50.0	52.6		ug/L		105	70 - 130
trans-1,3-Dichloropropene	50.0	47.2		ug/L		94	70 - 130
1,1,1-Trichloroethane	50.0	59.7		ug/L		119	70 - 130
1,1,2-Trichloroethane	50.0	54.2		ug/L		108	70 - 130
Trichloroethene	50.0	53.2		ug/L		106	70 - 130
Trichlorofluoromethane	50.0	55.5		ug/L		111	55 - 156
1,2,3-Trichloropropane	50.0	52.6		ug/L		105	70 - 130
Vinyl acetate	100	111		ug/L		111	60 - 176
Vinyl chloride	50.0	50.2		ug/L		100	67 - 134
Xylenes, Total	150	153		ug/L		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	106		70 - 130
Dibromofluoromethane	103		70 - 130
Toluene-d8 (Surr)	107		70 - 130

Lab Sample ID: LCSD 680-238252/5

Matrix: Water

Analysis Batch: 238252

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	79.3		ug/L		79	26 - 180	1	50
Benzene	50.0	51.9		ug/L		104	70 - 130	1	30
Bromoform	50.0	44.9		ug/L		90	70 - 130	1	30
Bromomethane	50.0	37.6		ug/L		75	23 - 165	15	50
Carbon disulfide	50.0	47.5		ug/L		95	54 - 132	3	30
Carbon tetrachloride	50.0	49.8		ug/L		100	70 - 130	0	30
Chlorobenzene	50.0	51.5		ug/L		103	70 - 130	1	30
Chlorodibromomethane	50.0	47.4		ug/L		95	70 - 130	0	50
Chloroethane	50.0	48.6		ug/L		97	56 - 152	6	40
Chloroform	50.0	48.7		ug/L		97	70 - 130	3	30
Chloromethane	50.0	58.8		ug/L		118	70 - 130	2	30
cis-1,2-Dichloroethene	50.0	49.0		ug/L		98	70 - 130	2	30
cis-1,3-Dichloropropene	50.0	55.0		ug/L		110	70 - 130	1	30
1,2-Dibromo-3-Chloropropane	50.0	52.3		ug/L		105	70 - 130	0	50
Dibromomethane	50.0	54.1		ug/L		108	70 - 130	1	30
Dichlorobromomethane	50.0	56.3		ug/L		113	70 - 130	2	30
Dichlorodifluoromethane	50.0	50.5		ug/L		101	44 - 146	0	50
1,1-Dichloroethane	50.0	53.9		ug/L		108	70 - 130	3	30
1,2-Dichloroethane	50.0	57.8		ug/L		116	70 - 130	2	30
1,1-Dichloroethene	50.0	51.1		ug/L		102	66 - 131	0	30
1,2-Dichloropropane	50.0	55.3		ug/L		111	70 - 130	2	30
Ethylbenzene	50.0	51.2		ug/L		102	70 - 130	1	30
Ethylene Dibromide	50.0	55.1		ug/L		110	70 - 130	2	30
2-Hexanone	100	100		ug/L		100	42 - 185	3	30
Methylene Chloride	50.0	46.5		ug/L		93	67 - 130	6	30
2-Butanone (MEK)	100	77.4		ug/L		77	49 - 172	2	30
4-Methyl-2-pentanone (MIBK)	100	104		ug/L		104	70 - 130	2	30
Styrene	50.0	54.4		ug/L		109	70 - 130	1	30



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79569-1

Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-238252/5

Matrix: Water

Analysis Batch: 238252

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	50.0	50.6		ug/L		101	70 - 130	1	30
1,1,2,2-Tetrachloroethane	50.0	55.2		ug/L		110	70 - 130	1	30
Tetrachloroethene	50.0	50.3		ug/L		101	70 - 130	3	30
Toluene	50.0	53.7		ug/L		107	70 - 130	2	30
trans-1,2-Dichloroethene	50.0	52.2		ug/L		104	70 - 130	1	30
trans-1,3-Dichloropropene	50.0	47.6		ug/L		95	70 - 130	1	50
1,1,1-Trichloroethane	50.0	62.3		ug/L		125	70 - 130	4	30
1,1,2-Trichloroethane	50.0	55.7		ug/L		111	70 - 130	3	30
Trichloroethene	50.0	53.8		ug/L		108	70 - 130	1	30
Trichlorofluoromethane	50.0	54.9		ug/L		110	55 - 156	1	30
1,2,3-Trichloropropane	50.0	52.8		ug/L		106	70 - 130	0	30
Vinyl acetate	100	108		ug/L		108	60 - 176	3	30
Vinyl chloride	50.0	50.0		ug/L		100	67 - 134	0	30
Xylenes, Total	150	154		ug/L		103	70 - 130	0	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	107		70 - 130
Dibromofluoromethane	99		70 - 130
Toluene-d8 (Surr)	107		70 - 130

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 680-238027/1-A

Matrix: Water

Analysis Batch: 238198

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 238027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 00:45	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 00:45	1
Barium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 00:45	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 00:45	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 00:45	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 00:45	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 00:45	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 00:45	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 00:45	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 00:45	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 00:45	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 00:45	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 00:45	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 00:45	1
Vanadium	0.010	U	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 00:45	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 00:45	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

TestAmerica Job ID: 680-79569-1

## Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 680-238027/2-A

Matrix: Water

Analysis Batch: 238198

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 238027

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.490		mg/L		98	75 - 125
Arsenic	2.00	2.13		mg/L		107	75 - 125
Barium	2.00	2.10		mg/L		105	75 - 125
Beryllium	0.0500	0.0526		mg/L		105	75 - 125
Cadmium	0.0500	0.0517		mg/L		103	75 - 125
Chromium	0.200	0.208		mg/L		104	75 - 125
Cobalt	0.500	0.530		mg/L		106	75 - 125
Copper	0.250	0.269		mg/L		107	75 - 125
Lead	0.500	0.517		mg/L		103	75 - 125
Nickel	0.500	0.520		mg/L		104	75 - 125
Selenium	2.00	2.09		mg/L		104	75 - 125
Silver	0.0500	0.0522		mg/L		104	75 - 125
Thallium	2.00	2.17		mg/L		108	75 - 125
Tin	1.00	1.05		mg/L		105	75 - 125
Vanadium	0.500	0.515		mg/L		103	75 - 125
Zinc	0.500	0.515		mg/L		103	75 - 125

## Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 680-237779/1-A

Matrix: Water

Analysis Batch: 238210

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 237779

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L		05/18/12 10:12	05/22/12 11:59	1

Lab Sample ID: LCS 680-237779/2-A

Matrix: Water

Analysis Batch: 238210

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 237779

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.00242		mg/L		97	80 - 120



## QC Association Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79569-1

Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

### GC/MS VOA

#### Analysis Batch: 238252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79569-1	MW-51S	Total/NA	Water	8260B	
680-79569-2	MW-51I	Total/NA	Water	8260B	
680-79569-3	MW-51D	Total/NA	Water	8260B	
LCS 680-238252/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-238252/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-238252/8	Method Blank	Total/NA	Water	8260B	

### Metals

#### Prep Batch: 237779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79569-1	MW-51S	Total/NA	Water	7470A	
680-79569-2	MW-51I	Total/NA	Water	7470A	
680-79569-3	MW-51D	Total/NA	Water	7470A	
LCS 680-237779/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 680-237779/1-A	Method Blank	Total/NA	Water	7470A	

#### Prep Batch: 238027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79569-1	MW-51S	Total Recoverable	Water	3005A	
680-79569-2	MW-51I	Total Recoverable	Water	3005A	
680-79569-3	MW-51D	Total Recoverable	Water	3005A	
LCS 680-238027/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 680-238027/1-A	Method Blank	Total Recoverable	Water	3005A	

#### Analysis Batch: 238198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79569-1	MW-51S	Total Recoverable	Water	6010B	238027
680-79569-2	MW-51I	Total Recoverable	Water	6010B	238027
680-79569-3	MW-51D	Total Recoverable	Water	6010B	238027
LCS 680-238027/2-A	Lab Control Sample	Total Recoverable	Water	6010B	238027
MB 680-238027/1-A	Method Blank	Total Recoverable	Water	6010B	238027

#### Analysis Batch: 238210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79569-1	MW-51S	Total/NA	Water	7470A	237779
680-79569-2	MW-51I	Total/NA	Water	7470A	237779
680-79569-3	MW-51D	Total/NA	Water	7470A	237779
LCS 680-237779/2-A	Lab Control Sample	Total/NA	Water	7470A	237779
MB 680-237779/1-A	Method Blank	Total/NA	Water	7470A	237779



## Lab Chronicle

Client: Ashland Inc.

TestAmerica Job ID: 680-79569-1

Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

**Client Sample ID: MW-51S**

**Lab Sample ID: 680-79569-1**

**Date Collected: 05/16/12 10:55**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	238252	05/23/12 14:17	RB	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 01:54	BCB	TAL SAV
Total/NA	Prep	7470A			237779	05/18/12 10:12	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 13:19	JKL	TAL SAV

**Client Sample ID: MW-51I**

**Lab Sample ID: 680-79569-2**

**Date Collected: 05/16/12 10:50**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	238252	05/23/12 14:45	RB	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 01:58	BCB	TAL SAV
Total/NA	Prep	7470A			237779	05/18/12 10:12	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 13:23	JKL	TAL SAV

**Client Sample ID: MW-51D**

**Lab Sample ID: 680-79569-3**

**Date Collected: 05/16/12 10:35**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	238252	05/23/12 15:14	RB	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 02:02	BCB	TAL SAV
Total/NA	Prep	7470A			237779	05/18/12 10:12	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 13:27	JKL	TAL SAV

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



## Chain of Custody Record

**TestAmerica Laboratories, Inc.**

[illegible]



## Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-79569-1

**Login Number: 79569**

**List Source: TestAmerica Savannah**

**List Number: 1**

**Creator: Barnett, Eddie T**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2, 2.0, 4.2, 4.0, 4.0 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	pH of container(s) is out of range: A1,A2,A3
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	Insufficient volume received for MS/MSD.
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Certification Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79569-1

Project/Site: HERC Brunswick Ph 3 RFI - MW51- MAY 2012

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Savannah	A2LA	DoD ELAP		0399-01
TestAmerica Savannah	A2LA	ISO/IEC 17025		399.01
TestAmerica Savannah	Alabama	State Program	4	41450
TestAmerica Savannah	Arkansas	State Program	6	N/A
TestAmerica Savannah	Arkansas DEQ	State Program	6	88-0692
TestAmerica Savannah	California	NELAC	9	3217CA
TestAmerica Savannah	Colorado	State Program	8	N/A
TestAmerica Savannah	Connecticut	State Program	1	PH-0161
TestAmerica Savannah	Florida	NELAC	4	E87052
TestAmerica Savannah	GA Dept. of Agriculture	State Program	4	N/A
TestAmerica Savannah	Georgia	State Program	4	803
TestAmerica Savannah	Georgia	State Program	4	N/A
TestAmerica Savannah	Guam	State Program	9	09-005r
TestAmerica Savannah	Hawaii	State Program	9	N/A
TestAmerica Savannah	Illinois	NELAC	5	200022
TestAmerica Savannah	Indiana	State Program	5	N/A
TestAmerica Savannah	Iowa	State Program	7	353
TestAmerica Savannah	Kentucky	State Program	4	90084
TestAmerica Savannah	Kentucky (UST)	State Program	4	18
TestAmerica Savannah	Louisiana	NELAC	6	30690
TestAmerica Savannah	Louisiana	NELAC	6	LA100015
TestAmerica Savannah	Maine	State Program	1	GA00006
TestAmerica Savannah	Maryland	State Program	3	250
TestAmerica Savannah	Massachusetts	State Program	1	M-GA006
TestAmerica Savannah	Michigan	State Program	5	9925
TestAmerica Savannah	Mississippi	State Program	4	N/A
TestAmerica Savannah	Montana	State Program	8	CERT0081
TestAmerica Savannah	Nebraska	State Program	7	TestAmerica-Savannah
TestAmerica Savannah	New Jersey	NELAC	2	GA769
TestAmerica Savannah	New Mexico	State Program	6	N/A
TestAmerica Savannah	New York	NELAC	2	10842
TestAmerica Savannah	North Carolina DENR	State Program	4	269
TestAmerica Savannah	North Carolina DHHS	State Program	4	13701
TestAmerica Savannah	Oklahoma	State Program	6	9984
TestAmerica Savannah	Pennsylvania	NELAC	3	68-00474
TestAmerica Savannah	Puerto Rico	State Program	2	GA00006
TestAmerica Savannah	Rhode Island	State Program	1	LAO00244
TestAmerica Savannah	South Carolina	State Program	4	98001
TestAmerica Savannah	Tennessee	State Program	4	TN02961
TestAmerica Savannah	Texas	NELAC	6	T104704185-08-TX
TestAmerica Savannah	USDA	Federal		SAV 3-04
TestAmerica Savannah	Vermont	State Program	1	87052
TestAmerica Savannah	Virginia	NELAC	3	460161
TestAmerica Savannah	Washington	State Program	10	C1794
TestAmerica Savannah	West Virginia	State Program	3	9950C
TestAmerica Savannah	West Virginia DEP	State Program	3	94
TestAmerica Savannah	Wisconsin	State Program	5	999819810
TestAmerica Savannah	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-79574-1

Client Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

For:

Ashland Inc.

Ashland Hercules Research Center

500 Hercules Rd Bldg 8139

Wilmington, Delaware 19808

Attn: Timothy Hassett



Authorized for release by:

6/6/2012 6:02:05 PM

Lidya Gulizia

Project Manager II

[lidya.gulizia@testamericainc.com](mailto:lidya.gulizia@testamericainc.com)

cc: Tony Mancini

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.





# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Case Narrative . . . . .	3
Sample Summary . . . . .	5
Method Summary . . . . .	6
Definitions . . . . .	7
Detection Summary . . . . .	8
Client Sample Results . . . . .	10
Surrogate Summary . . . . .	32
QC Sample Results . . . . .	33
QC Association . . . . .	47
Chronicle . . . . .	50
Chain of Custody . . . . .	53
Receipt Checklists . . . . .	55
Certification Summary . . . . .	56



## Case Narrative

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

**Job ID: 680-79574-1**

**Laboratory: TestAmerica Savannah**

Narrative

### CASE NARRATIVE

**Client: Ashland Inc.**

**Project: Brunswick Ph 3 RFI - MW-52 MAY 2012**

**Report Number: 680-79574-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

#### RECEIPT

The samples were received on 05/17/2012; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 2.0° C, 2.2° C, 4.0° C, 4.0° C and 4.2° C.

#### VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MW-52S (680-79574-1), MW-52I (680-79574-2), MW-52D (680-79574-3), Trip Blank 1 (680-79574-4), EB-1 (680-79574-5), EB-2 (680-79574-6), EB-3 (680-79574-7) and Trip Blank (680-79574-8) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/19/2012 and 05/20/2012.

The continuing calibration verification (CCV) for analytical batch(s) 237953 and 237899 exceeded average % Drift (%D) control criteria. These are in-house criteria established because limits for these compounds are not specified in the reference method. The %RSDs for all analytes of concern were within established in-house limits; therefore, the data have been reported.

No difficulties were encountered during the volatiles analyses.

All quality control parameters were within the acceptance limits.

#### PESTICIDES AND PCBS

Samples MW-52S (680-79574-1), MW-52I (680-79574-2), MW-52D (680-79574-3), EB-1 (680-79574-5), EB-2 (680-79574-6) and EB-3 (680-79574-7) were analyzed for Pesticides and PCBs in accordance with EPA SW846 Method 8081A\_8082. The samples were prepared on 05/18/2012 and 05/28/2012 and analyzed on 05/25/2012, 05/31/2012 and 06/01/2012.

This method incorporates 2nd column confirmation. Corrective action is not taken for surrogate/spike compounds unless results from both columns are unacceptable. Results outside criteria are qualified.

Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample(s) contained an allowable number of surrogate compounds outside limits: EB-1 (680-79574-5), EB-2 (680-79574-6), EB-3 (680-79574-7), MW-52D (680-79574-3), MW-52I (680-79574-2), MW-52S (680-79574-1). These results have been reported and qualified.

No other difficulties were encountered during the Pesticides and PCBs analyses.



## Case Narrative

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

### Job ID: 680-79574-1 (Continued)

#### Laboratory: TestAmerica Savannah (Continued)

All other quality control parameters were within the acceptance limits.

#### METALS (ICP)

Samples MW-52S (680-79574-1), MW-52I (680-79574-2), MW-52D (680-79574-3), EB-1 (680-79574-5), EB-2 (680-79574-6) and EB-3 (680-79574-7) were analyzed for Metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 05/21/2012 and 05/23/2012 and analyzed on 05/23/2012 and 05/25/2012.

Selenium was detected in method blank MB 680-238189/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses.

All other quality control parameters were within the acceptance limits.

#### TOTAL MERCURY

Samples MW-52S (680-79574-1), MW-52I (680-79574-2), MW-52D (680-79574-3), EB-1 (680-79574-5), EB-2 (680-79574-6) and EB-3 (680-79574-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/18/2012 and analyzed on 05/22/2012.

No difficulties were encountered during the mercury analyses.

All quality control parameters were within the acceptance limits.



## Sample Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-79574-1	MW-52S	Water	05/15/12 17:05	05/17/12 10:35
680-79574-2	MW-52I	Water	05/15/12 16:40	05/17/12 10:35
680-79574-3	MW-52D	Water	05/15/12 16:50	05/17/12 10:35
680-79574-4	Trip Blank 1	Water	05/15/12 00:00	05/17/12 10:35
680-79574-5	EB-1	Water	05/15/12 14:45	05/17/12 10:35
680-79574-6	EB-2	Water	05/15/12 15:00	05/17/12 10:35
680-79574-7	EB-3	Water	05/15/12 15:15	05/17/12 10:35
680-79574-8	Trip Blank	Water	05/15/12 00:00	05/17/12 10:35



## Method Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8081A_8082	Organochlorine Pesticides & PCBs (GC)	SW846	TAL SAV
6010B	Metals (ICP)	SW846	TAL SAV
7470A	Mercury (CVAA)	SW846	TAL SAV

### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



## Definitions/Glossary

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
X	Surrogate is outside control limits
U	Indicates the analyte was analyzed for but not detected.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



## Detection Summary

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

### Client Sample ID: MW-52S

### Lab Sample ID: 680-79574-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.025		0.010	0.0020	mg/L	1		6010B	Total Recoverable
Chromium	0.0043	J	0.010	0.0020	mg/L	1		6010B	Total Recoverable
Vanadium	0.0031	J	0.010	0.0030	mg/L	1		6010B	Total Recoverable

### Client Sample ID: MW-52I

### Lab Sample ID: 680-79574-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	0.12	J	1.0	0.11	ug/L	1		8260B	Total/NA
Barium	0.050		0.010	0.0020	mg/L	1		6010B	Total Recoverable
Beryllium	0.00013	J	0.0040	0.00010	mg/L	1		6010B	Total Recoverable
Chromium	0.0095	J	0.010	0.0020	mg/L	1		6010B	Total Recoverable
Vanadium	0.0090	J	0.010	0.0030	mg/L	1		6010B	Total Recoverable
Zinc	0.0093	J	0.020	0.0063	mg/L	1		6010B	Total Recoverable

### Client Sample ID: MW-52D

### Lab Sample ID: 680-79574-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	17		1.0	0.25	ug/L	1		8260B	Total/NA
Chlorobenzene	6.3		1.0	0.25	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	0.42	J	1.0	0.15	ug/L	1		8260B	Total/NA
1,2-Dichloropropane	0.42	J	1.0	0.13	ug/L	1		8260B	Total/NA
Ethylbenzene	6.1		1.0	0.11	ug/L	1		8260B	Total/NA
Toluene	0.61	J	1.0	0.33	ug/L	1		8260B	Total/NA
Xylenes, Total	17		2.0	0.20	ug/L	1		8260B	Total/NA
Toxaphene, TAUC, Parlar 11-69	0.88	J	4.7	0.47	ug/L	1		8081A_8082	Total/NA
Barium	0.45		0.010	0.0020	mg/L	1		6010B	Total Recoverable
Chromium	0.0022	J	0.010	0.0020	mg/L	1		6010B	Total Recoverable
Vanadium	0.0044	J	0.010	0.0030	mg/L	1		6010B	Total Recoverable

### Client Sample ID: Trip Blank 1

### Lab Sample ID: 680-79574-4

No Detections

### Client Sample ID: EB-1

### Lab Sample ID: 680-79574-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toxaphene, TAUC, Parlar 11-69	0.51	J	4.8	0.48	ug/L	1		8081A_8082	Total/NA

### Client Sample ID: EB-2

### Lab Sample ID: 680-79574-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toxaphene, TAUC, Parlar 11-69	0.62	J	4.8	0.48	ug/L	1		8081A_8082	Total/NA

### Client Sample ID: EB-3

### Lab Sample ID: 680-79574-7



## Detection Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

### Client Sample ID: EB-3 (Continued)

Lab Sample ID: 680-79574-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toxaphene, TAUC, Parlar 11-69	0.87	J	5.5	0.55	ug/L	1		8081A_8082	Total/NA

### Client Sample ID: Trip Blank

Lab Sample ID: 680-79574-8

No Detections



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

**Client Sample ID: MW-52S**

**Date Collected: 05/15/12 17:05**

**Date Received: 05/17/12 10:35**

**Lab Sample ID: 680-79574-1**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/20/12 23:52	1
Acetonitrile	40	U	40	10	ug/L			05/20/12 23:52	1
Acrolein	20	U	20	7.4	ug/L			05/20/12 23:52	1
Acrylonitrile	20	U	20	7.2	ug/L			05/20/12 23:52	1
Benzene	1.0	U	1.0	0.25	ug/L			05/20/12 23:52	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/20/12 23:52	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/20/12 23:52	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/20/12 23:52	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/20/12 23:52	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/20/12 23:52	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/20/12 23:52	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/20/12 23:52	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/20/12 23:52	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/20/12 23:52	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/20/12 23:52	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/20/12 23:52	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/20/12 23:52	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/20/12 23:52	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/20/12 23:52	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/20/12 23:52	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/20/12 23:52	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/20/12 23:52	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/20/12 23:52	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/20/12 23:52	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/20/12 23:52	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/20/12 23:52	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/20/12 23:52	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/20/12 23:52	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/20/12 23:52	1
2-Hexanone	10	U	10	1.0	ug/L			05/20/12 23:52	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/20/12 23:52	1
Isobutyl alcohol	40	U	40	11	ug/L			05/20/12 23:52	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/20/12 23:52	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/20/12 23:52	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/20/12 23:52	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/20/12 23:52	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/20/12 23:52	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/20/12 23:52	1
Propionitrile	20	U	20	4.6	ug/L			05/20/12 23:52	1
Styrene	1.0	U	1.0	0.11	ug/L			05/20/12 23:52	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/20/12 23:52	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/20/12 23:52	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/20/12 23:52	1
Toluene	1.0	U	1.0	0.33	ug/L			05/20/12 23:52	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/20/12 23:52	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/20/12 23:52	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/20/12 23:52	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/20/12 23:52	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/20/12 23:52	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/20/12 23:52	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/20/12 23:52	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

**Client Sample ID: MW-52S**

**Lab Sample ID: 680-79574-1**

**Date Collected: 05/15/12 17:05**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/20/12 23:52	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/20/12 23:52	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/20/12 23:52	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/20/12 23:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		70 - 130					05/20/12 23:52	1
Dibromofluoromethane	106		70 - 130					05/20/12 23:52	1
Toluene-d8 (Surr)	106		70 - 130					05/20/12 23:52	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.9	U	4.9	0.49	ug/L		05/18/12 15:41	05/25/12 01:28	1
Toxaphene, TAUC, Parlar 11-69	4.9	U	4.9	0.49	ug/L		05/18/12 15:41	05/25/12 01:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	54		40 - 130				05/18/12 15:41	05/25/12 01:28	1
DCB Decachlorobiphenyl	32	p X	40 - 130				05/18/12 15:41	05/25/12 01:28	1
Tetrachloro-m-xylene	86		36 - 130				05/18/12 15:41	05/25/12 01:28	1
Tetrachloro-m-xylene	88		36 - 130				05/18/12 15:41	05/25/12 01:28	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.9	U H	4.9	0.49	ug/L		05/28/12 15:21	05/31/12 23:58	1
Toxaphene, TAUC, Parlar 11-69	4.9	U H	4.9	0.49	ug/L		05/28/12 15:21	05/31/12 23:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	18	X	40 - 130				05/28/12 15:21	05/31/12 23:58	1
DCB Decachlorobiphenyl	17	X	40 - 130				05/28/12 15:21	05/31/12 23:58	1
Tetrachloro-m-xylene	62		36 - 130				05/28/12 15:21	05/31/12 23:58	1
Tetrachloro-m-xylene	65		36 - 130				05/28/12 15:21	05/31/12 23:58	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 02:54	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 02:54	1
Barium	0.025		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:54	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 02:54	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 02:54	1
Chromium	0.0043	J	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:54	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 02:54	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 02:54	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 02:54	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 02:54	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 02:54	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 02:54	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 02:54	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 02:54	1
Vanadium	0.0031	J	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 02:54	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 02:54	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: MW-52S**

**Lab Sample ID: 680-79574-1**

**Date Collected: 05/15/12 17:05**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 11:18	1



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: MW-521**

**Lab Sample ID: 680-79574-2**

**Date Collected: 05/15/12 16:40**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 15:26	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 15:26	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 15:26	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 15:26	1
Benzene	1.0	U	1.0	0.25	ug/L			05/19/12 15:26	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 15:26	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 15:26	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/19/12 15:26	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 15:26	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/19/12 15:26	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 15:26	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 15:26	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 15:26	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/19/12 15:26	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 15:26	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 15:26	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 15:26	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 15:26	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 15:26	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 15:26	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 15:26	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 15:26	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 15:26	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 15:26	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 15:26	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/19/12 15:26	1
<b>Ethylbenzene</b>	<b>0.12</b>	<b>J</b>	1.0	0.11	ug/L			05/19/12 15:26	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 15:26	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 15:26	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 15:26	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 15:26	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 15:26	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 15:26	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 15:26	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 15:26	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 15:26	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 15:26	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 15:26	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 15:26	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 15:26	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 15:26	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 15:26	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 15:26	1
Toluene	1.0	U	1.0	0.33	ug/L			05/19/12 15:26	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 15:26	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 15:26	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 15:26	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 15:26	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 15:26	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/19/12 15:26	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 15:26	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

**Client Sample ID: MW-52I**

**Lab Sample ID: 680-79574-2**

**Date Collected: 05/15/12 16:40**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 15:26	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 15:26	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 15:26	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/19/12 15:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		70 - 130					05/19/12 15:26	1
Dibromofluoromethane	95		70 - 130					05/19/12 15:26	1
Toluene-d8 (Surr)	105		70 - 130					05/19/12 15:26	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.7	U	4.7	0.47	ug/L		05/18/12 15:41	05/25/12 01:47	1
Toxaphene, TAUC, Parlar 11-69	4.7	U	4.7	0.47	ug/L		05/18/12 15:41	05/25/12 01:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	25	X	40 - 130				05/18/12 15:41	05/25/12 01:47	1
DCB Decachlorobiphenyl	23	X	40 - 130				05/18/12 15:41	05/25/12 01:47	1
Tetrachloro-m-xylene	64		36 - 130				05/18/12 15:41	05/25/12 01:47	1
Tetrachloro-m-xylene	61		36 - 130				05/18/12 15:41	05/25/12 01:47	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.7	U H	4.7	0.47	ug/L		05/28/12 15:21	06/01/12 00:17	1
Toxaphene, TAUC, Parlar 11-69	4.7	U H	4.7	0.47	ug/L		05/28/12 15:21	06/01/12 00:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	22	X	40 - 130				05/28/12 15:21	06/01/12 00:17	1
DCB Decachlorobiphenyl	20	X	40 - 130				05/28/12 15:21	06/01/12 00:17	1
Tetrachloro-m-xylene	75		36 - 130				05/28/12 15:21	06/01/12 00:17	1
Tetrachloro-m-xylene	75		36 - 130				05/28/12 15:21	06/01/12 00:17	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 02:58	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 02:58	1
Barium	0.050		0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:58	1
Beryllium	0.00013	J	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 02:58	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 02:58	1
Chromium	0.0095	J	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 02:58	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 02:58	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 02:58	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 02:58	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 02:58	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 02:58	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 02:58	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 02:58	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 02:58	1
Vanadium	0.0090	J	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 02:58	1
Zinc	0.0093	J	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 02:58	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: MW-52I**

**Lab Sample ID: 680-79574-2**

**Date Collected: 05/15/12 16:40**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 11:21	1



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: MW-52D**

**Lab Sample ID: 680-79574-3**

**Date Collected: 05/15/12 16:50**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 15:55	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 15:55	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 15:55	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 15:55	1
<b>Benzene</b>	<b>17</b>		1.0	0.25	ug/L			05/19/12 15:55	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 15:55	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 15:55	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/19/12 15:55	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 15:55	1
<b>Chlorobenzene</b>	<b>6.3</b>		1.0	0.25	ug/L			05/19/12 15:55	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 15:55	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 15:55	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 15:55	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/19/12 15:55	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 15:55	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 15:55	1
<b>cis-1,2-Dichloroethene</b>	<b>0.42</b>	<b>J</b>	1.0	0.15	ug/L			05/19/12 15:55	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 15:55	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 15:55	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 15:55	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 15:55	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 15:55	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 15:55	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 15:55	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 15:55	1
<b>1,2-Dichloropropane</b>	<b>0.42</b>	<b>J</b>	1.0	0.13	ug/L			05/19/12 15:55	1
<b>Ethylbenzene</b>	<b>6.1</b>		1.0	0.11	ug/L			05/19/12 15:55	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 15:55	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 15:55	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 15:55	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 15:55	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 15:55	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 15:55	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 15:55	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 15:55	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 15:55	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 15:55	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 15:55	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 15:55	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 15:55	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 15:55	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 15:55	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 15:55	1
<b>Toluene</b>	<b>0.61</b>	<b>J</b>	1.0	0.33	ug/L			05/19/12 15:55	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 15:55	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 15:55	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 15:55	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 15:55	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 15:55	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/19/12 15:55	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 15:55	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

**Client Sample ID: MW-52D**

**Lab Sample ID: 680-79574-3**

**Date Collected: 05/15/12 16:50**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 15:55	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 15:55	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 15:55	1
<b>Xylenes, Total</b>	<b>17</b>		2.0	0.20	ug/L			05/19/12 15:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		70 - 130		05/19/12 15:55	1
Dibromofluoromethane	92		70 - 130		05/19/12 15:55	1
Toluene-d8 (Surr)	104		70 - 130		05/19/12 15:55	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.7	U	4.7	0.47	ug/L		05/18/12 15:41	05/25/12 02:07	1
<b>Toxaphene, TAUC, Parlar 11-69</b>	<b>0.88</b>	<b>J</b>	4.7	0.47	ug/L		05/18/12 15:41	05/25/12 02:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	32	X	40 - 130	05/18/12 15:41	05/25/12 02:07	1
DCB Decachlorobiphenyl	25	X	40 - 130	05/18/12 15:41	05/25/12 02:07	1
Tetrachloro-m-xylene	106		36 - 130	05/18/12 15:41	05/25/12 02:07	1
Tetrachloro-m-xylene	103		36 - 130	05/18/12 15:41	05/25/12 02:07	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.7	U H	4.7	0.47	ug/L		05/28/12 15:21	06/01/12 00:37	1
Toxaphene, TAUC, Parlar 11-69	4.7	U H	4.7	0.47	ug/L		05/28/12 15:21	06/01/12 00:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	22	X	40 - 130	05/28/12 15:21	06/01/12 00:37	1
DCB Decachlorobiphenyl	14	X	40 - 130	05/28/12 15:21	06/01/12 00:37	1
Tetrachloro-m-xylene	142	X	36 - 130	05/28/12 15:21	06/01/12 00:37	1
Tetrachloro-m-xylene	106		36 - 130	05/28/12 15:21	06/01/12 00:37	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/23/12 08:39	05/25/12 11:17	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/23/12 08:39	05/25/12 11:17	1
<b>Barium</b>	<b>0.45</b>		0.010	0.0020	mg/L		05/23/12 08:39	05/25/12 11:17	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/23/12 08:39	05/25/12 11:17	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/23/12 08:39	05/25/12 11:17	1
<b>Chromium</b>	<b>0.0022</b>	<b>J</b>	0.010	0.0020	mg/L		05/23/12 08:39	05/25/12 11:17	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/23/12 08:39	05/25/12 11:17	1
Copper	0.020	U	0.020	0.0050	mg/L		05/23/12 08:39	05/25/12 11:17	1
Lead	0.010	U	0.010	0.0034	mg/L		05/23/12 08:39	05/25/12 11:17	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/23/12 08:39	05/25/12 11:17	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/23/12 08:39	05/25/12 11:17	1
Silver	0.010	U	0.010	0.00097	mg/L		05/23/12 08:39	05/25/12 11:17	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/23/12 08:39	05/25/12 11:17	1
Tin	0.050	U	0.050	0.0054	mg/L		05/23/12 08:39	05/25/12 11:17	1
<b>Vanadium</b>	<b>0.0044</b>	<b>J</b>	0.010	0.0030	mg/L		05/23/12 08:39	05/25/12 11:17	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/23/12 08:39	05/25/12 11:17	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: MW-52D**

**Lab Sample ID: 680-79574-3**

**Date Collected: 05/15/12 16:50**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 11:25	1



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: Trip Blank 1**

**Lab Sample ID: 680-79574-4**

**Date Collected: 05/15/12 00:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 10:25	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 10:25	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 10:25	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 10:25	1
Benzene	1.0	U	1.0	0.25	ug/L			05/19/12 10:25	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 10:25	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 10:25	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/19/12 10:25	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 10:25	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/19/12 10:25	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 10:25	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 10:25	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 10:25	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/19/12 10:25	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 10:25	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 10:25	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 10:25	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 10:25	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 10:25	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 10:25	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 10:25	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 10:25	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 10:25	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 10:25	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 10:25	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/19/12 10:25	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/19/12 10:25	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 10:25	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 10:25	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 10:25	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 10:25	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 10:25	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 10:25	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 10:25	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 10:25	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 10:25	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 10:25	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 10:25	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 10:25	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 10:25	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 10:25	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 10:25	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 10:25	1
Toluene	1.0	U	1.0	0.33	ug/L			05/19/12 10:25	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 10:25	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 10:25	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 10:25	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 10:25	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 10:25	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/19/12 10:25	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 10:25	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: Trip Blank 1**

**Lab Sample ID: 680-79574-4**

**Date Collected: 05/15/12 00:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 10:25	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 10:25	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 10:25	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/19/12 10:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		70 - 130		05/19/12 10:25	1
Dibromofluoromethane	107		70 - 130		05/19/12 10:25	1
Toluene-d8 (Surr)	107		70 - 130		05/19/12 10:25	1



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: EB-1**

**Lab Sample ID: 680-79574-5**

**Date Collected: 05/15/12 14:45**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 11:23	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 11:23	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 11:23	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 11:23	1
Benzene	1.0	U	1.0	0.25	ug/L			05/19/12 11:23	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 11:23	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 11:23	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/19/12 11:23	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 11:23	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/19/12 11:23	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 11:23	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 11:23	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 11:23	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/19/12 11:23	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 11:23	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 11:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 11:23	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 11:23	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 11:23	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 11:23	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 11:23	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 11:23	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 11:23	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 11:23	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 11:23	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/19/12 11:23	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/19/12 11:23	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 11:23	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 11:23	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 11:23	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 11:23	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 11:23	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 11:23	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 11:23	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 11:23	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 11:23	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 11:23	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 11:23	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 11:23	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 11:23	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 11:23	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 11:23	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 11:23	1
Toluene	1.0	U	1.0	0.33	ug/L			05/19/12 11:23	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 11:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 11:23	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 11:23	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 11:23	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 11:23	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/19/12 11:23	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 11:23	1



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: EB-1**

**Lab Sample ID: 680-79574-5**

**Date Collected: 05/15/12 14:45**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 11:23	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 11:23	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 11:23	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/19/12 11:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		70 - 130					05/19/12 11:23	1
Dibromofluoromethane	108		70 - 130					05/19/12 11:23	1
Toluene-d8 (Surr)	106		70 - 130					05/19/12 11:23	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.8	U	4.8	0.48	ug/L		05/18/12 15:41	05/25/12 02:26	1
Toxaphene, TAUC, Parlar 11-69	0.51	J	4.8	0.48	ug/L		05/18/12 15:41	05/25/12 02:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	19	p X	40 - 130				05/18/12 15:41	05/25/12 02:26	1
DCB Decachlorobiphenyl	37	X	40 - 130				05/18/12 15:41	05/25/12 02:26	1
Tetrachloro-m-xylene	56		36 - 130				05/18/12 15:41	05/25/12 02:26	1
Tetrachloro-m-xylene	67		36 - 130				05/18/12 15:41	05/25/12 02:26	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	5.2	U H	5.2	0.52	ug/L		05/28/12 15:21	06/01/12 00:56	1
Toxaphene, TAUC, Parlar 11-69	5.2	U H	5.2	0.52	ug/L		05/28/12 15:21	06/01/12 00:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	31	X	40 - 130				05/28/12 15:21	06/01/12 00:56	1
DCB Decachlorobiphenyl	29	X	40 - 130				05/28/12 15:21	06/01/12 00:56	1
Tetrachloro-m-xylene	75		36 - 130				05/28/12 15:21	06/01/12 00:56	1
Tetrachloro-m-xylene	78		36 - 130				05/28/12 15:21	06/01/12 00:56	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/23/12 08:39	05/25/12 11:22	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/23/12 08:39	05/25/12 11:22	1
Barium	0.010	U	0.010	0.0020	mg/L		05/23/12 08:39	05/25/12 11:22	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/23/12 08:39	05/25/12 11:22	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/23/12 08:39	05/25/12 11:22	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/23/12 08:39	05/25/12 11:22	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/23/12 08:39	05/25/12 11:22	1
Copper	0.020	U	0.020	0.0050	mg/L		05/23/12 08:39	05/25/12 11:22	1
Lead	0.010	U	0.010	0.0034	mg/L		05/23/12 08:39	05/25/12 11:22	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/23/12 08:39	05/25/12 11:22	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/23/12 08:39	05/25/12 11:22	1
Silver	0.010	U	0.010	0.00097	mg/L		05/23/12 08:39	05/25/12 11:22	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/23/12 08:39	05/25/12 11:22	1
Tin	0.050	U	0.050	0.0054	mg/L		05/23/12 08:39	05/25/12 11:22	1
Vanadium	0.010	U	0.010	0.0030	mg/L		05/23/12 08:39	05/25/12 11:22	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/23/12 08:39	05/25/12 11:22	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: EB-1**

**Lab Sample ID: 680-79574-5**

**Date Collected: 05/15/12 14:45**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 11:28	1



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: EB-2**

**Lab Sample ID: 680-79574-6**

**Date Collected: 05/15/12 15:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 11:51	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 11:51	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 11:51	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 11:51	1
Benzene	1.0	U	1.0	0.25	ug/L			05/19/12 11:51	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 11:51	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 11:51	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/19/12 11:51	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 11:51	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/19/12 11:51	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 11:51	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 11:51	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 11:51	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/19/12 11:51	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 11:51	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 11:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 11:51	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 11:51	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 11:51	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 11:51	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 11:51	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 11:51	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 11:51	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 11:51	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 11:51	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/19/12 11:51	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/19/12 11:51	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 11:51	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 11:51	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 11:51	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 11:51	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 11:51	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 11:51	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 11:51	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 11:51	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 11:51	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 11:51	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 11:51	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 11:51	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 11:51	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 11:51	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 11:51	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 11:51	1
Toluene	1.0	U	1.0	0.33	ug/L			05/19/12 11:51	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 11:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 11:51	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 11:51	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 11:51	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 11:51	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/19/12 11:51	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 11:51	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

**Client Sample ID: EB-2**

**Lab Sample ID: 680-79574-6**

**Date Collected: 05/15/12 15:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 11:51	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 11:51	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 11:51	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/19/12 11:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		70 - 130					05/19/12 11:51	1
Dibromofluoromethane	107		70 - 130					05/19/12 11:51	1
Toluene-d8 (Surr)	105		70 - 130					05/19/12 11:51	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.8	U	4.8	0.48	ug/L		05/18/12 15:41	05/25/12 02:45	1
Toxaphene, TAUC, Parlar 11-69	0.62	J	4.8	0.48	ug/L		05/18/12 15:41	05/25/12 02:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	19	X	40 - 130				05/18/12 15:41	05/25/12 02:45	1
DCB Decachlorobiphenyl	17	X	40 - 130				05/18/12 15:41	05/25/12 02:45	1
Tetrachloro-m-xylene	65		36 - 130				05/18/12 15:41	05/25/12 02:45	1
Tetrachloro-m-xylene	62		36 - 130				05/18/12 15:41	05/25/12 02:45	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.9	U H	4.9	0.49	ug/L		05/28/12 15:21	06/01/12 01:15	1
Toxaphene, TAUC, Parlar 11-69	4.9	U H	4.9	0.49	ug/L		05/28/12 15:21	06/01/12 01:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	52		40 - 130				05/28/12 15:21	06/01/12 01:15	1
DCB Decachlorobiphenyl	50		40 - 130				05/28/12 15:21	06/01/12 01:15	1
Tetrachloro-m-xylene	80		36 - 130				05/28/12 15:21	06/01/12 01:15	1
Tetrachloro-m-xylene	78		36 - 130				05/28/12 15:21	06/01/12 01:15	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/23/12 08:39	05/25/12 11:26	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/23/12 08:39	05/25/12 11:26	1
Barium	0.010	U	0.010	0.0020	mg/L		05/23/12 08:39	05/25/12 11:26	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/23/12 08:39	05/25/12 11:26	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/23/12 08:39	05/25/12 11:26	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/23/12 08:39	05/25/12 11:26	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/23/12 08:39	05/25/12 11:26	1
Copper	0.020	U	0.020	0.0050	mg/L		05/23/12 08:39	05/25/12 11:26	1
Lead	0.010	U	0.010	0.0034	mg/L		05/23/12 08:39	05/25/12 11:26	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/23/12 08:39	05/25/12 11:26	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/23/12 08:39	05/25/12 11:26	1
Silver	0.010	U	0.010	0.00097	mg/L		05/23/12 08:39	05/25/12 11:26	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/23/12 08:39	05/25/12 11:26	1
Tin	0.050	U	0.050	0.0054	mg/L		05/23/12 08:39	05/25/12 11:26	1
Vanadium	0.010	U	0.010	0.0030	mg/L		05/23/12 08:39	05/25/12 11:26	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/23/12 08:39	05/25/12 11:26	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: EB-2**

**Lab Sample ID: 680-79574-6**

**Date Collected: 05/15/12 15:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 11:32	1



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: EB-3**

**Lab Sample ID: 680-79574-7**

**Date Collected: 05/15/12 15:15**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 12:20	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 12:20	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 12:20	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 12:20	1
Benzene	1.0	U	1.0	0.25	ug/L			05/19/12 12:20	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 12:20	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 12:20	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/19/12 12:20	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 12:20	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/19/12 12:20	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 12:20	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 12:20	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 12:20	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/19/12 12:20	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 12:20	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 12:20	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 12:20	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 12:20	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 12:20	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 12:20	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 12:20	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 12:20	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 12:20	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 12:20	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 12:20	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/19/12 12:20	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/19/12 12:20	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 12:20	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 12:20	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 12:20	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 12:20	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 12:20	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 12:20	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 12:20	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 12:20	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 12:20	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 12:20	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 12:20	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 12:20	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 12:20	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 12:20	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 12:20	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 12:20	1
Toluene	1.0	U	1.0	0.33	ug/L			05/19/12 12:20	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 12:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 12:20	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 12:20	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 12:20	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 12:20	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/19/12 12:20	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 12:20	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

**Client Sample ID: EB-3**

**Lab Sample ID: 680-79574-7**

**Date Collected: 05/15/12 15:15**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 12:20	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 12:20	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 12:20	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/19/12 12:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		70 - 130		05/19/12 12:20	1
Dibromofluoromethane	107		70 - 130		05/19/12 12:20	1
Toluene-d8 (Surr)	105		70 - 130		05/19/12 12:20	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	5.5	U	5.5	0.55	ug/L		05/18/12 15:41	05/25/12 03:05	1
Toxaphene, TAUC, Parlar 11-69	0.87	J	5.5	0.55	ug/L		05/18/12 15:41	05/25/12 03:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	37	X	40 - 130	05/18/12 15:41	05/25/12 03:05	1
DCB Decachlorobiphenyl	25	X	40 - 130	05/18/12 15:41	05/25/12 03:05	1
Tetrachloro-m-xylene	78		36 - 130	05/18/12 15:41	05/25/12 03:05	1
Tetrachloro-m-xylene	64		36 - 130	05/18/12 15:41	05/25/12 03:05	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	5.0	U H	5.0	0.50	ug/L		05/28/12 15:21	06/01/12 01:35	1
Toxaphene, TAUC, Parlar 11-69	5.0	U H	5.0	0.50	ug/L		05/28/12 15:21	06/01/12 01:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	53		40 - 130	05/28/12 15:21	06/01/12 01:35	1
DCB Decachlorobiphenyl	50		40 - 130	05/28/12 15:21	06/01/12 01:35	1
Tetrachloro-m-xylene	81		36 - 130	05/28/12 15:21	06/01/12 01:35	1
Tetrachloro-m-xylene	79		36 - 130	05/28/12 15:21	06/01/12 01:35	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/23/12 08:39	05/25/12 11:30	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/23/12 08:39	05/25/12 11:30	1
Barium	0.010	U	0.010	0.0020	mg/L		05/23/12 08:39	05/25/12 11:30	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/23/12 08:39	05/25/12 11:30	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/23/12 08:39	05/25/12 11:30	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/23/12 08:39	05/25/12 11:30	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/23/12 08:39	05/25/12 11:30	1
Copper	0.020	U	0.020	0.0050	mg/L		05/23/12 08:39	05/25/12 11:30	1
Lead	0.010	U	0.010	0.0034	mg/L		05/23/12 08:39	05/25/12 11:30	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/23/12 08:39	05/25/12 11:30	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/23/12 08:39	05/25/12 11:30	1
Silver	0.010	U	0.010	0.00097	mg/L		05/23/12 08:39	05/25/12 11:30	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/23/12 08:39	05/25/12 11:30	1
Tin	0.050	U	0.050	0.0054	mg/L		05/23/12 08:39	05/25/12 11:30	1
Vanadium	0.010	U	0.010	0.0030	mg/L		05/23/12 08:39	05/25/12 11:30	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/23/12 08:39	05/25/12 11:30	1



## Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: EB-3**

**Lab Sample ID: 680-79574-7**

**Date Collected: 05/15/12 15:15**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L	—	05/18/12 12:35	05/22/12 11:35	1



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

**Client Sample ID: Trip Blank**

**Lab Sample ID: 680-79574-8**

**Date Collected: 05/15/12 00:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 10:54	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 10:54	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 10:54	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 10:54	1
Benzene	1.0	U	1.0	0.25	ug/L			05/19/12 10:54	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 10:54	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 10:54	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/19/12 10:54	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 10:54	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/19/12 10:54	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 10:54	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 10:54	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 10:54	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/19/12 10:54	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 10:54	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 10:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 10:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 10:54	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 10:54	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 10:54	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 10:54	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 10:54	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 10:54	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 10:54	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 10:54	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/19/12 10:54	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/19/12 10:54	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 10:54	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 10:54	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 10:54	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 10:54	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 10:54	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 10:54	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 10:54	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 10:54	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 10:54	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 10:54	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 10:54	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 10:54	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 10:54	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 10:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 10:54	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 10:54	1
Toluene	1.0	U	1.0	0.33	ug/L			05/19/12 10:54	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 10:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 10:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 10:54	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 10:54	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 10:54	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/19/12 10:54	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 10:54	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 680-79574-8**

**Date Collected: 05/15/12 00:00**

**Matrix: Water**

**Date Received: 05/17/12 10:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 10:54	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 10:54	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 10:54	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/19/12 10:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		70 - 130		05/19/12 10:54	1
Dibromofluoromethane	106		70 - 130		05/19/12 10:54	1
Toluene-d8 (Surr)	104		70 - 130		05/19/12 10:54	1



# Surrogate Summary

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (70-130)	DBFM (70-130)	TOL (70-130)
680-79574-1	MW-52S	93	106	106
680-79574-2	MW-52I	95	95	105
680-79574-3	MW-52D	100	92	104
680-79574-4	Trip Blank 1	92	107	107
680-79574-5	EB-1	93	108	106
680-79574-6	EB-2	91	107	105
680-79574-7	EB-3	92	107	105
680-79574-8	Trip Blank	94	106	104
LCS 680-237898/4	Lab Control Sample	100	104	106
LCS 680-237899/1	Lab Control Sample	100	109	111
LCS 680-237953/4	Lab Control Sample	101	108	111
LCSD 680-237898/5	Lab Control Sample Dup	99	99	103
LCSD 680-237899/2	Lab Control Sample Dup	101	107	108
LCSD 680-237953/5	Lab Control Sample Dup	98	107	110
MB 680-237898/7	Method Blank	95	100	106
MB 680-237899/8	Method Blank	91	107	106
MB 680-237953/7	Method Blank	94	104	107

**Surrogate Legend**

BFB = 4-Bromofluorobenzene  
DBFM = Dibromofluoromethane  
TOL = Toluene-d8 (Surr)

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (40-130)	DCB2 (40-130)	TCX1 (36-130)	TCX2 (36-130)
680-79574-1	MW-52S	54	32 p X	86	88
680-79574-1 - RE	MW-52S	18 X	17 X	62	65
680-79574-2	MW-52I	25 X	23 X	64	61
680-79574-2 - RE	MW-52I	22 X	20 X	75	75
680-79574-3	MW-52D	32 X	25 X	106	103
680-79574-3 - RE	MW-52D	22 X	14 X	142 X	106
680-79574-5	EB-1	19 p X	37 X	56	67
680-79574-5 - RE	EB-1	31 X	29 X	75	78
680-79574-6	EB-2	19 X	17 X	65	62
680-79574-6 - RE	EB-2	52	50	80	78
680-79574-7	EB-3	37 X	25 X	78	64
680-79574-7 - RE	EB-3	53	50	81	79
LCS 680-237769/21-A	Lab Control Sample	35 X	32 X	85	76
LCS 680-238605/18-A	Lab Control Sample	46	41	77	72
LCSD 680-238605/19-A	Lab Control Sample Dup	55	49	87	85
MB 680-237769/17-A	Method Blank	19 X	20 X	66	74
MB 680-238605/17-A	Method Blank	57	52	82	82

**Surrogate Legend**

DCB = DCB Decachlorobiphenyl  
TCX = Tetrachloro-m-xylene



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-237898/7

Matrix: Water

Analysis Batch: 237898

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 09:43	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 09:43	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 09:43	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 09:43	1
Benzene	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 09:43	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 09:43	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/19/12 09:43	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 09:43	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 09:43	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 09:43	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 09:43	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/19/12 09:43	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 09:43	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 09:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 09:43	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 09:43	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 09:43	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 09:43	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 09:43	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 09:43	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/19/12 09:43	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/19/12 09:43	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 09:43	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 09:43	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 09:43	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 09:43	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 09:43	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 09:43	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 09:43	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 09:43	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 09:43	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 09:43	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 09:43	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 09:43	1
1,1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 09:43	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 09:43	1
Toluene	1.0	U	1.0	0.33	ug/L			05/19/12 09:43	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 09:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 09:43	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 09:43	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 09:43	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 09:43	1



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-237898/7

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 237898

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/19/12 09:43	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:43	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 09:43	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 09:43	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 09:43	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/19/12 09:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		70 - 130		05/19/12 09:43	1
Dibromofluoromethane	100		70 - 130		05/19/12 09:43	1
Toluene-d8 (Surr)	106		70 - 130		05/19/12 09:43	1

Lab Sample ID: LCS 680-237898/4

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 237898

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	87.2		ug/L		87	26 - 180
Benzene	50.0	50.2		ug/L		100	70 - 130
Bromoform	50.0	41.5		ug/L		83	70 - 130
Bromomethane	50.0	41.5		ug/L		83	23 - 165
Carbon disulfide	50.0	47.8		ug/L		96	54 - 132
Carbon tetrachloride	50.0	47.7		ug/L		95	70 - 130
Chlorobenzene	50.0	47.7		ug/L		95	70 - 130
Chlorodibromomethane	50.0	43.7		ug/L		87	70 - 130
Chloroethane	50.0	49.2		ug/L		98	56 - 152
Chloroform	50.0	50.5		ug/L		101	70 - 130
Chloromethane	50.0	58.7		ug/L		117	70 - 130
cis-1,2-Dichloroethene	50.0	50.5		ug/L		101	70 - 130
cis-1,3-Dichloropropene	50.0	53.0		ug/L		106	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	48.6		ug/L		97	70 - 130
Dibromomethane	50.0	51.6		ug/L		103	70 - 130
Dichlorobromomethane	50.0	53.9		ug/L		108	70 - 130
Dichlorodifluoromethane	50.0	49.1		ug/L		98	44 - 146
1,1-Dichloroethane	50.0	54.9		ug/L		110	70 - 130
1,2-Dichloroethane	50.0	53.9		ug/L		108	70 - 130
1,1-Dichloroethene	50.0	50.1		ug/L		100	66 - 131
1,2-Dichloropropane	50.0	53.5		ug/L		107	70 - 130
Ethylbenzene	50.0	48.7		ug/L		97	70 - 130
Ethylene Dibromide	50.0	52.6		ug/L		105	70 - 130
2-Hexanone	100	94.1		ug/L		94	42 - 185
Methylene Chloride	50.0	48.3		ug/L		97	67 - 130
2-Butanone (MEK)	100	91.6		ug/L		92	49 - 172
4-Methyl-2-pentanone (MIBK)	100	103		ug/L		103	70 - 130
Styrene	50.0	49.5		ug/L		99	70 - 130
1,1,1,2-Tetrachloroethane	50.0	47.0		ug/L		94	70 - 130
1,1,2,2-Tetrachloroethane	50.0	51.5		ug/L		103	70 - 130
Tetrachloroethene	50.0	48.9		ug/L		98	70 - 130
Toluene	50.0	53.7		ug/L		107	70 - 130



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-237898/4

Matrix: Water

Analysis Batch: 237898

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	50.0	51.9		ug/L		104	70 - 130
trans-1,3-Dichloropropene	50.0	45.7		ug/L		91	70 - 130
1,1,1-Trichloroethane	50.0	57.3		ug/L		115	70 - 130
1,1,2-Trichloroethane	50.0	54.2		ug/L		108	70 - 130
Trichloroethene	50.0	52.0		ug/L		104	70 - 130
Trichlorofluoromethane	50.0	53.5		ug/L		107	55 - 156
1,2,3-Trichloropropane	50.0	49.8		ug/L		100	70 - 130
Vinyl acetate	100	110		ug/L		110	60 - 176
Vinyl chloride	50.0	49.6		ug/L		99	67 - 134
Xylenes, Total	150	146		ug/L		97	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	100		70 - 130
Dibromofluoromethane	104		70 - 130
Toluene-d8 (Surr)	106		70 - 130

Lab Sample ID: LCSD 680-237898/5

Matrix: Water

Analysis Batch: 237898

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	79.6		ug/L		80	26 - 180	9	50
Benzene	50.0	50.1		ug/L		100	70 - 130	0	30
Bromoform	50.0	40.9		ug/L		82	70 - 130	1	30
Bromomethane	50.0	44.9		ug/L		90	23 - 165	8	50
Carbon disulfide	50.0	45.8		ug/L		92	54 - 132	4	30
Carbon tetrachloride	50.0	46.5		ug/L		93	70 - 130	2	30
Chlorobenzene	50.0	47.1		ug/L		94	70 - 130	1	30
Chlorodibromomethane	50.0	42.6		ug/L		85	70 - 130	3	50
Chloroethane	50.0	51.0		ug/L		102	56 - 152	4	40
Chloroform	50.0	49.6		ug/L		99	70 - 130	2	30
Chloromethane	50.0	57.8		ug/L		116	70 - 130	2	30
cis-1,2-Dichloroethene	50.0	48.9		ug/L		98	70 - 130	3	30
cis-1,3-Dichloropropene	50.0	52.4		ug/L		105	70 - 130	1	30
1,2-Dibromo-3-Chloropropane	50.0	47.4		ug/L		95	70 - 130	2	50
Dibromomethane	50.0	50.8		ug/L		102	70 - 130	2	30
Dichlorobromomethane	50.0	53.9		ug/L		108	70 - 130	0	30
Dichlorodifluoromethane	50.0	48.4		ug/L		97	44 - 146	1	50
1,1-Dichloroethane	50.0	52.9		ug/L		106	70 - 130	4	30
1,2-Dichloroethane	50.0	54.3		ug/L		109	70 - 130	1	30
1,1-Dichloroethene	50.0	48.4		ug/L		97	66 - 131	3	30
1,2-Dichloropropane	50.0	52.6		ug/L		105	70 - 130	2	30
Ethylbenzene	50.0	48.4		ug/L		97	70 - 130	0	30
Ethylene Dibromide	50.0	52.6		ug/L		105	70 - 130	0	30
2-Hexanone	100	92.7		ug/L		93	42 - 185	1	30
Methylene Chloride	50.0	46.6		ug/L		93	67 - 130	3	30
2-Butanone (MEK)	100	88.4		ug/L		88	49 - 172	4	30
4-Methyl-2-pentanone (MIBK)	100	103		ug/L		103	70 - 130	0	30
Styrene	50.0	49.9		ug/L		100	70 - 130	1	30



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-237898/5

Matrix: Water

Analysis Batch: 237898

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	50.0	45.7		ug/L		91	70 - 130	3	30
1,1,2,2-Tetrachloroethane	50.0	50.9		ug/L		102	70 - 130	1	30
Tetrachloroethene	50.0	47.7		ug/L		95	70 - 130	2	30
Toluene	50.0	52.2		ug/L		104	70 - 130	3	30
trans-1,2-Dichloroethene	50.0	50.4		ug/L		101	70 - 130	3	30
trans-1,3-Dichloropropene	50.0	45.6		ug/L		91	70 - 130	0	50
1,1,1-Trichloroethane	50.0	57.1		ug/L		114	70 - 130	0	30
1,1,2-Trichloroethane	50.0	53.8		ug/L		108	70 - 130	1	30
Trichloroethene	50.0	51.1		ug/L		102	70 - 130	2	30
Trichlorofluoromethane	50.0	50.3		ug/L		101	55 - 156	6	30
1,2,3-Trichloropropane	50.0	49.3		ug/L		99	70 - 130	1	30
Vinyl acetate	100	106		ug/L		106	60 - 176	4	30
Vinyl chloride	50.0	48.1		ug/L		96	67 - 134	3	30
Xylenes, Total	150	144		ug/L		96	70 - 130	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	99		70 - 130
Dibromofluoromethane	99		70 - 130
Toluene-d8 (Surr)	103		70 - 130

Lab Sample ID: MB 680-237899/8

Matrix: Water

Analysis Batch: 237899

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/19/12 09:57	1
Acetonitrile	40	U	40	10	ug/L			05/19/12 09:57	1
Acrolein	20	U	20	7.4	ug/L			05/19/12 09:57	1
Acrylonitrile	20	U	20	7.2	ug/L			05/19/12 09:57	1
Benzene	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/19/12 09:57	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/19/12 09:57	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/19/12 09:57	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/19/12 09:57	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/19/12 09:57	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/19/12 09:57	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/19/12 09:57	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/19/12 09:57	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/19/12 09:57	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/19/12 09:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 09:57	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/19/12 09:57	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/19/12 09:57	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/19/12 09:57	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/19/12 09:57	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-237899/8

Matrix: Water

Analysis Batch: 237899

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/19/12 09:57	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/19/12 09:57	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/19/12 09:57	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
2-Hexanone	10	U	10	1.0	ug/L			05/19/12 09:57	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/19/12 09:57	1
Isobutyl alcohol	40	U	40	11	ug/L			05/19/12 09:57	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/19/12 09:57	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/19/12 09:57	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/19/12 09:57	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/19/12 09:57	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/19/12 09:57	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/19/12 09:57	1
Propionitrile	20	U	20	4.6	ug/L			05/19/12 09:57	1
Styrene	1.0	U	1.0	0.11	ug/L			05/19/12 09:57	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/19/12 09:57	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/19/12 09:57	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/19/12 09:57	1
Toluene	1.0	U	1.0	0.33	ug/L			05/19/12 09:57	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/19/12 09:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/19/12 09:57	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/19/12 09:57	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/19/12 09:57	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/19/12 09:57	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/19/12 09:57	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/19/12 09:57	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/19/12 09:57	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/19/12 09:57	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/19/12 09:57	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/19/12 09:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		70 - 130		05/19/12 09:57	1
Dibromofluoromethane	107		70 - 130		05/19/12 09:57	1
Toluene-d8 (Surr)	106		70 - 130		05/19/12 09:57	1

Lab Sample ID: LCS 680-237899/1

Matrix: Water

Analysis Batch: 237899

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	122		ug/L		122	26 - 180
Benzene	50.0	50.8		ug/L		102	70 - 130
Bromoform	50.0	42.2		ug/L		84	70 - 130
Bromomethane	50.0	60.7		ug/L		121	23 - 165
Carbon disulfide	50.0	47.1		ug/L		94	54 - 132
Carbon tetrachloride	50.0	57.7		ug/L		115	70 - 130
Chlorobenzene	50.0	49.1		ug/L		98	70 - 130



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-237899/1

Matrix: Water

Analysis Batch: 237899

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorodibromomethane	50.0	51.1		ug/L		102	70 - 130
Chloroethane	50.0	46.4		ug/L		93	56 - 152
Chloroform	50.0	51.1		ug/L		102	70 - 130
Chloromethane	50.0	52.1		ug/L		104	70 - 130
cis-1,2-Dichloroethene	50.0	52.4		ug/L		105	70 - 130
cis-1,3-Dichloropropene	50.0	64.5		ug/L		129	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	47.3		ug/L		95	70 - 130
Dibromomethane	50.0	51.8		ug/L		104	70 - 130
Dichlorobromomethane	50.0	56.3		ug/L		113	70 - 130
Dichlorodifluoromethane	50.0	49.2		ug/L		98	44 - 146
1,1-Dichloroethane	50.0	53.5		ug/L		107	70 - 130
1,2-Dichloroethane	50.0	55.7		ug/L		111	70 - 130
1,1-Dichloroethene	50.0	49.7		ug/L		99	66 - 131
1,2-Dichloropropane	50.0	53.5		ug/L		107	70 - 130
Ethylbenzene	50.0	50.3		ug/L		101	70 - 130
Ethylene Dibromide	50.0	52.6		ug/L		105	70 - 130
2-Hexanone	100	105		ug/L		105	42 - 185
Methylene Chloride	50.0	49.8		ug/L		100	67 - 130
2-Butanone (MEK)	100	111		ug/L		111	49 - 172
4-Methyl-2-pentanone (MIBK)	100	104		ug/L		104	70 - 130
Styrene	50.0	51.6		ug/L		103	70 - 130
1,1,1,2-Tetrachloroethane	50.0	55.4		ug/L		111	70 - 130
1,1,2,2-Tetrachloroethane	50.0	48.2		ug/L		96	70 - 130
Tetrachloroethene	50.0	48.4		ug/L		97	70 - 130
Toluene	50.0	53.8		ug/L		108	70 - 130
trans-1,2-Dichloroethene	50.0	53.3		ug/L		107	70 - 130
trans-1,3-Dichloropropene	50.0	56.6		ug/L		113	70 - 130
1,1,1-Trichloroethane	50.0	58.5		ug/L		117	70 - 130
1,1,2-Trichloroethane	50.0	52.4		ug/L		105	70 - 130
Trichloroethene	50.0	53.5		ug/L		107	70 - 130
Trichlorofluoromethane	50.0	50.3		ug/L		101	55 - 156
1,2,3-Trichloropropane	50.0	46.6		ug/L		93	70 - 130
Vinyl acetate	100	117		ug/L		117	60 - 176
Vinyl chloride	50.0	47.3		ug/L		95	67 - 134
Xylenes, Total	150	154		ug/L		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	100		70 - 130
Dibromofluoromethane	109		70 - 130
Toluene-d8 (Surr)	111		70 - 130

Lab Sample ID: LCSD 680-237899/2

Matrix: Water

Analysis Batch: 237899

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	118		ug/L		118	26 - 180	4	50
Benzene	50.0	50.0		ug/L		100	70 - 130	1	30
Bromoform	50.0	41.5		ug/L		83	70 - 130	2	30



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-237899/2

Matrix: Water

Analysis Batch: 237899

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane	50.0	62.0		ug/L		124	23 - 165	2	50
Carbon disulfide	50.0	45.4		ug/L		91	54 - 132	4	30
Carbon tetrachloride	50.0	57.0		ug/L		114	70 - 130	1	30
Chlorobenzene	50.0	48.0		ug/L		96	70 - 130	2	30
Chlorodibromomethane	50.0	50.6		ug/L		101	70 - 130	1	50
Chloroethane	50.0	45.8		ug/L		92	56 - 152	1	40
Chloroform	50.0	50.5		ug/L		101	70 - 130	1	30
Chloromethane	50.0	50.5		ug/L		101	70 - 130	3	30
cis-1,2-Dichloroethene	50.0	51.6		ug/L		103	70 - 130	1	30
cis-1,3-Dichloropropene	50.0	63.3		ug/L		127	70 - 130	2	30
1,2-Dibromo-3-Chloropropane	50.0	46.9		ug/L		94	70 - 130	1	50
Dibromomethane	50.0	51.0		ug/L		102	70 - 130	1	30
Dichlorobromomethane	50.0	54.3		ug/L		109	70 - 130	4	30
Dichlorodifluoromethane	50.0	47.5		ug/L		95	44 - 146	4	50
1,1-Dichloroethane	50.0	53.1		ug/L		106	70 - 130	1	30
1,2-Dichloroethane	50.0	55.3		ug/L		111	70 - 130	1	30
1,1-Dichloroethene	50.0	47.8		ug/L		96	66 - 131	4	30
1,2-Dichloropropane	50.0	52.9		ug/L		106	70 - 130	1	30
Ethylbenzene	50.0	50.4		ug/L		101	70 - 130	0	30
Ethylene Dibromide	50.0	52.1		ug/L		104	70 - 130	1	30
2-Hexanone	100	103		ug/L		103	42 - 185	2	30
Methylene Chloride	50.0	49.1		ug/L		98	67 - 130	1	30
2-Butanone (MEK)	100	107		ug/L		107	49 - 172	3	30
4-Methyl-2-pentanone (MIBK)	100	103		ug/L		103	70 - 130	1	30
Styrene	50.0	52.5		ug/L		105	70 - 130	2	30
1,1,1,2-Tetrachloroethane	50.0	54.3		ug/L		109	70 - 130	2	30
1,1,2,2-Tetrachloroethane	50.0	47.9		ug/L		96	70 - 130	1	30
Tetrachloroethene	50.0	47.0		ug/L		94	70 - 130	3	30
Toluene	50.0	52.7		ug/L		105	70 - 130	2	30
trans-1,2-Dichloroethene	50.0	51.9		ug/L		104	70 - 130	3	30
trans-1,3-Dichloropropene	50.0	54.7		ug/L		109	70 - 130	3	50
1,1,1-Trichloroethane	50.0	57.6		ug/L		115	70 - 130	2	30
1,1,2-Trichloroethane	50.0	51.7		ug/L		103	70 - 130	1	30
Trichloroethene	50.0	52.2		ug/L		104	70 - 130	3	30
Trichlorofluoromethane	50.0	48.2		ug/L		96	55 - 156	4	30
1,2,3-Trichloropropane	50.0	47.0		ug/L		94	70 - 130	1	30
Vinyl acetate	100	113		ug/L		113	60 - 176	3	30
Vinyl chloride	50.0	45.3		ug/L		91	67 - 134	4	30
Xylenes, Total	150	150		ug/L		100	70 - 130	3	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	101		70 - 130
Dibromofluoromethane	107		70 - 130
Toluene-d8 (Surr)	108		70 - 130



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-237953/7

Matrix: Water

Analysis Batch: 237953

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			05/20/12 18:36	1
Acetonitrile	40	U	40	10	ug/L			05/20/12 18:36	1
Acrolein	20	U	20	7.4	ug/L			05/20/12 18:36	1
Acrylonitrile	20	U	20	7.2	ug/L			05/20/12 18:36	1
Benzene	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
Bromoform	1.0	U	1.0	0.50	ug/L			05/20/12 18:36	1
Bromomethane	1.0	U	1.0	0.80	ug/L			05/20/12 18:36	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			05/20/12 18:36	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			05/20/12 18:36	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
2-Chloro-1,3-butadiene	1.0	U	1.0	0.30	ug/L			05/20/12 18:36	1
Chlorodibromomethane	1.0	U	1.0	0.10	ug/L			05/20/12 18:36	1
Chloroethane	1.0	U	1.0	1.0	ug/L			05/20/12 18:36	1
Chloroform	1.0	U	1.0	0.14	ug/L			05/20/12 18:36	1
Chloromethane	1.0	U	1.0	0.33	ug/L			05/20/12 18:36	1
3-Chloro-1-propene	1.0	U	1.0	0.20	ug/L			05/20/12 18:36	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			05/20/12 18:36	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.11	ug/L			05/20/12 18:36	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.44	ug/L			05/20/12 18:36	1
Dibromomethane	1.0	U	1.0	0.20	ug/L			05/20/12 18:36	1
Dichlorobromomethane	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
Dichlorodifluoromethane	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			05/20/12 18:36	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			05/20/12 18:36	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			05/20/12 18:36	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			05/20/12 18:36	1
Ethylene Dibromide	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
Ethyl methacrylate	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
2-Hexanone	10	U	10	1.0	ug/L			05/20/12 18:36	1
Iodomethane	5.0	U	5.0	1.0	ug/L			05/20/12 18:36	1
Isobutyl alcohol	40	U	40	11	ug/L			05/20/12 18:36	1
Methacrylonitrile	20	U	20	3.3	ug/L			05/20/12 18:36	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			05/20/12 18:36	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/20/12 18:36	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			05/20/12 18:36	1
Methyl methacrylate	1.0	U	1.0	0.48	ug/L			05/20/12 18:36	1
Pentachloroethane	5.0	U	5.0	1.2	ug/L			05/20/12 18:36	1
Propionitrile	20	U	20	4.6	ug/L			05/20/12 18:36	1
Styrene	1.0	U	1.0	0.11	ug/L			05/20/12 18:36	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.33	ug/L			05/20/12 18:36	1
1,1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			05/20/12 18:36	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/20/12 18:36	1
Toluene	1.0	U	1.0	0.33	ug/L			05/20/12 18:36	1
trans-1,4-Dichloro-2-butene	2.0	U	2.0	0.50	ug/L			05/20/12 18:36	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			05/20/12 18:36	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.21	ug/L			05/20/12 18:36	1
1,1,1-Trichloroethane	1.0	U	1.0	0.50	ug/L			05/20/12 18:36	1
1,1,2-Trichloroethane	1.0	U	1.0	0.13	ug/L			05/20/12 18:36	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-237953/7

Matrix: Water

Analysis Batch: 237953

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.13	ug/L			05/20/12 18:36	1
Trichlorofluoromethane	1.0	U	1.0	0.25	ug/L			05/20/12 18:36	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			05/20/12 18:36	1
Vinyl acetate	2.0	U	2.0	0.28	ug/L			05/20/12 18:36	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			05/20/12 18:36	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			05/20/12 18:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		70 - 130		05/20/12 18:36	1
Dibromofluoromethane	104		70 - 130		05/20/12 18:36	1
Toluene-d8 (Surr)	107		70 - 130		05/20/12 18:36	1

Lab Sample ID: LCS 680-237953/4

Matrix: Water

Analysis Batch: 237953

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	133		ug/L		133	26 - 180
Benzene	50.0	51.6		ug/L		103	70 - 130
Bromoform	50.0	41.6		ug/L		83	70 - 130
Bromomethane	50.0	47.2		ug/L		94	23 - 165
Carbon disulfide	50.0	47.9		ug/L		96	54 - 132
Carbon tetrachloride	50.0	58.5		ug/L		117	70 - 130
Chlorobenzene	50.0	47.8		ug/L		96	70 - 130
Chlorodibromomethane	50.0	51.1		ug/L		102	70 - 130
Chloroethane	50.0	45.4		ug/L		91	56 - 152
Chloroform	50.0	51.6		ug/L		103	70 - 130
Chloromethane	50.0	53.5		ug/L		107	70 - 130
cis-1,2-Dichloroethene	50.0	52.1		ug/L		104	70 - 130
cis-1,3-Dichloropropene	50.0	64.9		ug/L		130	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	47.4		ug/L		95	70 - 130
Dibromomethane	50.0	51.8		ug/L		104	70 - 130
Dichlorobromomethane	50.0	56.1		ug/L		112	70 - 130
Dichlorodifluoromethane	50.0	50.5		ug/L		101	44 - 146
1,1-Dichloroethane	50.0	54.0		ug/L		108	70 - 130
1,2-Dichloroethane	50.0	56.1		ug/L		112	70 - 130
1,1-Dichloroethene	50.0	50.7		ug/L		101	66 - 131
1,2-Dichloropropane	50.0	53.1		ug/L		106	70 - 130
Ethylbenzene	50.0	50.1		ug/L		100	70 - 130
Ethylene Dibromide	50.0	52.4		ug/L		105	70 - 130
2-Hexanone	100	128		ug/L		128	42 - 185
Methylene Chloride	50.0	50.3		ug/L		101	67 - 130
2-Butanone (MEK)	100	126		ug/L		126	49 - 172
4-Methyl-2-pentanone (MIBK)	100	106		ug/L		106	70 - 130
Styrene	50.0	51.7		ug/L		103	70 - 130
1,1,1,2-Tetrachloroethane	50.0	54.1		ug/L		108	70 - 130
1,1,2,2-Tetrachloroethane	50.0	47.5		ug/L		95	70 - 130
Tetrachloroethene	50.0	46.8		ug/L		94	70 - 130
Toluene	50.0	54.1		ug/L		108	70 - 130



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-237953/4

Matrix: Water

Analysis Batch: 237953

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	50.0	54.3		ug/L		109	70 - 130
trans-1,3-Dichloropropene	50.0	57.1		ug/L		114	70 - 130
1,1,1-Trichloroethane	50.0	60.5		ug/L		121	70 - 130
1,1,2-Trichloroethane	50.0	51.7		ug/L		103	70 - 130
Trichloroethene	50.0	52.3		ug/L		105	70 - 130
Trichlorofluoromethane	50.0	46.6		ug/L		93	55 - 156
1,2,3-Trichloropropane	50.0	45.8		ug/L		92	70 - 130
Vinyl acetate	100	123		ug/L		123	60 - 176
Vinyl chloride	50.0	45.5		ug/L		91	67 - 134
Xylenes, Total	150	151		ug/L		101	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	101		70 - 130
Dibromofluoromethane	108		70 - 130
Toluene-d8 (Surr)	111		70 - 130

Lab Sample ID: LCSD 680-237953/5

Matrix: Water

Analysis Batch: 237953

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	136		ug/L		136	26 - 180	2	50
Benzene	50.0	50.7		ug/L		101	70 - 130	2	30
Bromoform	50.0	39.6		ug/L		79	70 - 130	5	30
Bromomethane	50.0	52.1		ug/L		104	23 - 165	10	50
Carbon disulfide	50.0	47.4		ug/L		95	54 - 132	1	30
Carbon tetrachloride	50.0	58.2		ug/L		116	70 - 130	0	30
Chlorobenzene	50.0	46.0		ug/L		92	70 - 130	4	30
Chlorodibromomethane	50.0	48.8		ug/L		98	70 - 130	5	50
Chloroethane	50.0	40.7		ug/L		81	56 - 152	11	40
Chloroform	50.0	50.8		ug/L		102	70 - 130	2	30
Chloromethane	50.0	51.8		ug/L		104	70 - 130	3	30
cis-1,2-Dichloroethene	50.0	51.6		ug/L		103	70 - 130	1	30
cis-1,3-Dichloropropene	50.0	62.8		ug/L		126	70 - 130	3	30
1,2-Dibromo-3-Chloropropane	50.0	44.7		ug/L		89	70 - 130	6	50
Dibromomethane	50.0	51.2		ug/L		102	70 - 130	1	30
Dichlorobromomethane	50.0	55.0		ug/L		110	70 - 130	2	30
Dichlorodifluoromethane	50.0	51.7		ug/L		103	44 - 146	2	50
1,1-Dichloroethane	50.0	53.5		ug/L		107	70 - 130	1	30
1,2-Dichloroethane	50.0	55.2		ug/L		110	70 - 130	2	30
1,1-Dichloroethene	50.0	49.0		ug/L		98	66 - 131	3	30
1,2-Dichloropropane	50.0	51.1		ug/L		102	70 - 130	4	30
Ethylbenzene	50.0	48.4		ug/L		97	70 - 130	3	30
Ethylene Dibromide	50.0	51.5		ug/L		103	70 - 130	2	30
2-Hexanone	100	123		ug/L		123	42 - 185	4	30
Methylene Chloride	50.0	48.6		ug/L		97	67 - 130	3	30
2-Butanone (MEK)	100	124		ug/L		124	49 - 172	2	30
4-Methyl-2-pentanone (MIBK)	100	105		ug/L		105	70 - 130	1	30
Styrene	50.0	49.6		ug/L		99	70 - 130	4	30



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-237953/5

Matrix: Water

Analysis Batch: 237953

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	50.0	51.7		ug/L		103	70 - 130	4	30
1,1,2,2-Tetrachloroethane	50.0	47.4		ug/L		95	70 - 130	0	30
Tetrachloroethene	50.0	47.0		ug/L		94	70 - 130	0	30
Toluene	50.0	53.0		ug/L		106	70 - 130	2	30
trans-1,2-Dichloroethene	50.0	54.0		ug/L		108	70 - 130	0	30
trans-1,3-Dichloropropene	50.0	54.2		ug/L		108	70 - 130	5	50
1,1,1-Trichloroethane	50.0	59.9		ug/L		120	70 - 130	1	30
1,1,2-Trichloroethane	50.0	51.0		ug/L		102	70 - 130	1	30
Trichloroethene	50.0	51.3		ug/L		103	70 - 130	2	30
Trichlorofluoromethane	50.0	45.8		ug/L		92	55 - 156	2	30
1,2,3-Trichloropropane	50.0	44.6		ug/L		89	70 - 130	3	30
Vinyl acetate	100	116		ug/L		116	60 - 176	6	30
Vinyl chloride	50.0	44.5		ug/L		89	67 - 134	2	30
Xylenes, Total	150	146		ug/L		97	70 - 130	4	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	98		70 - 130
Dibromofluoromethane	107		70 - 130
Toluene-d8 (Surr)	110		70 - 130

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Lab Sample ID: MB 680-237769/17-A

Matrix: Water

Analysis Batch: 238224

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 237769

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	5.0	U	5.0	0.50	ug/L		05/18/12 15:41	05/22/12 17:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	19	X	40 - 130	05/18/12 15:41	05/22/12 17:49	1
DCB Decachlorobiphenyl	20	X	40 - 130	05/18/12 15:41	05/22/12 17:49	1
Tetrachloro-m-xylene	66		36 - 130	05/18/12 15:41	05/22/12 17:49	1
Tetrachloro-m-xylene	74		36 - 130	05/18/12 15:41	05/22/12 17:49	1

Lab Sample ID: LCS 680-237769/21-A

Matrix: Water

Analysis Batch: 238224

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 237769

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene, Technical	10.0	12.5		ug/L		125	35 - 138

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	35	X	40 - 130
DCB Decachlorobiphenyl	32	X	40 - 130
Tetrachloro-m-xylene	85		36 - 130
Tetrachloro-m-xylene	76		36 - 130



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) (Continued)

Lab Sample ID: MB 680-238605/17-A

Matrix: Water

Analysis Batch: 239361

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 238605

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	5.0	U	5.0	0.50	ug/L		05/28/12 15:21	05/31/12 19:26	1
Toxaphene, TAUC, Parlar 11-69	5.0	U	5.0	0.50	ug/L		05/28/12 15:21	05/31/12 19:26	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	57		40 - 130				05/28/12 15:21	05/31/12 19:26	1
DCB Decachlorobiphenyl	52		40 - 130				05/28/12 15:21	05/31/12 19:26	1
Tetrachloro-m-xylene	82		36 - 130				05/28/12 15:21	05/31/12 19:26	1
Tetrachloro-m-xylene	82		36 - 130				05/28/12 15:21	05/31/12 19:26	1

Lab Sample ID: LCS 680-238605/18-A

Matrix: Water

Analysis Batch: 239361

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 238605

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene, Technical	10.0	8.80		ug/L		88	35 - 138
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
DCB Decachlorobiphenyl	46		40 - 130				
DCB Decachlorobiphenyl	41		40 - 130				
Tetrachloro-m-xylene	77		36 - 130				
Tetrachloro-m-xylene	72		36 - 130				

Lab Sample ID: LCSD 680-238605/19-A

Matrix: Water

Analysis Batch: 239361

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 238605

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toxaphene, Technical	10.0	10.5		ug/L		105	35 - 138	17	50
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
DCB Decachlorobiphenyl	55		40 - 130						
DCB Decachlorobiphenyl	49		40 - 130						
Tetrachloro-m-xylene	87		36 - 130						
Tetrachloro-m-xylene	85		36 - 130						

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 680-238027/1-A

Matrix: Water

Analysis Batch: 238198

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 238027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/21/12 17:58	05/23/12 00:45	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/21/12 17:58	05/23/12 00:45	1
Barium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 00:45	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/21/12 17:58	05/23/12 00:45	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/21/12 17:58	05/23/12 00:45	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/21/12 17:58	05/23/12 00:45	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

## Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 680-238027/1-A

Matrix: Water

Analysis Batch: 238198

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 238027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.010	U	0.010	0.0010	mg/L		05/21/12 17:58	05/23/12 00:45	1
Copper	0.020	U	0.020	0.0050	mg/L		05/21/12 17:58	05/23/12 00:45	1
Lead	0.010	U	0.010	0.0034	mg/L		05/21/12 17:58	05/23/12 00:45	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/21/12 17:58	05/23/12 00:45	1
Selenium	0.020	U	0.020	0.0064	mg/L		05/21/12 17:58	05/23/12 00:45	1
Silver	0.010	U	0.010	0.00097	mg/L		05/21/12 17:58	05/23/12 00:45	1
Thallium	0.025	U	0.025	0.0087	mg/L		05/21/12 17:58	05/23/12 00:45	1
Tin	0.050	U	0.050	0.0054	mg/L		05/21/12 17:58	05/23/12 00:45	1
Vanadium	0.010	U	0.010	0.0030	mg/L		05/21/12 17:58	05/23/12 00:45	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/21/12 17:58	05/23/12 00:45	1

Lab Sample ID: LCS 680-238027/2-A

Matrix: Water

Analysis Batch: 238198

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 238027

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.490		mg/L		98	75 - 125
Arsenic	2.00	2.13		mg/L		107	75 - 125
Barium	2.00	2.10		mg/L		105	75 - 125
Beryllium	0.0500	0.0526		mg/L		105	75 - 125
Cadmium	0.0500	0.0517		mg/L		103	75 - 125
Chromium	0.200	0.208		mg/L		104	75 - 125
Cobalt	0.500	0.530		mg/L		106	75 - 125
Copper	0.250	0.269		mg/L		107	75 - 125
Lead	0.500	0.517		mg/L		103	75 - 125
Nickel	0.500	0.520		mg/L		104	75 - 125
Selenium	2.00	2.09		mg/L		104	75 - 125
Silver	0.0500	0.0522		mg/L		104	75 - 125
Thallium	2.00	2.17		mg/L		108	75 - 125
Tin	1.00	1.05		mg/L		105	75 - 125
Vanadium	0.500	0.515		mg/L		103	75 - 125
Zinc	0.500	0.515		mg/L		103	75 - 125

Lab Sample ID: MB 680-238189/1-A

Matrix: Water

Analysis Batch: 238551

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 238189

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.020	U	0.020	0.0052	mg/L		05/23/12 08:39	05/25/12 11:09	1
Arsenic	0.020	U	0.020	0.010	mg/L		05/23/12 08:39	05/25/12 11:09	1
Barium	0.010	U	0.010	0.0020	mg/L		05/23/12 08:39	05/25/12 11:09	1
Beryllium	0.0040	U	0.0040	0.00010	mg/L		05/23/12 08:39	05/25/12 11:09	1
Cadmium	0.0050	U	0.0050	0.0020	mg/L		05/23/12 08:39	05/25/12 11:09	1
Chromium	0.010	U	0.010	0.0020	mg/L		05/23/12 08:39	05/25/12 11:09	1
Cobalt	0.010	U	0.010	0.0010	mg/L		05/23/12 08:39	05/25/12 11:09	1
Copper	0.020	U	0.020	0.0050	mg/L		05/23/12 08:39	05/25/12 11:09	1
Lead	0.010	U	0.010	0.0034	mg/L		05/23/12 08:39	05/25/12 11:09	1
Nickel	0.040	U	0.040	0.0040	mg/L		05/23/12 08:39	05/25/12 11:09	1
Selenium	0.00640	J	0.020	0.0064	mg/L		05/23/12 08:39	05/25/12 11:09	1
Silver	0.010	U	0.010	0.00097	mg/L		05/23/12 08:39	05/25/12 11:09	1



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

## Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 680-238189/1-A

Matrix: Water

Analysis Batch: 238551

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 238189

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.025	U	0.025	0.0087	mg/L		05/23/12 08:39	05/25/12 11:09	1
Tin	0.050	U	0.050	0.0054	mg/L		05/23/12 08:39	05/25/12 11:09	1
Vanadium	0.010	U	0.010	0.0030	mg/L		05/23/12 08:39	05/25/12 11:09	1
Zinc	0.020	U	0.020	0.0063	mg/L		05/23/12 08:39	05/25/12 11:09	1

Lab Sample ID: LCS 680-238189/2-A

Matrix: Water

Analysis Batch: 238551

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 238189

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.483		mg/L		97	75 - 125
Arsenic	2.00	2.10		mg/L		105	75 - 125
Barium	2.00	2.06		mg/L		103	75 - 125
Beryllium	0.0500	0.0506		mg/L		101	75 - 125
Cadmium	0.0500	0.0507		mg/L		101	75 - 125
Chromium	0.200	0.201		mg/L		101	75 - 125
Cobalt	0.500	0.520		mg/L		104	75 - 125
Copper	0.250	0.266		mg/L		106	75 - 125
Lead	0.500	0.513		mg/L		103	75 - 125
Nickel	0.500	0.518		mg/L		104	75 - 125
Selenium	2.00	2.06		mg/L		103	75 - 125
Silver	0.0500	0.0502		mg/L		100	75 - 125
Thallium	2.00	2.12		mg/L		106	75 - 125
Tin	1.00	1.05		mg/L		105	75 - 125
Vanadium	0.500	0.509		mg/L		102	75 - 125
Zinc	0.500	0.498		mg/L		100	75 - 125

## Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 680-237806/1-A

Matrix: Water

Analysis Batch: 238210

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 237806

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000091	mg/L		05/18/12 12:35	05/22/12 10:27	1

Lab Sample ID: LCS 680-237806/2-A

Matrix: Water

Analysis Batch: 238210

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 237806

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.00248		mg/L		99	80 - 120



# QC Association Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

## GC/MS VOA

### Analysis Batch: 237898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-2	MW-52I	Total/NA	Water	8260B	
680-79574-3	MW-52D	Total/NA	Water	8260B	
LCS 680-237898/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-237898/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-237898/7	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 237899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-4	Trip Blank 1	Total/NA	Water	8260B	
680-79574-5	EB-1	Total/NA	Water	8260B	
680-79574-6	EB-2	Total/NA	Water	8260B	
680-79574-7	EB-3	Total/NA	Water	8260B	
680-79574-8	Trip Blank	Total/NA	Water	8260B	
LCS 680-237899/1	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-237899/2	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-237899/8	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 237953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-1	MW-52S	Total/NA	Water	8260B	
LCS 680-237953/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-237953/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-237953/7	Method Blank	Total/NA	Water	8260B	

## GC Semi VOA

### Prep Batch: 237769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-1	MW-52S	Total/NA	Water	3520C	
680-79574-2	MW-52I	Total/NA	Water	3520C	
680-79574-3	MW-52D	Total/NA	Water	3520C	
680-79574-5	EB-1	Total/NA	Water	3520C	
680-79574-6	EB-2	Total/NA	Water	3520C	
680-79574-7	EB-3	Total/NA	Water	3520C	
LCS 680-237769/21-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-237769/17-A	Method Blank	Total/NA	Water	3520C	

### Analysis Batch: 238224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-237769/21-A	Lab Control Sample	Total/NA	Water	8081A_8082	237769
MB 680-237769/17-A	Method Blank	Total/NA	Water	8081A_8082	237769

### Prep Batch: 238605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-1 - RE	MW-52S	Total/NA	Water	3520C	
680-79574-2 - RE	MW-52I	Total/NA	Water	3520C	
680-79574-3 - RE	MW-52D	Total/NA	Water	3520C	
680-79574-5 - RE	EB-1	Total/NA	Water	3520C	
680-79574-6 - RE	EB-2	Total/NA	Water	3520C	
680-79574-7 - RE	EB-3	Total/NA	Water	3520C	
LCS 680-238605/18-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 680-238605/19-A	Lab Control Sample Dup	Total/NA	Water	3520C	



# QC Association Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

## GC Semi VOA (Continued)

### Prep Batch: 238605 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-238605/17-A	Method Blank	Total/NA	Water	3520C	

### Analysis Batch: 238799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-1	MW-52S	Total/NA	Water	8081A_8082	237769
680-79574-2	MW-52I	Total/NA	Water	8081A_8082	237769
680-79574-3	MW-52D	Total/NA	Water	8081A_8082	237769
680-79574-5	EB-1	Total/NA	Water	8081A_8082	237769
680-79574-6	EB-2	Total/NA	Water	8081A_8082	237769
680-79574-7	EB-3	Total/NA	Water	8081A_8082	237769

### Analysis Batch: 238857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-1	MW-52S	Total/NA	Water	8081A_8082	237769
680-79574-2	MW-52I	Total/NA	Water	8081A_8082	237769
680-79574-3	MW-52D	Total/NA	Water	8081A_8082	237769
680-79574-5	EB-1	Total/NA	Water	8081A_8082	237769
680-79574-6	EB-2	Total/NA	Water	8081A_8082	237769
680-79574-7	EB-3	Total/NA	Water	8081A_8082	237769

### Analysis Batch: 239360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-1 - RE	MW-52S	Total/NA	Water	8081A_8082	238605
680-79574-2 - RE	MW-52I	Total/NA	Water	8081A_8082	238605
680-79574-3 - RE	MW-52D	Total/NA	Water	8081A_8082	238605
680-79574-5 - RE	EB-1	Total/NA	Water	8081A_8082	238605
680-79574-6 - RE	EB-2	Total/NA	Water	8081A_8082	238605
680-79574-7 - RE	EB-3	Total/NA	Water	8081A_8082	238605
MB 680-238605/17-A	Method Blank	Total/NA	Water	8081A_8082	238605

### Analysis Batch: 239361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-1 - RE	MW-52S	Total/NA	Water	8081A_8082	238605
680-79574-2 - RE	MW-52I	Total/NA	Water	8081A_8082	238605
680-79574-3 - RE	MW-52D	Total/NA	Water	8081A_8082	238605
680-79574-5 - RE	EB-1	Total/NA	Water	8081A_8082	238605
680-79574-6 - RE	EB-2	Total/NA	Water	8081A_8082	238605
680-79574-7 - RE	EB-3	Total/NA	Water	8081A_8082	238605
LCS 680-238605/18-A	Lab Control Sample	Total/NA	Water	8081A_8082	238605
LCSD 680-238605/19-A	Lab Control Sample Dup	Total/NA	Water	8081A_8082	238605
MB 680-238605/17-A	Method Blank	Total/NA	Water	8081A_8082	238605

## Metals

### Prep Batch: 237806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-1	MW-52S	Total/NA	Water	7470A	
680-79574-2	MW-52I	Total/NA	Water	7470A	
680-79574-3	MW-52D	Total/NA	Water	7470A	
680-79574-5	EB-1	Total/NA	Water	7470A	
680-79574-6	EB-2	Total/NA	Water	7470A	
680-79574-7	EB-3	Total/NA	Water	7470A	



# QC Association Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

## Metals (Continued)

### Prep Batch: 237806 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-237806/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 680-237806/1-A	Method Blank	Total/NA	Water	7470A	

### Prep Batch: 238027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-1	MW-52S	Total Recoverable	Water	3005A	
680-79574-2	MW-52I	Total Recoverable	Water	3005A	
LCS 680-238027/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 680-238027/1-A	Method Blank	Total Recoverable	Water	3005A	

### Prep Batch: 238189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-3	MW-52D	Total Recoverable	Water	3005A	
680-79574-5	EB-1	Total Recoverable	Water	3005A	
680-79574-6	EB-2	Total Recoverable	Water	3005A	
680-79574-7	EB-3	Total Recoverable	Water	3005A	
LCS 680-238189/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 680-238189/1-A	Method Blank	Total Recoverable	Water	3005A	

### Analysis Batch: 238198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-1	MW-52S	Total Recoverable	Water	6010B	238027
680-79574-2	MW-52I	Total Recoverable	Water	6010B	238027
LCS 680-238027/2-A	Lab Control Sample	Total Recoverable	Water	6010B	238027
MB 680-238027/1-A	Method Blank	Total Recoverable	Water	6010B	238027

### Analysis Batch: 238210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-1	MW-52S	Total/NA	Water	7470A	237806
680-79574-2	MW-52I	Total/NA	Water	7470A	237806
680-79574-3	MW-52D	Total/NA	Water	7470A	237806
680-79574-5	EB-1	Total/NA	Water	7470A	237806
680-79574-6	EB-2	Total/NA	Water	7470A	237806
680-79574-7	EB-3	Total/NA	Water	7470A	237806
LCS 680-237806/2-A	Lab Control Sample	Total/NA	Water	7470A	237806
MB 680-237806/1-A	Method Blank	Total/NA	Water	7470A	237806

### Analysis Batch: 238551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-79574-3	MW-52D	Total Recoverable	Water	6010B	238189
680-79574-5	EB-1	Total Recoverable	Water	6010B	238189
680-79574-6	EB-2	Total Recoverable	Water	6010B	238189
680-79574-7	EB-3	Total Recoverable	Water	6010B	238189
LCS 680-238189/2-A	Lab Control Sample	Total Recoverable	Water	6010B	238189
MB 680-238189/1-A	Method Blank	Total Recoverable	Water	6010B	238189



# Lab Chronicle

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

**Client Sample ID: MW-52S**

**Date Collected: 05/15/12 17:05**

**Date Received: 05/17/12 10:35**

**Lab Sample ID: 680-79574-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237953	05/20/12 23:52	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1	238799	05/25/12 01:28	GM	TAL SAV
Total/NA	Analysis	8081A_8082		1	238857	05/25/12 01:28	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239360	05/31/12 23:58	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239361	05/31/12 23:58	JK	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 02:54	BCB	TAL SAV
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 11:18	JKL	TAL SAV

**Client Sample ID: MW-52I**

**Date Collected: 05/15/12 16:40**

**Date Received: 05/17/12 10:35**

**Lab Sample ID: 680-79574-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237898	05/19/12 15:26	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1	238799	05/25/12 01:47	GM	TAL SAV
Total/NA	Analysis	8081A_8082		1	238857	05/25/12 01:47	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239360	06/01/12 00:17	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239361	06/01/12 00:17	JK	TAL SAV
Total Recoverable	Prep	3005A			238027	05/21/12 17:58	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238198	05/23/12 02:58	BCB	TAL SAV
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 11:21	JKL	TAL SAV

**Client Sample ID: MW-52D**

**Date Collected: 05/15/12 16:50**

**Date Received: 05/17/12 10:35**

**Lab Sample ID: 680-79574-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237898	05/19/12 15:55	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1	238799	05/25/12 02:07	GM	TAL SAV
Total/NA	Analysis	8081A_8082		1	238857	05/25/12 02:07	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239360	06/01/12 00:37	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239361	06/01/12 00:37	JK	TAL SAV
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 11:25	JKL	TAL SAV



# Lab Chronicle

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

## Client Sample ID: MW-52D

Lab Sample ID: 680-79574-3

Date Collected: 05/15/12 16:50

Matrix: Water

Date Received: 05/17/12 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			238189	05/23/12 08:39	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238551	05/25/12 11:17	BCB	TAL SAV

## Client Sample ID: Trip Blank 1

Lab Sample ID: 680-79574-4

Date Collected: 05/15/12 00:00

Matrix: Water

Date Received: 05/17/12 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237899	05/19/12 10:25	RB	TAL SAV

## Client Sample ID: EB-1

Lab Sample ID: 680-79574-5

Date Collected: 05/15/12 14:45

Matrix: Water

Date Received: 05/17/12 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237899	05/19/12 11:23	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1	238799	05/25/12 02:26	GM	TAL SAV
Total/NA	Analysis	8081A_8082		1	238857	05/25/12 02:26	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239360	06/01/12 00:56	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239361	06/01/12 00:56	JK	TAL SAV
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 11:28	JKL	TAL SAV
Total Recoverable	Prep	3005A			238189	05/23/12 08:39	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238551	05/25/12 11:22	BCB	TAL SAV

## Client Sample ID: EB-2

Lab Sample ID: 680-79574-6

Date Collected: 05/15/12 15:00

Matrix: Water

Date Received: 05/17/12 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237899	05/19/12 11:51	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1	238799	05/25/12 02:45	GM	TAL SAV
Total/NA	Analysis	8081A_8082		1	238857	05/25/12 02:45	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239360	06/01/12 01:15	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239361	06/01/12 01:15	JK	TAL SAV
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 11:32	JKL	TAL SAV
Total Recoverable	Prep	3005A			238189	05/23/12 08:39	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238551	05/25/12 11:26	BCB	TAL SAV



## Lab Chronicle

Client: Ashland Inc.  
Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

TestAmerica Job ID: 680-79574-1

**Client Sample ID: EB-3**

**Date Collected: 05/15/12 15:15**

**Date Received: 05/17/12 10:35**

**Lab Sample ID: 680-79574-7**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237899	05/19/12 12:20	RB	TAL SAV
Total/NA	Prep	3520C			237769	05/18/12 15:41	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1	238799	05/25/12 03:05	GM	TAL SAV
Total/NA	Analysis	8081A_8082		1	238857	05/25/12 03:05	GM	TAL SAV
Total/NA	Prep	3520C	RE		238605	05/28/12 15:21	RBS	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239360	06/01/12 01:35	JK	TAL SAV
Total/NA	Analysis	8081A_8082	RE	1	239361	06/01/12 01:35	JK	TAL SAV
Total/NA	Prep	7470A			237806	05/18/12 12:35	JKL	TAL SAV
Total/NA	Analysis	7470A		1	238210	05/22/12 11:35	JKL	TAL SAV
Total Recoverable	Prep	3005A			238189	05/23/12 08:39	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	238551	05/25/12 11:30	BCB	TAL SAV

**Client Sample ID: Trip Blank**

**Date Collected: 05/15/12 00:00**

**Date Received: 05/17/12 10:35**

**Lab Sample ID: 680-79574-8**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	237899	05/19/12 10:54	RB	TAL SAV

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



## Chain of Custody Record

Savannah, GA 31404  
phone 912.354.7858 fax 912.352.0165

**TestAmerica Laboratories, Inc.**

[illegible]

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- 2
- 3
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- 15







## Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-79574-1

**Login Number: 79574**

**List Source: TestAmerica Savannah**

**List Number: 1**

**Creator: Barnett, Eddie T**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2, 2.0, 4.2, 4.0, 4.0 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	False	Second trip blank received and not listed on COC
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	pH of container(s) is out of range: C2
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	Insufficient volume received for MS/MSD.
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Certification Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-79574-1

Project/Site: Brunswick Ph 3 RFI - MW-52 MAY 2012

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Savannah	A2LA	DoD ELAP		0399-01
TestAmerica Savannah	A2LA	ISO/IEC 17025		399.01
TestAmerica Savannah	Alabama	State Program	4	41450
TestAmerica Savannah	Arkansas DEQ	State Program	6	88-0692
TestAmerica Savannah	California	NELAC	9	3217CA
TestAmerica Savannah	Colorado	State Program	8	N/A
TestAmerica Savannah	Connecticut	State Program	1	PH-0161
TestAmerica Savannah	Florida	NELAC	4	E87052
TestAmerica Savannah	GA Dept. of Agriculture	State Program	4	N/A
TestAmerica Savannah	Georgia	State Program	4	803
TestAmerica Savannah	Georgia	State Program	4	N/A
TestAmerica Savannah	Guam	State Program	9	09-005r
TestAmerica Savannah	Hawaii	State Program	9	N/A
TestAmerica Savannah	Illinois	NELAC	5	200022
TestAmerica Savannah	Indiana	State Program	5	N/A
TestAmerica Savannah	Iowa	State Program	7	353
TestAmerica Savannah	Kentucky	State Program	4	90084
TestAmerica Savannah	Kentucky (UST)	State Program	4	18
TestAmerica Savannah	Louisiana	NELAC	6	30690
TestAmerica Savannah	Louisiana	NELAC	6	LA100015
TestAmerica Savannah	Maine	State Program	1	GA00006
TestAmerica Savannah	Maryland	State Program	3	250
TestAmerica Savannah	Massachusetts	State Program	1	M-GA006
TestAmerica Savannah	Michigan	State Program	5	9925
TestAmerica Savannah	Mississippi	State Program	4	N/A
TestAmerica Savannah	Montana	State Program	8	CERT0081
TestAmerica Savannah	Nebraska	State Program	7	TestAmerica-Savannah
TestAmerica Savannah	New Jersey	NELAC	2	GA769
TestAmerica Savannah	New Mexico	State Program	6	N/A
TestAmerica Savannah	New York	NELAC	2	10842
TestAmerica Savannah	North Carolina DENR	State Program	4	269
TestAmerica Savannah	North Carolina DHHS	State Program	4	13701
TestAmerica Savannah	Oklahoma	State Program	6	9984
TestAmerica Savannah	Pennsylvania	NELAC	3	68-00474
TestAmerica Savannah	Puerto Rico	State Program	2	GA00006
TestAmerica Savannah	Rhode Island	State Program	1	LAO00244
TestAmerica Savannah	South Carolina	State Program	4	98001
TestAmerica Savannah	Tennessee	State Program	4	TN02961
TestAmerica Savannah	Texas	NELAC	6	T104704185-08-TX
TestAmerica Savannah	USDA	Federal		SAV 3-04
TestAmerica Savannah	Vermont	State Program	1	87052
TestAmerica Savannah	Virginia	NELAC	3	460161
TestAmerica Savannah	Washington	State Program	10	C1794
TestAmerica Savannah	West Virginia	State Program	3	9950C
TestAmerica Savannah	West Virginia DEP	State Program	3	94
TestAmerica Savannah	Wisconsin	State Program	5	999819810
TestAmerica Savannah	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-81728-2

Client Project/Site: HERC Brunswick Ph3 RFI Resample AUG  
2012

For:

Ashland Inc.

Ashland Hercules Research Center

500 Hercules Rd Bldg 8139

Wilmington, Delaware 19808

Attn: Timothy Hassett



Authorized for release by:

8/15/2012 3:45:00 PM

Lidya Gulizia

Project Manager II

[lidya.gulizia@testamericainc.com](mailto:lidya.gulizia@testamericainc.com)

cc: Tony Mancini

### LINKS

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results through

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Case Narrative . . . . .	3
Sample Summary . . . . .	4
Method Summary . . . . .	5
Definitions . . . . .	6
Detection Summary . . . . .	7
Client Sample Results . . . . .	8
Surrogate Summary . . . . .	12
QC Sample Results . . . . .	13
QC Association . . . . .	15
Chronicle . . . . .	16
Chain of Custody . . . . .	17
Receipt Checklists . . . . .	18
Certification Summary . . . . .	19





## Case Narrative

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

TestAmerica Job ID: 680-81728-2

**Job ID: 680-81728-2**

**Laboratory: TestAmerica Savannah**

### Narrative

## CASE NARRATIVE

**Client: Ashland Inc.**

**Project: HERC Brunswick Ph3 RFI Resample AUG 2012**

**Report Number: 680-81728-2**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### RECEIPT

The samples were received on 08/03/2012; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.8° C and 1.9° C.

### VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MW-52S (680-81728-1), MW-52I (680-81728-2), MW-52D (680-81728-3) and EQ-B (680-81728-4) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 08/08/2012.

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch 245986 exceeded control limits for the following analytes: chloroethane. These analytes were biased high in both the LCS and LCSD but were not detected in the associated samples; therefore, the data have been reported.

No other difficulties were encountered during the volatiles analyses.

All other quality control parameters were within the acceptance limits.

### PESTICIDES AND PCBs

Samples MW-52D (680-81728-3) and EQ-B (680-81728-4) were analyzed for Pesticides and PCBs in accordance with EPA SW846 Method 8081A\_8082. The samples were prepared on 08/06/2012 and analyzed on 08/08/2012 and 08/09/2012.

This method incorporates 2nd column confirmation. Corrective action is not taken for surrogate/spike compounds unless results from both columns are unacceptable. Results outside criteria are qualified.

Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample(s) contained an allowable number of surrogate compounds outside limits: MW-52D (680-81728-3). These results have been reported and qualified.

No other difficulties were encountered during the Pesticides and PCBs analyses.

All other quality control parameters were within the acceptance limits.



## Sample Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-81728-2

Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-81728-1	MW-52S	Water	08/02/12 12:10	08/03/12 11:53
680-81728-2	MW-52I	Water	08/02/12 13:45	08/03/12 11:53
680-81728-3	MW-52D	Water	08/02/12 14:40	08/03/12 11:53
680-81728-4	EQ-B	Water	08/02/12 10:45	08/03/12 11:53



## Method Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-81728-2

Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8081A_8082	Organochlorine Pesticides & PCBs (GC)	SW846	TAL SAV

### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



## Definitions/Glossary

Client: Ashland Inc.

TestAmerica Job ID: 680-81728-2

Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
U	Indicates the analyte was analyzed for but not detected.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



## Detection Summary

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

TestAmerica Job ID: 680-81728-2

### Client Sample ID: MW-52S

Lab Sample ID: 680-81728-1

No Detections

### Client Sample ID: MW-52I

Lab Sample ID: 680-81728-2

No Detections

### Client Sample ID: MW-52D

Lab Sample ID: 680-81728-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.0		1.0	0.25	ug/L	1		8260B	Total/NA
Chlorobenzene	1.7		1.0	0.25	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	0.31	J	1.0	0.15	ug/L	1		8260B	Total/NA
1,2-Dichloropropane	0.27	J	1.0	0.13	ug/L	1		8260B	Total/NA
Ethylbenzene	0.89	J	1.0	0.11	ug/L	1		8260B	Total/NA
Xylenes, Total	2.3		2.0	0.20	ug/L	1		8260B	Total/NA

### Client Sample ID: EQ-B

Lab Sample ID: 680-81728-4

No Detections



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

TestAmerica Job ID: 680-81728-2

**Client Sample ID: MW-52S**

**Lab Sample ID: 680-81728-1**

**Date Collected: 08/02/12 12:10**

**Matrix: Water**

**Date Received: 08/03/12 11:53**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.25	ug/L			08/08/12 15:29	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			08/08/12 15:29	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			08/08/12 15:29	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			08/08/12 15:29	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			08/08/12 15:29	1
Toluene	1.0	U	1.0	0.33	ug/L			08/08/12 15:29	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			08/08/12 15:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	97		70 - 130		08/08/12 15:29	1
Dibromofluoromethane	101		70 - 130		08/08/12 15:29	1
Toluene-d8 (Surr)	99		70 - 130		08/08/12 15:29	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

TestAmerica Job ID: 680-81728-2

**Client Sample ID: MW-52I**

**Lab Sample ID: 680-81728-2**

**Date Collected: 08/02/12 13:45**

**Matrix: Water**

**Date Received: 08/03/12 11:53**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.25	ug/L			08/08/12 15:57	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			08/08/12 15:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			08/08/12 15:57	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			08/08/12 15:57	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			08/08/12 15:57	1
Toluene	1.0	U	1.0	0.33	ug/L			08/08/12 15:57	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			08/08/12 15:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	97		70 - 130		08/08/12 15:57	1
Dibromofluoromethane	101		70 - 130		08/08/12 15:57	1
Toluene-d8 (Surr)	99		70 - 130		08/08/12 15:57	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

TestAmerica Job ID: 680-81728-2

**Client Sample ID: MW-52D**

**Lab Sample ID: 680-81728-3**

Date Collected: 08/02/12 14:40

Matrix: Water

Date Received: 08/03/12 11:53

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	6.0		1.0	0.25	ug/L			08/08/12 16:25	1
Chlorobenzene	1.7		1.0	0.25	ug/L			08/08/12 16:25	1
cis-1,2-Dichloroethene	0.31	J	1.0	0.15	ug/L			08/08/12 16:25	1
1,2-Dichloropropane	0.27	J	1.0	0.13	ug/L			08/08/12 16:25	1
Ethylbenzene	0.89	J	1.0	0.11	ug/L			08/08/12 16:25	1
Toluene	1.0	U	1.0	0.33	ug/L			08/08/12 16:25	1
Xylenes, Total	2.3		2.0	0.20	ug/L			08/08/12 16:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		70 - 130		08/08/12 16:25	1
Dibromofluoromethane	101		70 - 130		08/08/12 16:25	1
Toluene-d8 (Surr)	99		70 - 130		08/08/12 16:25	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.7	U	4.7	0.47	ug/L		08/06/12 16:12	08/08/12 23:10	1
Toxaphene, TAUC, Parlar 11-69	4.7	U	4.7	0.47	ug/L		08/06/12 16:12	08/09/12 16:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	20	X	22 - 130	08/06/12 16:12	08/08/12 23:10	1
DCB Decachlorobiphenyl	17	X	22 - 130	08/06/12 16:12	08/08/12 23:10	1
Tetrachloro-m-xylene	55		53 - 130	08/06/12 16:12	08/08/12 23:10	1
Tetrachloro-m-xylene	59		53 - 130	08/06/12 16:12	08/08/12 23:10	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

TestAmerica Job ID: 680-81728-2

Client Sample ID: EQ-B

Lab Sample ID: 680-81728-4

Date Collected: 08/02/12 10:45

Matrix: Water

Date Received: 08/03/12 11:53

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.25	ug/L			08/08/12 15:00	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			08/08/12 15:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			08/08/12 15:00	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			08/08/12 15:00	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			08/08/12 15:00	1
Toluene	1.0	U	1.0	0.33	ug/L			08/08/12 15:00	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			08/08/12 15:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	99		70 - 130		08/08/12 15:00	1
Dibromofluoromethane	101		70 - 130		08/08/12 15:00	1
Toluene-d8 (Surr)	99		70 - 130		08/08/12 15:00	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	4.7	U	4.7	0.47	ug/L		08/06/12 16:12	08/08/12 23:38	1
Toxaphene, TAUC, Parlar 11-69	4.7	U	4.7	0.47	ug/L		08/06/12 16:12	08/09/12 16:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	81		22 - 130	08/06/12 16:12	08/08/12 23:38	1
DCB Decachlorobiphenyl	79		22 - 130	08/06/12 16:12	08/08/12 23:38	1
Tetrachloro-m-xylene	69		53 - 130	08/06/12 16:12	08/08/12 23:38	1
Tetrachloro-m-xylene	67		53 - 130	08/06/12 16:12	08/08/12 23:38	1



## Surrogate Summary

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

TestAmerica Job ID: 680-81728-2

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (70-130)	DBFM (70-130)	TOL (70-130)
680-81728-1	MW-52S	97	101	99
680-81728-2	MW-52I	97	101	99
680-81728-3	MW-52D	98	101	99
680-81728-4	EQ-B	99	101	99
LCS 680-245986/3	Lab Control Sample	99	108	102
LCSD 680-245986/4	Lab Control Sample Dup	98	106	102
MB 680-245986/6	Method Blank	98	99	98
<b>Surrogate Legend</b>				
BFB = 4-Bromofluorobenzene				
DBFM = Dibromofluoromethane				
TOL = Toluene-d8 (Surr)				

### Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (22-130)	DCB2 (22-130)	TCX1 (53-130)	TCX2 (53-130)
680-81728-3	MW-52D	20 X	17 X	55	59
680-81728-4	EQ-B	81	79	69	67
LCS 680-245739/26-A	Lab Control Sample	63		72	
LCSD 680-245739/27-A	Lab Control Sample Dup	57		71	
MB 680-245739/17-A	Method Blank	73		70	
<b>Surrogate Legend</b>					
DCB = DCB Decachlorobiphenyl					
TCX = Tetrachloro-m-xylene					



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

TestAmerica Job ID: 680-81728-2

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-245986/6

Matrix: Water

Analysis Batch: 245986

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.25	ug/L			08/08/12 13:08	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			08/08/12 13:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			08/08/12 13:08	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			08/08/12 13:08	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			08/08/12 13:08	1
Toluene	1.0	U	1.0	0.33	ug/L			08/08/12 13:08	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			08/08/12 13:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		70 - 130		08/08/12 13:08	1
Dibromofluoromethane	99		70 - 130		08/08/12 13:08	1
Toluene-d8 (Surr)	98		70 - 130		08/08/12 13:08	1

Lab Sample ID: LCS 680-245986/3

Matrix: Water

Analysis Batch: 245986

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	53.5		ug/L		107	70 - 130
Chlorobenzene	50.0	48.9		ug/L		98	70 - 130
cis-1,2-Dichloroethene	50.0	51.2		ug/L		102	70 - 130
1,2-Dichloropropane	50.0	53.5		ug/L		107	70 - 130
Ethylbenzene	50.0	50.8		ug/L		102	70 - 130
Toluene	50.0	53.1		ug/L		106	70 - 130
Xylenes, Total	150	151		ug/L		101	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	99		70 - 130
Dibromofluoromethane	108		70 - 130
Toluene-d8 (Surr)	102		70 - 130

Lab Sample ID: LCSD 680-245986/4

Matrix: Water

Analysis Batch: 245986

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	53.1		ug/L		106	70 - 130	1	30
Chlorobenzene	50.0	48.7		ug/L		97	70 - 130	0	30
cis-1,2-Dichloroethene	50.0	50.9		ug/L		102	70 - 130	1	30
1,2-Dichloropropane	50.0	52.7		ug/L		105	70 - 130	1	30
Ethylbenzene	50.0	50.0		ug/L		100	70 - 130	2	30
Toluene	50.0	52.9		ug/L		106	70 - 130	0	30
Xylenes, Total	150	150		ug/L		100	70 - 130	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	98		70 - 130
Dibromofluoromethane	106		70 - 130
Toluene-d8 (Surr)	102		70 - 130



# QC Sample Results

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

TestAmerica Job ID: 680-81728-2

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Lab Sample ID: MB 680-245739/17-A

Matrix: Water

Analysis Batch: 246176

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 245739

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	5.0	U	5.0	0.50	ug/L		08/06/12 16:12	08/08/12 18:57	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	73		22 - 130				08/06/12 16:12	08/08/12 18:57	1
Tetrachloro-m-xylene	70		53 - 130				08/06/12 16:12	08/08/12 18:57	1

Lab Sample ID: MB 680-245739/17-A

Matrix: Water

Analysis Batch: 246312

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 245739

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, TAUC, Parlar 11-69	5.0	U	5.0	0.50	ug/L		08/06/12 16:12	08/09/12 17:13	1

Lab Sample ID: LCS 680-245739/26-A

Matrix: Water

Analysis Batch: 246176

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 245739

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene, Technical	10.0	8.21		ug/L		82	35 - 138
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
DCB Decachlorobiphenyl	63		22 - 130				
Tetrachloro-m-xylene	72		53 - 130				

Lab Sample ID: LCSD 680-245739/27-A

Matrix: Water

Analysis Batch: 246176

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 245739

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toxaphene, Technical	10.0	8.97		ug/L		90	35 - 138	9	50
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
DCB Decachlorobiphenyl	57		22 - 130						
Tetrachloro-m-xylene	71		53 - 130						



## QC Association Summary

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

TestAmerica Job ID: 680-81728-2

### GC/MS VOA

#### Analysis Batch: 245986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-81728-1	MW-52S	Total/NA	Water	8260B	
680-81728-2	MW-52I	Total/NA	Water	8260B	
680-81728-3	MW-52D	Total/NA	Water	8260B	
680-81728-4	EQ-B	Total/NA	Water	8260B	
LCS 680-245986/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-245986/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-245986/6	Method Blank	Total/NA	Water	8260B	

### GC Semi VOA

#### Prep Batch: 245739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-81728-3	MW-52D	Total/NA	Water	3520C	
680-81728-4	EQ-B	Total/NA	Water	3520C	
LCS 680-245739/26-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 680-245739/27-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 680-245739/17-A	Method Blank	Total/NA	Water	3520C	

#### Analysis Batch: 246176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-81728-3	MW-52D	Total/NA	Water	8081A_8082	245739
680-81728-4	EQ-B	Total/NA	Water	8081A_8082	245739
LCS 680-245739/26-A	Lab Control Sample	Total/NA	Water	8081A_8082	245739
LCSD 680-245739/27-A	Lab Control Sample Dup	Total/NA	Water	8081A_8082	245739
MB 680-245739/17-A	Method Blank	Total/NA	Water	8081A_8082	245739

#### Analysis Batch: 246312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-81728-3	MW-52D	Total/NA	Water	8081A_8082	245739
680-81728-4	EQ-B	Total/NA	Water	8081A_8082	245739
MB 680-245739/17-A	Method Blank	Total/NA	Water	8081A_8082	245739



## Lab Chronicle

Client: Ashland Inc.  
Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

TestAmerica Job ID: 680-81728-2

### Client Sample ID: MW-52S

Date Collected: 08/02/12 12:10

Date Received: 08/03/12 11:53

### Lab Sample ID: 680-81728-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	245986	08/08/12 15:29	JD	TAL SAV

### Client Sample ID: MW-52I

Date Collected: 08/02/12 13:45

Date Received: 08/03/12 11:53

### Lab Sample ID: 680-81728-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	245986	08/08/12 15:57	JD	TAL SAV

### Client Sample ID: MW-52D

Date Collected: 08/02/12 14:40

Date Received: 08/03/12 11:53

### Lab Sample ID: 680-81728-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	245986	08/08/12 16:25	JD	TAL SAV
Total/NA	Prep	3520C			245739	08/06/12 16:12	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1	246176	08/08/12 23:10	CAR	TAL SAV
Total/NA	Analysis	8081A_8082		1	246312	08/09/12 16:17	CAR	TAL SAV

### Client Sample ID: EQ-B

Date Collected: 08/02/12 10:45

Date Received: 08/03/12 11:53

### Lab Sample ID: 680-81728-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	245986	08/08/12 15:00	JD	TAL SAV
Total/NA	Prep	3520C			245739	08/06/12 16:12	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1	246176	08/08/12 23:38	CAR	TAL SAV
Total/NA	Analysis	8081A_8082		1	246312	08/09/12 16:45	CAR	TAL SAV

#### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



## Chain of Custody Record

[illegible]



## Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-81728-2

**Login Number: 81728**

**List Source: TestAmerica Savannah**

**List Number: 1**

**Creator: Conner, Keaton**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	False	No vials labeled as TB-4 vials labeled MW 52 D
Samples are received within Holding Time.	True	Did not receive TB
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	Insufficient volume received for MS/MSD.
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	



## Certification Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-81728-2

Project/Site: HERC Brunswick Ph3 RFI Resample AUG 2012

### Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		0399-01	02-28-13
A2LA	ISO/IEC 17025		399.01	02-28-13
Alabama	State Program	4	41450	08-15-12
Alaska (UST)	State Program	10	UST-104	06-19-13
Arkansas DEQ	State Program	6	88-0692	02-01-13
California	NELAC	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-12
Connecticut	State Program	1	PH-0161	03-31-13
Florida	NELAC	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-12
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Guam	State Program	9	09-005r	04-17-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAC	5	200022	11-30-12
Indiana	State Program	5	N/A	06-30-12
Iowa	State Program	7	353	07-01-13
Kentucky	State Program	4	90084	12-31-12
Kentucky (UST)	State Program	4	18	02-28-13
Louisiana	NELAC	6	30690	06-30-13
Louisiana	NELAC	6	LA100015	12-31-12
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-12
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-12
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	12-31-12
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13
New Jersey	NELAC	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
New York	NELAC	2	10842	04-01-13
North Carolina DENR	State Program	4	269	12-31-13
North Carolina DHHS	State Program	4	13701	07-31-13
Oklahoma	State Program	6	9984	08-31-12
Pennsylvania	NELAC	3	68-00474	06-30-13
Puerto Rico	State Program	2	GA00006	01-01-13
Rhode Island	State Program	1	LAO00244	12-30-12
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAC	6	T104704185-08-TX	11-30-12
USDA	Federal		SAV 3-04	04-07-14
Vermont	State Program	1	87052	11-16-12
Virginia	NELAC	3	460161	06-14-13
Washington	State Program	10	C1794	06-10-13
West Virginia	State Program	3	9950C	12-31-12
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-12
Wyoming	State Program	8	8TMS-Q	06-30-13



## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-86980-1

Client Project/Site: Ashland Brunswick Groundwater RFI

For:

Ashland Inc.

Ashland Hercules Research Center

500 Hercules Rd Bldg 8139

Wilmington, Delaware 19808

Attn: Timothy Hassett



Authorized for release by:

2/15/2013 11:23:02 AM

Lidya Gulizia

Project Manager II

[lidya.gulizia@testamericainc.com](mailto:lidya.gulizia@testamericainc.com)

### LINKS

Review your project  
results through

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*





# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Case Narrative . . . . .	3
Method Summary . . . . .	5
Sample Summary . . . . .	6
Definitions/Glossary . . . . .	7
Client Sample Results . . . . .	8
Surrogate Summary . . . . .	20
QC Sample Results . . . . .	21
QC Association Summary . . . . .	30
Lab Chronicle . . . . .	32
Chain of Custody . . . . .	34
Receipt Checklists . . . . .	35
Certification Summary . . . . .	36



## Case Narrative

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

**Job ID: 680-86980-1**

**Laboratory: TestAmerica Savannah**

Narrative

### CASE NARRATIVE

**Client: Ashland Inc.**

**Project: Ashland Brunswick Groundwater RFI**

**Report Number: 680-86980-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

#### RECEIPT

The samples were received on 01/31/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.2° C, 0.4° C and 0.6° C.

#### VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples HP-III-59 89-99' (680-86980-1), HP-III-60A 20-26' (680-86980-2), HP-III-60B 50-56' (680-86980-3), HP-III-60C 75-86' (680-86980-4), Trip Blank (680-86980-5) and Field Equipment Blank (680-86980-6) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 02/04/2013 and 02/05/2013.

The laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for batch 265001 exceeded control limits for vinyl acetate. Vinyl acetate has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 265220 exceeded control limits for the following analytes: 1,1-dichloroethane and vinyl acetate.

Samples HP-III-59 89-99' (680-86980-1)[2X] and HP-III-60C 75-86' (680-86980-4)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the volatiles analyses.

All other quality control parameters were within the acceptance limits.

#### PESTICIDES AND PCBS

Samples HP-III-59 89-99' (680-86980-1), HP-III-60A 20-26' (680-86980-2), HP-III-60B 50-56' (680-86980-3) and HP-III-60C 75-86' (680-86980-4) were analyzed for Pesticides and PCBs in accordance with EPA SW846 Method 8081A\_8082. The samples were prepared on 02/01/2013 and analyzed on 02/11/2013.

This method incorporates 2nd column confirmation. Corrective action is not taken for surrogate/spike compounds unless results from both columns are unacceptable. Results outside criteria are qualified.

Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without



## Case Narrative

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

### Job ID: 680-86980-1 (Continued)

#### Laboratory: TestAmerica Savannah (Continued)

performing re-extraction/re-analysis. The following sample(s) contained an allowable number of surrogate compounds outside limits: HP-III-60C 75-86' (680-86980-4). These results have been reported and qualified.

Surrogate recovery for the following sample(s) was outside control limits: (680-86980-1 MS), (680-86980-1 MSD), HP-III-59 89-99' (680-86980-1), (680-86980-2 MS), (680-86980-2 MSD), HP-III-60A 20-26' (680-86980-2). Re-extraction and/or re-analysis was performed with concurring results. The original analysis has been reported.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 269748 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Surrogate recovery was outside control limits for the following sample: Field Equipment Blank (680-86980-6). The sample was re-extracted outside of holding time. Both sets of data are provided.

No other difficulties were encountered during the Pesticides and PCBs analyses.

All other quality control parameters were within the acceptance limits.



## Method Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-86980-1

Project/Site: Ashland Brunswick Groundwater RFI

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8081A_8082	Organochlorine Pesticides & PCBs (GC)	SW846	TAL SAV

### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



## Sample Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-86980-1

Project/Site: Ashland Brunswick Groundwater RFI

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-86980-1	HP-III-59 89-99'	Water	01/29/13 17:55	01/31/13 09:42
680-86980-2	HP-III-60A 20-26'	Water	01/30/13 11:52	01/31/13 09:42
680-86980-3	HP-III-60B 50-56'	Water	01/30/13 13:27	01/31/13 09:42
680-86980-4	HP-III-60C 75-86'	Water	01/30/13 15:32	01/31/13 09:42
680-86980-5	Trip Blank	Water	01/30/13 00:00	01/31/13 09:42
680-86980-6	Field Equipment Blank	Water	01/30/13 11:10	01/31/13 09:42



## Definitions/Glossary

Client: Ashland Inc.

Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits

#### GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	RPD of the MS and MSD exceeds the control limits
F	MS or MSD exceeds the control limits

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

Client Sample ID: HP-III-59 89-99'

Lab Sample ID: 680-86980-1

Date Collected: 01/29/13 17:55

Matrix: Water

Date Received: 01/31/13 09:42

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10		50	10	ug/L			02/05/13 13:35	2
Acetonitrile	<20		80	20	ug/L			02/05/13 13:35	2
Acrolein	<15		40	15	ug/L			02/05/13 13:35	2
Acrylonitrile	<14		40	14	ug/L			02/05/13 13:35	2
<b>Benzene</b>	<b>230</b>		2.0	0.50	ug/L			02/05/13 13:35	2
<b>Dichlorobromomethane</b>	<b>2.3</b>		2.0	0.50	ug/L			02/05/13 13:35	2
<b>Bromoform</b>	<b>3.2</b>		2.0	1.0	ug/L			02/05/13 13:35	2
Bromomethane	<1.6		2.0	1.6	ug/L			02/05/13 13:35	2
2-Butanone (MEK)	<2.0		20	2.0	ug/L			02/05/13 13:35	2
Carbon disulfide	<1.2		4.0	1.2	ug/L			02/05/13 13:35	2
Carbon tetrachloride	<1.0		2.0	1.0	ug/L			02/05/13 13:35	2
<b>Chlorobenzene</b>	<b>8.9</b>		2.0	0.50	ug/L			02/05/13 13:35	2
Chloroethane	<2.0		2.0	2.0	ug/L			02/05/13 13:35	2
<b>Chloroform</b>	<b>1.4 J</b>		2.0	0.28	ug/L			02/05/13 13:35	2
Chloromethane	<0.66		2.0	0.66	ug/L			02/05/13 13:35	2
2-Chloro-1,3-butadiene	<0.60		2.0	0.60	ug/L			02/05/13 13:35	2
3-Chloro-1-propene	<0.40		2.0	0.40	ug/L			02/05/13 13:35	2
<b>Chlorodibromomethane</b>	<b>5.2</b>		2.0	0.20	ug/L			02/05/13 13:35	2
1,1,1,2-Tetrachloroethane	<0.66		2.0	0.66	ug/L			02/05/13 13:35	2
1,2-Dibromo-3-Chloropropane	<0.88		2.0	0.88	ug/L			02/05/13 13:35	2
Ethylene Dibromide	<0.50		2.0	0.50	ug/L			02/05/13 13:35	2
Dibromomethane	<0.40		2.0	0.40	ug/L			02/05/13 13:35	2
trans-1,4-Dichloro-2-butene	<1.0		4.0	1.0	ug/L			02/05/13 13:35	2
Dichlorodifluoromethane	<0.50		2.0	0.50	ug/L			02/05/13 13:35	2
1,1-Dichloroethane	<0.50	*	2.0	0.50	ug/L			02/05/13 13:35	2
1,2-Dichloroethane	<0.20		2.0	0.20	ug/L			02/05/13 13:35	2
1,1-Dichloroethene	<0.22		2.0	0.22	ug/L			02/05/13 13:35	2
<b>cis-1,2-Dichloroethene</b>	<b>0.30 J</b>		2.0	0.30	ug/L			02/05/13 13:35	2
trans-1,2-Dichloroethene	<0.40		2.0	0.40	ug/L			02/05/13 13:35	2
1,2-Dichloropropane	<0.26		2.0	0.26	ug/L			02/05/13 13:35	2
cis-1,3-Dichloropropene	<0.22		2.0	0.22	ug/L			02/05/13 13:35	2
trans-1,3-Dichloropropene	<0.42		2.0	0.42	ug/L			02/05/13 13:35	2
<b>Ethylbenzene</b>	<b>6.4</b>		2.0	0.22	ug/L			02/05/13 13:35	2
Ethyl methacrylate	<0.50		2.0	0.50	ug/L			02/05/13 13:35	2
2-Hexanone	<2.0		20	2.0	ug/L			02/05/13 13:35	2
Iodomethane	<2.0		10	2.0	ug/L			02/05/13 13:35	2
Isobutyl alcohol	<22		80	22	ug/L			02/05/13 13:35	2
Methacrylonitrile	<6.6		40	6.6	ug/L			02/05/13 13:35	2
Methylene Chloride	<2.0		10	2.0	ug/L			02/05/13 13:35	2
Methyl methacrylate	<0.96		2.0	0.96	ug/L			02/05/13 13:35	2
<b>4-Methyl-2-pentanone (MIBK)</b>	<b>3.4 J</b>		20	2.0	ug/L			02/05/13 13:35	2
Pentachloroethane	<2.4		10	2.4	ug/L			02/05/13 13:35	2
Propionitrile	<9.2		40	9.2	ug/L			02/05/13 13:35	2
<b>Styrene</b>	<b>1.3 J</b>		2.0	0.22	ug/L			02/05/13 13:35	2
1,1,2,2-Tetrachloroethane	<0.36		2.0	0.36	ug/L			02/05/13 13:35	2
Tetrachloroethene	<0.30		2.0	0.30	ug/L			02/05/13 13:35	2
<b>Toluene</b>	<b>70</b>		2.0	0.66	ug/L			02/05/13 13:35	2
1,1,1-Trichloroethane	<1.0		2.0	1.0	ug/L			02/05/13 13:35	2
1,1,2-Trichloroethane	<0.26		2.0	0.26	ug/L			02/05/13 13:35	2

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

Client Sample ID: HP-III-59 89-99'

Lab Sample ID: 680-86980-1

Date Collected: 01/29/13 17:55

Matrix: Water

Date Received: 01/31/13 09:42

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	<0.26		2.0	0.26	ug/L			02/05/13 13:35	2
Trichlorofluoromethane	<0.50		2.0	0.50	ug/L			02/05/13 13:35	2
1,2,3-Trichloropropane	<0.82		2.0	0.82	ug/L			02/05/13 13:35	2
Vinyl acetate	<0.56	*	4.0	0.56	ug/L			02/05/13 13:35	2
Vinyl chloride	<0.36		2.0	0.36	ug/L			02/05/13 13:35	2
<b>Xylenes, Total</b>	<b>29</b>		4.0	0.40	ug/L			02/05/13 13:35	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	111		70 - 130		02/05/13 13:35	2
Dibromofluoromethane	105		70 - 130		02/05/13 13:35	2
Toluene-d8 (Surr)	97		70 - 130		02/05/13 13:35	2

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0057		0.050	0.0057	ug/L		02/01/13 14:58	02/11/13 00:12	1
gamma-BHC (Lindane)	<0.0059		0.050	0.0059	ug/L		02/01/13 14:58	02/11/13 00:12	1
Toxaphene, Technical	<0.50		5.0	0.50	ug/L		02/01/13 14:58	02/11/13 00:12	1
<b>Toxaphene, TAUC, Parlar 11-69</b>	<b>2.9</b>	<b>J p</b>	5.0	0.50	ug/L		02/01/13 14:58	02/11/13 00:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	14	X	22 - 130	02/01/13 14:58	02/11/13 00:12	1
DCB Decachlorobiphenyl	9	p X	22 - 130	02/01/13 14:58	02/11/13 00:12	1
Tetrachloro-m-xylene	42	X	53 - 130	02/01/13 14:58	02/11/13 00:12	1
Tetrachloro-m-xylene	33	X	53 - 130	02/01/13 14:58	02/11/13 00:12	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

Client Sample ID: HP-III-60A 20-26'

Lab Sample ID: 680-86980-2

Date Collected: 01/30/13 11:52

Matrix: Water

Date Received: 01/31/13 09:42

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			02/04/13 18:39	1
Acetonitrile	<10		40	10	ug/L			02/04/13 18:39	1
Acrolein	<7.4		20	7.4	ug/L			02/04/13 18:39	1
Acrylonitrile	<7.2		20	7.2	ug/L			02/04/13 18:39	1
<b>Benzene</b>	<b>1.4</b>		1.0	0.25	ug/L			02/04/13 18:39	1
Dichlorobromomethane	<0.25		1.0	0.25	ug/L			02/04/13 18:39	1
Bromoform	<0.50		1.0	0.50	ug/L			02/04/13 18:39	1
Bromomethane	<0.80		1.0	0.80	ug/L			02/04/13 18:39	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			02/04/13 18:39	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			02/04/13 18:39	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			02/04/13 18:39	1
<b>Chlorobenzene</b>	<b>0.51</b>	<b>J</b>	1.0	0.25	ug/L			02/04/13 18:39	1
Chloroethane	<1.0		1.0	1.0	ug/L			02/04/13 18:39	1
Chloroform	<0.14		1.0	0.14	ug/L			02/04/13 18:39	1
Chloromethane	<0.33		1.0	0.33	ug/L			02/04/13 18:39	1
2-Chloro-1,3-butadiene	<0.30		1.0	0.30	ug/L			02/04/13 18:39	1
3-Chloro-1-propene	<0.20		1.0	0.20	ug/L			02/04/13 18:39	1
Chlorodibromomethane	<0.10		1.0	0.10	ug/L			02/04/13 18:39	1
1,1,1,2-Tetrachloroethane	<0.33		1.0	0.33	ug/L			02/04/13 18:39	1
1,2-Dibromo-3-Chloropropane	<0.44		1.0	0.44	ug/L			02/04/13 18:39	1
Ethylene Dibromide	<0.25		1.0	0.25	ug/L			02/04/13 18:39	1
Dibromomethane	<0.20		1.0	0.20	ug/L			02/04/13 18:39	1
trans-1,4-Dichloro-2-butene	<0.50		2.0	0.50	ug/L			02/04/13 18:39	1
Dichlorodifluoromethane	<0.25		1.0	0.25	ug/L			02/04/13 18:39	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			02/04/13 18:39	1
1,2-Dichloroethane	<0.10		1.0	0.10	ug/L			02/04/13 18:39	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			02/04/13 18:39	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			02/04/13 18:39	1
trans-1,2-Dichloroethene	<0.20		1.0	0.20	ug/L			02/04/13 18:39	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			02/04/13 18:39	1
cis-1,3-Dichloropropene	<0.11		1.0	0.11	ug/L			02/04/13 18:39	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			02/04/13 18:39	1
<b>Ethylbenzene</b>	<b>0.36</b>	<b>J</b>	1.0	0.11	ug/L			02/04/13 18:39	1
Ethyl methacrylate	<0.25		1.0	0.25	ug/L			02/04/13 18:39	1
2-Hexanone	<1.0		10	1.0	ug/L			02/04/13 18:39	1
Iodomethane	<1.0		5.0	1.0	ug/L			02/04/13 18:39	1
Isobutyl alcohol	<11		40	11	ug/L			02/04/13 18:39	1
Methacrylonitrile	<3.3		20	3.3	ug/L			02/04/13 18:39	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			02/04/13 18:39	1
Methyl methacrylate	<0.48		1.0	0.48	ug/L			02/04/13 18:39	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			02/04/13 18:39	1
Pentachloroethane	<1.2		5.0	1.2	ug/L			02/04/13 18:39	1
Propionitrile	<4.6		20	4.6	ug/L			02/04/13 18:39	1
Styrene	<0.11		1.0	0.11	ug/L			02/04/13 18:39	1
1,1,2,2-Tetrachloroethane	<0.18		1.0	0.18	ug/L			02/04/13 18:39	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			02/04/13 18:39	1
<b>Toluene</b>	<b>19</b>		1.0	0.33	ug/L			02/04/13 18:39	1
1,1,1-Trichloroethane	<0.50		1.0	0.50	ug/L			02/04/13 18:39	1
1,1,2-Trichloroethane	<0.13		1.0	0.13	ug/L			02/04/13 18:39	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

Client Sample ID: HP-III-60A 20-26'

Lab Sample ID: 680-86980-2

Date Collected: 01/30/13 11:52

Matrix: Water

Date Received: 01/31/13 09:42

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	<0.13		1.0	0.13	ug/L			02/04/13 18:39	1
Trichlorofluoromethane	<0.25		1.0	0.25	ug/L			02/04/13 18:39	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			02/04/13 18:39	1
Vinyl acetate	<0.28	*	2.0	0.28	ug/L			02/04/13 18:39	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			02/04/13 18:39	1
<b>Xylenes, Total</b>	<b>0.89</b>	<b>J</b>	2.0	0.20	ug/L			02/04/13 18:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	107		70 - 130		02/04/13 18:39	1
Dibromofluoromethane	105		70 - 130		02/04/13 18:39	1
Toluene-d8 (Surr)	100		70 - 130		02/04/13 18:39	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	<0.50		5.0	0.50	ug/L		02/01/13 14:58	02/11/13 08:41	1
Toxaphene, TAUC, Parlar 11-69	2.8	J	5.0	0.50	ug/L		02/01/13 14:58	02/11/13 08:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	11	X	22 - 130				02/01/13 14:58	02/11/13 08:41	1
DCB Decachlorobiphenyl	5	p X	22 - 130				02/01/13 14:58	02/11/13 08:41	1
Tetrachloro-m-xylene	40	X	53 - 130				02/01/13 14:58	02/11/13 08:41	1
Tetrachloro-m-xylene	39	X	53 - 130				02/01/13 14:58	02/11/13 08:41	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

Client Sample ID: HP-III-60B 50-56'

Lab Sample ID: 680-86980-3

Date Collected: 01/30/13 13:27

Matrix: Water

Date Received: 01/31/13 09:42

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			02/04/13 19:01	1
Acetonitrile	<10		40	10	ug/L			02/04/13 19:01	1
Acrolein	<7.4		20	7.4	ug/L			02/04/13 19:01	1
Acrylonitrile	<7.2		20	7.2	ug/L			02/04/13 19:01	1
<b>Benzene</b>	<b>2.9</b>		1.0	0.25	ug/L			02/04/13 19:01	1
Dichlorobromomethane	<0.25		1.0	0.25	ug/L			02/04/13 19:01	1
Bromoform	<0.50		1.0	0.50	ug/L			02/04/13 19:01	1
Bromomethane	<0.80		1.0	0.80	ug/L			02/04/13 19:01	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			02/04/13 19:01	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			02/04/13 19:01	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			02/04/13 19:01	1
<b>Chlorobenzene</b>	<b>0.36 J</b>		1.0	0.25	ug/L			02/04/13 19:01	1
Chloroethane	<1.0		1.0	1.0	ug/L			02/04/13 19:01	1
Chloroform	<0.14		1.0	0.14	ug/L			02/04/13 19:01	1
Chloromethane	<0.33		1.0	0.33	ug/L			02/04/13 19:01	1
2-Chloro-1,3-butadiene	<0.30		1.0	0.30	ug/L			02/04/13 19:01	1
3-Chloro-1-propene	<0.20		1.0	0.20	ug/L			02/04/13 19:01	1
Chlorodibromomethane	<0.10		1.0	0.10	ug/L			02/04/13 19:01	1
1,1,1,2-Tetrachloroethane	<0.33		1.0	0.33	ug/L			02/04/13 19:01	1
1,2-Dibromo-3-Chloropropane	<0.44		1.0	0.44	ug/L			02/04/13 19:01	1
Ethylene Dibromide	<0.25		1.0	0.25	ug/L			02/04/13 19:01	1
Dibromomethane	<0.20		1.0	0.20	ug/L			02/04/13 19:01	1
trans-1,4-Dichloro-2-butene	<0.50		2.0	0.50	ug/L			02/04/13 19:01	1
Dichlorodifluoromethane	<0.25		1.0	0.25	ug/L			02/04/13 19:01	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			02/04/13 19:01	1
1,2-Dichloroethane	<0.10		1.0	0.10	ug/L			02/04/13 19:01	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			02/04/13 19:01	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			02/04/13 19:01	1
trans-1,2-Dichloroethene	<0.20		1.0	0.20	ug/L			02/04/13 19:01	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			02/04/13 19:01	1
cis-1,3-Dichloropropene	<0.11		1.0	0.11	ug/L			02/04/13 19:01	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			02/04/13 19:01	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			02/04/13 19:01	1
Ethyl methacrylate	<0.25		1.0	0.25	ug/L			02/04/13 19:01	1
2-Hexanone	<1.0		10	1.0	ug/L			02/04/13 19:01	1
Iodomethane	<1.0		5.0	1.0	ug/L			02/04/13 19:01	1
Isobutyl alcohol	<11		40	11	ug/L			02/04/13 19:01	1
Methacrylonitrile	<3.3		20	3.3	ug/L			02/04/13 19:01	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			02/04/13 19:01	1
Methyl methacrylate	<0.48		1.0	0.48	ug/L			02/04/13 19:01	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			02/04/13 19:01	1
Pentachloroethane	<1.2		5.0	1.2	ug/L			02/04/13 19:01	1
Propionitrile	<4.6		20	4.6	ug/L			02/04/13 19:01	1
Styrene	<0.11		1.0	0.11	ug/L			02/04/13 19:01	1
1,1,2,2-Tetrachloroethane	<0.18		1.0	0.18	ug/L			02/04/13 19:01	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			02/04/13 19:01	1
<b>Toluene</b>	<b>2.0</b>		1.0	0.33	ug/L			02/04/13 19:01	1
1,1,1-Trichloroethane	<0.50		1.0	0.50	ug/L			02/04/13 19:01	1
1,1,2-Trichloroethane	<0.13		1.0	0.13	ug/L			02/04/13 19:01	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

Client Sample ID: HP-III-60B 50-56'

Lab Sample ID: 680-86980-3

Date Collected: 01/30/13 13:27

Matrix: Water

Date Received: 01/31/13 09:42

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	<0.13		1.0	0.13	ug/L			02/04/13 19:01	1
Trichlorofluoromethane	<0.25		1.0	0.25	ug/L			02/04/13 19:01	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			02/04/13 19:01	1
Vinyl acetate	<0.28	*	2.0	0.28	ug/L			02/04/13 19:01	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			02/04/13 19:01	1
<b>Xylenes, Total</b>	<b>0.26</b>	<b>J</b>	2.0	0.20	ug/L			02/04/13 19:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	106		70 - 130		02/04/13 19:01	1
Dibromofluoromethane	103		70 - 130		02/04/13 19:01	1
Toluene-d8 (Surr)	99		70 - 130		02/04/13 19:01	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	<0.50		5.0	0.50	ug/L		02/01/13 14:58	02/11/13 00:36	1
Toxaphene, TAUC, Parlar 11-69	<0.50		5.0	0.50	ug/L		02/01/13 14:58	02/11/13 00:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	23		22 - 130				02/01/13 14:58	02/11/13 00:36	1
DCB Decachlorobiphenyl	22		22 - 130				02/01/13 14:58	02/11/13 00:36	1
Tetrachloro-m-xylene	58		53 - 130				02/01/13 14:58	02/11/13 00:36	1
Tetrachloro-m-xylene	57		53 - 130				02/01/13 14:58	02/11/13 00:36	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

Client Sample ID: HP-III-60C 75-86'

Lab Sample ID: 680-86980-4

Date Collected: 01/30/13 15:32

Matrix: Water

Date Received: 01/31/13 09:42

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<25		130	25	ug/L			02/05/13 13:56	5
Acetonitrile	<50		200	50	ug/L			02/05/13 13:56	5
Acrolein	<37		100	37	ug/L			02/05/13 13:56	5
Acrylonitrile	<36		100	36	ug/L			02/05/13 13:56	5
<b>Benzene</b>	<b>710</b>		5.0	1.3	ug/L			02/05/13 13:56	5
Dichlorobromomethane	<1.3		5.0	1.3	ug/L			02/05/13 13:56	5
Bromoform	<2.5		5.0	2.5	ug/L			02/05/13 13:56	5
Bromomethane	<4.0		5.0	4.0	ug/L			02/05/13 13:56	5
2-Butanone (MEK)	<5.0		50	5.0	ug/L			02/05/13 13:56	5
Carbon disulfide	<3.0		10	3.0	ug/L			02/05/13 13:56	5
Carbon tetrachloride	<2.5		5.0	2.5	ug/L			02/05/13 13:56	5
<b>Chlorobenzene</b>	<b>280</b>		5.0	1.3	ug/L			02/05/13 13:56	5
Chloroethane	<5.0		5.0	5.0	ug/L			02/05/13 13:56	5
Chloroform	<0.70		5.0	0.70	ug/L			02/05/13 13:56	5
Chloromethane	<1.7		5.0	1.7	ug/L			02/05/13 13:56	5
2-Chloro-1,3-butadiene	<1.5		5.0	1.5	ug/L			02/05/13 13:56	5
3-Chloro-1-propene	<1.0		5.0	1.0	ug/L			02/05/13 13:56	5
Chlorodibromomethane	<0.50		5.0	0.50	ug/L			02/05/13 13:56	5
1,1,1,2-Tetrachloroethane	<1.7		5.0	1.7	ug/L			02/05/13 13:56	5
1,2-Dibromo-3-Chloropropane	<2.2		5.0	2.2	ug/L			02/05/13 13:56	5
Ethylene Dibromide	<1.3		5.0	1.3	ug/L			02/05/13 13:56	5
Dibromomethane	<1.0		5.0	1.0	ug/L			02/05/13 13:56	5
trans-1,4-Dichloro-2-butene	<2.5		10	2.5	ug/L			02/05/13 13:56	5
Dichlorodifluoromethane	<1.3		5.0	1.3	ug/L			02/05/13 13:56	5
1,1-Dichloroethane	<1.3	*	5.0	1.3	ug/L			02/05/13 13:56	5
1,2-Dichloroethane	<0.50		5.0	0.50	ug/L			02/05/13 13:56	5
1,1-Dichloroethene	<0.55		5.0	0.55	ug/L			02/05/13 13:56	5
<b>cis-1,2-Dichloroethene</b>	<b>2.1</b>	J	5.0	0.75	ug/L			02/05/13 13:56	5
trans-1,2-Dichloroethene	<1.0		5.0	1.0	ug/L			02/05/13 13:56	5
1,2-Dichloropropane	<0.65		5.0	0.65	ug/L			02/05/13 13:56	5
cis-1,3-Dichloropropene	<0.55		5.0	0.55	ug/L			02/05/13 13:56	5
trans-1,3-Dichloropropene	<1.1		5.0	1.1	ug/L			02/05/13 13:56	5
<b>Ethylbenzene</b>	<b>15</b>		5.0	0.55	ug/L			02/05/13 13:56	5
Ethyl methacrylate	<1.3		5.0	1.3	ug/L			02/05/13 13:56	5
2-Hexanone	<5.0		50	5.0	ug/L			02/05/13 13:56	5
Iodomethane	<5.0		25	5.0	ug/L			02/05/13 13:56	5
Isobutyl alcohol	<55		200	55	ug/L			02/05/13 13:56	5
Methacrylonitrile	<17		100	17	ug/L			02/05/13 13:56	5
Methylene Chloride	<5.0		25	5.0	ug/L			02/05/13 13:56	5
Methyl methacrylate	<2.4		5.0	2.4	ug/L			02/05/13 13:56	5
4-Methyl-2-pentanone (MIBK)	<5.0		50	5.0	ug/L			02/05/13 13:56	5
Pentachloroethane	<6.0		25	6.0	ug/L			02/05/13 13:56	5
Propionitrile	<23		100	23	ug/L			02/05/13 13:56	5
Styrene	<0.55		5.0	0.55	ug/L			02/05/13 13:56	5
1,1,2,2-Tetrachloroethane	<0.90		5.0	0.90	ug/L			02/05/13 13:56	5
Tetrachloroethene	<0.75		5.0	0.75	ug/L			02/05/13 13:56	5
<b>Toluene</b>	<b>22</b>		5.0	1.7	ug/L			02/05/13 13:56	5
1,1,1-Trichloroethane	<2.5		5.0	2.5	ug/L			02/05/13 13:56	5
1,1,2-Trichloroethane	<0.65		5.0	0.65	ug/L			02/05/13 13:56	5

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

Client Sample ID: HP-III-60C 75-86'

Lab Sample ID: 680-86980-4

Date Collected: 01/30/13 15:32

Matrix: Water

Date Received: 01/31/13 09:42

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	<0.65		5.0	0.65	ug/L			02/05/13 13:56	5
Trichlorofluoromethane	<1.3		5.0	1.3	ug/L			02/05/13 13:56	5
1,2,3-Trichloropropane	<2.1		5.0	2.1	ug/L			02/05/13 13:56	5
Vinyl acetate	<1.4	*	10	1.4	ug/L			02/05/13 13:56	5
Vinyl chloride	<0.90		5.0	0.90	ug/L			02/05/13 13:56	5
<b>Xylenes, Total</b>	<b>8.3</b>	<b>J</b>	10	1.0	ug/L			02/05/13 13:56	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	111		70 - 130		02/05/13 13:56	5
Dibromofluoromethane	104		70 - 130		02/05/13 13:56	5
Toluene-d8 (Surr)	99		70 - 130		02/05/13 13:56	5

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene, Technical	<0.53		5.3	0.53	ug/L		02/01/13 14:58	02/11/13 09:53	1
Toxaphene, TAUC, Parlar 11-69	4.5	J p	5.3	0.53	ug/L		02/01/13 14:58	02/11/13 09:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	11	X	22 - 130				02/01/13 14:58	02/11/13 09:53	1
DCB Decachlorobiphenyl	8	X	22 - 130				02/01/13 14:58	02/11/13 09:53	1
Tetrachloro-m-xylene	73		53 - 130				02/01/13 14:58	02/11/13 09:53	1
Tetrachloro-m-xylene	99		53 - 130				02/01/13 14:58	02/11/13 09:53	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 680-86980-5**

**Date Collected: 01/30/13 00:00**

**Matrix: Water**

**Date Received: 01/31/13 09:42**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			02/04/13 17:33	1
Acetonitrile	<10		40	10	ug/L			02/04/13 17:33	1
Acrolein	<7.4		20	7.4	ug/L			02/04/13 17:33	1
Acrylonitrile	<7.2		20	7.2	ug/L			02/04/13 17:33	1
Benzene	<0.25		1.0	0.25	ug/L			02/04/13 17:33	1
Dichlorobromomethane	<0.25		1.0	0.25	ug/L			02/04/13 17:33	1
Bromoform	<0.50		1.0	0.50	ug/L			02/04/13 17:33	1
Bromomethane	<0.80		1.0	0.80	ug/L			02/04/13 17:33	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			02/04/13 17:33	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			02/04/13 17:33	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			02/04/13 17:33	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			02/04/13 17:33	1
Chloroethane	<1.0		1.0	1.0	ug/L			02/04/13 17:33	1
Chloroform	<0.14		1.0	0.14	ug/L			02/04/13 17:33	1
Chloromethane	<0.33		1.0	0.33	ug/L			02/04/13 17:33	1
2-Chloro-1,3-butadiene	<0.30		1.0	0.30	ug/L			02/04/13 17:33	1
3-Chloro-1-propene	<0.20		1.0	0.20	ug/L			02/04/13 17:33	1
Chlorodibromomethane	<0.10		1.0	0.10	ug/L			02/04/13 17:33	1
1,1,1,2-Tetrachloroethane	<0.33		1.0	0.33	ug/L			02/04/13 17:33	1
1,2-Dibromo-3-Chloropropane	<0.44		1.0	0.44	ug/L			02/04/13 17:33	1
Ethylene Dibromide	<0.25		1.0	0.25	ug/L			02/04/13 17:33	1
Dibromomethane	<0.20		1.0	0.20	ug/L			02/04/13 17:33	1
trans-1,4-Dichloro-2-butene	<0.50		2.0	0.50	ug/L			02/04/13 17:33	1
Dichlorodifluoromethane	<0.25		1.0	0.25	ug/L			02/04/13 17:33	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			02/04/13 17:33	1
1,2-Dichloroethane	<0.10		1.0	0.10	ug/L			02/04/13 17:33	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			02/04/13 17:33	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			02/04/13 17:33	1
trans-1,2-Dichloroethene	<0.20		1.0	0.20	ug/L			02/04/13 17:33	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			02/04/13 17:33	1
cis-1,3-Dichloropropene	<0.11		1.0	0.11	ug/L			02/04/13 17:33	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			02/04/13 17:33	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			02/04/13 17:33	1
Ethyl methacrylate	<0.25		1.0	0.25	ug/L			02/04/13 17:33	1
2-Hexanone	<1.0		10	1.0	ug/L			02/04/13 17:33	1
Iodomethane	<1.0		5.0	1.0	ug/L			02/04/13 17:33	1
Isobutyl alcohol	<11		40	11	ug/L			02/04/13 17:33	1
Methacrylonitrile	<3.3		20	3.3	ug/L			02/04/13 17:33	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			02/04/13 17:33	1
Methyl methacrylate	<0.48		1.0	0.48	ug/L			02/04/13 17:33	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			02/04/13 17:33	1
Pentachloroethane	<1.2		5.0	1.2	ug/L			02/04/13 17:33	1
Propionitrile	<4.6		20	4.6	ug/L			02/04/13 17:33	1
Styrene	<0.11		1.0	0.11	ug/L			02/04/13 17:33	1
1,1,2,2-Tetrachloroethane	<0.18		1.0	0.18	ug/L			02/04/13 17:33	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			02/04/13 17:33	1
Toluene	<0.33		1.0	0.33	ug/L			02/04/13 17:33	1
1,1,1-Trichloroethane	<0.50		1.0	0.50	ug/L			02/04/13 17:33	1
1,1,2-Trichloroethane	<0.13		1.0	0.13	ug/L			02/04/13 17:33	1

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# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 680-86980-5**

**Date Collected: 01/30/13 00:00**

**Matrix: Water**

**Date Received: 01/31/13 09:42**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	<0.13		1.0	0.13	ug/L			02/04/13 17:33	1
Trichlorofluoromethane	<0.25		1.0	0.25	ug/L			02/04/13 17:33	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			02/04/13 17:33	1
Vinyl acetate	<0.28	*	2.0	0.28	ug/L			02/04/13 17:33	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			02/04/13 17:33	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			02/04/13 17:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	108		70 - 130		02/04/13 17:33	1
Dibromofluoromethane	101		70 - 130		02/04/13 17:33	1
Toluene-d8 (Surr)	100		70 - 130		02/04/13 17:33	1



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-86980-1

Project/Site: Ashland Brunswick Groundwater RFI

**Client Sample ID: Field Equipment Blank**

**Lab Sample ID: 680-86980-6**

**Date Collected: 01/30/13 11:10**

**Matrix: Water**

**Date Received: 01/31/13 09:42**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			02/04/13 17:55	1
Acetonitrile	<10		40	10	ug/L			02/04/13 17:55	1
Acrolein	<7.4		20	7.4	ug/L			02/04/13 17:55	1
Acrylonitrile	<7.2		20	7.2	ug/L			02/04/13 17:55	1
Benzene	<0.25		1.0	0.25	ug/L			02/04/13 17:55	1
Dichlorobromomethane	<0.25		1.0	0.25	ug/L			02/04/13 17:55	1
Bromoform	<0.50		1.0	0.50	ug/L			02/04/13 17:55	1
Bromomethane	<0.80		1.0	0.80	ug/L			02/04/13 17:55	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			02/04/13 17:55	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			02/04/13 17:55	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			02/04/13 17:55	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			02/04/13 17:55	1
Chloroethane	<1.0		1.0	1.0	ug/L			02/04/13 17:55	1
Chloroform	<0.14		1.0	0.14	ug/L			02/04/13 17:55	1
Chloromethane	<0.33		1.0	0.33	ug/L			02/04/13 17:55	1
2-Chloro-1,3-butadiene	<0.30		1.0	0.30	ug/L			02/04/13 17:55	1
3-Chloro-1-propene	<0.20		1.0	0.20	ug/L			02/04/13 17:55	1
Chlorodibromomethane	<0.10		1.0	0.10	ug/L			02/04/13 17:55	1
1,1,1,2-Tetrachloroethane	<0.33		1.0	0.33	ug/L			02/04/13 17:55	1
1,2-Dibromo-3-Chloropropane	<0.44		1.0	0.44	ug/L			02/04/13 17:55	1
Ethylene Dibromide	<0.25		1.0	0.25	ug/L			02/04/13 17:55	1
Dibromomethane	<0.20		1.0	0.20	ug/L			02/04/13 17:55	1
trans-1,4-Dichloro-2-butene	<0.50		2.0	0.50	ug/L			02/04/13 17:55	1
Dichlorodifluoromethane	<0.25		1.0	0.25	ug/L			02/04/13 17:55	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			02/04/13 17:55	1
1,2-Dichloroethane	<0.10		1.0	0.10	ug/L			02/04/13 17:55	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			02/04/13 17:55	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			02/04/13 17:55	1
trans-1,2-Dichloroethene	<0.20		1.0	0.20	ug/L			02/04/13 17:55	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			02/04/13 17:55	1
cis-1,3-Dichloropropene	<0.11		1.0	0.11	ug/L			02/04/13 17:55	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			02/04/13 17:55	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			02/04/13 17:55	1
Ethyl methacrylate	<0.25		1.0	0.25	ug/L			02/04/13 17:55	1
2-Hexanone	<1.0		10	1.0	ug/L			02/04/13 17:55	1
Iodomethane	<1.0		5.0	1.0	ug/L			02/04/13 17:55	1
Isobutyl alcohol	<11		40	11	ug/L			02/04/13 17:55	1
Methacrylonitrile	<3.3		20	3.3	ug/L			02/04/13 17:55	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			02/04/13 17:55	1
Methyl methacrylate	<0.48		1.0	0.48	ug/L			02/04/13 17:55	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			02/04/13 17:55	1
Pentachloroethane	<1.2		5.0	1.2	ug/L			02/04/13 17:55	1
Propionitrile	<4.6		20	4.6	ug/L			02/04/13 17:55	1
Styrene	<0.11		1.0	0.11	ug/L			02/04/13 17:55	1
1,1,2,2-Tetrachloroethane	<0.18		1.0	0.18	ug/L			02/04/13 17:55	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			02/04/13 17:55	1
Toluene	<0.33		1.0	0.33	ug/L			02/04/13 17:55	1
1,1,1-Trichloroethane	<0.50		1.0	0.50	ug/L			02/04/13 17:55	1
1,1,2-Trichloroethane	<0.13		1.0	0.13	ug/L			02/04/13 17:55	1

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# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-86980-1

Project/Site: Ashland Brunswick Groundwater RFI

**Client Sample ID: Field Equipment Blank**

**Lab Sample ID: 680-86980-6**

**Date Collected: 01/30/13 11:10**

**Matrix: Water**

**Date Received: 01/31/13 09:42**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	<0.13		1.0	0.13	ug/L			02/04/13 17:55	1
Trichlorofluoromethane	<0.25		1.0	0.25	ug/L			02/04/13 17:55	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			02/04/13 17:55	1
Vinyl acetate	<0.28	*	2.0	0.28	ug/L			02/04/13 17:55	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			02/04/13 17:55	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			02/04/13 17:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	87		70 - 130		02/04/13 17:55	1
Dibromofluoromethane	72		70 - 130		02/04/13 17:55	1
Toluene-d8 (Surr)	90		70 - 130		02/04/13 17:55	1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0056		0.049	0.0056	ug/L		02/01/13 14:58	02/11/13 10:18	1
gamma-BHC (Lindane)	<0.0058		0.049	0.0058	ug/L		02/01/13 14:58	02/11/13 10:18	1
Toxaphene, Technical	<0.49		4.9	0.49	ug/L		02/01/13 14:58	02/11/13 10:18	1
Toxaphene, TAUC, Parlar 11-69	<0.49		4.9	0.49	ug/L		02/01/13 14:58	02/11/13 10:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	6	X	22 - 130	02/01/13 14:58	02/11/13 10:18	1
DCB Decachlorobiphenyl	3	p X	22 - 130	02/01/13 14:58	02/11/13 10:18	1
Tetrachloro-m-xylene	19	X	53 - 130	02/01/13 14:58	02/11/13 10:18	1
Tetrachloro-m-xylene	18	X	53 - 130	02/01/13 14:58	02/11/13 10:18	1

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## Surrogate Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-86980-1

Project/Site: Ashland Brunswick Groundwater RFI

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (70-130)	DBFM (70-130)	TOL (70-130)
680-86980-1	HP-III-59 89-99'	111	105	97
680-86980-2	HP-III-60A 20-26'	107	105	100
680-86980-3	HP-III-60B 50-56'	106	103	99
680-86980-4	HP-III-60C 75-86'	111	104	99
680-86980-5	Trip Blank	108	101	100
680-86980-6	Field Equipment Blank	87	72	90
LCS 680-265011/4	Lab Control Sample	102	113	107
LCS 680-265220/4	Lab Control Sample	101	112	108
LCSD 680-265011/8	Lab Control Sample Dup	102	112	107
LCSD 680-265220/6	Lab Control Sample Dup	103	114	108
MB 680-265011/7	Method Blank	110	106	99
MB 680-265220/7	Method Blank	110	105	99

**Surrogate Legend**

BFB = 4-Bromofluorobenzene  
 DBFM = Dibromofluoromethane  
 TOL = Toluene-d8 (Surr)

### Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (22-130)	DCB2 (22-130)	TCX1 (53-130)	TCX2 (53-130)
680-86980-1	HP-III-59 89-99'	14 X	9 p X	42 X	33 X
680-86980-1 MS	HP-III-59 89-99'	13 X	10 X	37 X	29 X
680-86980-1 MSD	HP-III-59 89-99'	10 X	8 X	38 X	31 X
680-86980-2	HP-III-60A 20-26'	11 X	5 p X	40 X	39 X
680-86980-2 MS	HP-III-60A 20-26'	9 X	7 X	56	54
680-86980-2 MSD	HP-III-60A 20-26'	8 X	6 X	37 X	35 X
680-86980-3	HP-III-60B 50-56'	23	22	58	57
680-86980-4	HP-III-60C 75-86'	11 X	8 X	73	99
680-86980-6	Field Equipment Blank	6 X	3 p X	19 X	18 X
LCS 680-264748/11-A	Lab Control Sample	69	57	62	60
LCS 680-264748/17-A	Lab Control Sample	51	51	70	69
MB 680-264748/10-A	Method Blank	39	39	72	71

**Surrogate Legend**

DCB = DCB Decachlorobiphenyl  
 TCX = Tetrachloro-m-xylene



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-86980-1

Project/Site: Ashland Brunswick Groundwater RFI

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-265011/7

Matrix: Water

Analysis Batch: 265011

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			02/04/13 12:06	1
Acetonitrile	<10		40	10	ug/L			02/04/13 12:06	1
Acrolein	<7.4		20	7.4	ug/L			02/04/13 12:06	1
Acrylonitrile	<7.2		20	7.2	ug/L			02/04/13 12:06	1
Benzene	<0.25		1.0	0.25	ug/L			02/04/13 12:06	1
Dichlorobromomethane	<0.25		1.0	0.25	ug/L			02/04/13 12:06	1
Bromoform	<0.50		1.0	0.50	ug/L			02/04/13 12:06	1
Bromomethane	<0.80		1.0	0.80	ug/L			02/04/13 12:06	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			02/04/13 12:06	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			02/04/13 12:06	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			02/04/13 12:06	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			02/04/13 12:06	1
Chloroethane	<1.0		1.0	1.0	ug/L			02/04/13 12:06	1
Chloroform	<0.14		1.0	0.14	ug/L			02/04/13 12:06	1
Chloromethane	<0.33		1.0	0.33	ug/L			02/04/13 12:06	1
2-Chloro-1,3-butadiene	<0.30		1.0	0.30	ug/L			02/04/13 12:06	1
3-Chloro-1-propene	<0.20		1.0	0.20	ug/L			02/04/13 12:06	1
Chlorodibromomethane	<0.10		1.0	0.10	ug/L			02/04/13 12:06	1
1,1,1,2-Tetrachloroethane	<0.33		1.0	0.33	ug/L			02/04/13 12:06	1
1,2-Dibromo-3-Chloropropane	<0.44		1.0	0.44	ug/L			02/04/13 12:06	1
Ethylene Dibromide	<0.25		1.0	0.25	ug/L			02/04/13 12:06	1
Dibromomethane	<0.20		1.0	0.20	ug/L			02/04/13 12:06	1
trans-1,4-Dichloro-2-butene	<0.50		2.0	0.50	ug/L			02/04/13 12:06	1
Dichlorodifluoromethane	<0.25		1.0	0.25	ug/L			02/04/13 12:06	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			02/04/13 12:06	1
1,2-Dichloroethane	<0.10		1.0	0.10	ug/L			02/04/13 12:06	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			02/04/13 12:06	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			02/04/13 12:06	1
trans-1,2-Dichloroethene	<0.20		1.0	0.20	ug/L			02/04/13 12:06	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			02/04/13 12:06	1
cis-1,3-Dichloropropene	<0.11		1.0	0.11	ug/L			02/04/13 12:06	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			02/04/13 12:06	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			02/04/13 12:06	1
Ethyl methacrylate	<0.25		1.0	0.25	ug/L			02/04/13 12:06	1
2-Hexanone	<1.0		10	1.0	ug/L			02/04/13 12:06	1
Iodomethane	<1.0		5.0	1.0	ug/L			02/04/13 12:06	1
Isobutyl alcohol	<11		40	11	ug/L			02/04/13 12:06	1
Methacrylonitrile	<3.3		20	3.3	ug/L			02/04/13 12:06	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			02/04/13 12:06	1
Methyl methacrylate	<0.48		1.0	0.48	ug/L			02/04/13 12:06	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			02/04/13 12:06	1
Pentachloroethane	<1.2		5.0	1.2	ug/L			02/04/13 12:06	1
Propionitrile	<4.6		20	4.6	ug/L			02/04/13 12:06	1
Styrene	<0.11		1.0	0.11	ug/L			02/04/13 12:06	1
1,1,2,2-Tetrachloroethane	<0.18		1.0	0.18	ug/L			02/04/13 12:06	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			02/04/13 12:06	1
Toluene	<0.33		1.0	0.33	ug/L			02/04/13 12:06	1
1,1,1-Trichloroethane	<0.50		1.0	0.50	ug/L			02/04/13 12:06	1

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-265011/7

Matrix: Water

Analysis Batch: 265011

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	<0.13		1.0	0.13	ug/L			02/04/13 12:06	1
Trichloroethene	<0.13		1.0	0.13	ug/L			02/04/13 12:06	1
Trichlorofluoromethane	<0.25		1.0	0.25	ug/L			02/04/13 12:06	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			02/04/13 12:06	1
Vinyl acetate	<0.28		2.0	0.28	ug/L			02/04/13 12:06	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			02/04/13 12:06	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			02/04/13 12:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	110		70 - 130		02/04/13 12:06	1
Dibromofluoromethane	106		70 - 130		02/04/13 12:06	1
Toluene-d8 (Surr)	99		70 - 130		02/04/13 12:06	1

Lab Sample ID: LCS 680-265011/4

Matrix: Water

Analysis Batch: 265011

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	94.8		ug/L		95	39 - 162
Benzene	50.0	50.6		ug/L		101	74 - 123
Dichlorobromomethane	50.0	49.9		ug/L		100	72 - 129
Bromoform	50.0	56.9		ug/L		114	60 - 134
Bromomethane	50.0	48.4		ug/L		97	10 - 171
2-Butanone (MEK)	100	96.5		ug/L		97	55 - 142
Carbon disulfide	50.0	57.7		ug/L		115	63 - 142
Carbon tetrachloride	50.0	51.0		ug/L		102	70 - 131
Chlorobenzene	50.0	50.6		ug/L		101	79 - 120
Chloroethane	50.0	55.8		ug/L		112	47 - 148
Chloroform	50.0	55.1		ug/L		110	76 - 128
Chloromethane	50.0	56.5		ug/L		113	47 - 151
Chlorodibromomethane	50.0	53.4		ug/L		107	63 - 134
1,1,1,2-Tetrachloroethane	50.0	47.6		ug/L		95	68 - 132
1,2-Dibromo-3-Chloropropane	50.0	53.0		ug/L		106	57 - 126
Ethylene Dibromide	50.0	56.4		ug/L		113	75 - 127
Dibromomethane	50.0	51.7		ug/L		103	75 - 122
Dichlorodifluoromethane	50.0	59.4		ug/L		119	41 - 165
1,1-Dichloroethane	50.0	60.0		ug/L		120	69 - 132
1,2-Dichloroethane	50.0	46.7		ug/L		93	75 - 120
1,1-Dichloroethene	50.0	58.8		ug/L		118	73 - 134
cis-1,2-Dichloroethene	50.0	55.9		ug/L		112	78 - 127
trans-1,2-Dichloroethene	50.0	55.7		ug/L		111	78 - 130
1,2-Dichloropropane	50.0	51.0		ug/L		102	71 - 126
cis-1,3-Dichloropropene	50.0	52.8		ug/L		106	73 - 128
trans-1,3-Dichloropropene	50.0	54.4		ug/L		109	72 - 127
Ethylbenzene	50.0	50.9		ug/L		102	78 - 125
2-Hexanone	100	88.9		ug/L		89	52 - 149
Methylene Chloride	50.0	56.0		ug/L		112	79 - 124
4-Methyl-2-pentanone (MIBK)	100	98.6		ug/L		99	51 - 143

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-86980-1

Project/Site: Ashland Brunswick Groundwater RFI

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-265011/4

Matrix: Water

Analysis Batch: 265011

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Styrene	50.0	50.7		ug/L		101	75 - 129
1,1,2,2-Tetrachloroethane	50.0	47.4		ug/L		95	71 - 127
Tetrachloroethene	50.0	49.6		ug/L		99	77 - 128
Toluene	50.0	53.2		ug/L		106	77 - 125
1,1,1-Trichloroethane	50.0	59.5		ug/L		119	76 - 126
1,1,2-Trichloroethane	50.0	50.6		ug/L		101	69 - 127
Trichloroethene	50.0	49.6		ug/L		99	80 - 120
Trichlorofluoromethane	50.0	53.0		ug/L		106	66 - 144
1,2,3-Trichloropropane	50.0	50.7		ug/L		101	74 - 126
Vinyl acetate	100	221 *		ug/L		221	10 - 200
Vinyl chloride	50.0	55.9		ug/L		112	58 - 141
Xylenes, Total	150	153		ug/L		102	80 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	102		70 - 130
Dibromofluoromethane	113		70 - 130
Toluene-d8 (Surr)	107		70 - 130

Lab Sample ID: LCSD 680-265011/8

Matrix: Water

Analysis Batch: 265011

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	95.0		ug/L		95	39 - 162	0	50
Benzene	50.0	51.1		ug/L		102	74 - 123	1	30
Dichlorobromomethane	50.0	48.4		ug/L		97	72 - 129	3	30
Bromoform	50.0	54.2		ug/L		108	60 - 134	5	30
Bromomethane	50.0	52.4		ug/L		105	10 - 171	8	50
2-Butanone (MEK)	100	94.6		ug/L		95	55 - 142	2	30
Carbon disulfide	50.0	57.1		ug/L		114	63 - 142	1	30
Carbon tetrachloride	50.0	49.8		ug/L		100	70 - 131	2	30
Chlorobenzene	50.0	50.5		ug/L		101	79 - 120	0	30
Chloroethane	50.0	56.5		ug/L		113	47 - 148	1	40
Chloroform	50.0	55.2		ug/L		110	76 - 128	0	30
Chloromethane	50.0	53.6		ug/L		107	47 - 151	5	30
Chlorodibromomethane	50.0	50.8		ug/L		102	63 - 134	5	50
1,1,1,2-Tetrachloroethane	50.0	46.0		ug/L		92	68 - 132	3	30
1,2-Dibromo-3-Chloropropane	50.0	49.5		ug/L		99	57 - 126	7	50
Ethylene Dibromide	50.0	56.0		ug/L		112	75 - 127	1	30
Dibromomethane	50.0	51.2		ug/L		102	75 - 122	1	30
Dichlorodifluoromethane	50.0	62.3		ug/L		125	41 - 165	5	50
1,1-Dichloroethane	50.0	56.8		ug/L		114	69 - 132	5	30
1,2-Dichloroethane	50.0	47.1		ug/L		94	75 - 120	1	30
1,1-Dichloroethene	50.0	58.8		ug/L		118	73 - 134	0	30
cis-1,2-Dichloroethene	50.0	56.0		ug/L		112	78 - 127	0	30
trans-1,2-Dichloroethene	50.0	55.4		ug/L		111	78 - 130	0	30
1,2-Dichloropropane	50.0	50.6		ug/L		101	71 - 126	1	30
cis-1,3-Dichloropropene	50.0	51.6		ug/L		103	73 - 128	2	30

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-86980-1

Project/Site: Ashland Brunswick Groundwater RFI

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-265011/8

Matrix: Water

Analysis Batch: 265011

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,3-Dichloropropene	50.0	53.2		ug/L		106	72 - 127	2	50
Ethylbenzene	50.0	50.4		ug/L		101	78 - 125	1	30
2-Hexanone	100	86.7		ug/L		87	52 - 149	3	30
Methylene Chloride	50.0	54.7		ug/L		109	79 - 124	2	30
4-Methyl-2-pentanone (MIBK)	100	97.2		ug/L		97	51 - 143	1	30
Styrene	50.0	50.8		ug/L		102	75 - 129	0	30
1,1,2,2-Tetrachloroethane	50.0	47.0		ug/L		94	71 - 127	1	30
Tetrachloroethene	50.0	49.7		ug/L		99	77 - 128	0	30
Toluene	50.0	53.1		ug/L		106	77 - 125	0	30
1,1,1-Trichloroethane	50.0	58.7		ug/L		117	76 - 126	1	30
1,1,2-Trichloroethane	50.0	49.9		ug/L		100	69 - 127	1	30
Trichloroethene	50.0	49.7		ug/L		99	80 - 120	0	30
Trichlorofluoromethane	50.0	54.7		ug/L		109	66 - 144	3	30
1,2,3-Trichloropropane	50.0	49.3		ug/L		99	74 - 126	3	30
Vinyl acetate	100	205 *		ug/L		205	10 - 200	7	30
Vinyl chloride	50.0	54.4		ug/L		109	58 - 141	3	30
Xylenes, Total	150	152		ug/L		101	80 - 124	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	102		70 - 130
Dibromofluoromethane	112		70 - 130
Toluene-d8 (Surr)	107		70 - 130

Lab Sample ID: MB 680-265220/7

Matrix: Water

Analysis Batch: 265220

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			02/05/13 12:15	1
Acetonitrile	<10		40	10	ug/L			02/05/13 12:15	1
Acrolein	<7.4		20	7.4	ug/L			02/05/13 12:15	1
Acrylonitrile	<7.2		20	7.2	ug/L			02/05/13 12:15	1
Benzene	<0.25		1.0	0.25	ug/L			02/05/13 12:15	1
Dichlorobromomethane	<0.25		1.0	0.25	ug/L			02/05/13 12:15	1
Bromoform	<0.50		1.0	0.50	ug/L			02/05/13 12:15	1
Bromomethane	<0.80		1.0	0.80	ug/L			02/05/13 12:15	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			02/05/13 12:15	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			02/05/13 12:15	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			02/05/13 12:15	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			02/05/13 12:15	1
Chloroethane	<1.0		1.0	1.0	ug/L			02/05/13 12:15	1
Chloroform	<0.14		1.0	0.14	ug/L			02/05/13 12:15	1
Chloromethane	<0.33		1.0	0.33	ug/L			02/05/13 12:15	1
2-Chloro-1,3-butadiene	<0.30		1.0	0.30	ug/L			02/05/13 12:15	1
3-Chloro-1-propene	<0.20		1.0	0.20	ug/L			02/05/13 12:15	1
Chlorodibromomethane	<0.10		1.0	0.10	ug/L			02/05/13 12:15	1
1,1,1,2-Tetrachloroethane	<0.33		1.0	0.33	ug/L			02/05/13 12:15	1
1,2-Dibromo-3-Chloropropane	<0.44		1.0	0.44	ug/L			02/05/13 12:15	1

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-86980-1

Project/Site: Ashland Brunswick Groundwater RFI

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-265220/7

Matrix: Water

Analysis Batch: 265220

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	<0.25		1.0	0.25	ug/L			02/05/13 12:15	1
Dibromomethane	<0.20		1.0	0.20	ug/L			02/05/13 12:15	1
trans-1,4-Dichloro-2-butene	<0.50		2.0	0.50	ug/L			02/05/13 12:15	1
Dichlorodifluoromethane	<0.25		1.0	0.25	ug/L			02/05/13 12:15	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			02/05/13 12:15	1
1,2-Dichloroethane	<0.10		1.0	0.10	ug/L			02/05/13 12:15	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			02/05/13 12:15	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			02/05/13 12:15	1
trans-1,2-Dichloroethene	<0.20		1.0	0.20	ug/L			02/05/13 12:15	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			02/05/13 12:15	1
cis-1,3-Dichloropropene	<0.11		1.0	0.11	ug/L			02/05/13 12:15	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			02/05/13 12:15	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			02/05/13 12:15	1
Ethyl methacrylate	<0.25		1.0	0.25	ug/L			02/05/13 12:15	1
2-Hexanone	<1.0		10	1.0	ug/L			02/05/13 12:15	1
Iodomethane	<1.0		5.0	1.0	ug/L			02/05/13 12:15	1
Isobutyl alcohol	<11		40	11	ug/L			02/05/13 12:15	1
Methacrylonitrile	<3.3		20	3.3	ug/L			02/05/13 12:15	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			02/05/13 12:15	1
Methyl methacrylate	<0.48		1.0	0.48	ug/L			02/05/13 12:15	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			02/05/13 12:15	1
Pentachloroethane	<1.2		5.0	1.2	ug/L			02/05/13 12:15	1
Propionitrile	<4.6		20	4.6	ug/L			02/05/13 12:15	1
Styrene	<0.11		1.0	0.11	ug/L			02/05/13 12:15	1
1,1,2,2-Tetrachloroethane	<0.18		1.0	0.18	ug/L			02/05/13 12:15	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			02/05/13 12:15	1
Toluene	<0.33		1.0	0.33	ug/L			02/05/13 12:15	1
1,1,1-Trichloroethane	<0.50		1.0	0.50	ug/L			02/05/13 12:15	1
1,1,2-Trichloroethane	<0.13		1.0	0.13	ug/L			02/05/13 12:15	1
Trichloroethene	<0.13		1.0	0.13	ug/L			02/05/13 12:15	1
Trichlorofluoromethane	<0.25		1.0	0.25	ug/L			02/05/13 12:15	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			02/05/13 12:15	1
Vinyl acetate	<0.28		2.0	0.28	ug/L			02/05/13 12:15	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			02/05/13 12:15	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			02/05/13 12:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	110		70 - 130		02/05/13 12:15	1
Dibromofluoromethane	105		70 - 130		02/05/13 12:15	1
Toluene-d8 (Surr)	99		70 - 130		02/05/13 12:15	1

Lab Sample ID: LCS 680-265220/4

Matrix: Water

Analysis Batch: 265220

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	75.8		ug/L		76	39 - 162
Benzene	50.0	51.8		ug/L		104	74 - 123

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-265220/4

Matrix: Water

Analysis Batch: 265220

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorobromomethane	50.0	50.1		ug/L		100	72 - 129
Bromoform	50.0	57.2		ug/L		114	60 - 134
Bromomethane	50.0	67.7		ug/L		135	10 - 171
2-Butanone (MEK)	100	90.6		ug/L		91	55 - 142
Carbon disulfide	50.0	45.0		ug/L		90	63 - 142
Carbon tetrachloride	50.0	52.9		ug/L		106	70 - 131
Chlorobenzene	50.0	49.5		ug/L		99	79 - 120
Chloroethane	50.0	54.1		ug/L		108	47 - 148
Chloroform	50.0	55.3		ug/L		111	76 - 128
Chloromethane	50.0	48.3		ug/L		97	47 - 151
Chlorodibromomethane	50.0	53.2		ug/L		106	63 - 134
1,1,1,2-Tetrachloroethane	50.0	47.4		ug/L		95	68 - 132
1,2-Dibromo-3-Chloropropane	50.0	52.0		ug/L		104	57 - 126
Ethylene Dibromide	50.0	56.7		ug/L		113	75 - 127
Dibromomethane	50.0	52.3		ug/L		105	75 - 122
Dichlorodifluoromethane	50.0	57.6		ug/L		115	41 - 165
1,1-Dichloroethane	50.0	58.9		ug/L		118	69 - 132
1,2-Dichloroethane	50.0	48.0		ug/L		96	75 - 120
1,1-Dichloroethene	50.0	44.9		ug/L		90	73 - 134
cis-1,2-Dichloroethene	50.0	54.8		ug/L		110	78 - 127
trans-1,2-Dichloroethene	50.0	50.9		ug/L		102	78 - 130
1,2-Dichloropropane	50.0	51.3		ug/L		103	71 - 126
cis-1,3-Dichloropropene	50.0	51.6		ug/L		103	73 - 128
trans-1,3-Dichloropropene	50.0	53.9		ug/L		108	72 - 127
Ethylbenzene	50.0	50.1		ug/L		100	78 - 125
2-Hexanone	100	90.9		ug/L		91	52 - 149
Methylene Chloride	50.0	41.2		ug/L		82	79 - 124
4-Methyl-2-pentanone (MIBK)	100	102		ug/L		102	51 - 143
Styrene	50.0	50.0		ug/L		100	75 - 129
1,1,2,2-Tetrachloroethane	50.0	48.4		ug/L		97	71 - 127
Tetrachloroethene	50.0	49.2		ug/L		98	77 - 128
Toluene	50.0	53.9		ug/L		108	77 - 125
1,1,1-Trichloroethane	50.0	60.7		ug/L		121	76 - 126
1,1,2-Trichloroethane	50.0	51.3		ug/L		103	69 - 127
Trichloroethene	50.0	50.6		ug/L		101	80 - 120
Trichlorofluoromethane	50.0	52.3		ug/L		105	66 - 144
1,2,3-Trichloropropane	50.0	50.7		ug/L		101	74 - 126
Vinyl acetate	100	113		ug/L		113	10 - 200
Vinyl chloride	50.0	53.7		ug/L		107	58 - 141
Xylenes, Total	150	151		ug/L		101	80 - 124

Surrogate	%Recovery	LCS Qualifier	LCS Limits
4-Bromofluorobenzene	101		70 - 130
Dibromofluoromethane	112		70 - 130
Toluene-d8 (Surr)	108		70 - 130

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-86980-1

Project/Site: Ashland Brunswick Groundwater RFI

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-265220/6

Matrix: Water

Analysis Batch: 265220

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	93.0		ug/L		93	39 - 162	20	50
Benzene	50.0	51.8		ug/L		104	74 - 123	0	30
Dichlorobromomethane	50.0	49.0		ug/L		98	72 - 129	2	30
Bromoform	50.0	55.6		ug/L		111	60 - 134	3	30
Bromomethane	50.0	71.0		ug/L		142	10 - 171	5	50
2-Butanone (MEK)	100	101		ug/L		101	55 - 142	11	30
Carbon disulfide	50.0	57.8		ug/L		116	63 - 142	25	30
Carbon tetrachloride	50.0	51.4		ug/L		103	70 - 131	3	30
Chlorobenzene	50.0	50.3		ug/L		101	79 - 120	2	30
Chloroethane	50.0	55.1		ug/L		110	47 - 148	2	40
Chloroform	50.0	56.7		ug/L		113	76 - 128	3	30
Chloromethane	50.0	51.0		ug/L		102	47 - 151	5	30
Chlorodibromomethane	50.0	52.1		ug/L		104	63 - 134	2	50
1,1,1,2-Tetrachloroethane	50.0	47.6		ug/L		95	68 - 132	0	30
1,2-Dibromo-3-Chloropropane	50.0	50.0		ug/L		100	57 - 126	4	50
Ethylene Dibromide	50.0	56.3		ug/L		113	75 - 127	1	30
Dibromomethane	50.0	51.9		ug/L		104	75 - 122	1	30
Dichlorodifluoromethane	50.0	61.6		ug/L		123	41 - 165	7	50
1,1-Dichloroethane	50.0	36.1	*	ug/L		72	69 - 132	48	30
1,2-Dichloroethane	50.0	47.4		ug/L		95	75 - 120	1	30
1,1-Dichloroethene	50.0	59.6		ug/L		119	73 - 134	28	30
cis-1,2-Dichloroethene	50.0	57.6		ug/L		115	78 - 127	5	30
trans-1,2-Dichloroethene	50.0	57.3		ug/L		115	78 - 130	12	30
1,2-Dichloropropane	50.0	49.9		ug/L		100	71 - 126	3	30
cis-1,3-Dichloropropene	50.0	50.3		ug/L		101	73 - 128	3	30
trans-1,3-Dichloropropene	50.0	52.1		ug/L		104	72 - 127	3	50
Ethylbenzene	50.0	50.9		ug/L		102	78 - 125	2	30
2-Hexanone	100	90.4		ug/L		90	52 - 149	1	30
Methylene Chloride	50.0	55.4		ug/L		111	79 - 124	29	30
4-Methyl-2-pentanone (MIBK)	100	100		ug/L		100	51 - 143	2	30
Styrene	50.0	51.2		ug/L		102	75 - 129	2	30
1,1,2,2-Tetrachloroethane	50.0	48.0		ug/L		96	71 - 127	1	30
Tetrachloroethene	50.0	50.5		ug/L		101	77 - 128	3	30
Toluene	50.0	53.2		ug/L		106	77 - 125	1	30
1,1,1-Trichloroethane	50.0	59.7		ug/L		119	76 - 126	2	30
1,1,2-Trichloroethane	50.0	50.6		ug/L		101	69 - 127	1	30
Trichloroethene	50.0	50.0		ug/L		100	80 - 120	1	30
Trichlorofluoromethane	50.0	56.1		ug/L		112	66 - 144	7	30
1,2,3-Trichloropropane	50.0	50.9		ug/L		102	74 - 126	0	30
Vinyl acetate	100	65.7	*	ug/L		66	10 - 200	53	30
Vinyl chloride	50.0	51.3		ug/L		103	58 - 141	5	30
Xylenes, Total	150	153		ug/L		102	80 - 124	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	103		70 - 130
Dibromofluoromethane	114		70 - 130
Toluene-d8 (Surr)	108		70 - 130

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC)

Lab Sample ID: MB 680-264748/10-A

Matrix: Water

Analysis Batch: 266109

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 264748

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0057		0.050	0.0057	ug/L		02/01/13 14:58	02/12/13 14:19	1
gamma-BHC (Lindane)	<0.0059		0.050	0.0059	ug/L		02/01/13 14:58	02/12/13 14:19	1
Toxaphene, Technical	<0.50		5.0	0.50	ug/L		02/01/13 14:58	02/12/13 14:19	1
Toxaphene, TAUC, Parlar 11-69	<0.50		5.0	0.50	ug/L		02/01/13 14:58	02/12/13 14:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	39		22 - 130	02/01/13 14:58	02/12/13 14:19	1
DCB Decachlorobiphenyl	39		22 - 130	02/01/13 14:58	02/12/13 14:19	1
Tetrachloro-m-xylene	72		53 - 130	02/01/13 14:58	02/12/13 14:19	1
Tetrachloro-m-xylene	71		53 - 130	02/01/13 14:58	02/12/13 14:19	1

Lab Sample ID: LCS 680-264748/11-A

Matrix: Water

Analysis Batch: 265953

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 264748

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-BHC	0.100	0.0801		ug/L		80	43 - 138
gamma-BHC (Lindane)	0.100	0.0820		ug/L		82	54 - 134

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	69		22 - 130
DCB Decachlorobiphenyl	57		22 - 130
Tetrachloro-m-xylene	62		53 - 130
Tetrachloro-m-xylene	60		53 - 130

Lab Sample ID: LCS 680-264748/17-A

Matrix: Water

Analysis Batch: 265953

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 264748

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene, Technical	10.0	8.79		ug/L		88	35 - 138
Toxaphene, TAUC, Parlar 11-69	10.0	8.46		ug/L		85	35 - 138

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	51		22 - 130
DCB Decachlorobiphenyl	51		22 - 130
Tetrachloro-m-xylene	70		53 - 130
Tetrachloro-m-xylene	69		53 - 130

Lab Sample ID: 680-86980-1 MS

Matrix: Water

Analysis Batch: 265953

Client Sample ID: HP-III-59 89-99'

Prep Type: Total/NA

Prep Batch: 264748

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-BHC	<0.0057		0.0998	0.0619	p	ug/L		62	43 - 138
gamma-BHC (Lindane)	<0.0059		0.0998	0.101		ug/L		102	54 - 134

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

## Method: 8081A\_8082 - Organochlorine Pesticides & PCBs (GC) (Continued)

Lab Sample ID: 680-86980-1 MS

Matrix: Water

Analysis Batch: 265953

Client Sample ID: HP-III-59 89-99'

Prep Type: Total/NA

Prep Batch: 264748

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl	13	X	22 - 130
DCB Decachlorobiphenyl	10	X	22 - 130
Tetrachloro-m-xylene	37	X	53 - 130
Tetrachloro-m-xylene	29	X	53 - 130

Lab Sample ID: 680-86980-1 MSD

Matrix: Water

Analysis Batch: 265953

Client Sample ID: HP-III-59 89-99'

Prep Type: Total/NA

Prep Batch: 264748

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
alpha-BHC	<0.0057		0.108	0.111	F	ug/L		103	43 - 138	57	50
gamma-BHC (Lindane)	<0.0059		0.108	0.119		ug/L		110	54 - 134	16	50
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
DCB Decachlorobiphenyl	10	X	22 - 130								
DCB Decachlorobiphenyl	8	X	22 - 130								
Tetrachloro-m-xylene	38	X	53 - 130								
Tetrachloro-m-xylene	31	X	53 - 130								

Lab Sample ID: 680-86980-2 MS

Matrix: Water

Analysis Batch: 265955

Client Sample ID: HP-III-60A 20-26'

Prep Type: Total/NA

Prep Batch: 264748

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Toxaphene, Technical	<0.50		10.0	4.22	J	ug/L		42	35 - 138		
Toxaphene, TAUC, Parlar 11-69	2.8	J	10.0	4.42	J F	ug/L		16	35 - 138		
Surrogate	MS %Recovery	MS Qualifier	Limits								
DCB Decachlorobiphenyl	9	X	22 - 130								
DCB Decachlorobiphenyl	7	X	22 - 130								
Tetrachloro-m-xylene	56		53 - 130								
Tetrachloro-m-xylene	54		53 - 130								

Lab Sample ID: 680-86980-2 MSD

Matrix: Water

Analysis Batch: 265955

Client Sample ID: HP-III-60A 20-26'

Prep Type: Total/NA

Prep Batch: 264748

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toxaphene, Technical	<0.50		8.91	3.39	J	ug/L		38	35 - 138	22	50
Toxaphene, TAUC, Parlar 11-69	2.8	J	8.91	3.57	J F	ug/L		8	35 - 138	21	50
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
DCB Decachlorobiphenyl	8	X	22 - 130								
DCB Decachlorobiphenyl	6	X	22 - 130								
Tetrachloro-m-xylene	37	X	53 - 130								
Tetrachloro-m-xylene	35	X	53 - 130								

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# QC Association Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-86980-1

Project/Site: Ashland Brunswick Groundwater RFI

## GC/MS VOA

### Analysis Batch: 265011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-86980-2	HP-III-60A 20-26'	Total/NA	Water	8260B	
680-86980-3	HP-III-60B 50-56'	Total/NA	Water	8260B	
680-86980-5	Trip Blank	Total/NA	Water	8260B	
680-86980-6	Field Equipment Blank	Total/NA	Water	8260B	
LCS 680-265011/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-265011/8	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-265011/7	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 265220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-86980-1	HP-III-59 89-99'	Total/NA	Water	8260B	
680-86980-4	HP-III-60C 75-86'	Total/NA	Water	8260B	
LCS 680-265220/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-265220/6	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-265220/7	Method Blank	Total/NA	Water	8260B	

## GC Semi VOA

### Prep Batch: 264748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-86980-1	HP-III-59 89-99'	Total/NA	Water	3520C	
680-86980-1 MS	HP-III-59 89-99'	Total/NA	Water	3520C	
680-86980-1 MSD	HP-III-59 89-99'	Total/NA	Water	3520C	
680-86980-2	HP-III-60A 20-26'	Total/NA	Water	3520C	
680-86980-2 MS	HP-III-60A 20-26'	Total/NA	Water	3520C	
680-86980-2 MSD	HP-III-60A 20-26'	Total/NA	Water	3520C	
680-86980-3	HP-III-60B 50-56'	Total/NA	Water	3520C	
680-86980-4	HP-III-60C 75-86'	Total/NA	Water	3520C	
680-86980-6	Field Equipment Blank	Total/NA	Water	3520C	
LCS 680-264748/11-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 680-264748/17-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-264748/10-A	Method Blank	Total/NA	Water	3520C	

### Analysis Batch: 265953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-86980-1	HP-III-59 89-99'	Total/NA	Water	8081A_8082	264748
680-86980-1 MS	HP-III-59 89-99'	Total/NA	Water	8081A_8082	264748
680-86980-1 MSD	HP-III-59 89-99'	Total/NA	Water	8081A_8082	264748
680-86980-3	HP-III-60B 50-56'	Total/NA	Water	8081A_8082	264748
LCS 680-264748/11-A	Lab Control Sample	Total/NA	Water	8081A_8082	264748
LCS 680-264748/17-A	Lab Control Sample	Total/NA	Water	8081A_8082	264748

### Analysis Batch: 265954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-86980-1	HP-III-59 89-99'	Total/NA	Water	8081A_8082	264748
680-86980-1 MS	HP-III-59 89-99'	Total/NA	Water	8081A_8082	264748
680-86980-1 MSD	HP-III-59 89-99'	Total/NA	Water	8081A_8082	264748
680-86980-3	HP-III-60B 50-56'	Total/NA	Water	8081A_8082	264748
LCS 680-264748/17-A	Lab Control Sample	Total/NA	Water	8081A_8082	264748

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## QC Association Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-86980-1

Project/Site: Ashland Brunswick Groundwater RFI

### GC Semi VOA (Continued)

#### Analysis Batch: 265955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-86980-2	HP-III-60A 20-26'	Total/NA	Water	8081A_8082	264748
680-86980-2 MS	HP-III-60A 20-26'	Total/NA	Water	8081A_8082	264748
680-86980-2 MSD	HP-III-60A 20-26'	Total/NA	Water	8081A_8082	264748
680-86980-4	HP-III-60C 75-86'	Total/NA	Water	8081A_8082	264748
680-86980-6	Field Equipment Blank	Total/NA	Water	8081A_8082	264748

#### Analysis Batch: 265956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-86980-2	HP-III-60A 20-26'	Total/NA	Water	8081A_8082	264748
680-86980-2 MS	HP-III-60A 20-26'	Total/NA	Water	8081A_8082	264748
680-86980-2 MSD	HP-III-60A 20-26'	Total/NA	Water	8081A_8082	264748
680-86980-4	HP-III-60C 75-86'	Total/NA	Water	8081A_8082	264748
680-86980-6	Field Equipment Blank	Total/NA	Water	8081A_8082	264748

#### Analysis Batch: 266109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-264748/10-A	Method Blank	Total/NA	Water	8081A_8082	264748

#### Analysis Batch: 266110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-264748/10-A	Method Blank	Total/NA	Water	8081A_8082	264748



# Lab Chronicle

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

**Client Sample ID: HP-III-59 89-99'**

**Date Collected: 01/29/13 17:55**

**Date Received: 01/31/13 09:42**

**Lab Sample ID: 680-86980-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	5 mL	5 mL	265220	02/05/13 13:35	CAR	TAL SAV
Total/NA	Prep	3520C			503.8 mL	5 mL	264748	02/01/13 14:58	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1			265953	02/11/13 00:12	JK	TAL SAV
Total/NA	Analysis	8081A_8082		1			265954	02/11/13 00:12	JK	TAL SAV

**Client Sample ID: HP-III-60A 20-26'**

**Date Collected: 01/30/13 11:52**

**Date Received: 01/31/13 09:42**

**Lab Sample ID: 680-86980-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	265011	02/04/13 18:39	JD	TAL SAV
Total/NA	Prep	3520C			500.4 mL	5 mL	264748	02/01/13 14:58	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1			265955	02/11/13 08:41	JK	TAL SAV
Total/NA	Analysis	8081A_8082		1			265956	02/11/13 08:41	JK	TAL SAV

**Client Sample ID: HP-III-60B 50-56'**

**Date Collected: 01/30/13 13:27**

**Date Received: 01/31/13 09:42**

**Lab Sample ID: 680-86980-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	265011	02/04/13 19:01	JD	TAL SAV
Total/NA	Prep	3520C			998.1 mL	10 mL	264748	02/01/13 14:58	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1			265953	02/11/13 00:36	JK	TAL SAV
Total/NA	Analysis	8081A_8082		1			265954	02/11/13 00:36	JK	TAL SAV

**Client Sample ID: HP-III-60C 75-86'**

**Date Collected: 01/30/13 15:32**

**Date Received: 01/31/13 09:42**

**Lab Sample ID: 680-86980-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	5 mL	5 mL	265220	02/05/13 13:56	CAR	TAL SAV
Total/NA	Prep	3520C			944.0 mL	10 mL	264748	02/01/13 14:58	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1			265955	02/11/13 09:53	JK	TAL SAV
Total/NA	Analysis	8081A_8082		1			265956	02/11/13 09:53	JK	TAL SAV

**Client Sample ID: Trip Blank**

**Date Collected: 01/30/13 00:00**

**Date Received: 01/31/13 09:42**

**Lab Sample ID: 680-86980-5**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	265011	02/04/13 17:33	JD	TAL SAV

TestAmerica Savannah



Lab Chronicle

Client: Ashland Inc.  
Project/Site: Ashland Brunswick Groundwater RFI

TestAmerica Job ID: 680-86980-1

Client Sample ID: Field Equipment Blank  
Date Collected: 01/30/13 11:10  
Date Received: 01/31/13 09:42

Lab Sample ID: 680-86980-6  
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	265011	02/04/13 17:55	JD	TAL SAV
Total/NA	Prep	3520C			1018.8 mL	10 mL	264748	02/01/13 14:58	RBS	TAL SAV
Total/NA	Analysis	8081A_8082		1			265955	02/11/13 10:18	JK	TAL SAV
Total/NA	Analysis	8081A_8082		1			265956	02/11/13 10:18	JK	TAL SAV

Laboratory References:  
TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



5102 LaRoche Avenue

Savannah, GA 31404  
phone 912.354.7858 fax 912.352.0165

## Chain of Custody Record

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING  
**TestAmerica Laboratories, Inc.**

**TestAmerica Laboratories, Inc.**

[illegible]



## Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-86980-1

**Login Number: 86980**

**List Source: TestAmerica Savannah**

**List Number: 1**

**Creator: Conner, Keaton**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2, 0.4, 0.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	Insufficient volume received for MS/MSD.
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Certification Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-86980-1

Project/Site: Ashland Brunswick Groundwater RFI

## Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		0399-01	02-28-13
A2LA	ISO/IEC 17025		399.01	02-28-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
California	NELAP	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-12
Connecticut	State Program	1	PH-0161	03-31-13
Florida	NELAP	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-13
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Guam	State Program	9	09-005r	04-17-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAP	5	200022	11-30-12
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13
Kentucky	State Program	4	90084	12-31-12
Kentucky (UST)	State Program	4	18	02-28-13
Louisiana	NELAP	6	30690	06-30-13
Louisiana	NELAP	6	LA100015	12-31-13
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-12
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	12-31-12
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13
New Jersey	NELAP	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
New York	NELAP	2	10842	04-01-13
North Carolina DENR	State Program	4	269	12-31-13
North Carolina DHHS	State Program	4	13701	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAP	3	68-00474	06-30-13
Puerto Rico	State Program	2	GA00006	01-01-13
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAP	6	T104704185-08-TX	11-30-13
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-13
Washington	State Program	10	C1794	06-10-13
West Virginia	State Program	3	9950C	12-31-12
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

TestAmerica Savannah



## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-96759-1

Client Project/Site: Ashland Brunswick

For:

Ashland Inc.

Ashland Hercules Research Center

500 Hercules Rd Bldg 8139

Wilmington, Delaware 19808

Attn: Timothy Hassett

*Kathryn Smith*

Authorized for release by:

12/17/2013 5:59:27 PM

Kathryn Smith, Project Manager II

(912)354-7858

[kathy.smith@testamericainc.com](mailto:kathy.smith@testamericainc.com)

### LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



## Definitions/Glossary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

#### GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

#### HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

#### Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



## Sample Summary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-96759-1	MW-55S	Water	12/04/13 12:46	12/04/13 15:15
680-96759-2	MW-55I	Water	12/04/13 11:55	12/04/13 15:15
680-96759-3	MW-55D	Water	12/04/13 10:10	12/04/13 15:15
680-96759-4	Dup-1	Water	12/04/13 00:00	12/04/13 15:15
680-96759-5	EB-1	Water	12/04/13 13:15	12/04/13 15:15
680-96759-6	Trip Blank	Water	12/04/13 00:00	12/04/13 15:15



## Case Narrative

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

**Job ID: 680-96759-1**

**Laboratory: TestAmerica Savannah**

### Narrative

## CASE NARRATIVE

**Client: Ashland Inc.**

**Project: Ashland Brunswick**

**Report Number: 680-96759-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### RECEIPT

The samples were received on 12/04/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 2.6° C, 2.8° C and 3.0° C.

### VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MW-55S (680-96759-1), MW-55I (680-96759-2), MW-55D (680-96759-3), Dup-1 (680-96759-4), EB-1 (680-96759-5) and Trip Blank (680-96759-6) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 12/06/2013.

1,2,4-Trichlorobenzene was detected in method blank MB 680-306385/7 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

2-Butanone (MEK) failed the recovery criteria high for LCS 680-306385/4. 1,2,4-Trichlorobenzene failed the recovery criteria high for LCSD 680-306390/8.

Samples MW-55D (680-96759-3)[10X] and Dup-1 (680-96759-4)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the volatiles analysis.

All other quality control parameters were within the acceptance limits.

### SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS) - LOW LEVEL

Samples MW-55S (680-96759-1), MW-55I (680-96759-2), MW-55D (680-96759-3), Dup-1 (680-96759-4) and EB-1 (680-96759-5) were analyzed for Semivolatile Organic Compounds (GC/MS) - Low level in accordance with EPA SW-846 Method 8270D. The samples were prepared on 12/05/2013 and analyzed on 12/13/2013 and 12/14/2013.

2,4,6-Tribromophenol (Surr), 2-Fluorobiphenyl, 2-Fluorophenol (Surr), Nitrobenzene-d5 (Surr), Phenol-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for MW-55D (680-96759-3). 2,4,6-Tribromophenol (Surr), 2-Fluorobiphenyl, 2-Fluorophenol (Surr), Nitrobenzene-d5 (Surr), Phenol-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for Dup-1 (680-96759-4). Refer to the QC report for details.



## Case Narrative

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

### Job ID: 680-96759-1 (Continued)

#### Laboratory: TestAmerica Savannah (Continued)

Samples MW-55D (680-96759-3)[10X] and Dup-1 (680-96759-4)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the SVOAs analysis.

All other quality control parameters were within the acceptance limits.

#### PESTICIDES AND PCBS

Samples MW-55S (680-96759-1), MW-55I (680-96759-2), MW-55D (680-96759-3), Dup-1 (680-96759-4) and EB-1 (680-96759-5) were analyzed for Pesticides and PCBs in accordance with EPA SW-846 Method 8081B\_8082A. The samples were prepared on 12/05/2013 and analyzed on 12/07/2013.

This method incorporates 2nd column confirmation. Corrective action is not taken for surrogate/spike compounds unless results from both columns are unacceptable. Results outside criteria are qualified.

Tetrachloro-m-xylene failed the surrogate recovery criteria low for MW-55S (680-96759-1). DCB Decachlorobiphenyl failed the surrogate recovery criteria low for MW-55I (680-96759-2). DCB Decachlorobiphenyl failed the surrogate recovery criteria low for MW-55D (680-96759-3). DCB Decachlorobiphenyl failed the surrogate recovery criteria low for Dup-1 (680-96759-4). Tetrachloro-m-xylene failed the surrogate recovery criteria low for LCS 680-306207/12-A. Refer to the QC report for details.

No other difficulties were encountered during the Pesticides and PCBs analysis.

All other quality control parameters were within the acceptance limits.

#### FORMALDEHYDE

Samples MW-55S (680-96759-1), MW-55I (680-96759-2), MW-55D (680-96759-3), Dup-1 (680-96759-4) and EB-1 (680-96759-5) were analyzed for formaldehyde in accordance with EPA SW-846 Method 8315A. The samples were prepared and analyzed on 12/05/2013.

No difficulties were encountered during the formaldehyde analysis.

All quality control parameters were within the acceptance limits.

#### TOTAL RECOVERABLE METALS (ICPMS)

Samples MW-55S (680-96759-1), MW-55I (680-96759-2), MW-55D (680-96759-3), Dup-1 (680-96759-4) and EB-1 (680-96759-5) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 12/05/2013 and analyzed on 12/06/2013.

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

**Client Sample ID: MW-55S**

**Date Collected: 12/04/13 12:46**

**Date Received: 12/04/13 15:15**

**Lab Sample ID: 680-96759-1**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	6.0	J	25	5.0	ug/L			12/06/13 12:49	1
Benzene	1.0	U	1.0	0.25	ug/L			12/06/13 12:49	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			12/06/13 12:49	1
Carbon disulfide	0.82	J	2.0	0.60	ug/L			12/06/13 12:49	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			12/06/13 12:49	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			12/06/13 12:49	1
Chloroform	1.0	U	1.0	0.14	ug/L			12/06/13 12:49	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			12/06/13 12:49	1
1,2-Dichlorobenzene	1.0	U	1.0	0.21	ug/L			12/06/13 12:49	1
1,4-Dichlorobenzene	1.0	U	1.0	0.28	ug/L			12/06/13 12:49	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			12/06/13 12:49	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			12/06/13 12:49	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			12/06/13 12:49	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			12/06/13 12:49	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			12/06/13 12:49	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			12/06/13 12:49	1
p-Isopropyltoluene	1.0	U	1.0	0.13	ug/L			12/06/13 12:49	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			12/06/13 12:49	1
Toluene	1.0	U	1.0	0.33	ug/L			12/06/13 12:49	1
1,2,4-Trichlorobenzene	1.0	U *	1.0	0.25	ug/L			12/06/13 12:49	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			12/06/13 12:49	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			12/06/13 12:49	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			12/06/13 12:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		70 - 130		12/06/13 12:49	1
4-Bromofluorobenzene	104		70 - 130		12/06/13 12:49	1
Dibromofluoromethane	120		70 - 130		12/06/13 12:49	1

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	1.0	U	1.0	0.10	ug/L		12/05/13 15:11	12/13/13 07:02	1
Benzo[g,h,i]perylene	0.21	U	0.21	0.10	ug/L		12/05/13 15:11	12/13/13 07:02	1
Dibenz[a,h]anthracene	0.21	U	0.21	0.10	ug/L		12/05/13 15:11	12/13/13 07:02	1
Indeno[1,2,3-cd]pyrene	0.21	U	0.21	0.10	ug/L		12/05/13 15:11	12/13/13 07:02	1
3 & 4 Methylphenol	2.1	U	2.1	0.69	ug/L		12/05/13 15:11	12/13/13 07:02	1
Naphthalene	0.21	U	0.21	0.10	ug/L		12/05/13 15:11	12/13/13 07:02	1
Phenol	1.0	U	1.0	0.14	ug/L		12/05/13 15:11	12/13/13 07:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	45		32 - 130	12/05/13 15:11	12/13/13 07:02	1
2-Fluorobiphenyl	54		34 - 130	12/05/13 15:11	12/13/13 07:02	1
Terphenyl-d14 (Surr)	79		36 - 130	12/05/13 15:11	12/13/13 07:02	1
Phenol-d5 (Surr)	29		27 - 130	12/05/13 15:11	12/13/13 07:02	1
2-Fluorophenol (Surr)	52		25 - 130	12/05/13 15:11	12/13/13 07:02	1
2,4,6-Tribromophenol (Surr)	69		30 - 130	12/05/13 15:11	12/13/13 07:02	1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	0.050	U	0.050	0.0057	ug/L		12/05/13 15:11	12/07/13 18:06	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

Client Sample ID: MW-55S

Lab Sample ID: 680-96759-1

Date Collected: 12/04/13 12:46

Matrix: Water

Date Received: 12/04/13 15:15

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	0.050	U	0.050	0.0048	ug/L		12/05/13 15:11	12/07/13 18:06	1
gamma-BHC (Lindane)	0.050	U	0.050	0.0059	ug/L		12/05/13 15:11	12/07/13 18:06	1
Heptachlor	0.050	U	0.050	0.0069	ug/L		12/05/13 15:11	12/07/13 18:06	1
Toxaphene, Technical	5.0	U	5.0	0.50	ug/L		12/05/13 15:11	12/07/13 18:06	1
Toxaphene - Total	5.0	U	5.0	0.50	ug/L		12/05/13 15:11	12/07/13 18:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	25		22 - 130	12/05/13 15:11	12/07/13 18:06	1
Tetrachloro-m-xylene	45	X	53 - 130	12/05/13 15:11	12/07/13 18:06	1

## Method: 8315A - Carbonyl Compounds (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	50	U	50	5.0	ug/L		12/05/13 08:23	12/05/13 12:46	1

## Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8		2.5	1.3	ug/L		12/05/13 15:59	12/06/13 16:56	1
Barium	100		5.0	1.3	ug/L		12/05/13 15:59	12/06/13 16:56	1
Cobalt	0.64		0.50	0.15	ug/L		12/05/13 15:59	12/06/13 16:56	1
Chromium	5.0	U	5.0	2.5	ug/L		12/05/13 15:59	12/06/13 16:56	1
Nickel	5.0	U	5.0	2.0	ug/L		12/05/13 15:59	12/06/13 16:56	1
Selenium	2.5	U	2.5	1.0	ug/L		12/05/13 15:59	12/06/13 16:56	1
Vanadium	5.5	J	10	3.8	ug/L		12/05/13 15:59	12/06/13 16:56	1
Zinc	20	U	20	8.3	ug/L		12/05/13 15:59	12/06/13 16:56	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

**Client Sample ID: MW-551**

**Date Collected: 12/04/13 11:55**

**Date Received: 12/04/13 15:15**

**Lab Sample ID: 680-96759-2**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			12/06/13 13:11	1
Benzene	1.0	U	1.0	0.25	ug/L			12/06/13 13:11	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			12/06/13 13:11	1
Carbon disulfide	0.81	J	2.0	0.60	ug/L			12/06/13 13:11	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			12/06/13 13:11	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			12/06/13 13:11	1
Chloroform	1.2		1.0	0.14	ug/L			12/06/13 13:11	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			12/06/13 13:11	1
1,2-Dichlorobenzene	1.0	U	1.0	0.21	ug/L			12/06/13 13:11	1
1,4-Dichlorobenzene	1.0	U	1.0	0.28	ug/L			12/06/13 13:11	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			12/06/13 13:11	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			12/06/13 13:11	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			12/06/13 13:11	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			12/06/13 13:11	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			12/06/13 13:11	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			12/06/13 13:11	1
p-Isopropyltoluene	1.0	U	1.0	0.13	ug/L			12/06/13 13:11	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			12/06/13 13:11	1
Toluene	1.0	U	1.0	0.33	ug/L			12/06/13 13:11	1
1,2,4-Trichlorobenzene	1.0	U *	1.0	0.25	ug/L			12/06/13 13:11	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			12/06/13 13:11	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			12/06/13 13:11	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			12/06/13 13:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		70 - 130		12/06/13 13:11	1
4-Bromofluorobenzene	102		70 - 130		12/06/13 13:11	1
Dibromofluoromethane	120		70 - 130		12/06/13 13:11	1

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	0.26	J	0.97	0.097	ug/L		12/05/13 15:11	12/13/13 07:27	1
Benzo[g,h,i]perylene	0.19	U	0.19	0.097	ug/L		12/05/13 15:11	12/13/13 07:27	1
Dibenz[a,h]anthracene	0.19	U	0.19	0.097	ug/L		12/05/13 15:11	12/13/13 07:27	1
Indeno[1,2,3-cd]pyrene	0.19	U	0.19	0.097	ug/L		12/05/13 15:11	12/13/13 07:27	1
3 & 4 Methylphenol	1.9	U	1.9	0.64	ug/L		12/05/13 15:11	12/13/13 07:27	1
Naphthalene	0.19	U	0.19	0.097	ug/L		12/05/13 15:11	12/13/13 07:27	1
Phenol	0.97	U	0.97	0.13	ug/L		12/05/13 15:11	12/13/13 07:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	39		32 - 130	12/05/13 15:11	12/13/13 07:27	1
2-Fluorobiphenyl	50		34 - 130	12/05/13 15:11	12/13/13 07:27	1
Terphenyl-d14 (Surr)	79		36 - 130	12/05/13 15:11	12/13/13 07:27	1
Phenol-d5 (Surr)	50		27 - 130	12/05/13 15:11	12/13/13 07:27	1
2-Fluorophenol (Surr)	47		25 - 130	12/05/13 15:11	12/13/13 07:27	1
2,4,6-Tribromophenol (Surr)	39		30 - 130	12/05/13 15:11	12/13/13 07:27	1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	0.048	U	0.048	0.0054	ug/L		12/05/13 15:11	12/07/13 18:29	1

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# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

Client Sample ID: MW-55I

Lab Sample ID: 680-96759-2

Date Collected: 12/04/13 11:55

Matrix: Water

Date Received: 12/04/13 15:15

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	0.048	U	0.048	0.0046	ug/L		12/05/13 15:11	12/07/13 18:29	1
gamma-BHC (Lindane)	0.048	U	0.048	0.0056	ug/L		12/05/13 15:11	12/07/13 18:29	1
Heptachlor	0.048	U	0.048	0.0067	ug/L		12/05/13 15:11	12/07/13 18:29	1
Toxaphene, Technical	4.8	U	4.8	0.48	ug/L		12/05/13 15:11	12/07/13 18:29	1
Toxaphene - Total	4.8	U	4.8	0.48	ug/L		12/05/13 15:11	12/07/13 18:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	18	p X	22 - 130	12/05/13 15:11	12/07/13 18:29	1
Tetrachloro-m-xylene	57		53 - 130	12/05/13 15:11	12/07/13 18:29	1

## Method: 8315A - Carbonyl Compounds (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	50	U	50	5.0	ug/L		12/05/13 08:23	12/05/13 12:58	1

## Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.3		2.5	1.3	ug/L		12/05/13 15:59	12/06/13 17:03	1
Barium	28		5.0	1.3	ug/L		12/05/13 15:59	12/06/13 17:03	1
Cobalt	0.50	U	0.50	0.15	ug/L		12/05/13 15:59	12/06/13 17:03	1
Chromium	2.9	J	5.0	2.5	ug/L		12/05/13 15:59	12/06/13 17:03	1
Nickel	5.0	U	5.0	2.0	ug/L		12/05/13 15:59	12/06/13 17:03	1
Selenium	2.5	U	2.5	1.0	ug/L		12/05/13 15:59	12/06/13 17:03	1
Vanadium	10	U	10	3.8	ug/L		12/05/13 15:59	12/06/13 17:03	1
Zinc	20	U	20	8.3	ug/L		12/05/13 15:59	12/06/13 17:03	1

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# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

**Client Sample ID: MW-55D**

**Lab Sample ID: 680-96759-3**

**Date Collected: 12/04/13 10:10**

**Matrix: Water**

**Date Received: 12/04/13 15:15**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	250	U	250	50	ug/L			12/06/13 15:13	10
Benzene	1000		10	2.5	ug/L			12/06/13 15:13	10
2-Butanone (MEK)	100	U *	100	10	ug/L			12/06/13 15:13	10
Carbon disulfide	20	U	20	6.0	ug/L			12/06/13 15:13	10
Carbon tetrachloride	10	U	10	5.0	ug/L			12/06/13 15:13	10
Chlorobenzene	520		10	2.5	ug/L			12/06/13 15:13	10
Chloroform	10	U	10	1.4	ug/L			12/06/13 15:13	10
cis-1,2-Dichloroethene	4.8	J	10	1.5	ug/L			12/06/13 15:13	10
1,2-Dichlorobenzene	8.3	J	10	2.1	ug/L			12/06/13 15:13	10
1,4-Dichlorobenzene	14		10	2.8	ug/L			12/06/13 15:13	10
1,1-Dichloroethane	10	U	10	2.5	ug/L			12/06/13 15:13	10
1,1-Dichloroethene	10	U	10	1.1	ug/L			12/06/13 15:13	10
1,2-Dichloropropane	10	U	10	1.3	ug/L			12/06/13 15:13	10
Ethylbenzene	64		10	1.1	ug/L			12/06/13 15:13	10
Methylene Chloride	50	U	50	10	ug/L			12/06/13 15:13	10
4-Methyl-2-pentanone (MIBK)	100	U	100	10	ug/L			12/06/13 15:13	10
p-Isopropyltoluene	12		10	1.3	ug/L			12/06/13 15:13	10
Tetrachloroethene	10	U	10	1.5	ug/L			12/06/13 15:13	10
Toluene	5.3	J	10	3.3	ug/L			12/06/13 15:13	10
1,2,4-Trichlorobenzene	10	U	10	2.5	ug/L			12/06/13 15:13	10
1,2,3-Trichloropropane	10	U	10	4.1	ug/L			12/06/13 15:13	10
Vinyl chloride	10	U	10	1.8	ug/L			12/06/13 15:13	10
Xylenes, Total	98		20	2.0	ug/L			12/06/13 15:13	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		70 - 130		12/06/13 15:13	10
4-Bromofluorobenzene	104		70 - 130		12/06/13 15:13	10
Dibromofluoromethane	112		70 - 130		12/06/13 15:13	10

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	9.5	U	9.5	0.95	ug/L		12/05/13 15:11	12/14/13 17:40	10
Benzo[g,h,i]perylene	1.9	U	1.9	0.95	ug/L		12/05/13 15:11	12/14/13 17:40	10
Dibenz[a,h]anthracene	1.9	U	1.9	0.95	ug/L		12/05/13 15:11	12/14/13 17:40	10
Indeno[1,2,3-cd]pyrene	1.9	U	1.9	0.95	ug/L		12/05/13 15:11	12/14/13 17:40	10
3 & 4 Methylphenol	19	U	19	6.3	ug/L		12/05/13 15:11	12/14/13 17:40	10
Naphthalene	1.9	U	1.9	0.95	ug/L		12/05/13 15:11	12/14/13 17:40	10
Phenol	9.5	U	9.5	1.2	ug/L		12/05/13 15:11	12/14/13 17:40	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	0	D	32 - 130	12/05/13 15:11	12/14/13 17:40	10
2-Fluorobiphenyl	0	D	34 - 130	12/05/13 15:11	12/14/13 17:40	10
Terphenyl-d14 (Surr)	0	D	36 - 130	12/05/13 15:11	12/14/13 17:40	10
Phenol-d5 (Surr)	0	D	27 - 130	12/05/13 15:11	12/14/13 17:40	10
2-Fluorophenol (Surr)	0	D	25 - 130	12/05/13 15:11	12/14/13 17:40	10
2,4,6-Tribromophenol (Surr)	0	D	30 - 130	12/05/13 15:11	12/14/13 17:40	10

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	0.090	p	0.047	0.0054	ug/L		12/05/13 15:11	12/07/13 18:52	1

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# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

Client Sample ID: MW-55D

Lab Sample ID: 680-96759-3

Date Collected: 12/04/13 10:10

Matrix: Water

Date Received: 12/04/13 15:15

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	0.31	p	0.047	0.0045	ug/L		12/05/13 15:11	12/07/13 18:52	1
gamma-BHC (Lindane)	0.047	U	0.047	0.0056	ug/L		12/05/13 15:11	12/07/13 18:52	1
Heptachlor	0.047	U	0.047	0.0066	ug/L		12/05/13 15:11	12/07/13 18:52	1
Toxaphene, Technical	4.7	U	4.7	0.47	ug/L		12/05/13 15:11	12/07/13 18:52	1
Toxaphene - Total	7.2		4.7	0.47	ug/L		12/05/13 15:11	12/07/13 18:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	11	X	22 - 130				12/05/13 15:11	12/07/13 18:52	1
Tetrachloro-m-xylene	62		53 - 130				12/05/13 15:11	12/07/13 18:52	1

## Method: 8315A - Carbonyl Compounds (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	50	U	50	5.0	ug/L		12/05/13 08:23	12/05/13 13:10	1

## Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.7	J	2.5	1.3	ug/L		12/05/13 15:59	12/06/13 17:10	1
Barium	670		5.0	1.3	ug/L		12/05/13 15:59	12/06/13 17:10	1
Cobalt	1.5		0.50	0.15	ug/L		12/05/13 15:59	12/06/13 17:10	1
Chromium	5.0	U	5.0	2.5	ug/L		12/05/13 15:59	12/06/13 17:10	1
Nickel	5.0	U	5.0	2.0	ug/L		12/05/13 15:59	12/06/13 17:10	1
Selenium	2.5	U	2.5	1.0	ug/L		12/05/13 15:59	12/06/13 17:10	1
Vanadium	10	U	10	3.8	ug/L		12/05/13 15:59	12/06/13 17:10	1
Zinc	20	U	20	8.3	ug/L		12/05/13 15:59	12/06/13 17:10	1

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# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

**Client Sample ID: Dup-1**  
**Date Collected: 12/04/13 00:00**  
**Date Received: 12/04/13 15:15**

**Lab Sample ID: 680-96759-4**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	250	U	250	50	ug/L			12/06/13 15:31	10
Benzene	1100		10	2.5	ug/L			12/06/13 15:31	10
2-Butanone (MEK)	100	U	100	10	ug/L			12/06/13 15:31	10
Carbon disulfide	20	U	20	6.0	ug/L			12/06/13 15:31	10
Carbon tetrachloride	10	U	10	5.0	ug/L			12/06/13 15:31	10
Chlorobenzene	590		10	2.5	ug/L			12/06/13 15:31	10
Chloroform	10	U	10	1.4	ug/L			12/06/13 15:31	10
cis-1,2-Dichloroethene	4.8	J	10	1.5	ug/L			12/06/13 15:31	10
1,2-Dichlorobenzene	8.2	J	10	2.1	ug/L			12/06/13 15:31	10
1,4-Dichlorobenzene	14		10	2.8	ug/L			12/06/13 15:31	10
1,1-Dichloroethane	10	U	10	2.5	ug/L			12/06/13 15:31	10
1,1-Dichloroethene	10	U	10	1.1	ug/L			12/06/13 15:31	10
1,2-Dichloropropane	10	U	10	1.3	ug/L			12/06/13 15:31	10
Ethylbenzene	66		10	1.1	ug/L			12/06/13 15:31	10
Methylene Chloride	50	U	50	10	ug/L			12/06/13 15:31	10
4-Methyl-2-pentanone (MIBK)	100	U	100	10	ug/L			12/06/13 15:31	10
p-Isopropyltoluene	14		10	1.3	ug/L			12/06/13 15:31	10
Tetrachloroethene	10	U	10	1.5	ug/L			12/06/13 15:31	10
Toluene	3.7	J	10	3.3	ug/L			12/06/13 15:31	10
1,2,4-Trichlorobenzene	10	U	10	2.5	ug/L			12/06/13 15:31	10
1,2,3-Trichloropropane	10	U	10	4.1	ug/L			12/06/13 15:31	10
Vinyl chloride	10	U	10	1.8	ug/L			12/06/13 15:31	10
Xylenes, Total	110		20	2.0	ug/L			12/06/13 15:31	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130					12/06/13 15:31	10
4-Bromofluorobenzene	103		70 - 130					12/06/13 15:31	10
Dibromofluoromethane	111		70 - 130					12/06/13 15:31	10

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	9.6	U	9.6	0.96	ug/L		12/05/13 15:11	12/14/13 18:05	10
Benzo[g,h,i]perylene	1.9	U	1.9	0.96	ug/L		12/05/13 15:11	12/14/13 18:05	10
Dibenz[a,h]anthracene	1.9	U	1.9	0.96	ug/L		12/05/13 15:11	12/14/13 18:05	10
Indeno[1,2,3-cd]pyrene	1.9	U	1.9	0.96	ug/L		12/05/13 15:11	12/14/13 18:05	10
3 & 4 Methylphenol	19	U	19	6.3	ug/L		12/05/13 15:11	12/14/13 18:05	10
Naphthalene	1.9	U	1.9	0.96	ug/L		12/05/13 15:11	12/14/13 18:05	10
Phenol	9.6	U	9.6	1.2	ug/L		12/05/13 15:11	12/14/13 18:05	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	0	D	32 - 130				12/05/13 15:11	12/14/13 18:05	10
2-Fluorobiphenyl	0	D	34 - 130				12/05/13 15:11	12/14/13 18:05	10
Terphenyl-d14 (Surr)	0	D	36 - 130				12/05/13 15:11	12/14/13 18:05	10
Phenol-d5 (Surr)	0	D	27 - 130				12/05/13 15:11	12/14/13 18:05	10
2-Fluorophenol (Surr)	0	D	25 - 130				12/05/13 15:11	12/14/13 18:05	10
2,4,6-Tribromophenol (Surr)	0	D	30 - 130				12/05/13 15:11	12/14/13 18:05	10

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	0.10	p	0.048	0.0054	ug/L		12/05/13 15:11	12/07/13 19:14	1

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# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

Client Sample ID: Dup-1

Lab Sample ID: 680-96759-4

Date Collected: 12/04/13 00:00

Matrix: Water

Date Received: 12/04/13 15:15

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	0.38	p	0.048	0.0046	ug/L		12/05/13 15:11	12/07/13 19:14	1
gamma-BHC (Lindane)	0.048	U	0.048	0.0056	ug/L		12/05/13 15:11	12/07/13 19:14	1
Heptachlor	0.048	U	0.048	0.0067	ug/L		12/05/13 15:11	12/07/13 19:14	1
Toxaphene, Technical	4.8	U	4.8	0.48	ug/L		12/05/13 15:11	12/07/13 19:14	1
Toxaphene - Total	6.0	p	4.8	0.48	ug/L		12/05/13 15:11	12/07/13 19:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	11	X	22 - 130				12/05/13 15:11	12/07/13 19:14	1
Tetrachloro-m-xylene	68		53 - 130				12/05/13 15:11	12/07/13 19:14	1

## Method: 8315A - Carbonyl Compounds (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	50	U	50	5.0	ug/L		12/05/13 08:23	12/05/13 14:10	1

## Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.6	J	2.5	1.3	ug/L		12/05/13 15:59	12/06/13 17:17	1
Barium	630		5.0	1.3	ug/L		12/05/13 15:59	12/06/13 17:17	1
Cobalt	1.4		0.50	0.15	ug/L		12/05/13 15:59	12/06/13 17:17	1
Chromium	5.0	U	5.0	2.5	ug/L		12/05/13 15:59	12/06/13 17:17	1
Nickel	5.0	U	5.0	2.0	ug/L		12/05/13 15:59	12/06/13 17:17	1
Selenium	2.5	U	2.5	1.0	ug/L		12/05/13 15:59	12/06/13 17:17	1
Vanadium	10	U	10	3.8	ug/L		12/05/13 15:59	12/06/13 17:17	1
Zinc	20	U	20	8.3	ug/L		12/05/13 15:59	12/06/13 17:17	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

Client Sample ID: EB-1

Date Collected: 12/04/13 13:15

Date Received: 12/04/13 15:15

Lab Sample ID: 680-96759-5

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			12/06/13 12:36	1
Benzene	1.0	U	1.0	0.25	ug/L			12/06/13 12:36	1
2-Butanone (MEK)	10	U *	10	1.0	ug/L			12/06/13 12:36	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			12/06/13 12:36	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			12/06/13 12:36	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			12/06/13 12:36	1
Chloroform	1.0	U	1.0	0.14	ug/L			12/06/13 12:36	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			12/06/13 12:36	1
1,2-Dichlorobenzene	1.0	U	1.0	0.21	ug/L			12/06/13 12:36	1
1,4-Dichlorobenzene	2.1		1.0	0.28	ug/L			12/06/13 12:36	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			12/06/13 12:36	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			12/06/13 12:36	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			12/06/13 12:36	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			12/06/13 12:36	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			12/06/13 12:36	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			12/06/13 12:36	1
p-Isopropyltoluene	1.0	U	1.0	0.13	ug/L			12/06/13 12:36	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			12/06/13 12:36	1
Toluene	1.0	U	1.0	0.33	ug/L			12/06/13 12:36	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.25	ug/L			12/06/13 12:36	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			12/06/13 12:36	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			12/06/13 12:36	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			12/06/13 12:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		70 - 130		12/06/13 12:36	1
4-Bromofluorobenzene	98		70 - 130		12/06/13 12:36	1
Dibromofluoromethane	115		70 - 130		12/06/13 12:36	1

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	0.62	J	0.96	0.096	ug/L		12/05/13 15:11	12/13/13 08:43	1
Benzo[g,h,i]perylene	0.19	U	0.19	0.096	ug/L		12/05/13 15:11	12/13/13 08:43	1
Dibenz[a,h]anthracene	0.19	U	0.19	0.096	ug/L		12/05/13 15:11	12/13/13 08:43	1
Indeno[1,2,3-cd]pyrene	0.19	U	0.19	0.096	ug/L		12/05/13 15:11	12/13/13 08:43	1
3 & 4 Methylphenol	1.9	U	1.9	0.63	ug/L		12/05/13 15:11	12/13/13 08:43	1
Naphthalene	0.19	U	0.19	0.096	ug/L		12/05/13 15:11	12/13/13 08:43	1
Phenol	0.51	J	0.96	0.12	ug/L		12/05/13 15:11	12/13/13 08:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	67		32 - 130	12/05/13 15:11	12/13/13 08:43	1
2-Fluorobiphenyl	65		34 - 130	12/05/13 15:11	12/13/13 08:43	1
Terphenyl-d14 (Surr)	95		36 - 130	12/05/13 15:11	12/13/13 08:43	1
Phenol-d5 (Surr)	63		27 - 130	12/05/13 15:11	12/13/13 08:43	1
2-Fluorophenol (Surr)	75		25 - 130	12/05/13 15:11	12/13/13 08:43	1
2,4,6-Tribromophenol (Surr)	63		30 - 130	12/05/13 15:11	12/13/13 08:43	1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	0.056	U	0.056	0.0064	ug/L		12/05/13 15:11	12/07/13 19:37	1

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# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

Client Sample ID: EB-1

Lab Sample ID: 680-96759-5

Date Collected: 12/04/13 13:15

Matrix: Water

Date Received: 12/04/13 15:15

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	0.056	U	0.056	0.0054	ug/L		12/05/13 15:11	12/07/13 19:37	1
gamma-BHC (Lindane)	0.056	U	0.056	0.0066	ug/L		12/05/13 15:11	12/07/13 19:37	1
Heptachlor	0.056	U	0.056	0.0078	ug/L		12/05/13 15:11	12/07/13 19:37	1
Toxaphene, Technical	5.6	U	5.6	0.56	ug/L		12/05/13 15:11	12/07/13 19:37	1
Toxaphene - Total	5.6	U	5.6	0.56	ug/L		12/05/13 15:11	12/07/13 19:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	75		22 - 130				12/05/13 15:11	12/07/13 19:37	1
Tetrachloro-m-xylene	59		53 - 130				12/05/13 15:11	12/07/13 19:37	1

## Method: 8315A - Carbonyl Compounds (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	50	U	50	5.0	ug/L		12/05/13 08:23	12/05/13 13:45	1

## Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.5	U	2.5	1.3	ug/L		12/05/13 15:59	12/06/13 17:25	1
Barium	5.0	U	5.0	1.3	ug/L		12/05/13 15:59	12/06/13 17:25	1
Cobalt	0.50	U	0.50	0.15	ug/L		12/05/13 15:59	12/06/13 17:25	1
Chromium	5.0	U	5.0	2.5	ug/L		12/05/13 15:59	12/06/13 17:25	1
Nickel	5.0	U	5.0	2.0	ug/L		12/05/13 15:59	12/06/13 17:25	1
Selenium	2.5	U	2.5	1.0	ug/L		12/05/13 15:59	12/06/13 17:25	1
Vanadium	10	U	10	3.8	ug/L		12/05/13 15:59	12/06/13 17:25	1
Zinc	20	U	20	8.3	ug/L		12/05/13 15:59	12/06/13 17:25	1

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# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 680-96759-6**

**Date Collected: 12/04/13 00:00**

**Matrix: Water**

**Date Received: 12/04/13 15:15**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			12/06/13 13:05	1
Benzene	1.0	U	1.0	0.25	ug/L			12/06/13 13:05	1
2-Butanone (MEK)	10	U *	10	1.0	ug/L			12/06/13 13:05	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			12/06/13 13:05	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			12/06/13 13:05	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			12/06/13 13:05	1
Chloroform	1.0	U	1.0	0.14	ug/L			12/06/13 13:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			12/06/13 13:05	1
1,2-Dichlorobenzene	1.0	U	1.0	0.21	ug/L			12/06/13 13:05	1
1,4-Dichlorobenzene	2.3		1.0	0.28	ug/L			12/06/13 13:05	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			12/06/13 13:05	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			12/06/13 13:05	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			12/06/13 13:05	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			12/06/13 13:05	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			12/06/13 13:05	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			12/06/13 13:05	1
p-Isopropyltoluene	1.0	U	1.0	0.13	ug/L			12/06/13 13:05	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			12/06/13 13:05	1
Toluene	1.0	U	1.0	0.33	ug/L			12/06/13 13:05	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.25	ug/L			12/06/13 13:05	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			12/06/13 13:05	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			12/06/13 13:05	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			12/06/13 13:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		70 - 130					12/06/13 13:05	1
4-Bromofluorobenzene	102		70 - 130					12/06/13 13:05	1
Dibromofluoromethane	116		70 - 130					12/06/13 13:05	1

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-306385/7

Matrix: Water

Analysis Batch: 306385

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			12/06/13 11:34	1
Benzene	1.0	U	1.0	0.25	ug/L			12/06/13 11:34	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			12/06/13 11:34	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			12/06/13 11:34	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			12/06/13 11:34	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			12/06/13 11:34	1
Chloroform	1.0	U	1.0	0.14	ug/L			12/06/13 11:34	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			12/06/13 11:34	1
1,2-Dichlorobenzene	1.0	U	1.0	0.21	ug/L			12/06/13 11:34	1
1,4-Dichlorobenzene	1.0	U	1.0	0.28	ug/L			12/06/13 11:34	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			12/06/13 11:34	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			12/06/13 11:34	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			12/06/13 11:34	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			12/06/13 11:34	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			12/06/13 11:34	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			12/06/13 11:34	1
p-Isopropyltoluene	1.0	U	1.0	0.13	ug/L			12/06/13 11:34	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			12/06/13 11:34	1
Toluene	1.0	U	1.0	0.33	ug/L			12/06/13 11:34	1
1,2,4-Trichlorobenzene	0.309	J	1.0	0.25	ug/L			12/06/13 11:34	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			12/06/13 11:34	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			12/06/13 11:34	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			12/06/13 11:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		70 - 130		12/06/13 11:34	1
4-Bromofluorobenzene	102		70 - 130		12/06/13 11:34	1
Dibromofluoromethane	116		70 - 130		12/06/13 11:34	1

Lab Sample ID: LCS 680-306385/4

Matrix: Water

Analysis Batch: 306385

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	109		ug/L		109	39 - 162
Benzene	50.0	51.5		ug/L		103	74 - 123
2-Butanone (MEK)	100	159	*	ug/L		159	55 - 142
Carbon disulfide	50.0	47.2		ug/L		94	63 - 142
Carbon tetrachloride	50.0	44.7		ug/L		89	70 - 131
Chlorobenzene	50.0	53.2		ug/L		106	79 - 120
Chloroform	50.0	49.8		ug/L		100	76 - 128
cis-1,2-Dichloroethene	50.0	53.5		ug/L		107	78 - 127
1,2-Dichlorobenzene	50.0	60.2		ug/L		120	77 - 124
1,4-Dichlorobenzene	50.0	58.8		ug/L		118	76 - 124
1,1-Dichloroethane	50.0	48.9		ug/L		98	69 - 132
1,1-Dichloroethene	50.0	42.7		ug/L		85	73 - 134
1,2-Dichloropropane	50.0	46.8		ug/L		94	71 - 126
Ethylbenzene	50.0	52.7		ug/L		105	78 - 125

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-306385/4

Matrix: Water

Analysis Batch: 306385

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	50.0	49.9		ug/L		100	79 - 124
4-Methyl-2-pentanone (MIBK)	100	117		ug/L		117	51 - 143
p-Isopropyltoluene	50.0	55.3		ug/L		111	69 - 129
Tetrachloroethene	50.0	51.0		ug/L		102	77 - 128
Toluene	50.0	57.3		ug/L		115	77 - 125
1,2,4-Trichlorobenzene	50.0	58.5		ug/L		117	67 - 134
1,2,3-Trichloropropane	50.0	48.8		ug/L		98	74 - 126
Vinyl chloride	50.0	45.1		ug/L		90	58 - 141
Xylenes, Total	150	154		ug/L		103	80 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	109		70 - 130
4-Bromofluorobenzene	103		70 - 130
Dibromofluoromethane	104		70 - 130

Lab Sample ID: LCSD 680-306385/5

Matrix: Water

Analysis Batch: 306385

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	78.4		ug/L		78	39 - 162	33	50
Benzene	50.0	47.6		ug/L		95	74 - 123	8	30
2-Butanone (MEK)	100	126		ug/L		126	55 - 142	24	30
Carbon disulfide	50.0	35.4		ug/L		71	63 - 142	29	30
Carbon tetrachloride	50.0	39.2		ug/L		78	70 - 131	13	30
Chlorobenzene	50.0	50.4		ug/L		101	79 - 120	5	30
Chloroform	50.0	47.2		ug/L		94	76 - 128	5	30
cis-1,2-Dichloroethene	50.0	49.6		ug/L		99	78 - 127	8	30
1,2-Dichlorobenzene	50.0	57.1		ug/L		114	77 - 124	5	30
1,4-Dichlorobenzene	50.0	56.3		ug/L		113	76 - 124	4	30
1,1-Dichloroethane	50.0	45.0		ug/L		90	69 - 132	8	30
1,1-Dichloroethene	50.0	37.6		ug/L		75	73 - 134	13	30
1,2-Dichloropropane	50.0	49.1		ug/L		98	71 - 126	5	30
Ethylbenzene	50.0	48.8		ug/L		98	78 - 125	8	30
Methylene Chloride	50.0	43.8		ug/L		88	79 - 124	13	30
4-Methyl-2-pentanone (MIBK)	100	96.8		ug/L		97	51 - 143	19	30
p-Isopropyltoluene	50.0	52.5		ug/L		105	69 - 129	5	50
Tetrachloroethene	50.0	47.8		ug/L		96	77 - 128	6	30
Toluene	50.0	49.2		ug/L		98	77 - 125	15	30
1,2,4-Trichlorobenzene	50.0	55.6		ug/L		111	67 - 134	5	30
1,2,3-Trichloropropane	50.0	53.6		ug/L		107	74 - 126	9	30
Vinyl chloride	50.0	37.1		ug/L		74	58 - 141	19	30
Xylenes, Total	150	149		ug/L		100	80 - 124	3	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	99		70 - 130
4-Bromofluorobenzene	101		70 - 130

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-306385/5

Matrix: Water

Analysis Batch: 306385

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane	99		70 - 130

Lab Sample ID: MB 680-306386/7

Matrix: Water

Analysis Batch: 306386

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			12/06/13 11:52	1
Benzene	1.0	U	1.0	0.25	ug/L			12/06/13 11:52	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			12/06/13 11:52	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			12/06/13 11:52	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			12/06/13 11:52	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			12/06/13 11:52	1
Chloroform	1.0	U	1.0	0.14	ug/L			12/06/13 11:52	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			12/06/13 11:52	1
1,2-Dichlorobenzene	1.0	U	1.0	0.21	ug/L			12/06/13 11:52	1
1,4-Dichlorobenzene	1.0	U	1.0	0.28	ug/L			12/06/13 11:52	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			12/06/13 11:52	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			12/06/13 11:52	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			12/06/13 11:52	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			12/06/13 11:52	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			12/06/13 11:52	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			12/06/13 11:52	1
p-Isopropyltoluene	1.0	U	1.0	0.13	ug/L			12/06/13 11:52	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			12/06/13 11:52	1
Toluene	1.0	U	1.0	0.33	ug/L			12/06/13 11:52	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.25	ug/L			12/06/13 11:52	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			12/06/13 11:52	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			12/06/13 11:52	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			12/06/13 11:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		70 - 130		12/06/13 11:52	1
4-Bromofluorobenzene	100		70 - 130		12/06/13 11:52	1
Dibromofluoromethane	122		70 - 130		12/06/13 11:52	1

Lab Sample ID: LCS 680-306386/4

Matrix: Water

Analysis Batch: 306386

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	115		ug/L		115	39 - 162
Benzene	50.0	50.7		ug/L		101	74 - 123
2-Butanone (MEK)	100	110		ug/L		110	55 - 142
Carbon disulfide	50.0	54.2		ug/L		108	63 - 142
Carbon tetrachloride	50.0	46.0		ug/L		92	70 - 131
Chlorobenzene	50.0	53.6		ug/L		107	79 - 120
Chloroform	50.0	54.9		ug/L		110	76 - 128

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-306386/4

Matrix: Water

Analysis Batch: 306386

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	50.0	56.5		ug/L		113	78 - 127
1,2-Dichlorobenzene	50.0	53.3		ug/L		107	77 - 124
1,4-Dichlorobenzene	50.0	56.1		ug/L		112	76 - 124
1,1-Dichloroethane	50.0	54.3		ug/L		109	69 - 132
1,1-Dichloroethene	50.0	51.8		ug/L		104	73 - 134
1,2-Dichloropropane	50.0	44.6		ug/L		89	71 - 126
Ethylbenzene	50.0	52.5		ug/L		105	78 - 125
Methylene Chloride	50.0	57.3		ug/L		115	79 - 124
4-Methyl-2-pentanone (MIBK)	100	107		ug/L		107	51 - 143
p-Isopropyltoluene	50.0	53.1		ug/L		106	69 - 129
Tetrachloroethene	50.0	52.3		ug/L		105	77 - 128
Toluene	50.0	52.9		ug/L		106	77 - 125
1,2,4-Trichlorobenzene	50.0	52.0		ug/L		104	67 - 134
1,2,3-Trichloropropane	50.0	44.9		ug/L		90	74 - 126
Vinyl chloride	50.0	48.4		ug/L		97	58 - 141
Xylenes, Total	150	155		ug/L		103	80 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	104		70 - 130
4-Bromofluorobenzene	100		70 - 130
Dibromofluoromethane	111		70 - 130

Lab Sample ID: LCSD 680-306386/5

Matrix: Water

Analysis Batch: 306386

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	138		ug/L		138	39 - 162	17	50
Benzene	50.0	55.3		ug/L		111	74 - 123	9	30
2-Butanone (MEK)	100	118		ug/L		118	55 - 142	7	30
Carbon disulfide	50.0	51.7		ug/L		103	63 - 142	5	30
Carbon tetrachloride	50.0	47.1		ug/L		94	70 - 131	3	30
Chlorobenzene	50.0	56.1		ug/L		112	79 - 120	4	30
Chloroform	50.0	58.3		ug/L		117	76 - 128	6	30
cis-1,2-Dichloroethene	50.0	59.0		ug/L		118	78 - 127	4	30
1,2-Dichlorobenzene	50.0	56.0		ug/L		112	77 - 124	5	30
1,4-Dichlorobenzene	50.0	56.8		ug/L		114	76 - 124	1	30
1,1-Dichloroethane	50.0	58.1		ug/L		116	69 - 132	7	30
1,1-Dichloroethene	50.0	52.5		ug/L		105	73 - 134	1	30
1,2-Dichloropropane	50.0	55.6		ug/L		111	71 - 126	22	30
Ethylbenzene	50.0	54.1		ug/L		108	78 - 125	3	30
Methylene Chloride	50.0	58.6		ug/L		117	79 - 124	2	30
4-Methyl-2-pentanone (MIBK)	100	118		ug/L		118	51 - 143	10	30
p-Isopropyltoluene	50.0	55.7		ug/L		111	69 - 129	5	50
Tetrachloroethene	50.0	54.2		ug/L		108	77 - 128	4	30
Toluene	50.0	56.4		ug/L		113	77 - 125	6	30
1,2,4-Trichlorobenzene	50.0	55.2		ug/L		110	67 - 134	6	30
1,2,3-Trichloropropane	50.0	55.9		ug/L		112	74 - 126	22	30

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-306386/5

Matrix: Water

Analysis Batch: 306386

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	50.0	46.1		ug/L		92	58 - 141	5	30
Xylenes, Total	150	164		ug/L		109	80 - 124	6	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	111		70 - 130
4-Bromofluorobenzene	110		70 - 130
Dibromofluoromethane	119		70 - 130

Lab Sample ID: MB 680-306390/11

Matrix: Water

Analysis Batch: 306390

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	5.0	ug/L			12/06/13 12:26	1
Benzene	1.0	U	1.0	0.25	ug/L			12/06/13 12:26	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			12/06/13 12:26	1
Carbon disulfide	2.0	U	2.0	0.60	ug/L			12/06/13 12:26	1
Carbon tetrachloride	1.0	U	1.0	0.50	ug/L			12/06/13 12:26	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			12/06/13 12:26	1
Chloroform	1.0	U	1.0	0.14	ug/L			12/06/13 12:26	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.15	ug/L			12/06/13 12:26	1
1,2-Dichlorobenzene	1.0	U	1.0	0.21	ug/L			12/06/13 12:26	1
1,4-Dichlorobenzene	1.0	U	1.0	0.28	ug/L			12/06/13 12:26	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			12/06/13 12:26	1
1,1-Dichloroethene	1.0	U	1.0	0.11	ug/L			12/06/13 12:26	1
1,2-Dichloropropane	1.0	U	1.0	0.13	ug/L			12/06/13 12:26	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			12/06/13 12:26	1
Methylene Chloride	5.0	U	5.0	1.0	ug/L			12/06/13 12:26	1
4-Methyl-2-pentanone (MIBK)	10	U	10	1.0	ug/L			12/06/13 12:26	1
p-Isopropyltoluene	1.0	U	1.0	0.13	ug/L			12/06/13 12:26	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			12/06/13 12:26	1
Toluene	1.0	U	1.0	0.33	ug/L			12/06/13 12:26	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.25	ug/L			12/06/13 12:26	1
1,2,3-Trichloropropane	1.0	U	1.0	0.41	ug/L			12/06/13 12:26	1
Vinyl chloride	1.0	U	1.0	0.18	ug/L			12/06/13 12:26	1
Xylenes, Total	2.0	U	2.0	0.20	ug/L			12/06/13 12:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		70 - 130		12/06/13 12:26	1
4-Bromofluorobenzene	105		70 - 130		12/06/13 12:26	1
Dibromofluoromethane	124		70 - 130		12/06/13 12:26	1

Lab Sample ID: LCS 680-306390/7

Matrix: Water

Analysis Batch: 306390

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	101		ug/L		101	39 - 162

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-306390/7

Matrix: Water

Analysis Batch: 306390

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	50.3		ug/L		101	74 - 123
2-Butanone (MEK)	100	89.1		ug/L		89	55 - 142
Carbon disulfide	50.0	48.8		ug/L		98	63 - 142
Carbon tetrachloride	50.0	57.7		ug/L		115	70 - 131
Chlorobenzene	50.0	54.2		ug/L		108	79 - 120
Chloroform	50.0	53.5		ug/L		107	76 - 128
cis-1,2-Dichloroethene	50.0	52.3		ug/L		105	78 - 127
1,2-Dichlorobenzene	50.0	55.4		ug/L		111	77 - 124
1,4-Dichlorobenzene	50.0	56.9		ug/L		114	76 - 124
1,1-Dichloroethane	50.0	48.7		ug/L		97	69 - 132
1,1-Dichloroethene	50.0	50.1		ug/L		100	73 - 134
1,2-Dichloropropane	50.0	47.9		ug/L		96	71 - 126
Ethylbenzene	50.0	53.7		ug/L		107	78 - 125
Methylene Chloride	50.0	49.5		ug/L		99	79 - 124
4-Methyl-2-pentanone (MIBK)	100	92.8		ug/L		93	51 - 143
p-Isopropyltoluene	50.0	55.8		ug/L		112	69 - 129
Tetrachloroethene	50.0	57.9		ug/L		116	77 - 128
Toluene	50.0	53.3		ug/L		107	77 - 125
1,2,4-Trichlorobenzene	50.0	64.4		ug/L		129	67 - 134
1,2,3-Trichloropropane	50.0	56.4		ug/L		113	74 - 126
Vinyl chloride	50.0	45.5		ug/L		91	58 - 141
Xylenes, Total	150	166		ug/L		111	80 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	108		70 - 130
4-Bromofluorobenzene	109		70 - 130
Dibromofluoromethane	112		70 - 130

Lab Sample ID: LCSD 680-306390/8

Matrix: Water

Analysis Batch: 306390

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	101		ug/L		101	39 - 162	0	50
Benzene	50.0	47.1		ug/L		94	74 - 123	7	30
2-Butanone (MEK)	100	82.6		ug/L		83	55 - 142	8	30
Carbon disulfide	50.0	45.4		ug/L		91	63 - 142	7	30
Carbon tetrachloride	50.0	54.1		ug/L		108	70 - 131	6	30
Chlorobenzene	50.0	51.2		ug/L		102	79 - 120	6	30
Chloroform	50.0	47.9		ug/L		96	76 - 128	11	30
cis-1,2-Dichloroethene	50.0	47.8		ug/L		96	78 - 127	9	30
1,2-Dichlorobenzene	50.0	53.9		ug/L		108	77 - 124	3	30
1,4-Dichlorobenzene	50.0	53.8		ug/L		108	76 - 124	5	30
1,1-Dichloroethane	50.0	45.0		ug/L		90	69 - 132	8	30
1,1-Dichloroethene	50.0	44.9		ug/L		90	73 - 134	11	30
1,2-Dichloropropane	50.0	45.4		ug/L		91	71 - 126	5	30
Ethylbenzene	50.0	50.7		ug/L		101	78 - 125	6	30
Methylene Chloride	50.0	45.8		ug/L		92	79 - 124	8	30

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-306390/8

Matrix: Water

Analysis Batch: 306390

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Methyl-2-pentanone (MIBK)	100	89.5		ug/L		90	51 - 143	4	30
p-Isopropyltoluene	50.0	53.6		ug/L		107	69 - 129	4	50
Tetrachloroethene	50.0	53.3		ug/L		107	77 - 128	8	30
Toluene	50.0	50.2		ug/L		100	77 - 125	6	30
1,2,4-Trichlorobenzene	50.0	68.3	*	ug/L		137	67 - 134	6	30
1,2,3-Trichloropropane	50.0	54.5		ug/L		109	74 - 126	3	30
Vinyl chloride	50.0	40.8		ug/L		82	58 - 141	11	30
Xylenes, Total	150	157		ug/L		105	80 - 124	6	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	100		70 - 130
4-Bromofluorobenzene	102		70 - 130
Dibromofluoromethane	103		70 - 130

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 680-306184/19-A

Matrix: Water

Analysis Batch: 307383

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 306184

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	1.0	U	1.0	0.10	ug/L		12/05/13 15:11	12/13/13 01:11	1
Benzo[g,h,i]perylene	0.20	U	0.20	0.10	ug/L		12/05/13 15:11	12/13/13 01:11	1
Dibenz(a,h)anthracene	0.20	U	0.20	0.10	ug/L		12/05/13 15:11	12/13/13 01:11	1
Indeno[1,2,3-cd]pyrene	0.20	U	0.20	0.10	ug/L		12/05/13 15:11	12/13/13 01:11	1
3 & 4 Methylphenol	2.0	U	2.0	0.66	ug/L		12/05/13 15:11	12/13/13 01:11	1
Naphthalene	0.20	U	0.20	0.10	ug/L		12/05/13 15:11	12/13/13 01:11	1
Phenol	1.0	U	1.0	0.13	ug/L		12/05/13 15:11	12/13/13 01:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	68		32 - 130	12/05/13 15:11	12/13/13 01:11	1
2-Fluorobiphenyl	64		34 - 130	12/05/13 15:11	12/13/13 01:11	1
Terphenyl-d14 (Surr)	88		36 - 130	12/05/13 15:11	12/13/13 01:11	1
Phenol-d5 (Surr)	67		27 - 130	12/05/13 15:11	12/13/13 01:11	1
2-Fluorophenol (Surr)	65		25 - 130	12/05/13 15:11	12/13/13 01:11	1
2,4,6-Tribromophenol (Surr)	59		30 - 130	12/05/13 15:11	12/13/13 01:11	1

Lab Sample ID: LCS 680-306184/20-A

Matrix: Water

Analysis Batch: 307383

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 306184

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetophenone	10.0	7.80		ug/L		78	45 - 130
Benzo[g,h,i]perylene	10.0	7.67		ug/L		77	27 - 134
Dibenz(a,h)anthracene	10.0	7.48		ug/L		75	38 - 130
Indeno[1,2,3-cd]pyrene	10.0	7.01		ug/L		70	12 - 130
3 & 4 Methylphenol	10.0	7.98		ug/L		80	55 - 130

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 680-306184/20-A

Matrix: Water

Analysis Batch: 307383

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 306184

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	10.0	7.41		ug/L		74	35 - 130
Phenol	10.0	7.80		ug/L		78	44 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5 (Surr)	69		32 - 130
2-Fluorobiphenyl	65		34 - 130
Terphenyl-d14 (Surr)	72		36 - 130
Phenol-d5 (Surr)	67		27 - 130
2-Fluorophenol (Surr)	67		25 - 130
2,4,6-Tribromophenol (Surr)	75		30 - 130

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Lab Sample ID: MB 680-306207/8-A

Matrix: Water

Analysis Batch: 306607

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 306207

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	0.050	U	0.050	0.0057	ug/L		12/05/13 15:11	12/07/13 15:51	1
delta-BHC	0.050	U	0.050	0.0048	ug/L		12/05/13 15:11	12/07/13 15:51	1
gamma-BHC (Lindane)	0.050	U	0.050	0.0059	ug/L		12/05/13 15:11	12/07/13 15:51	1
Heptachlor	0.050	U	0.050	0.0070	ug/L		12/05/13 15:11	12/07/13 15:51	1
Toxaphene, Technical	5.0	U	5.0	0.50	ug/L		12/05/13 15:11	12/07/13 15:51	1
Toxaphene - Total	5.0	U	5.0	0.50	ug/L		12/05/13 15:11	12/07/13 15:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	60		22 - 130	12/05/13 15:11	12/07/13 15:51	1
Tetrachloro-m-xylene	68		53 - 130	12/05/13 15:11	12/07/13 15:51	1

Lab Sample ID: LCS 680-306207/12-A

Matrix: Water

Analysis Batch: 306607

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 306207

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene, Technical	8.00	5.15		ug/L		64	35 - 138
Toxaphene - Total	8.00	5.65		ug/L		71	35 - 138

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	47		22 - 130
Tetrachloro-m-xylene	25	X	53 - 130

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Lab Sample ID: LCS 680-306207/9-A

Matrix: Water

Analysis Batch: 306607

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 306207

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-BHC	0.100	0.0723		ug/L		72	43 - 138
delta-BHC	0.100	0.0791		ug/L		79	23 - 191
gamma-BHC (Lindane)	0.100	0.0748		ug/L		75	54 - 134
Heptachlor	0.100	0.0718		ug/L		72	10 - 200

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	60		22 - 130
Tetrachloro-m-xylene	66		53 - 130

Lab Sample ID: 680-96759-1 MS

Matrix: Water

Analysis Batch: 306607

Client Sample ID: MW-55S

Prep Type: Total/NA

Prep Batch: 306207

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene, Technical	5.0	U	7.79	5.78		ug/L		74	35 - 138
Toxaphene - Total	5.0	U	7.79	6.98		ug/L		90	35 - 138

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl	37		22 - 130
Tetrachloro-m-xylene	57		53 - 130

Lab Sample ID: 680-96759-1 MSD

Matrix: Water

Analysis Batch: 306607

Client Sample ID: MW-55S

Prep Type: Total/NA

Prep Batch: 306207

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Toxaphene, Technical	5.0	U	7.34	5.91		ug/L		81	35 - 138	2	50
Toxaphene - Total	5.0	U	7.34	7.26		ug/L		99	35 - 138	4	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl	45		22 - 130
Tetrachloro-m-xylene	66		53 - 130

## Method: 8315A - Carbonyl Compounds (HPLC)

Lab Sample ID: MB 640-106275/1-A

Matrix: Water

Analysis Batch: 106310

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 106275

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	50	U	50	5.0	ug/L		12/05/13 08:23	12/05/13 10:12	1

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

## Method: 8315A - Carbonyl Compounds (HPLC) (Continued)

Lab Sample ID: LCS 640-106275/2-A

Matrix: Water

Analysis Batch: 106310

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 106275

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Formaldehyde	150	141		ug/L		94	73 - 133

Lab Sample ID: LCSD 640-106275/3-A

Matrix: Water

Analysis Batch: 106310

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 106275

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Formaldehyde	150	148		ug/L		99	73 - 133	5	20

## Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 680-306329/1-A

Matrix: Water

Analysis Batch: 306733

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 306329

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.5	U	2.5	1.3	ug/L		12/05/13 15:59	12/06/13 16:41	1
Barium	5.0	U	5.0	1.3	ug/L		12/05/13 15:59	12/06/13 16:41	1
Cobalt	0.50	U	0.50	0.15	ug/L		12/05/13 15:59	12/06/13 16:41	1
Chromium	5.0	U	5.0	2.5	ug/L		12/05/13 15:59	12/06/13 16:41	1
Nickel	5.0	U	5.0	2.0	ug/L		12/05/13 15:59	12/06/13 16:41	1
Selenium	2.5	U	2.5	1.0	ug/L		12/05/13 15:59	12/06/13 16:41	1
Vanadium	10	U	10	3.8	ug/L		12/05/13 15:59	12/06/13 16:41	1
Zinc	20	U	20	8.3	ug/L		12/05/13 15:59	12/06/13 16:41	1

Lab Sample ID: LCS 680-306329/2-A

Matrix: Water

Analysis Batch: 306733

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 306329

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	109		ug/L		109	75 - 125
Barium	100	108		ug/L		108	75 - 125
Cobalt	50.0	50.5		ug/L		101	75 - 125
Chromium	100	110		ug/L		110	75 - 125
Nickel	100	111		ug/L		111	75 - 125
Selenium	100	104		ug/L		104	75 - 125
Vanadium	100	107		ug/L		107	75 - 125
Zinc	100	107		ug/L		107	75 - 125

TestAmerica Savannah



# QC Association Summary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

## GC/MS VOA

### Analysis Batch: 306385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96759-3	MW-55D	Total/NA	Water	8260B	
680-96759-5	EB-1	Total/NA	Water	8260B	
680-96759-6	Trip Blank	Total/NA	Water	8260B	
LCS 680-306385/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-306385/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-306385/7	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 306386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96759-4	Dup-1	Total/NA	Water	8260B	
LCS 680-306386/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-306386/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-306386/7	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 306390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96759-1	MW-55S	Total/NA	Water	8260B	
680-96759-2	MW-55I	Total/NA	Water	8260B	
LCS 680-306390/7	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-306390/8	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-306390/11	Method Blank	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 306184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96759-1	MW-55S	Total/NA	Water	3520C	
680-96759-2	MW-55I	Total/NA	Water	3520C	
680-96759-3	MW-55D	Total/NA	Water	3520C	
680-96759-4	Dup-1	Total/NA	Water	3520C	
680-96759-5	EB-1	Total/NA	Water	3520C	
LCS 680-306184/20-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-306184/19-A	Method Blank	Total/NA	Water	3520C	

### Analysis Batch: 307383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96759-1	MW-55S	Total/NA	Water	8270D LL	306184
680-96759-2	MW-55I	Total/NA	Water	8270D LL	306184
680-96759-5	EB-1	Total/NA	Water	8270D LL	306184
LCS 680-306184/20-A	Lab Control Sample	Total/NA	Water	8270D LL	306184
MB 680-306184/19-A	Method Blank	Total/NA	Water	8270D LL	306184

### Analysis Batch: 307613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96759-3	MW-55D	Total/NA	Water	8270D LL	306184
680-96759-4	Dup-1	Total/NA	Water	8270D LL	306184

TestAmerica Savannah



# QC Association Summary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

## GC Semi VOA

### Prep Batch: 306207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96759-1	MW-55S	Total/NA	Water	3520C	
680-96759-1 MS	MW-55S	Total/NA	Water	3520C	
680-96759-1 MSD	MW-55S	Total/NA	Water	3520C	
680-96759-2	MW-55I	Total/NA	Water	3520C	
680-96759-3	MW-55D	Total/NA	Water	3520C	
680-96759-4	Dup-1	Total/NA	Water	3520C	
680-96759-5	EB-1	Total/NA	Water	3520C	
LCS 680-306207/12-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 680-306207/9-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-306207/8-A	Method Blank	Total/NA	Water	3520C	

### Analysis Batch: 306607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96759-1	MW-55S	Total/NA	Water	8081B/8082A	306207
680-96759-1 MS	MW-55S	Total/NA	Water	8081B/8082A	306207
680-96759-1 MSD	MW-55S	Total/NA	Water	8081B/8082A	306207
680-96759-2	MW-55I	Total/NA	Water	8081B/8082A	306207
680-96759-3	MW-55D	Total/NA	Water	8081B/8082A	306207
680-96759-4	Dup-1	Total/NA	Water	8081B/8082A	306207
680-96759-5	EB-1	Total/NA	Water	8081B/8082A	306207
LCS 680-306207/12-A	Lab Control Sample	Total/NA	Water	8081B/8082A	306207
LCS 680-306207/9-A	Lab Control Sample	Total/NA	Water	8081B/8082A	306207
MB 680-306207/8-A	Method Blank	Total/NA	Water	8081B/8082A	306207

## HPLC/IC

### Prep Batch: 106275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96759-1	MW-55S	Total/NA	Water	8315_W_Prep	
680-96759-2	MW-55I	Total/NA	Water	8315_W_Prep	
680-96759-3	MW-55D	Total/NA	Water	8315_W_Prep	
680-96759-4	Dup-1	Total/NA	Water	8315_W_Prep	
680-96759-5	EB-1	Total/NA	Water	8315_W_Prep	
LCS 640-106275/2-A	Lab Control Sample	Total/NA	Water	8315_W_Prep	
LCSD 640-106275/3-A	Lab Control Sample Dup	Total/NA	Water	8315_W_Prep	
MB 640-106275/1-A	Method Blank	Total/NA	Water	8315_W_Prep	

### Analysis Batch: 106310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96759-1	MW-55S	Total/NA	Water	8315A	106275
680-96759-2	MW-55I	Total/NA	Water	8315A	106275
680-96759-3	MW-55D	Total/NA	Water	8315A	106275
680-96759-4	Dup-1	Total/NA	Water	8315A	106275
680-96759-5	EB-1	Total/NA	Water	8315A	106275
LCS 640-106275/2-A	Lab Control Sample	Total/NA	Water	8315A	106275
LCSD 640-106275/3-A	Lab Control Sample Dup	Total/NA	Water	8315A	106275
MB 640-106275/1-A	Method Blank	Total/NA	Water	8315A	106275

TestAmerica Savannah



## QC Association Summary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

### Metals

#### Prep Batch: 306329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96759-1	MW-55S	Total Recoverable	Water	3005A	
680-96759-2	MW-55I	Total Recoverable	Water	3005A	
680-96759-3	MW-55D	Total Recoverable	Water	3005A	
680-96759-4	Dup-1	Total Recoverable	Water	3005A	
680-96759-5	EB-1	Total Recoverable	Water	3005A	
LCS 680-306329/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 680-306329/1-A	Method Blank	Total Recoverable	Water	3005A	

#### Analysis Batch: 306733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-96759-1	MW-55S	Total Recoverable	Water	6020	306329
680-96759-2	MW-55I	Total Recoverable	Water	6020	306329
680-96759-3	MW-55D	Total Recoverable	Water	6020	306329
680-96759-4	Dup-1	Total Recoverable	Water	6020	306329
680-96759-5	EB-1	Total Recoverable	Water	6020	306329
LCS 680-306329/2-A	Lab Control Sample	Total Recoverable	Water	6020	306329
MB 680-306329/1-A	Method Blank	Total Recoverable	Water	6020	306329



# Lab Chronicle

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

**Client Sample ID: MW-55S**

**Date Collected: 12/04/13 12:46**

**Date Received: 12/04/13 15:15**

**Lab Sample ID: 680-96759-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	306390	12/06/13 12:49	JD1	TAL SAV
Total/NA	Prep	3520C			306184	12/05/13 15:11	RNJ	TAL SAV
Total/NA	Analysis	8270D LL		1	307383	12/13/13 07:02	JPM	TAL SAV
Total/NA	Prep	3520C			306207	12/05/13 15:11	RNJ	TAL SAV
Total/NA	Analysis	8081B/8082A		1	306607	12/07/13 18:06	JCK	TAL SAV
Total/NA	Prep	8315_W_Prep			106275	12/05/13 08:23	DNS	TAL TAL
Total/NA	Analysis	8315A		1	106310	12/05/13 12:46	DNS	TAL TAL
Total Recoverable	Prep	3005A			306329	12/05/13 15:59	DAS	TAL SAV
Total Recoverable	Analysis	6020		1	306733	12/06/13 16:56	BWR	TAL SAV

**Client Sample ID: MW-55I**

**Date Collected: 12/04/13 11:55**

**Date Received: 12/04/13 15:15**

**Lab Sample ID: 680-96759-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	306390	12/06/13 13:11	JD1	TAL SAV
Total/NA	Prep	3520C			306184	12/05/13 15:11	RNJ	TAL SAV
Total/NA	Analysis	8270D LL		1	307383	12/13/13 07:27	JPM	TAL SAV
Total/NA	Prep	3520C			306207	12/05/13 15:11	RNJ	TAL SAV
Total/NA	Analysis	8081B/8082A		1	306607	12/07/13 18:29	JCK	TAL SAV
Total/NA	Prep	8315_W_Prep			106275	12/05/13 08:23	DNS	TAL TAL
Total/NA	Analysis	8315A		1	106310	12/05/13 12:58	DNS	TAL TAL
Total Recoverable	Prep	3005A			306329	12/05/13 15:59	DAS	TAL SAV
Total Recoverable	Analysis	6020		1	306733	12/06/13 17:03	BWR	TAL SAV

**Client Sample ID: MW-55D**

**Date Collected: 12/04/13 10:10**

**Date Received: 12/04/13 15:15**

**Lab Sample ID: 680-96759-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	306385	12/06/13 15:13	JD1	TAL SAV
Total/NA	Prep	3520C			306184	12/05/13 15:11	RNJ	TAL SAV
Total/NA	Analysis	8270D LL		10	307613	12/14/13 17:40	JPM	TAL SAV
Total/NA	Prep	3520C			306207	12/05/13 15:11	RNJ	TAL SAV
Total/NA	Analysis	8081B/8082A		1	306607	12/07/13 18:52	JCK	TAL SAV
Total/NA	Prep	8315_W_Prep			106275	12/05/13 08:23	DNS	TAL TAL
Total/NA	Analysis	8315A		1	106310	12/05/13 13:10	DNS	TAL TAL
Total Recoverable	Prep	3005A			306329	12/05/13 15:59	DAS	TAL SAV
Total Recoverable	Analysis	6020		1	306733	12/06/13 17:10	BWR	TAL SAV

TestAmerica Savannah



# Lab Chronicle

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

**Client Sample ID: Dup-1**

**Date Collected: 12/04/13 00:00**

**Date Received: 12/04/13 15:15**

**Lab Sample ID: 680-96759-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	306386	12/06/13 15:31	JD1	TAL SAV
Total/NA	Prep	3520C			306184	12/05/13 15:11	RNJ	TAL SAV
Total/NA	Analysis	8270D LL		10	307613	12/14/13 18:05	JPM	TAL SAV
Total/NA	Prep	3520C			306207	12/05/13 15:11	RNJ	TAL SAV
Total/NA	Analysis	8081B/8082A		1	306607	12/07/13 19:14	JCK	TAL SAV
Total/NA	Prep	8315_W_Prep			106275	12/05/13 08:23	DNS	TAL TAL
Total/NA	Analysis	8315A		1	106310	12/05/13 14:10	DNS	TAL TAL
Total Recoverable	Prep	3005A			306329	12/05/13 15:59	DAS	TAL SAV
Total Recoverable	Analysis	6020		1	306733	12/06/13 17:17	BWR	TAL SAV

**Client Sample ID: EB-1**

**Date Collected: 12/04/13 13:15**

**Date Received: 12/04/13 15:15**

**Lab Sample ID: 680-96759-5**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	306385	12/06/13 12:36	JD1	TAL SAV
Total/NA	Prep	3520C			306184	12/05/13 15:11	RNJ	TAL SAV
Total/NA	Analysis	8270D LL		1	307383	12/13/13 08:43	JPM	TAL SAV
Total/NA	Prep	3520C			306207	12/05/13 15:11	RNJ	TAL SAV
Total/NA	Analysis	8081B/8082A		1	306607	12/07/13 19:37	JCK	TAL SAV
Total/NA	Prep	8315_W_Prep			106275	12/05/13 08:23	DNS	TAL TAL
Total/NA	Analysis	8315A		1	106310	12/05/13 13:45	DNS	TAL TAL
Total Recoverable	Prep	3005A			306329	12/05/13 15:59	DAS	TAL SAV
Total Recoverable	Analysis	6020		1	306733	12/06/13 17:25	BWR	TAL SAV

**Client Sample ID: Trip Blank**

**Date Collected: 12/04/13 00:00**

**Date Received: 12/04/13 15:15**

**Lab Sample ID: 680-96759-6**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	306385	12/06/13 13:05	JD1	TAL SAV

## Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAL = TestAmerica Tallahassee, 2846 Industrial Plaza Drive, Tallahassee, FL 32301, TEL (850)878-3994

TestAmerica Savannah



# Certification Summary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

## Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	AFCEE		SAVLAB	
A2LA	DoD ELAP		399.01	02-28-15
A2LA	ISO/IEC 17025		399.01	02-28-15
Alabama	State Program	4	41450	06-30-14
Arkansas DEQ	State Program	6	88-0692	02-01-14
California	NELAP	9	3217CA	07-31-14
Colorado	State Program	8	N/A	12-31-13 *
Connecticut	State Program	1	PH-0161	03-31-15
Florida	NELAP	4	E87052	06-30-14
GA Dept. of Agriculture	State Program	4	N/A	12-31-13 *
Georgia	State Program	4	N/A	06-30-14
Georgia	State Program	4	803	06-30-14
Guam	State Program	9	09-005r	06-17-14
Hawaii	State Program	9	N/A	06-30-14
Illinois	NELAP	5	200022	11-30-13 *
Indiana	State Program	5	N/A	06-30-14
Iowa	State Program	7	353	07-01-15
Kentucky	State Program	4	90084	12-31-13 *
Kentucky (UST)	State Program	4	18	06-30-14
Louisiana	NELAP	6	30690	06-30-14
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-13 *
Massachusetts	State Program	1	M-GA006	06-30-14
Michigan	State Program	5	9925	06-30-14
Mississippi	State Program	4	N/A	06-30-14
Montana	State Program	8	CERT0081	01-01-14
Nebraska	State Program	7	TestAmerica-Savannah	06-30-14
New Jersey	NELAP	2	GA769	06-30-14
New Mexico	State Program	6	N/A	06-30-14
New York	NELAP	2	10842	04-01-14
North Carolina DENR	State Program	4	269	12-31-13 *
North Carolina DHHS	State Program	4	13701	07-31-14
Oklahoma	State Program	6	9984	08-31-14
Pennsylvania	NELAP	3	68-00474	06-30-14
Puerto Rico	State Program	2	GA00006	01-01-14 *
South Carolina	State Program	4	98001	06-30-14
Tennessee	State Program	4	TN02961	06-30-14
Texas	NELAP	6	T104704185-08-TX	11-30-14
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-14
Washington	State Program	10	C1794	06-10-14
West Virginia	State Program	3	9950C	12-31-13 *
West Virginia DEP	State Program	3	94	06-30-14
Wisconsin	State Program	5	999819810	08-31-14
Wyoming	State Program	8	8TMS-L	06-30-14

## Laboratory: TestAmerica Tallahassee

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

\* Expired certification is currently pending renewal and is considered valid.

TestAmerica Savannah



## Certification Summary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

### Laboratory: TestAmerica Tallahassee (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E81005	06-30-14
Georgia	State Program	4		06-30-14
Louisiana	NELAP	6	30663	06-30-14
New Jersey	NELAP	2	FL012	06-30-14
Texas	NELAP	6	T104704459-11-2	03-31-14
USDA	Federal		P330-08-00158	08-05-14



## Method Summary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick

TestAmerica Job ID: 680-96759-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL SAV
8081B/8082A	Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	SW846	TAL SAV
8315A	Carbonyl Compounds (HPLC)	SW846	TAL TAL
6020	Metals (ICP/MS)	SW846	TAL SAV

### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAL = TestAmerica Tallahassee, 2846 Industrial Plaza Drive, Tallahassee, FL 32301, TEL (850)878-3994



5102 LaRoche Avenue

Savannah, GA 31404

phone: 912.354.7858 fax: 912.352.0165

TestAmerica

DOI: 10.1002/1522-2675(200109)183:03:1:0

### Chain of Custody Record

FestAmerica Laboratories, Inc.

[illegible]



## Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-96759-1

Login Number: 96759

List Source: TestAmerica Savannah

List Number: 1

Creator: Banda, Christy S

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-96759-1

**Login Number: 96759**

**List Source: TestAmerica Tallahassee**

**List Number: 1**

**List Creation: 12/05/13 10:37 AM**

**Creator: Stark, Clayton E**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-99118-1

Client Project/Site: Brunswick - Terry Creek Trailer Park

Revision: 1

For:

Antea USA, Inc.

8008 Corporate Center Dr., Ste. 100

Charlotte, North Carolina 28226

Attn: Jon Alix

*Kathryn Smith*

Authorized for release by:

4/4/2014 3:11:53 PM

Kathryn Smith, Project Manager II

(912)354-7858

[kathy.smith@testamericainc.com](mailto:kathy.smith@testamericainc.com)

### LINKS

Review your project  
results through

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Case Narrative . . . . .	3
Method Summary . . . . .	5
Sample Summary . . . . .	6
Definitions/Glossary . . . . .	7
Detection Summary . . . . .	8
Client Sample Results . . . . .	9
Surrogate Summary . . . . .	12
QC Sample Results . . . . .	14
QC Association Summary . . . . .	20
Lab Chronicle . . . . .	22
Chain of Custody . . . . .	23
Receipt Checklists . . . . .	25
Certification Summary . . . . .	27
Definitions/Glossary . . . . .	29

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15



## Case Narrative

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

**Job ID: 680-99118-1**

**Laboratory: TestAmerica Savannah**

### Narrative

## CASE NARRATIVE

**Client: Antea USA, Inc.**

**Project: Brunswick - Terry Creek Trailer Park**

**Report Number: 680-99118-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

### RECEIPT

The samples were received on 03/05/2014; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.3° C and 2.8° C.

### VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples Terry Creek Trailer Park (680-99118-1) and Trip Blank (680-99118-2) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/07/2014.

Chloroform was detected in method blank MB 680-318627/9 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

The trip blank for batch 318627 contained chloroform above the method detection limit (MDL). This target analyte concentration was less than the project-specific action limit; therefore, re-analysis of samples was not performed.

### SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS) - LOW LEVEL

Sample Terry Creek Trailer Park (680-99118-1) was analyzed for Semivolatile Organic Compounds (GC/MS) - Low level in accordance with EPA SW-846 Method 8270D. The samples were prepared on 03/06/2014 and analyzed on 03/11/2014.

The continuing calibration verification (CCV) analyzed in batch 318613 was outside the method criteria for the following analyte(s): Indeno[1,2,3-cd]pyrene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

### PESTICIDES AND PCBS

Sample Terry Creek Trailer Park (680-99118-1) was analyzed for Pesticides and PCBs in accordance with EPA SW-846 Method 8081B\_8082A. The samples were prepared on 03/05/2014 and analyzed on 03/07/2014.

This method incorporates 2nd column confirmation. Corrective action is not taken for surrogate/spike compounds unless results from both columns are unacceptable. Results outside criteria are qualified.

Due to the absence of indicator peaks for toxaphene, including weathered toxaphene, Total toxaphene as area under the curve was not quantitated and has been reported as not detected.

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



## Case Narrative

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

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### Job ID: 680-99118-1 (Continued)

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Laboratory: TestAmerica Savannah (Continued)

#### FORMALDEHYDE

Sample Terry Creek Trailer Park (680-99118-1) was analyzed for formaldehyde in accordance with EPA SW-846 Method 8315A. The samples were prepared and analyzed on 03/06/2014.

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### METALS (ICPMS)

Sample Terry Creek Trailer Park (680-99118-1) was analyzed for metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 03/06/2014 and analyzed on 03/07/2014.

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



## Method Summary

Client: Antea USA, Inc.

TestAmerica Job ID: 680-99118-1

Project/Site: Brunswick - Terry Creek Trailer Park

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL SAV
8081B/8082A	Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	SW846	TAL SAV
8315A	Carbonyl Compounds (HPLC)	SW846	TAL TAL
6020A	Metals (ICP/MS)	SW846	TAL SAV

### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAL = TestAmerica Tallahassee, 2846 Industrial Plaza Drive, Tallahassee, FL 32301, TEL (850)878-3994



## Sample Summary

Client: Antea USA, Inc.

TestAmerica Job ID: 680-99118-1

Project/Site: Brunswick - Terry Creek Trailer Park

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-99118-1	Terry Creek Trailer Park	Water	03/04/14 15:25	03/05/14 10:15
680-99118-2	Trip Blank	Water	03/04/14 00:00	03/05/14 10:15



## Definitions/Glossary

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



## Detection Summary

Client: Antea USA, Inc.

TestAmerica Job ID: 680-99118-1

Project/Site: Brunswick - Terry Creek Trailer Park

### Client Sample ID: Terry Creek Trailer Park

Lab Sample ID: 680-99118-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.36	J B	1.0	0.14	ug/L	1		8260B	Total/NA
Barium	43		5.0	1.3	ug/L	1		6020A	Total Recoverable
Zinc	11	J	20	8.3	ug/L	1		6020A	Total Recoverable

### Client Sample ID: Trip Blank

Lab Sample ID: 680-99118-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.5	J	25	5.0	ug/L	1		8260B	Total/NA
Chloroform	0.34	J B	1.0	0.14	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah



# Client Sample Results

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

**Client Sample ID: Terry Creek Trailer Park**

**Lab Sample ID: 680-99118-1**

**Date Collected: 03/04/14 15:25**

**Matrix: Water**

**Date Received: 03/05/14 10:15**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			03/07/14 20:18	1
Benzene	<0.25		1.0	0.25	ug/L			03/07/14 20:18	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			03/07/14 20:18	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			03/07/14 20:18	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			03/07/14 20:18	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			03/07/14 20:18	1
<b>Chloroform</b>	<b>0.36</b>	<b>J B</b>	1.0	0.14	ug/L			03/07/14 20:18	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			03/07/14 20:18	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			03/07/14 20:18	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			03/07/14 20:18	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			03/07/14 20:18	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			03/07/14 20:18	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			03/07/14 20:18	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			03/07/14 20:18	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			03/07/14 20:18	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			03/07/14 20:18	1
p-Isopropyltoluene	<0.13		1.0	0.13	ug/L			03/07/14 20:18	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			03/07/14 20:18	1
Toluene	<0.33		1.0	0.33	ug/L			03/07/14 20:18	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			03/07/14 20:18	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			03/07/14 20:18	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			03/07/14 20:18	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			03/07/14 20:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		70 - 130		03/07/14 20:18	1
Dibromofluoromethane	99		70 - 130		03/07/14 20:18	1
Toluene-d8 (Surr)	89		70 - 130		03/07/14 20:18	1

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.13		0.97	0.13	ug/L		03/06/14 13:26	03/11/14 04:12	1
Acetophenone	<0.097		0.97	0.097	ug/L		03/06/14 13:26	03/11/14 04:12	1
3 & 4 Methylphenol	<0.64		1.9	0.64	ug/L		03/06/14 13:26	03/11/14 04:12	1
Naphthalene	<0.097		0.19	0.097	ug/L		03/06/14 13:26	03/11/14 04:12	1
Indeno[1,2,3-cd]pyrene	<0.097		0.19	0.097	ug/L		03/06/14 13:26	03/11/14 04:12	1
Dibenz(a,h)anthracene	<0.097		0.19	0.097	ug/L		03/06/14 13:26	03/11/14 04:12	1
Benzo[g,h,i]perylene	<0.097		0.19	0.097	ug/L		03/06/14 13:26	03/11/14 04:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	57		32 - 130	03/06/14 13:26	03/11/14 04:12	1
2-Fluorobiphenyl	58		34 - 130	03/06/14 13:26	03/11/14 04:12	1
Terphenyl-d14 (Surr)	61		36 - 130	03/06/14 13:26	03/11/14 04:12	1
Phenol-d5 (Surr)	69		27 - 130	03/06/14 13:26	03/11/14 04:12	1
2-Fluorophenol (Surr)	57		25 - 130	03/06/14 13:26	03/11/14 04:12	1
2,4,6-Tribromophenol (Surr)	57		30 - 130	03/06/14 13:26	03/11/14 04:12	1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.023		0.053	0.023	ug/L		03/05/14 14:03	03/07/14 18:47	1

TestAmerica Savannah



# Client Sample Results

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

**Client Sample ID: Terry Creek Trailer Park**

**Lab Sample ID: 680-99118-1**

**Date Collected: 03/04/14 15:25**

**Matrix: Water**

**Date Received: 03/05/14 10:15**

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	<0.023		0.053	0.023	ug/L		03/05/14 14:03	03/07/14 18:47	1
gamma-BHC (Lindane)	<0.020		0.053	0.020	ug/L		03/05/14 14:03	03/07/14 18:47	1
Heptachlor	<0.024		0.053	0.024	ug/L		03/05/14 14:03	03/07/14 18:47	1
Toxaphene, Technical	<0.54		5.3	0.54	ug/L		03/05/14 14:03	03/07/14 18:47	1
Toxaphene - Total	<0.54		5.3	0.54	ug/L		03/05/14 14:03	03/07/14 18:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	72		10 - 130				03/05/14 14:03	03/07/14 18:47	1
Tetrachloro-m-xylene	71		39 - 130				03/05/14 14:03	03/07/14 18:47	1

## Method: 8315A - Carbonyl Compounds (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	<5.0		50	5.0	ug/L		03/06/14 10:50	03/06/14 12:59	1

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<1.3		2.5	1.3	ug/L		03/06/14 07:57	03/07/14 11:05	1
Barium	43		5.0	1.3	ug/L		03/06/14 07:57	03/07/14 11:05	1
Cobalt	<0.15		0.50	0.15	ug/L		03/06/14 07:57	03/07/14 11:05	1
Chromium	<2.5		5.0	2.5	ug/L		03/06/14 07:57	03/07/14 11:05	1
Nickel	<2.0		5.0	2.0	ug/L		03/06/14 07:57	03/07/14 11:05	1
Selenium	<1.0		2.5	1.0	ug/L		03/06/14 07:57	03/07/14 11:05	1
Vanadium	<3.8		10	3.8	ug/L		03/06/14 07:57	03/07/14 11:05	1
Zinc	11 J		20	8.3	ug/L		03/06/14 07:57	03/07/14 11:05	1

TestAmerica Savannah



# Client Sample Results

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 680-99118-2**

**Date Collected: 03/04/14 00:00**

**Matrix: Water**

**Date Received: 03/05/14 10:15**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>5.5</b>	<b>J</b>	25	5.0	ug/L			03/07/14 15:27	1
Benzene	<0.25		1.0	0.25	ug/L			03/07/14 15:27	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			03/07/14 15:27	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			03/07/14 15:27	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			03/07/14 15:27	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			03/07/14 15:27	1
<b>Chloroform</b>	<b>0.34</b>	<b>J B</b>	1.0	0.14	ug/L			03/07/14 15:27	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			03/07/14 15:27	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			03/07/14 15:27	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			03/07/14 15:27	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			03/07/14 15:27	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			03/07/14 15:27	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			03/07/14 15:27	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			03/07/14 15:27	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			03/07/14 15:27	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			03/07/14 15:27	1
p-Isopropyltoluene	<0.13		1.0	0.13	ug/L			03/07/14 15:27	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			03/07/14 15:27	1
Toluene	<0.33		1.0	0.33	ug/L			03/07/14 15:27	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			03/07/14 15:27	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			03/07/14 15:27	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			03/07/14 15:27	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			03/07/14 15:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		70 - 130		03/07/14 15:27	1
Dibromofluoromethane	101		70 - 130		03/07/14 15:27	1
Toluene-d8 (Surr)	89		70 - 130		03/07/14 15:27	1

TestAmerica Savannah



# Surrogate Summary

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (70-130)	DBFM (70-130)	TOL (70-130)
680-99118-1	Terry Creek Trailer Park	96	99	89
680-99118-2	Trip Blank	91	101	89
LCS 680-318627/4	Lab Control Sample	87	88	89
LCSD 680-318627/5	Lab Control Sample Dup	83	95	91
MB 680-318627/9	Method Blank	95	100	90
<b>Surrogate Legend</b>				
BFB = 4-Bromofluorobenzene				
DBFM = Dibromofluoromethane				
TOL = Toluene-d8 (Surr)				

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		NBZ (32-130)	FBP (34-130)	TPH (36-130)	PHL (27-130)	2FP (25-130)	TBP (30-130)
680-99118-1	Terry Creek Trailer Park	57	58	61	69	57	57
LCS 680-318452/11-A	Lab Control Sample	61	62	62	72	61	66
MB 680-318452/10-A	Method Blank	63	63	65	73	60	52
<b>Surrogate Legend</b>							
NBZ = Nitrobenzene-d5 (Surr)							
FBP = 2-Fluorobiphenyl							
TPH = Terphenyl-d14 (Surr)							
PHL = Phenol-d5 (Surr)							
2FP = 2-Fluorophenol (Surr)							
TBP = 2,4,6-Tribromophenol (Surr)							

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCB1 (10-130)	TCX1 (39-130)
680-99118-1	Terry Creek Trailer Park	72	71
LCSD 680-318334/4-A	Lab Control Sample Dup	54	66
LCSD 680-318334/6-A	Lab Control Sample Dup	57	64
<b>Surrogate Legend</b>			
DCB = DCB Decachlorobiphenyl			
TCX = Tetrachloro-m-xylene			



## Surrogate Summary

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

### Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCB2 (10-130)	TCX2 (39-130)
LCS 680-318334/3-A	Lab Control Sample	43	55
LCS 680-318334/5-A	Lab Control Sample	50	54
MB 680-318334/2-A	Method Blank	57	71
<b>Surrogate Legend</b>			
DCB = DCB Decachlorobiphenyl			
TCX = Tetrachloro-m-xylene			



# QC Sample Results

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-318627/9

Matrix: Water

Analysis Batch: 318627

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			03/07/14 14:42	1
Benzene	<0.25		1.0	0.25	ug/L			03/07/14 14:42	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			03/07/14 14:42	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			03/07/14 14:42	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			03/07/14 14:42	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			03/07/14 14:42	1
Chloroform	0.285	J	1.0	0.14	ug/L			03/07/14 14:42	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			03/07/14 14:42	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			03/07/14 14:42	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			03/07/14 14:42	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			03/07/14 14:42	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			03/07/14 14:42	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			03/07/14 14:42	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			03/07/14 14:42	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			03/07/14 14:42	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			03/07/14 14:42	1
p-Isopropyltoluene	<0.13		1.0	0.13	ug/L			03/07/14 14:42	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			03/07/14 14:42	1
Toluene	<0.33		1.0	0.33	ug/L			03/07/14 14:42	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			03/07/14 14:42	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			03/07/14 14:42	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			03/07/14 14:42	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			03/07/14 14:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		70 - 130		03/07/14 14:42	1
Dibromofluoromethane	100		70 - 130		03/07/14 14:42	1
Toluene-d8 (Surr)	90		70 - 130		03/07/14 14:42	1

Lab Sample ID: LCS 680-318627/4

Matrix: Water

Analysis Batch: 318627

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	68.4		ug/L		68	39 - 162
Benzene	50.0	49.9		ug/L		100	74 - 123
2-Butanone (MEK)	100	72.4		ug/L		72	55 - 142
Carbon disulfide	50.0	45.8		ug/L		92	63 - 142
Carbon tetrachloride	50.0	51.8		ug/L		104	70 - 131
Chlorobenzene	50.0	44.1		ug/L		88	79 - 120
Chloroform	50.0	45.8		ug/L		92	76 - 128
cis-1,2-Dichloroethene	50.0	44.9		ug/L		90	78 - 127
1,2-Dichlorobenzene	50.0	44.7		ug/L		89	77 - 124
1,4-Dichlorobenzene	50.0	45.3		ug/L		91	76 - 124
1,1-Dichloroethane	50.0	43.1		ug/L		86	69 - 132
1,1-Dichloroethene	50.0	48.1		ug/L		96	73 - 134
1,2-Dichloropropane	50.0	46.2		ug/L		92	71 - 126
Ethylbenzene	50.0	49.6		ug/L		99	78 - 125

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# QC Sample Results

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-318627/4

Matrix: Water

Analysis Batch: 318627

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	50.0	45.0		ug/L		90	79 - 124
4-Methyl-2-pentanone (MIBK)	100	88.6		ug/L		89	51 - 143
p-Isopropyltoluene	50.0	47.8		ug/L		96	69 - 129
Tetrachloroethene	50.0	49.1		ug/L		98	77 - 128
Toluene	50.0	50.5		ug/L		101	77 - 125
1,2,4-Trichlorobenzene	50.0	41.0		ug/L		82	67 - 134
1,2,3-Trichloropropane	50.0	43.1		ug/L		86	74 - 126
Vinyl chloride	50.0	48.7		ug/L		97	58 - 141
Xylenes, Total	150	147		ug/L		98	80 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	87		70 - 130
Dibromofluoromethane	88		70 - 130
Toluene-d8 (Surr)	89		70 - 130

Lab Sample ID: LCSD 680-318627/5

Matrix: Water

Analysis Batch: 318627

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	85.4		ug/L		85	39 - 162	22	50
Benzene	50.0	49.7		ug/L		99	74 - 123	0	30
2-Butanone (MEK)	100	76.8		ug/L		77	55 - 142	6	30
Carbon disulfide	50.0	55.9		ug/L		112	63 - 142	20	30
Carbon tetrachloride	50.0	52.9		ug/L		106	70 - 131	2	30
Chlorobenzene	50.0	45.0		ug/L		90	79 - 120	2	30
Chloroform	50.0	49.5		ug/L		99	76 - 128	8	30
cis-1,2-Dichloroethene	50.0	49.5		ug/L		99	78 - 127	10	30
1,2-Dichlorobenzene	50.0	43.8		ug/L		88	77 - 124	2	30
1,4-Dichlorobenzene	50.0	43.9		ug/L		88	76 - 124	3	30
1,1-Dichloroethane	50.0	49.8		ug/L		100	69 - 132	14	30
1,1-Dichloroethene	50.0	59.6		ug/L		119	73 - 134	21	30
1,2-Dichloropropane	50.0	46.3		ug/L		93	71 - 126	0	30
Ethylbenzene	50.0	50.7		ug/L		101	78 - 125	2	30
Methylene Chloride	50.0	51.4		ug/L		103	79 - 124	13	30
4-Methyl-2-pentanone (MIBK)	100	88.7		ug/L		89	51 - 143	0	30
p-Isopropyltoluene	50.0	47.6		ug/L		95	69 - 129	0	50
Tetrachloroethene	50.0	48.8		ug/L		98	77 - 128	1	30
Toluene	50.0	50.8		ug/L		102	77 - 125	1	30
1,2,4-Trichlorobenzene	50.0	41.2		ug/L		82	67 - 134	1	30
1,2,3-Trichloropropane	50.0	41.3		ug/L		83	74 - 126	4	30
Vinyl chloride	50.0	51.0		ug/L		102	58 - 141	5	30
Xylenes, Total	150	145		ug/L		97	80 - 124	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	83		70 - 130
Dibromofluoromethane	95		70 - 130

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# QC Sample Results

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-318627/5

Matrix: Water

Analysis Batch: 318627

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	91		70 - 130

## Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 680-318452/10-A

Matrix: Water

Analysis Batch: 319016

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 318452

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.13		1.0	0.13	ug/L		03/06/14 13:26	03/10/14 22:53	1
Acetophenone	<0.10		1.0	0.10	ug/L		03/06/14 13:26	03/10/14 22:53	1
3 & 4 Methylphenol	<0.66		2.0	0.66	ug/L		03/06/14 13:26	03/10/14 22:53	1
Naphthalene	<0.10		0.20	0.10	ug/L		03/06/14 13:26	03/10/14 22:53	1
Indeno[1,2,3-cd]pyrene	<0.10		0.20	0.10	ug/L		03/06/14 13:26	03/10/14 22:53	1
Dibenz(a,h)anthracene	<0.10		0.20	0.10	ug/L		03/06/14 13:26	03/10/14 22:53	1
Benzo[g,h,i]perylene	<0.10		0.20	0.10	ug/L		03/06/14 13:26	03/10/14 22:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	63		32 - 130	03/06/14 13:26	03/10/14 22:53	1
2-Fluorobiphenyl	63		34 - 130	03/06/14 13:26	03/10/14 22:53	1
Terphenyl-d14 (Surr)	65		36 - 130	03/06/14 13:26	03/10/14 22:53	1
Phenol-d5 (Surr)	73		27 - 130	03/06/14 13:26	03/10/14 22:53	1
2-Fluorophenol (Surr)	60		25 - 130	03/06/14 13:26	03/10/14 22:53	1
2,4,6-Tribromophenol (Surr)	52		30 - 130	03/06/14 13:26	03/10/14 22:53	1

Lab Sample ID: LCS 680-318452/11-A

Matrix: Water

Analysis Batch: 319016

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 318452

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenol	10.0	8.37		ug/L		84	44 - 130
Acetophenone	10.0	7.29		ug/L		73	45 - 130
3 & 4 Methylphenol	10.0	7.57		ug/L		76	55 - 130
Naphthalene	10.0	6.37		ug/L		64	35 - 130
Indeno[1,2,3-cd]pyrene	10.0	7.04		ug/L		70	12 - 130
Dibenz(a,h)anthracene	10.0	7.07		ug/L		71	38 - 130
Benzo[g,h,i]perylene	10.0	6.87		ug/L		69	27 - 134

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5 (Surr)	61		32 - 130
2-Fluorobiphenyl	62		34 - 130
Terphenyl-d14 (Surr)	62		36 - 130
Phenol-d5 (Surr)	72		27 - 130
2-Fluorophenol (Surr)	61		25 - 130
2,4,6-Tribromophenol (Surr)	66		30 - 130

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# QC Sample Results

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Lab Sample ID: MB 680-318334/2-A

Matrix: Water

Analysis Batch: 318727

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 318334

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.022		0.050	0.022	ug/L		03/05/14 14:03	03/07/14 16:49	1
delta-BHC	<0.022		0.050	0.022	ug/L		03/05/14 14:03	03/07/14 16:49	1
gamma-BHC (Lindane)	<0.019		0.050	0.019	ug/L		03/05/14 14:03	03/07/14 16:49	1
Heptachlor	<0.023		0.050	0.023	ug/L		03/05/14 14:03	03/07/14 16:49	1
Toxaphene, Technical	<0.51		5.0	0.51	ug/L		03/05/14 14:03	03/07/14 16:49	1
Toxaphene - Total	<0.51		5.0	0.51	ug/L		03/05/14 14:03	03/07/14 16:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	57		10 - 130	03/05/14 14:03	03/07/14 16:49	1
Tetrachloro-m-xylene	71		39 - 130	03/05/14 14:03	03/07/14 16:49	1

Lab Sample ID: LCS 680-318334/3-A

Matrix: Water

Analysis Batch: 318727

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 318334

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-BHC	0.200	0.134		ug/L		67	45 - 130
delta-BHC	0.200	0.151		ug/L		76	47 - 140
gamma-BHC (Lindane)	0.200	0.138		ug/L		69	47 - 130
Heptachlor	0.200	0.135		ug/L		68	49 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	43		10 - 130
Tetrachloro-m-xylene	55		39 - 130

Lab Sample ID: LCS 680-318334/5-A

Matrix: Water

Analysis Batch: 318727

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 318334

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene, Technical	16.0	13.5		ug/L		84	22 - 145
Toxaphene - Total	16.0	11.7		ug/L		73	35 - 138

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	50		10 - 130
Tetrachloro-m-xylene	54		39 - 130

Lab Sample ID: LCSD 680-318334/4-A

Matrix: Water

Analysis Batch: 318727

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 318334

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
alpha-BHC	0.200	0.151		ug/L		75	45 - 130	12	30
delta-BHC	0.200	0.168		ug/L		84	47 - 140	10	30
gamma-BHC (Lindane)	0.200	0.155		ug/L		77	47 - 130	11	30
Heptachlor	0.200	0.150		ug/L		75	49 - 130	11	30

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# QC Sample Results

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Lab Sample ID: LCSD 680-318334/4-A

Matrix: Water

Analysis Batch: 318727

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 318334

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl	54		10 - 130
Tetrachloro-m-xylene	66		39 - 130

Lab Sample ID: LCSD 680-318334/6-A

Matrix: Water

Analysis Batch: 318727

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 318334

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toxaphene, Technical	16.0	15.1		ug/L		94	22 - 145	11	50
Toxaphene - Total	16.0	12.8		ug/L		80	35 - 138	9	50

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl	57		10 - 130
Tetrachloro-m-xylene	64		39 - 130

## Method: 8315A - Carbonyl Compounds (HPLC)

Lab Sample ID: MB 640-107985/1-A

Matrix: Water

Analysis Batch: 108032

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 107985

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	<5.0		50	5.0	ug/L		03/06/14 10:50	03/06/14 11:49	1

Lab Sample ID: LCS 640-107985/2-A

Matrix: Water

Analysis Batch: 108032

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 107985

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Formaldehyde	150	146		ug/L		97	73 - 133

Lab Sample ID: LCSD 640-107985/3-A

Matrix: Water

Analysis Batch: 108032

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 107985

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Formaldehyde	150	154		ug/L		103	73 - 133	5	20

## Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-318434/1-A

Matrix: Water

Analysis Batch: 318737

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 318434

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<1.3		2.5	1.3	ug/L		03/06/14 07:57	03/07/14 09:00	1
Barium	<1.3		5.0	1.3	ug/L		03/06/14 07:57	03/07/14 09:00	1

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# QC Sample Results

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

## Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 680-318434/1-A

Matrix: Water

Analysis Batch: 318737

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 318434

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	<0.15		0.50	0.15	ug/L		03/06/14 07:57	03/07/14 09:00	1
Chromium	<2.5		5.0	2.5	ug/L		03/06/14 07:57	03/07/14 09:00	1
Nickel	<2.0		5.0	2.0	ug/L		03/06/14 07:57	03/07/14 09:00	1
Selenium	<1.0		2.5	1.0	ug/L		03/06/14 07:57	03/07/14 09:00	1
Vanadium	<3.8		10	3.8	ug/L		03/06/14 07:57	03/07/14 09:00	1
Zinc	<8.3		20	8.3	ug/L		03/06/14 07:57	03/07/14 09:00	1

Lab Sample ID: LCS 680-318434/2-A

Matrix: Water

Analysis Batch: 318737

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 318434

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	107		ug/L		107	75 - 125
Barium	100	104		ug/L		104	75 - 125
Cobalt	50.0	51.2		ug/L		102	75 - 125
Chromium	100	107		ug/L		107	75 - 125
Nickel	100	109		ug/L		109	75 - 125
Selenium	100	108		ug/L		108	75 - 125
Vanadium	100	106		ug/L		106	75 - 125
Zinc	100	106		ug/L		106	75 - 125



## QC Association Summary

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

### GC/MS VOA

#### Analysis Batch: 318627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-99118-1	Terry Creek Trailer Park	Total/NA	Water	8260B	
680-99118-2	Trip Blank	Total/NA	Water	8260B	
LCS 680-318627/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-318627/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-318627/9	Method Blank	Total/NA	Water	8260B	

### GC/MS Semi VOA

#### Prep Batch: 318452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-99118-1	Terry Creek Trailer Park	Total/NA	Water	3520C	
LCS 680-318452/11-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-318452/10-A	Method Blank	Total/NA	Water	3520C	

#### Analysis Batch: 319016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-99118-1	Terry Creek Trailer Park	Total/NA	Water	8270D LL	318452
LCS 680-318452/11-A	Lab Control Sample	Total/NA	Water	8270D LL	318452
MB 680-318452/10-A	Method Blank	Total/NA	Water	8270D LL	318452

### GC Semi VOA

#### Prep Batch: 318334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-99118-1	Terry Creek Trailer Park	Total/NA	Water	3520C	
LCS 680-318334/3-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 680-318334/5-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 680-318334/4-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 680-318334/6-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 680-318334/2-A	Method Blank	Total/NA	Water	3520C	

#### Analysis Batch: 318727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-99118-1	Terry Creek Trailer Park	Total/NA	Water	8081B/8082A	318334
LCS 680-318334/3-A	Lab Control Sample	Total/NA	Water	8081B/8082A	318334
LCS 680-318334/5-A	Lab Control Sample	Total/NA	Water	8081B/8082A	318334
LCSD 680-318334/4-A	Lab Control Sample Dup	Total/NA	Water	8081B/8082A	318334
LCSD 680-318334/6-A	Lab Control Sample Dup	Total/NA	Water	8081B/8082A	318334
MB 680-318334/2-A	Method Blank	Total/NA	Water	8081B/8082A	318334

### HPLC/IC

#### Prep Batch: 107985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-99118-1	Terry Creek Trailer Park	Total/NA	Water	8315_W_Prep	
LCS 640-107985/2-A	Lab Control Sample	Total/NA	Water	8315_W_Prep	
LCSD 640-107985/3-A	Lab Control Sample Dup	Total/NA	Water	8315_W_Prep	
MB 640-107985/1-A	Method Blank	Total/NA	Water	8315_W_Prep	

TestAmerica Savannah



## QC Association Summary

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

### HPLC/IC (Continued)

#### Analysis Batch: 108032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-99118-1	Terry Creek Trailer Park	Total/NA	Water	8315A	107985
LCS 640-107985/2-A	Lab Control Sample	Total/NA	Water	8315A	107985
LCSD 640-107985/3-A	Lab Control Sample Dup	Total/NA	Water	8315A	107985
MB 640-107985/1-A	Method Blank	Total/NA	Water	8315A	107985

### Metals

#### Prep Batch: 318434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-99118-1	Terry Creek Trailer Park	Total Recoverable	Water	3005A	
LCS 680-318434/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 680-318434/1-A	Method Blank	Total Recoverable	Water	3005A	

#### Analysis Batch: 318737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-99118-1	Terry Creek Trailer Park	Total Recoverable	Water	6020A	318434
LCS 680-318434/2-A	Lab Control Sample	Total Recoverable	Water	6020A	318434
MB 680-318434/1-A	Method Blank	Total Recoverable	Water	6020A	318434



# Lab Chronicle

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

**Client Sample ID: Terry Creek Trailer Park**

**Date Collected: 03/04/14 15:25**

**Date Received: 03/05/14 10:15**

**Lab Sample ID: 680-99118-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	318627	03/07/14 20:18	MMT	TAL SAV
Total/NA	Prep	3520C			1035.5 mL	1 mL	318452	03/06/14 13:26	RBS	TAL SAV
Total/NA	Analysis	8270D LL		1	1035.5 mL	1 mL	319016	03/11/14 04:12	JLW	TAL SAV
Total/NA	Prep	3520C			118.2 mL	2.5 mL	318334	03/05/14 14:03	RBS	TAL SAV
Total/NA	Analysis	8081B/8082A		1	118.2 mL	2.5 mL	318727	03/07/14 18:47	JCK	TAL SAV
Total/NA	Prep	8315_W_Prep			100 mL	4.0 mL	107985	03/06/14 10:50	DNS	TAL TAL
Total/NA	Analysis	8315A		1	100 mL	4.0 mL	108032	03/06/14 12:59	DNS	TAL TAL
Total Recoverable	Prep	3005A			50 mL	250 mL	318434	03/06/14 07:57	CRW	TAL SAV
Total Recoverable	Analysis	6020A		1	50 mL	250 mL	318737	03/07/14 11:05	BWR	TAL SAV

**Client Sample ID: Trip Blank**

**Date Collected: 03/04/14 00:00**

**Date Received: 03/05/14 10:15**

**Lab Sample ID: 680-99118-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	318627	03/07/14 15:27	MMT	TAL SAV

## Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAL = TestAmerica Tallahassee, 2846 Industrial Plaza Drive, Tallahassee, FL 32301, TEL (850)878-3994







Savannah

5102 LaRoelle Avenue

Savannah, GA 31404

phone 912.354.7838 fax 912.352.0163

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

## Chain of Custody Record

Client Contact		Project Manager: Jon Alix, Anten Group		Site Contact: Tim Hassett		Date:		COC No: _____ of 1 COCs	
Hercules, Inc.		Tel/Fax: 704-543-3925		Lab Contact: Kathy Smith		Carrier:		Job No. _____	
Analysis Turnaround Time		Calendar (C) or Work Days (W)		W					
TAT if different from below: _____		2 weeks		1 week		2 days		1 day	
Project Name: Off-site IM Plan		Sample Date		Sample Time		Sample Type		Matrix	
Site: Former Hercules, Brunswick, Facility		3/4/2014		1725		G		W	
Anten Group Proj. # WBS2014B3.0020		# of Cont.		10					
Sample Identification		Terry Creek Trailer Park							
Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other									
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown							
Special Instructions/QC Requirements & Comments:		Sample Disposal (A too may be assessed if samples are retained longer than 1 month)		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Relinquished by: <i>[Signature]</i>		Date/Time: 3/4/14/1600		Received by: <i>[Signature]</i>		Date/Time: 4/3/14/0905		Company: TAC	
Relinquished by: <i>[Signature]</i>		Date/Time:		Received by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Received by:		Date/Time:		Company:	



## Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 680-99118-1

**Login Number: 99118**

**List Source: TestAmerica Savannah**

**List Number: 1**

**Creator: Conner, Keaton**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	SAMPLE TIME TAKEN FROM LABELS
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 680-99118-1

**Login Number: 99118**

**List Source: TestAmerica Tallahassee**

**List Number: 1**

**List Creation: 03/05/14 12:08 PM**

**Creator: Carpenter, Jonnie T**

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	



# Certification Summary

Client: Antea USA, Inc.

TestAmerica Job ID: 680-99118-1

Project/Site: Brunswick - Terry Creek Trailer Park

## Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	AFCEE		SAVLAB	
A2LA	DoD ELAP		399.01	02-28-15
A2LA	ISO/IEC 17025		399.01	02-28-15
Alabama	State Program	4	41450	06-30-14
Arkansas DEQ	State Program	6	88-0692	01-31-15
California	NELAP	9	3217CA	07-31-14
Colorado	State Program	8	N/A	12-31-14
Connecticut	State Program	1	PH-0161	03-31-15
Florida	NELAP	4	E87052	06-30-14
GA Dept. of Agriculture	State Program	4	N/A	06-30-14
Georgia	State Program	4	N/A	06-30-14
Georgia	State Program	4	803	06-30-14
Guam	State Program	9	09-005r	04-17-14 *
Hawaii	State Program	9	N/A	06-30-14
Illinois	NELAP	5	200022	11-30-14
Indiana	State Program	5	N/A	06-30-14
Iowa	State Program	7	353	07-01-15
Kentucky (DW)	State Program	4	90084	12-31-14
Kentucky (UST)	State Program	4	18	06-30-14
Louisiana	NELAP	6	LA100015	12-31-14
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-14
Massachusetts	State Program	1	M-GA006	06-30-14
Michigan	State Program	5	9925	06-30-14
Mississippi	State Program	4	N/A	06-30-14
Montana	State Program	8	CERT0081	01-01-15
Nebraska	State Program	7	TestAmerica-Savannah	06-30-14
New Jersey	NELAP	2	GA769	06-30-14
New Mexico	State Program	6	N/A	06-30-14
New York	NELAP	2	10842	03-31-14 *
North Carolina DENR	State Program	4	269	12-31-14
North Carolina DHHS	State Program	4	13701	07-31-14
Oklahoma	State Program	6	9984	08-31-14
Pennsylvania	NELAP	3	68-00474	06-30-14
Puerto Rico	State Program	2	GA00006	12-31-14
South Carolina	State Program	4	98001	06-30-14
Tennessee	State Program	4	TN02961	06-30-14
Texas	NELAP	6	T104704185-08-TX	11-30-14
USDA	Federal		SAV 3-04	04-07-14 *
Virginia	NELAP	3	460161	06-14-14
Washington	State Program	10	C1794	06-10-14
West Virginia DEP	State Program	3	94	06-30-14
West Virginia DHHR	State Program	3	9950C	12-31-14
Wisconsin	State Program	5	999819810	08-31-14
Wyoming	State Program	8	8TMS-L	06-30-14

## Laboratory: TestAmerica Tallahassee

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

\* Expired certification is currently pending renewal and is considered valid.

TestAmerica Savannah



## Certification Summary

Client: Antea USA, Inc.

TestAmerica Job ID: 680-99118-1

Project/Site: Brunswick - Terry Creek Trailer Park

### Laboratory: TestAmerica Tallahassee (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E81005	06-30-14
Georgia	State Program	4		06-30-14
Louisiana	NELAP	6	30663	06-30-14
New Jersey	NELAP	2	FL012	06-30-14
Texas	NELAP	6	T104704459-11-2	03-31-15
USDA	Federal		P330-08-00158	08-05-14



## Definitions/Glossary

Client: Antea USA, Inc.  
Project/Site: Brunswick - Terry Creek Trailer Park

TestAmerica Job ID: 680-99118-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-102491-1

Client Project/Site: Former Hercules Brunswick Facility

For:

Ashland Inc.

Ashland Hercules Research Center

500 Hercules Rd Bldg 8139

Wilmington, Delaware 19808

Attn: Timothy Hassett

*Linda A. Wolfe*

Authorized for release by:

7/3/2014 10:19:44 AM

Linda Wolfe, Project Manager II

(912)354-7858 e.3005

[linda.wolfe@testamericainc.com](mailto:linda.wolfe@testamericainc.com)

Designee for

Kathryn Smith, Project Manager II

(912)354-7858

[kathy.smith@testamericainc.com](mailto:kathy.smith@testamericainc.com)

### LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Case Narrative . . . . .	3
Method Summary . . . . .	5
Sample Summary . . . . .	6
Definitions/Glossary . . . . .	7
Detection Summary . . . . .	8
Client Sample Results . . . . .	9
Surrogate Summary . . . . .	14
QC Sample Results . . . . .	16
QC Association Summary . . . . .	24
Lab Chronicle . . . . .	26
Chain of Custody . . . . .	27
Receipt Checklists . . . . .	28
Certification Summary . . . . .	29
Definitions/Glossary . . . . .	31

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15



## Case Narrative

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

**Job ID: 680-102491-1**

**Laboratory: TestAmerica Savannah**

### Narrative

## CASE NARRATIVE

**Client: Ashland Inc.**

**Project: Former Hercules Brunswick Facility**

**Report Number: 680-102491-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

### RECEIPT

The samples were received on 06/19/2014; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.0 C.

### VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples Blount 8 (680-102491-1), Blount 10 (680-102491-2) and TB-2 (680-102491-3) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/29/2014.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 336820.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### SEMIVOLATILE ORGANIC COMPOUNDS (AQUEOUS)

Samples Blount 8 (680-102491-1) and Blount 10 (680-102491-2) were analyzed for Semivolatile Organic Compounds (Aqueous) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 06/23/2014 and 06/30/2014 and analyzed on 07/01/2014.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 335718.

Naphthalene failed the recovery criteria low for LCS 680-335718/10-A. Dibenz(a,h)anthracene and Indeno[1,2,3-cd]pyrene exceeded the RPD limit for the LCS and LCSD in batch 680-335718/11-A. The associated samples were re-prepared and re-analyzed outside holding time. Both sets of data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### PESTICIDES AND PCBs

Samples Blount 8 (680-102491-1) and Blount 10 (680-102491-2) were analyzed for Pesticides and PCBs in accordance with EPA SW-846 Method 8081B\_8082A. The samples were prepared on 06/23/2014 and analyzed on 06/26/2014.

This method incorporates 2nd column confirmation. Corrective action is not taken for surrogate/spike compounds unless results from both columns are unacceptable. Results outside criteria are qualified.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### FORMALDEHYDE

Samples Blount 8 (680-102491-1) and Blount 10 (680-102491-2) were analyzed for formaldehyde in accordance with EPA SW-846 Method 8315A. The samples were prepared and analyzed on 06/20/2014.



## Case Narrative

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

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### Job ID: 680-102491-1 (Continued)

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#### Laboratory: TestAmerica Savannah (Continued)

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 640-109838.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### METALS (ICPMS)

Samples Blount 8 (680-102491-1) and Blount 10 (680-102491-2) were analyzed for Metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 06/24/2014 and analyzed on 06/28/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.



## Method Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-102491-1

Project/Site: Former Hercules Brunswick Facility

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
8081B/8082A	Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	SW846	TAL SAV
8315A	Carbonyl Compounds (HPLC)	SW846	TAL TAL
6020A	Metals (ICP/MS)	SW846	TAL SAV

### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAL = TestAmerica Tallahassee, 2846 Industrial Plaza Drive, Tallahassee, FL 32301, TEL (850)878-3994



## Sample Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-102491-1

Project/Site: Former Hercules Brunswick Facility

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-102491-1	Blount 8	Water	06/18/14 14:52	06/19/14 08:51
680-102491-2	Blount 10	Water	06/18/14 15:56	06/19/14 08:51
680-102491-3	TB-2	Water	06/18/14 00:00	06/19/14 08:51



## Definitions/Glossary

Client: Ashland Inc.

TestAmerica Job ID: 680-102491-1

Project/Site: Former Hercules Brunswick Facility

### Qualifiers

#### GC/MS Semi VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD exceeds the control limits

#### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



## Detection Summary

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

### Client Sample ID: Blount 8

Lab Sample ID: 680-102491-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	49		5.0	1.4	ug/L	1		6020A	Total/NA

### Client Sample ID: Blount 10

Lab Sample ID: 680-102491-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	20		5.0	1.4	ug/L	1		6020A	Total/NA
Zinc	14	J	20	8.4	ug/L	1		6020A	Total/NA

### Client Sample ID: TB-2

Lab Sample ID: 680-102491-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

**Client Sample ID: Blount 8**

**Lab Sample ID: 680-102491-1**

**Date Collected: 06/18/14 14:52**

**Matrix: Water**

**Date Received: 06/19/14 08:51**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			06/29/14 18:07	1
Benzene	<0.25		1.0	0.25	ug/L			06/29/14 18:07	1
2-Butanone	<1.0		10	1.0	ug/L			06/29/14 18:07	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			06/29/14 18:07	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			06/29/14 18:07	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			06/29/14 18:07	1
Chloroform	<0.14		1.0	0.14	ug/L			06/29/14 18:07	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			06/29/14 18:07	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			06/29/14 18:07	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			06/29/14 18:07	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			06/29/14 18:07	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			06/29/14 18:07	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			06/29/14 18:07	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			06/29/14 18:07	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			06/29/14 18:07	1
Methyl isobutyl ketone (MIBK)	<1.0		10	1.0	ug/L			06/29/14 18:07	1
p-Cymene	<0.13		1.0	0.13	ug/L			06/29/14 18:07	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			06/29/14 18:07	1
Toluene	<0.33		1.0	0.33	ug/L			06/29/14 18:07	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			06/29/14 18:07	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/29/14 18:07	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			06/29/14 18:07	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			06/29/14 18:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		70 - 130		06/29/14 18:07	1
Dibromofluoromethane	105		70 - 130		06/29/14 18:07	1
Toluene-d8 (Surr)	100		70 - 130		06/29/14 18:07	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	<1.8		9.8	1.8	ug/L		06/23/14 16:39	07/01/14 14:34	1
Benzo[g,h,i]perylene	<2.0		9.8	2.0	ug/L		06/23/14 16:39	07/01/14 14:34	1
Dibenz[a,h]anthracene	<1.7 *		9.8	1.7	ug/L		06/23/14 16:39	07/01/14 14:34	1
Indeno[1,2,3-cd]pyrene	<1.8 *		9.8	1.8	ug/L		06/23/14 16:39	07/01/14 14:34	1
3 & 4 Methylphenol	<1.3		9.8	1.3	ug/L		06/23/14 16:39	07/01/14 14:34	1
Naphthalene	<1.2 *		9.8	1.2	ug/L		06/23/14 16:39	07/01/14 14:34	1
Phenol	<1.5		9.8	1.5	ug/L		06/23/14 16:39	07/01/14 14:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	77		38 - 130	06/23/14 16:39	07/01/14 14:34	1
2-Fluorophenol	63		25 - 130	06/23/14 16:39	07/01/14 14:34	1
Nitrobenzene-d5	69		39 - 130	06/23/14 16:39	07/01/14 14:34	1
Phenol-d5	72		25 - 130	06/23/14 16:39	07/01/14 14:34	1
Terphenyl-d14	83		10 - 143	06/23/14 16:39	07/01/14 14:34	1
2,4,6-Tribromophenol	87		31 - 141	06/23/14 16:39	07/01/14 14:34	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	<1.7	H	9.5	1.7	ug/L		06/30/14 15:54	07/01/14 19:59	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

**Client Sample ID: Blount 8**

**Lab Sample ID: 680-102491-1**

**Date Collected: 06/18/14 14:52**

**Matrix: Water**

**Date Received: 06/19/14 08:51**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	<1.9	H	9.5	1.9	ug/L		06/30/14 15:54	07/01/14 19:59	1
Dibenz[a,h]anthracene	<1.6	H	9.5	1.6	ug/L		06/30/14 15:54	07/01/14 19:59	1
Indeno[1,2,3-cd]pyrene	<1.7	H	9.5	1.7	ug/L		06/30/14 15:54	07/01/14 19:59	1
3 & 4 Methylphenol	<1.2	H	9.5	1.2	ug/L		06/30/14 15:54	07/01/14 19:59	1
Naphthalene	<1.1	H	9.5	1.1	ug/L		06/30/14 15:54	07/01/14 19:59	1
Phenol	<1.4	H	9.5	1.4	ug/L		06/30/14 15:54	07/01/14 19:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	99		38 - 130	06/30/14 15:54	07/01/14 19:59	1
2-Fluorophenol	65		25 - 130	06/30/14 15:54	07/01/14 19:59	1
Nitrobenzene-d5	91		39 - 130	06/30/14 15:54	07/01/14 19:59	1
Phenol-d5	78		25 - 130	06/30/14 15:54	07/01/14 19:59	1
Terphenyl-d14	98		10 - 143	06/30/14 15:54	07/01/14 19:59	1
2,4,6-Tribromophenol	113		31 - 141	06/30/14 15:54	07/01/14 19:59	1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.022		0.050	0.022	ug/L		06/23/14 16:39	06/26/14 02:05	1
gamma-BHC (Lindane)	<0.019		0.050	0.019	ug/L		06/23/14 16:39	06/26/14 02:05	1
Toxaphene, Technical	<0.51		5.0	0.51	ug/L		06/23/14 16:39	06/26/14 02:05	1
Toxaphene, TAUC, Parlar 11-69	<0.51		5.0	0.51	ug/L		06/23/14 16:39	06/26/14 02:05	1
delta-BHC	<0.022		0.050	0.022	ug/L		06/23/14 16:39	06/26/14 02:05	1
Heptachlor	<0.023		0.050	0.023	ug/L		06/23/14 16:39	06/26/14 02:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	79		10 - 130	06/23/14 16:39	06/26/14 02:05	1
Tetrachloro-m-xylene	57		39 - 130	06/23/14 16:39	06/26/14 02:05	1

## Method: 8315A - Carbonyl Compounds (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	<5.0		50	5.0	ug/L		06/20/14 09:20	06/20/14 13:32	1

## Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<1.3		2.5	1.3	ug/L		06/24/14 14:22	06/28/14 23:00	1
Barium	49		5.0	1.4	ug/L		06/24/14 14:22	06/28/14 23:00	1
Cobalt	<0.12		0.50	0.12	ug/L		06/24/14 14:22	06/28/14 23:00	1
Chromium	<2.5		5.0	2.5	ug/L		06/24/14 14:22	06/28/14 23:00	1
Nickel	<2.0		5.0	2.0	ug/L		06/24/14 14:22	06/28/14 23:00	1
Selenium	<1.1		2.5	1.1	ug/L		06/24/14 14:22	06/28/14 23:00	1
Vanadium	<3.2		10	3.2	ug/L		06/24/14 14:22	06/28/14 23:00	1
Zinc	<8.4		20	8.4	ug/L		06/24/14 14:22	06/28/14 23:00	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

**Client Sample ID: Blount 10**

**Lab Sample ID: 680-102491-2**

**Date Collected: 06/18/14 15:56**

**Matrix: Water**

**Date Received: 06/19/14 08:51**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			06/29/14 18:33	1
Benzene	<0.25		1.0	0.25	ug/L			06/29/14 18:33	1
2-Butanone	<1.0		10	1.0	ug/L			06/29/14 18:33	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			06/29/14 18:33	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			06/29/14 18:33	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			06/29/14 18:33	1
Chloroform	<0.14		1.0	0.14	ug/L			06/29/14 18:33	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			06/29/14 18:33	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			06/29/14 18:33	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			06/29/14 18:33	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			06/29/14 18:33	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			06/29/14 18:33	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			06/29/14 18:33	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			06/29/14 18:33	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			06/29/14 18:33	1
Methyl isobutyl ketone (MIBK)	<1.0		10	1.0	ug/L			06/29/14 18:33	1
p-Cymene	<0.13		1.0	0.13	ug/L			06/29/14 18:33	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			06/29/14 18:33	1
Toluene	<0.33		1.0	0.33	ug/L			06/29/14 18:33	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			06/29/14 18:33	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/29/14 18:33	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			06/29/14 18:33	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			06/29/14 18:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	99		70 - 130					06/29/14 18:33	1
Dibromofluoromethane	106		70 - 130					06/29/14 18:33	1
Toluene-d8 (Surr)	100		70 - 130					06/29/14 18:33	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	<1.8		9.9	1.8	ug/L		06/23/14 16:39	07/01/14 14:59	1
Benzo[g,h,i]perylene	<2.0		9.9	2.0	ug/L		06/23/14 16:39	07/01/14 14:59	1
Dibenz[a,h]anthracene	<1.7	*	9.9	1.7	ug/L		06/23/14 16:39	07/01/14 14:59	1
Indeno[1,2,3-cd]pyrene	<1.8	*	9.9	1.8	ug/L		06/23/14 16:39	07/01/14 14:59	1
3 & 4 Methylphenol	<1.3		9.9	1.3	ug/L		06/23/14 16:39	07/01/14 14:59	1
Naphthalene	<1.2	*	9.9	1.2	ug/L		06/23/14 16:39	07/01/14 14:59	1
Phenol	<1.5		9.9	1.5	ug/L		06/23/14 16:39	07/01/14 14:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	65		38 - 130				06/23/14 16:39	07/01/14 14:59	1
2-Fluorophenol	53		25 - 130				06/23/14 16:39	07/01/14 14:59	1
Nitrobenzene-d5	68		39 - 130				06/23/14 16:39	07/01/14 14:59	1
Phenol-d5	59		25 - 130				06/23/14 16:39	07/01/14 14:59	1
Terphenyl-d14	90		10 - 143				06/23/14 16:39	07/01/14 14:59	1
2,4,6-Tribromophenol	83		31 - 141				06/23/14 16:39	07/01/14 14:59	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	<1.7	H	9.4	1.7	ug/L		06/30/14 15:54	07/01/14 20:25	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

**Client Sample ID: Blount 10**

**Lab Sample ID: 680-102491-2**

**Date Collected: 06/18/14 15:56**

**Matrix: Water**

**Date Received: 06/19/14 08:51**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	<1.9	H	9.4	1.9	ug/L		06/30/14 15:54	07/01/14 20:25	1
Dibenz[a,h]anthracene	<1.6	H	9.4	1.6	ug/L		06/30/14 15:54	07/01/14 20:25	1
Indeno[1,2,3-cd]pyrene	<1.7	H	9.4	1.7	ug/L		06/30/14 15:54	07/01/14 20:25	1
3 & 4 Methylphenol	<1.2	H	9.4	1.2	ug/L		06/30/14 15:54	07/01/14 20:25	1
Naphthalene	<1.1	H	9.4	1.1	ug/L		06/30/14 15:54	07/01/14 20:25	1
Phenol	<1.4	H	9.4	1.4	ug/L		06/30/14 15:54	07/01/14 20:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	76		38 - 130	06/30/14 15:54	07/01/14 20:25	1
2-Fluorophenol	62		25 - 130	06/30/14 15:54	07/01/14 20:25	1
Nitrobenzene-d5	72		39 - 130	06/30/14 15:54	07/01/14 20:25	1
Phenol-d5	68		25 - 130	06/30/14 15:54	07/01/14 20:25	1
Terphenyl-d14	79		10 - 143	06/30/14 15:54	07/01/14 20:25	1
2,4,6-Tribromophenol	109		31 - 141	06/30/14 15:54	07/01/14 20:25	1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.023		0.051	0.023	ug/L		06/23/14 16:39	06/26/14 01:50	1
gamma-BHC (Lindane)	<0.020		0.051	0.020	ug/L		06/23/14 16:39	06/26/14 01:50	1
Toxaphene, Technical	<0.52		5.1	0.52	ug/L		06/23/14 16:39	06/26/14 01:50	1
Toxaphene, TAUC, Parlar 11-69	<0.52		5.1	0.52	ug/L		06/23/14 16:39	06/26/14 01:50	1
delta-BHC	<0.023		0.051	0.023	ug/L		06/23/14 16:39	06/26/14 01:50	1
Heptachlor	<0.024		0.051	0.024	ug/L		06/23/14 16:39	06/26/14 01:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	84		10 - 130	06/23/14 16:39	06/26/14 01:50	1
Tetrachloro-m-xylene	60		39 - 130	06/23/14 16:39	06/26/14 01:50	1

## Method: 8315A - Carbonyl Compounds (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	<5.0		50	5.0	ug/L		06/20/14 09:20	06/20/14 13:44	1

## Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<1.3		2.5	1.3	ug/L		06/24/14 14:22	06/28/14 23:36	1
Barium	20		5.0	1.4	ug/L		06/24/14 14:22	06/28/14 23:36	1
Cobalt	<0.12		0.50	0.12	ug/L		06/24/14 14:22	06/28/14 23:36	1
Chromium	<2.5		5.0	2.5	ug/L		06/24/14 14:22	06/28/14 23:36	1
Nickel	<2.0		5.0	2.0	ug/L		06/24/14 14:22	06/28/14 23:36	1
Selenium	<1.1		2.5	1.1	ug/L		06/24/14 14:22	06/28/14 23:36	1
Vanadium	<3.2		10	3.2	ug/L		06/24/14 14:22	06/28/14 23:36	1
Zinc	14 J		20	8.4	ug/L		06/24/14 14:22	06/28/14 23:36	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-102491-1

Project/Site: Former Hercules Brunswick Facility

**Client Sample ID: TB-2**

**Lab Sample ID: 680-102491-3**

**Date Collected: 06/18/14 00:00**

**Matrix: Water**

**Date Received: 06/19/14 08:51**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			06/29/14 17:41	1
Benzene	<0.25		1.0	0.25	ug/L			06/29/14 17:41	1
2-Butanone	<1.0		10	1.0	ug/L			06/29/14 17:41	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			06/29/14 17:41	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			06/29/14 17:41	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			06/29/14 17:41	1
Chloroform	<0.14		1.0	0.14	ug/L			06/29/14 17:41	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			06/29/14 17:41	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			06/29/14 17:41	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			06/29/14 17:41	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			06/29/14 17:41	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			06/29/14 17:41	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			06/29/14 17:41	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			06/29/14 17:41	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			06/29/14 17:41	1
Methyl isobutyl ketone (MIBK)	<1.0		10	1.0	ug/L			06/29/14 17:41	1
p-Cymene	<0.13		1.0	0.13	ug/L			06/29/14 17:41	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			06/29/14 17:41	1
Toluene	<0.33		1.0	0.33	ug/L			06/29/14 17:41	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			06/29/14 17:41	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/29/14 17:41	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			06/29/14 17:41	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			06/29/14 17:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	99		70 - 130		06/29/14 17:41	1
Dibromofluoromethane	108		70 - 130		06/29/14 17:41	1
Toluene-d8 (Surr)	101		70 - 130		06/29/14 17:41	1

TestAmerica Savannah



# Surrogate Summary

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (70-130)	DBFM (70-130)	TOL (70-130)
680-102491-1	Blount 8	102	105	100
680-102491-2	Blount 10	99	106	100
680-102491-3	TB-2	99	108	101
LCS 680-336820/5	Lab Control Sample	105	103	105
LCSD 680-336820/6	Lab Control Sample Dup	106	102	107
MB 680-336820/9	Method Blank	101	108	101

**Surrogate Legend**

BFB = 4-Bromofluorobenzene  
DBFM = Dibromofluoromethane  
TOL = Toluene-d8 (Surr)

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (38-130)	2FP (25-130)	NBZ (39-130)	PHL (25-130)	TPH (10-143)	TBP (31-141)
680-102491-1 - RE	Blount 8	99	65	91	78	98	113
680-102491-1	Blount 8	77	63	69	72	83	87
680-102491-2 - RE	Blount 10	76	62	72	68	79	109
680-102491-2	Blount 10	65	53	68	59	90	83
LCS 680-335718/10-A	Lab Control Sample	43	43	47	44	43	56
LCS 680-336861/8-A	Lab Control Sample	76	65	83	57	74	99
LCSD 680-335718/11-A	Lab Control Sample Dup	61	59	65	63	63	78
MB 680-335718/9-A	Method Blank	56	55	61	58	67	74
MB 680-336861/7-A	Method Blank	89	73	95	90	99	106

**Surrogate Legend**

FBP = 2-Fluorobiphenyl  
2FP = 2-Fluorophenol  
NBZ = Nitrobenzene-d5  
PHL = Phenol-d5  
TPH = Terphenyl-d14  
TBP = 2,4,6-Tribromophenol

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCB2 (10-130)	TCX1 (39-130)
680-102491-1	Blount 8	79	57
680-102491-2	Blount 10	84	60
MB 680-335731/6-A	Method Blank	67	68

**Surrogate Legend**

DCB = DCB Decachlorobiphenyl  
TCX = Tetrachloro-m-xylene

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## Surrogate Summary

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

### Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

#### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB2 (10-130)	TCX2 (39-130)
LCS 680-335731/10-A	Lab Control Sample	59	54
LCS 680-335731/7-A	Lab Control Sample	58	49
LCSD 680-335731/11-A	Lab Control Sample Dup	56	49

#### Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-336820/9

Matrix: Water

Analysis Batch: 336820

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			06/29/14 17:15	1
Benzene	<0.25		1.0	0.25	ug/L			06/29/14 17:15	1
2-Butanone	<1.0		10	1.0	ug/L			06/29/14 17:15	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			06/29/14 17:15	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			06/29/14 17:15	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			06/29/14 17:15	1
Chloroform	<0.14		1.0	0.14	ug/L			06/29/14 17:15	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			06/29/14 17:15	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			06/29/14 17:15	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			06/29/14 17:15	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			06/29/14 17:15	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			06/29/14 17:15	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			06/29/14 17:15	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			06/29/14 17:15	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			06/29/14 17:15	1
Methyl isobutyl ketone (MIBK)	<1.0		10	1.0	ug/L			06/29/14 17:15	1
p-Cymene	<0.13		1.0	0.13	ug/L			06/29/14 17:15	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			06/29/14 17:15	1
Toluene	<0.33		1.0	0.33	ug/L			06/29/14 17:15	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			06/29/14 17:15	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/29/14 17:15	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			06/29/14 17:15	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			06/29/14 17:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130		06/29/14 17:15	1
Dibromofluoromethane	108		70 - 130		06/29/14 17:15	1
Toluene-d8 (Surr)	101		70 - 130		06/29/14 17:15	1

Lab Sample ID: LCS 680-336820/5

Matrix: Water

Analysis Batch: 336820

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	91.3		ug/L		91	39 - 162
Benzene	50.0	52.9		ug/L		106	74 - 123
2-Butanone	100	92.2		ug/L		92	55 - 142
Carbon disulfide	50.0	54.4		ug/L		109	63 - 142
Carbon tetrachloride	50.0	56.1		ug/L		112	70 - 131
Chlorobenzene	50.0	51.8		ug/L		104	79 - 120
Chloroform	50.0	51.4		ug/L		103	76 - 128
cis-1,2-Dichloroethene	50.0	50.7		ug/L		101	78 - 127
1,2-Dichlorobenzene	50.0	52.2		ug/L		104	77 - 124
1,4-Dichlorobenzene	50.0	52.2		ug/L		104	76 - 124
1,1-Dichloroethane	50.0	53.7		ug/L		107	69 - 132
1,1-Dichloroethene	50.0	56.7		ug/L		113	73 - 134
1,2-Dichloropropane	50.0	53.3		ug/L		107	71 - 126
Ethylbenzene	50.0	51.7		ug/L		103	78 - 125

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-336820/5

Matrix: Water

Analysis Batch: 336820

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	50.0	54.4		ug/L		109	79 - 124
Methyl isobutyl ketone (MIBK)	100	100		ug/L		100	51 - 143
p-Cymene	50.0	52.6		ug/L		105	69 - 129
Tetrachloroethene	50.0	51.8		ug/L		104	77 - 128
Toluene	50.0	53.2		ug/L		106	77 - 125
1,2,4-Trichlorobenzene	50.0	52.8		ug/L		106	67 - 134
1,2,3-Trichloropropane	50.0	50.0		ug/L		100	74 - 126
Vinyl chloride	50.0	56.8		ug/L		114	58 - 141
Xylenes, Total	150	159		ug/L		106	80 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	105		70 - 130
Dibromofluoromethane	103		70 - 130
Toluene-d8 (Surr)	105		70 - 130

Lab Sample ID: LCSD 680-336820/6

Matrix: Water

Analysis Batch: 336820

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	91.6		ug/L		92	39 - 162	0	50
Benzene	50.0	53.5		ug/L		107	74 - 123	1	30
2-Butanone	100	89.4		ug/L		89	55 - 142	3	30
Carbon disulfide	50.0	54.8		ug/L		110	63 - 142	1	30
Carbon tetrachloride	50.0	56.9		ug/L		114	70 - 131	1	30
Chlorobenzene	50.0	51.6		ug/L		103	79 - 120	0	30
Chloroform	50.0	52.0		ug/L		104	76 - 128	1	30
cis-1,2-Dichloroethene	50.0	50.7		ug/L		101	78 - 127	0	30
1,2-Dichlorobenzene	50.0	54.1		ug/L		108	77 - 124	4	30
1,4-Dichlorobenzene	50.0	53.6		ug/L		107	76 - 124	3	30
1,1-Dichloroethane	50.0	53.6		ug/L		107	69 - 132	0	30
1,1-Dichloroethene	50.0	57.7		ug/L		115	73 - 134	2	30
1,2-Dichloropropane	50.0	52.7		ug/L		105	71 - 126	1	30
Ethylbenzene	50.0	52.3		ug/L		105	78 - 125	1	30
Methylene Chloride	50.0	54.0		ug/L		108	79 - 124	1	30
Methyl isobutyl ketone (MIBK)	100	99.8		ug/L		100	51 - 143	0	30
p-Cymene	50.0	54.9		ug/L		110	69 - 129	4	50
Tetrachloroethene	50.0	53.0		ug/L		106	77 - 128	2	30
Toluene	50.0	53.4		ug/L		107	77 - 125	0	30
1,2,4-Trichlorobenzene	50.0	55.2		ug/L		110	67 - 134	5	30
1,2,3-Trichloropropane	50.0	50.2		ug/L		100	74 - 126	0	30
Vinyl chloride	50.0	57.6		ug/L		115	58 - 141	1	30
Xylenes, Total	150	163		ug/L		108	80 - 124	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	106		70 - 130
Dibromofluoromethane	102		70 - 130

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-336820/6

Matrix: Water

Analysis Batch: 336820

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	107		70 - 130

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-335718/9-A

Matrix: Water

Analysis Batch: 336584

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 335718

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	<1.8		10	1.8	ug/L		06/23/14 16:39	06/27/14 18:36	1
Benzo[g,h,i]perylene	<2.0		10	2.0	ug/L		06/23/14 16:39	06/27/14 18:36	1
Dibenz(a,h)anthracene	<1.7		10	1.7	ug/L		06/23/14 16:39	06/27/14 18:36	1
Indeno[1,2,3-cd]pyrene	<1.8		10	1.8	ug/L		06/23/14 16:39	06/27/14 18:36	1
3 & 4 Methylphenol	<1.3		10	1.3	ug/L		06/23/14 16:39	06/27/14 18:36	1
Naphthalene	<1.2		10	1.2	ug/L		06/23/14 16:39	06/27/14 18:36	1
Phenol	<1.5		10	1.5	ug/L		06/23/14 16:39	06/27/14 18:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	56		38 - 130	06/23/14 16:39	06/27/14 18:36	1
2-Fluorophenol	55		25 - 130	06/23/14 16:39	06/27/14 18:36	1
Nitrobenzene-d5	61		39 - 130	06/23/14 16:39	06/27/14 18:36	1
Phenol-d5	58		25 - 130	06/23/14 16:39	06/27/14 18:36	1
Terphenyl-d14	67		10 - 143	06/23/14 16:39	06/27/14 18:36	1
2,4,6-Tribromophenol	74		31 - 141	06/23/14 16:39	06/27/14 18:36	1

Lab Sample ID: LCS 680-335718/10-A

Matrix: Water

Analysis Batch: 336584

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 335718

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetophenone	100	47.2		ug/L		47	40 - 103
Benzo[g,h,i]perylene	100	45.0		ug/L		45	42 - 114
Dibenz(a,h)anthracene	100	48.6		ug/L		49	48 - 110
Indeno[1,2,3-cd]pyrene	100	54.6		ug/L		55	34 - 115
3 & 4 Methylphenol	100	48.3		ug/L		48	41 - 105
Naphthalene	100	26.3	*	ug/L		26	29 - 91
Phenol	100	44.6		ug/L		45	34 - 97

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	43		38 - 130
2-Fluorophenol	43		25 - 130
Nitrobenzene-d5	47		39 - 130
Phenol-d5	44		25 - 130
Terphenyl-d14	43		10 - 143
2,4,6-Tribromophenol	56		31 - 141

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-335718/11-A

Matrix: Water

Analysis Batch: 336584

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 335718

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetophenone	100	64.0		ug/L		64	40 - 103	30	30
Benzo[g,h,i]perylene	100	69.0		ug/L		69	42 - 114	42	50
Dibenz(a,h)anthracene	100	73.9	*	ug/L		74	48 - 110	41	40
Indeno[1,2,3-cd]pyrene	100	84.9	*	ug/L		85	34 - 115	43	40
3 & 4 Methylphenol	100	65.3		ug/L		65	41 - 105	30	50
Naphthalene	100	36.1		ug/L		36	29 - 91	32	40
Phenol	100	62.2		ug/L		62	34 - 97	33	50

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	61		38 - 130
2-Fluorophenol	59		25 - 130
Nitrobenzene-d5	65		39 - 130
Phenol-d5	63		25 - 130
Terphenyl-d14	63		10 - 143
2,4,6-Tribromophenol	78		31 - 141

Lab Sample ID: MB 680-336861/7-A

Matrix: Water

Analysis Batch: 337321

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 336861

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	<1.8		10	1.8	ug/L		06/30/14 15:54	07/02/14 14:26	1
Benzo[g,h,i]perylene	<2.0		10	2.0	ug/L		06/30/14 15:54	07/02/14 14:26	1
Dibenz(a,h)anthracene	<1.7		10	1.7	ug/L		06/30/14 15:54	07/02/14 14:26	1
Indeno[1,2,3-cd]pyrene	<1.8		10	1.8	ug/L		06/30/14 15:54	07/02/14 14:26	1
3 & 4 Methylphenol	<1.3		10	1.3	ug/L		06/30/14 15:54	07/02/14 14:26	1
Naphthalene	<1.2		10	1.2	ug/L		06/30/14 15:54	07/02/14 14:26	1
Phenol	<1.5		10	1.5	ug/L		06/30/14 15:54	07/02/14 14:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	89		38 - 130	06/30/14 15:54	07/02/14 14:26	1
2-Fluorophenol	73		25 - 130	06/30/14 15:54	07/02/14 14:26	1
Nitrobenzene-d5	95		39 - 130	06/30/14 15:54	07/02/14 14:26	1
Phenol-d5	90		25 - 130	06/30/14 15:54	07/02/14 14:26	1
Terphenyl-d14	99		10 - 143	06/30/14 15:54	07/02/14 14:26	1
2,4,6-Tribromophenol	106		31 - 141	06/30/14 15:54	07/02/14 14:26	1

Lab Sample ID: LCS 680-336861/8-A

Matrix: Water

Analysis Batch: 337086

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 336861

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetophenone	100	82.7		ug/L		83	40 - 103
Benzo[g,h,i]perylene	100	42.0		ug/L		42	42 - 114
Dibenz(a,h)anthracene	100	69.9		ug/L		70	48 - 110
Indeno[1,2,3-cd]pyrene	100	48.1		ug/L		48	34 - 115
3 & 4 Methylphenol	100	71.6		ug/L		72	41 - 105

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-336861/8-A

Matrix: Water

Analysis Batch: 337086

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 336861

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	100	61.0		ug/L		61	29 - 91
Phenol	100	65.6		ug/L		66	34 - 97

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	76		38 - 130
2-Fluorophenol	65		25 - 130
Nitrobenzene-d5	83		39 - 130
Phenol-d5	57		25 - 130
Terphenyl-d14	74		10 - 143
2,4,6-Tribromophenol	99		31 - 141

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Lab Sample ID: MB 680-335731/6-A

Matrix: Water

Analysis Batch: 336284

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 335731

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0028		0.0063	0.0028	ug/L		06/23/14 16:39	06/26/14 00:39	1
gamma-BHC (Lindane)	<0.0024		0.0063	0.0024	ug/L		06/23/14 16:39	06/26/14 00:39	1
Toxaphene, Technical	<0.064		0.63	0.064	ug/L		06/23/14 16:39	06/26/14 00:39	1
Toxaphene, TAUC, Parlar 11-69	<0.064		0.63	0.064	ug/L		06/23/14 16:39	06/26/14 00:39	1
delta-BHC	<0.0028		0.0063	0.0028	ug/L		06/23/14 16:39	06/26/14 00:39	1
Heptachlor	<0.0029		0.0063	0.0029	ug/L		06/23/14 16:39	06/26/14 00:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	67		10 - 130	06/23/14 16:39	06/26/14 00:39	1
Tetrachloro-m-xylene	68		39 - 130	06/23/14 16:39	06/26/14 00:39	1

Lab Sample ID: LCS 680-335731/10-A

Matrix: Water

Analysis Batch: 336284

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 335731

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene, Technical	2.00	1.92		ug/L		96	22 - 145
Toxaphene, TAUC, Parlar 11-69	2.00	2.06		ug/L		103	35 - 138

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	59		10 - 130
Tetrachloro-m-xylene	54		39 - 130

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Lab Sample ID: LCS 680-335731/7-A

Matrix: Water

Analysis Batch: 336284

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 335731

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-BHC	0.0250	0.0190		ug/L		76	45 - 130
gamma-BHC (Lindane)	0.0250	0.0187		ug/L		75	47 - 130
delta-BHC	0.0250	0.0203		ug/L		81	47 - 140
Heptachlor	0.0250	0.0155		ug/L		62	49 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	58		10 - 130
Tetrachloro-m-xylene	49		39 - 130

Lab Sample ID: LCSD 680-335731/11-A

Matrix: Water

Analysis Batch: 336284

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 335731

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toxaphene, Technical	2.00	1.94		ug/L		97	22 - 145	1	50
Toxaphene, TAUC, Parlar 11-69	2.00	2.14		ug/L		107	35 - 138	4	50

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl	56		10 - 130
Tetrachloro-m-xylene	49		39 - 130

## Method: 8315A - Carbonyl Compounds (HPLC)

Lab Sample ID: MB 640-109838/1-A

Matrix: Water

Analysis Batch: 109874

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 109838

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	<5.0		50	5.0	ug/L		06/20/14 09:20	06/20/14 12:57	1

Lab Sample ID: LCS 640-109838/2-A

Matrix: Water

Analysis Batch: 109874

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 109838

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Formaldehyde	150	134		ug/L		89	73 - 133

Lab Sample ID: LCSD 640-109838/3-A

Matrix: Water

Analysis Batch: 109874

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 109838

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Formaldehyde	150	133		ug/L		88	73 - 133	1	20

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-102491-1

Project/Site: Former Hercules Brunswick Facility

## Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-335998/1-A

Matrix: Water

Analysis Batch: 336889

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 335998

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<1.3		2.5	1.3	ug/L		06/24/14 14:22	06/28/14 22:45	1
Barium	<1.4		5.0	1.4	ug/L		06/24/14 14:22	06/28/14 22:45	1
Cobalt	<0.12		0.50	0.12	ug/L		06/24/14 14:22	06/28/14 22:45	1
Chromium	<2.5		5.0	2.5	ug/L		06/24/14 14:22	06/28/14 22:45	1
Nickel	<2.0		5.0	2.0	ug/L		06/24/14 14:22	06/28/14 22:45	1
Selenium	<1.1		2.5	1.1	ug/L		06/24/14 14:22	06/28/14 22:45	1
Vanadium	<3.2		10	3.2	ug/L		06/24/14 14:22	06/28/14 22:45	1
Zinc	<8.4		20	8.4	ug/L		06/24/14 14:22	06/28/14 22:45	1

Lab Sample ID: LCS 680-335998/2-A

Matrix: Water

Analysis Batch: 336889

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 335998

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	104		ug/L		104	75 - 125
Barium	100	102		ug/L		102	75 - 125
Cobalt	50.0	53.4		ug/L		107	75 - 125
Chromium	100	106		ug/L		106	75 - 125
Nickel	100	105		ug/L		105	75 - 125
Selenium	100	100		ug/L		100	75 - 125
Vanadium	100	105		ug/L		105	75 - 125
Zinc	100	102		ug/L		102	75 - 125

Lab Sample ID: 680-102491-1 MS

Matrix: Water

Analysis Batch: 336889

Client Sample ID: Blount 8

Prep Type: Total/NA

Prep Batch: 335998

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	<1.3		100	113		ug/L		113	75 - 125
Barium	49		100	162		ug/L		113	75 - 125
Cobalt	<0.12		50.0	56.4		ug/L		113	75 - 125
Chromium	<2.5		100	116		ug/L		116	75 - 125
Nickel	<2.0		100	113		ug/L		113	75 - 125
Selenium	<1.1		100	105		ug/L		105	75 - 125
Vanadium	<3.2		100	115		ug/L		115	75 - 125
Zinc	<8.4		100	108		ug/L		108	75 - 125

Lab Sample ID: 680-102491-1 MSD

Matrix: Water

Analysis Batch: 336889

Client Sample ID: Blount 8

Prep Type: Total/NA

Prep Batch: 335998

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	<1.3		100	105		ug/L		105	75 - 125	7	20
Barium	49		100	148		ug/L		99	75 - 125	9	20
Cobalt	<0.12		50.0	51.2		ug/L		102	75 - 125	10	20
Chromium	<2.5		100	104		ug/L		104	75 - 125	10	20
Nickel	<2.0		100	105		ug/L		105	75 - 125	7	20
Selenium	<1.1		100	95.3		ug/L		95	75 - 125	9	20
Vanadium	<3.2		100	106		ug/L		106	75 - 125	8	20

TestAmerica Savannah



## QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-102491-1

Project/Site: Former Hercules Brunswick Facility

### Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-102491-1 MSD

Matrix: Water

Analysis Batch: 336889

Client Sample ID: Blount 8

Prep Type: Total/NA

Prep Batch: 335998

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Zinc	<8.4		100	97.7		ug/L		98	75 - 125	10	20



# QC Association Summary

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

## GC/MS VOA

### Analysis Batch: 336820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102491-1	Blount 8	Total/NA	Water	8260B	
680-102491-2	Blount 10	Total/NA	Water	8260B	
680-102491-3	TB-2	Total/NA	Water	8260B	
LCS 680-336820/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-336820/6	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-336820/9	Method Blank	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 335718

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102491-1	Blount 8	Total/NA	Water	3520C	
680-102491-2	Blount 10	Total/NA	Water	3520C	
LCS 680-335718/10-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 680-335718/11-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 680-335718/9-A	Method Blank	Total/NA	Water	3520C	

### Analysis Batch: 336584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-335718/10-A	Lab Control Sample	Total/NA	Water	8270D	335718
LCSD 680-335718/11-A	Lab Control Sample Dup	Total/NA	Water	8270D	335718
MB 680-335718/9-A	Method Blank	Total/NA	Water	8270D	335718

### Prep Batch: 336861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102491-1 - RE	Blount 8	Total/NA	Water	3520C	
680-102491-2 - RE	Blount 10	Total/NA	Water	3520C	
LCS 680-336861/8-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-336861/7-A	Method Blank	Total/NA	Water	3520C	

### Analysis Batch: 337086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102491-1	Blount 8	Total/NA	Water	8270D	335718
680-102491-1 - RE	Blount 8	Total/NA	Water	8270D	336861
680-102491-2	Blount 10	Total/NA	Water	8270D	335718
680-102491-2 - RE	Blount 10	Total/NA	Water	8270D	336861
LCS 680-336861/8-A	Lab Control Sample	Total/NA	Water	8270D	336861

### Analysis Batch: 337321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-336861/7-A	Method Blank	Total/NA	Water	8270D	336861

## GC Semi VOA

### Prep Batch: 335731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102491-1	Blount 8	Total/NA	Water	3520C	
680-102491-2	Blount 10	Total/NA	Water	3520C	
LCS 680-335731/10-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 680-335731/7-A	Lab Control Sample	Total/NA	Water	3520C	

TestAmerica Savannah



# QC Association Summary

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

## GC Semi VOA (Continued)

### Prep Batch: 335731 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 680-335731/11-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 680-335731/6-A	Method Blank	Total/NA	Water	3520C	

### Analysis Batch: 336284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102491-1	Blount 8	Total/NA	Water	8081B/8082A	335731
680-102491-2	Blount 10	Total/NA	Water	8081B/8082A	335731
LCS 680-335731/10-A	Lab Control Sample	Total/NA	Water	8081B/8082A	335731
LCS 680-335731/7-A	Lab Control Sample	Total/NA	Water	8081B/8082A	335731
LCSD 680-335731/11-A	Lab Control Sample Dup	Total/NA	Water	8081B/8082A	335731
MB 680-335731/6-A	Method Blank	Total/NA	Water	8081B/8082A	335731

## HPLC/IC

### Prep Batch: 109838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102491-1	Blount 8	Total/NA	Water	8315_W_Prep	
680-102491-2	Blount 10	Total/NA	Water	8315_W_Prep	
LCS 640-109838/2-A	Lab Control Sample	Total/NA	Water	8315_W_Prep	
LCSD 640-109838/3-A	Lab Control Sample Dup	Total/NA	Water	8315_W_Prep	
MB 640-109838/1-A	Method Blank	Total/NA	Water	8315_W_Prep	

### Analysis Batch: 109874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102491-1	Blount 8	Total/NA	Water	8315A	109838
680-102491-2	Blount 10	Total/NA	Water	8315A	109838
LCS 640-109838/2-A	Lab Control Sample	Total/NA	Water	8315A	109838
LCSD 640-109838/3-A	Lab Control Sample Dup	Total/NA	Water	8315A	109838
MB 640-109838/1-A	Method Blank	Total/NA	Water	8315A	109838

## Metals

### Prep Batch: 335998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102491-1	Blount 8	Total/NA	Water	3010A	
680-102491-1 MS	Blount 8	Total/NA	Water	3010A	
680-102491-1 MSD	Blount 8	Total/NA	Water	3010A	
680-102491-2	Blount 10	Total/NA	Water	3010A	
LCS 680-335998/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 680-335998/1-A	Method Blank	Total/NA	Water	3010A	

### Analysis Batch: 336889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102491-1	Blount 8	Total/NA	Water	6020A	335998
680-102491-1 MS	Blount 8	Total/NA	Water	6020A	335998
680-102491-1 MSD	Blount 8	Total/NA	Water	6020A	335998
680-102491-2	Blount 10	Total/NA	Water	6020A	335998
LCS 680-335998/2-A	Lab Control Sample	Total/NA	Water	6020A	335998
MB 680-335998/1-A	Method Blank	Total/NA	Water	6020A	335998

TestAmerica Savannah



# Lab Chronicle

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick Facility

TestAmerica Job ID: 680-102491-1

## Client Sample ID: Blount 8

Date Collected: 06/18/14 14:52

Date Received: 06/19/14 08:51

## Lab Sample ID: 680-102491-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	336820	06/29/14 18:07	JD1	TAL SAV
Total/NA	Prep	3520C			254.9 mL	0.5 mL	335718	06/23/14 16:39	RBS	TAL SAV
Total/NA	Analysis	8270D		1	254.9 mL	0.5 mL	337086	07/01/14 14:34	SMC	TAL SAV
Total/NA	Prep	3520C	RE		263.9 mL	0.5 mL	336861	06/30/14 15:54	RBS	TAL SAV
Total/NA	Analysis	8270D	RE	1	263.9 mL	0.5 mL	337086	07/01/14 19:59	SMC	TAL SAV
Total/NA	Prep	3520C			125 mL	2.5 mL	335731	06/23/14 16:39	RBS	TAL SAV
Total/NA	Analysis	8081B/8082A		1	125 mL	2.5 mL	336284	06/26/14 02:05	JCK	TAL SAV
Total/NA	Prep	8315_W_Prep			100 mL	4.0 mL	109838	06/20/14 09:20	DNS	TAL TAL
Total/NA	Analysis	8315A		1	100 mL	4.0 mL	109874	06/20/14 13:32	DNS	TAL TAL
Total/NA	Prep	3010A			50 mL	250 mL	335998	06/24/14 14:22	SP	TAL SAV
Total/NA	Analysis	6020A		1	50 mL	250 mL	336889	06/28/14 23:00	BWR	TAL SAV

## Client Sample ID: Blount 10

Date Collected: 06/18/14 15:56

Date Received: 06/19/14 08:51

## Lab Sample ID: 680-102491-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	336820	06/29/14 18:33	JD1	TAL SAV
Total/NA	Prep	3520C			251.3 mL	0.5 mL	335718	06/23/14 16:39	RBS	TAL SAV
Total/NA	Analysis	8270D		1	251.3 mL	0.5 mL	337086	07/01/14 14:59	SMC	TAL SAV
Total/NA	Prep	3520C	RE		264.6 mL	0.5 mL	336861	06/30/14 15:54	RBS	TAL SAV
Total/NA	Analysis	8270D	RE	1	264.6 mL	0.5 mL	337086	07/01/14 20:25	SMC	TAL SAV
Total/NA	Prep	3520C			121.6 mL	2.5 mL	335731	06/23/14 16:39	RBS	TAL SAV
Total/NA	Analysis	8081B/8082A		1	121.6 mL	2.5 mL	336284	06/26/14 01:50	JCK	TAL SAV
Total/NA	Prep	8315_W_Prep			100 mL	4.0 mL	109838	06/20/14 09:20	DNS	TAL TAL
Total/NA	Analysis	8315A		1	100 mL	4.0 mL	109874	06/20/14 13:44	DNS	TAL TAL
Total/NA	Prep	3010A			50 mL	250 mL	335998	06/24/14 14:22	SP	TAL SAV
Total/NA	Analysis	6020A		1	50 mL	250 mL	336889	06/28/14 23:36	BWR	TAL SAV

## Client Sample ID: TB-2

Date Collected: 06/18/14 00:00

Date Received: 06/19/14 08:51

## Lab Sample ID: 680-102491-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	336820	06/29/14 17:41	JD1	TAL SAV

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAL = TestAmerica Tallahassee, 2846 Industrial Plaza Drive, Tallahassee, FL 32301, TEL (850)878-3994

TestAmerica Savannah



## Chain of Custody Record



phone 912.354.7858 fax 912.352.0165

[illegible]



## Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-102491-1

**Login Number: 102491**

**List Source: TestAmerica Savannah**

**List Number: 1**

**Creator: Conner, Keaton**

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Certification Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-102491-1

Project/Site: Former Hercules Brunswick Facility

## Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	AFCEE		SAVLAB	
A2LA	DoD ELAP		399.01	02-28-15
A2LA	ISO/IEC 17025		399.01	02-28-15
Alabama	State Program	4	41450	06-30-14 *
Arkansas DEQ	State Program	6	88-0692	01-31-15
California	NELAP	9	3217CA	07-31-14 *
Colorado	State Program	8	N/A	12-31-14
Connecticut	State Program	1	PH-0161	03-31-15
Florida	NELAP	4	E87052	06-30-15
GA Dept. of Agriculture	State Program	4	N/A	06-30-14 *
Georgia	State Program	4	N/A	06-30-15
Guam	State Program	9	09-005r	04-16-15
Hawaii	State Program	9	N/A	06-30-14 *
Illinois	NELAP	5	200022	11-30-14
Indiana	State Program	5	N/A	06-30-14 *
Iowa	State Program	7	353	07-01-15
Kentucky (DW)	State Program	4	90084	12-31-14
Kentucky (UST)	State Program	4	18	06-30-15
Louisiana	NELAP	6	30690	06-30-14 *
Louisiana (DW)	NELAP	6	LA140023	12-31-14
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-14
Massachusetts	State Program	1	M-GA006	06-30-14 *
Michigan	State Program	5	9925	06-30-14 *
Mississippi	State Program	4	N/A	06-30-14 *
Montana	State Program	8	CERT0081	01-01-15
Nebraska	State Program	7	TestAmerica-Savannah	06-30-14 *
New Jersey	NELAP	2	GA769	06-30-15
New Mexico	State Program	6	N/A	06-30-14 *
New York	NELAP	2	10842	03-31-15
North Carolina (DW)	State Program	4	13701	07-31-14 *
North Carolina (VW/SW)	State Program	4	269	12-31-14
Oklahoma	State Program	6	9984	08-31-14
Pennsylvania	NELAP	3	68-00474	06-30-15
Puerto Rico	State Program	2	GA00006	12-31-14
South Carolina	State Program	4	98001	06-30-14 *
Tennessee	State Program	4	TN02961	06-30-14 *
Texas	NELAP	6	T104704185-08-TX	11-30-14
USDA	Federal		SAV 3-04	06-11-17
Virginia	NELAP	3	460161	06-14-15
Washington	State Program	10	C805	06-10-15
West Virginia (DW)	State Program	3	9950C	12-31-14
West Virginia DEP	State Program	3	94	06-30-14 *
Wisconsin	State Program	5	999819810	08-31-14
Wyoming	State Program	8	8TMS-L	06-30-14 *

## Laboratory: TestAmerica Tallahassee

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

\* Certification renewal pending - certification considered valid.

TestAmerica Savannah



## Certification Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-102491-1

Project/Site: Former Hercules Brunswick Facility

### Laboratory: TestAmerica Tallahassee (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E81005	06-30-15
Georgia	State Program	4		06-30-15
Louisiana	NELAP	6	30663	06-30-14 *
New Jersey	NELAP	2	FL012	06-30-15
Texas	NELAP	6	T104704459-11-2	03-31-15
USDA	Federal		P330-08-00158	08-05-14

\* Certification renewal pending - certification considered valid.

TestAmerica Savannah



## Definitions/Glossary

Client: Ashland Inc.

TestAmerica Job ID: 680-102491-1

Project/Site: Former Hercules Brunswick Facility

### Qualifiers

#### GC/MS Semi VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD exceeds the control limits

#### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-102397-1

Client Project/Site: Former Hercules Brunswick - Offsite IM

For:

Ashland Inc.

Ashland Hercules Research Center

500 Hercules Rd Bldg 8139

Wilmington, Delaware 19808

Attn: Timothy Hassett

*Kathryn Smith*

Authorized for release by:

6/30/2014 2:12:00 PM

Kathryn Smith, Project Manager II

(912)354-7858

[kathy.smith@testamericainc.com](mailto:kathy.smith@testamericainc.com)

### LINKS

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Have a Question?



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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Case Narrative . . . . .	3
Method Summary . . . . .	4
Sample Summary . . . . .	5
Definitions/Glossary . . . . .	6
Detection Summary . . . . .	7
Client Sample Results . . . . .	8
Surrogate Summary . . . . .	11
QC Sample Results . . . . .	13
QC Association Summary . . . . .	21
Lab Chronicle . . . . .	23
Chain of Custody . . . . .	24
Receipt Checklists . . . . .	25
Certification Summary . . . . .	27
Definitions/Glossary . . . . .	29





## Case Narrative

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick - Offsite IM

TestAmerica Job ID: 680-102397-1

**Job ID: 680-102397-1**

**Laboratory: TestAmerica Savannah**

### Narrative

## CASE NARRATIVE

**Client: Ashland Inc.**

**Project: Former Hercules Brunswick - Offsite IM**

**Report Number: 680-102397-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

### RECEIPT

The samples were received on 06/17/2014; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.0 C.

### VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples Roberts 22 (680-102397-1) and TB-1 (680-102397-2) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/26/2014 and 06/27/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### SEMIVOLATILE ORGANIC COMPOUNDS (AQUEOUS)

Sample Roberts 22 (680-102397-1) was analyzed for Semivolatile Organic Compounds (Aqueous) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 06/18/2014 and analyzed on 06/26/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### PESTICIDES AND PCBs

Sample Roberts 22 (680-102397-1) was analyzed for Pesticides and PCBs in accordance with EPA SW-846 Method 8081B\_8082A. The samples were prepared on 06/23/2014 and analyzed on 06/26/2014.

This method incorporates 2nd column confirmation. Corrective action is not taken for surrogate/spike compounds unless results from both columns are unacceptable. Results outside criteria are qualified.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### FORMALDEHYDE

Sample Roberts 22 (680-102397-1) was analyzed for formaldehyde in accordance with EPA SW-846 Method 8315A. The samples were prepared on 06/17/2014 and analyzed on 06/18/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### METALS (ICPMS)

Sample Roberts 22 (680-102397-1) was analyzed for Metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 06/18/2014 and analyzed on 06/20/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.



## Method Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
8081B/8082A	Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	SW846	TAL SAV
8315A	Carbonyl Compounds (HPLC)	SW846	TAL TAL
6020A	Metals (ICP/MS)	SW846	TAL SAV

### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAL = TestAmerica Tallahassee, 2846 Industrial Plaza Drive, Tallahassee, FL 32301, TEL (850)878-3994



## Sample Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-102397-1	Roberts 22	Water	06/16/14 14:57	06/17/14 09:35
680-102397-2	TB-1	Water	06/16/14 00:00	06/17/14 09:35



## Definitions/Glossary

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



## Detection Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

### Client Sample ID: Roberts 22

Lab Sample ID: 680-102397-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	51		5.0	1.4	ug/L	1		6020A	Total/NA
Zinc	73		20	8.4	ug/L	1		6020A	Total/NA

### Client Sample ID: TB-1

Lab Sample ID: 680-102397-2

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick - Offsite IM

TestAmerica Job ID: 680-102397-1

**Client Sample ID: Roberts 22**

**Lab Sample ID: 680-102397-1**

**Date Collected: 06/16/14 14:57**

**Matrix: Water**

**Date Received: 06/17/14 09:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			06/27/14 17:53	1
Benzene	<0.25		1.0	0.25	ug/L			06/27/14 17:53	1
2-Butanone	<1.0		10	1.0	ug/L			06/27/14 17:53	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			06/27/14 17:53	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			06/27/14 17:53	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			06/27/14 17:53	1
Chloroform	<0.14		1.0	0.14	ug/L			06/27/14 17:53	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			06/27/14 17:53	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			06/27/14 17:53	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			06/27/14 17:53	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			06/27/14 17:53	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			06/27/14 17:53	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			06/27/14 17:53	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			06/27/14 17:53	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			06/27/14 17:53	1
Methyl isobutyl ketone (MIBK)	<1.0		10	1.0	ug/L			06/27/14 17:53	1
p-Cymene	<0.13		1.0	0.13	ug/L			06/27/14 17:53	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			06/27/14 17:53	1
Toluene	<0.33		1.0	0.33	ug/L			06/27/14 17:53	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			06/27/14 17:53	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/27/14 17:53	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			06/27/14 17:53	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			06/27/14 17:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130		06/27/14 17:53	1
Dibromofluoromethane	106		70 - 130		06/27/14 17:53	1
Toluene-d8 (Surr)	101		70 - 130		06/27/14 17:53	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	<1.8		10	1.8	ug/L		06/18/14 15:59	06/26/14 17:43	1
Benzo[g,h,i]perylene	<2.0		10	2.0	ug/L		06/18/14 15:59	06/26/14 17:43	1
Dibenz[a,h]anthracene	<1.7		10	1.7	ug/L		06/18/14 15:59	06/26/14 17:43	1
Indeno[1,2,3-cd]pyrene	<1.8		10	1.8	ug/L		06/18/14 15:59	06/26/14 17:43	1
3 & 4 Methylphenol	<1.3		10	1.3	ug/L		06/18/14 15:59	06/26/14 17:43	1
Naphthalene	<1.2		10	1.2	ug/L		06/18/14 15:59	06/26/14 17:43	1
Phenol	<1.5		10	1.5	ug/L		06/18/14 15:59	06/26/14 17:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	81		38 - 130	06/18/14 15:59	06/26/14 17:43	1
2-Fluorophenol	64		25 - 130	06/18/14 15:59	06/26/14 17:43	1
Nitrobenzene-d5	85		39 - 130	06/18/14 15:59	06/26/14 17:43	1
Phenol-d5	79		25 - 130	06/18/14 15:59	06/26/14 17:43	1
Terphenyl-d14	82		10 - 143	06/18/14 15:59	06/26/14 17:43	1
2,4,6-Tribromophenol	99		31 - 141	06/18/14 15:59	06/26/14 17:43	1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.023		0.052	0.023	ug/L		06/23/14 16:39	06/26/14 01:36	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

**Client Sample ID: Roberts 22**

**Lab Sample ID: 680-102397-1**

**Date Collected: 06/16/14 14:57**

**Matrix: Water**

**Date Received: 06/17/14 09:35**

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
gamma-BHC (Lindane)	<0.020		0.052	0.020	ug/L		06/23/14 16:39	06/26/14 01:36	1
Toxaphene, Technical	<0.53		5.2	0.53	ug/L		06/23/14 16:39	06/26/14 01:36	1
Toxaphene, TAUC, Parlar 11-69	<0.53		5.2	0.53	ug/L		06/23/14 16:39	06/26/14 01:36	1
delta-BHC	<0.023		0.052	0.023	ug/L		06/23/14 16:39	06/26/14 01:36	1
Heptachlor	<0.024		0.052	0.024	ug/L		06/23/14 16:39	06/26/14 01:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	83		10 - 130				06/23/14 16:39	06/26/14 01:36	1
Tetrachloro-m-xylene	60		39 - 130				06/23/14 16:39	06/26/14 01:36	1

## Method: 8315A - Carbonyl Compounds (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	<5.0		50	5.0	ug/L		06/17/14 11:20	06/18/14 11:17	1

## Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<1.3		2.5	1.3	ug/L		06/18/14 09:02	06/20/14 00:28	1
<b>Barium</b>	<b>51</b>		5.0	1.4	ug/L		06/18/14 09:02	06/20/14 00:28	1
Cobalt	<0.12		0.50	0.12	ug/L		06/18/14 09:02	06/20/14 00:28	1
Chromium	<2.5		5.0	2.5	ug/L		06/18/14 09:02	06/20/14 00:28	1
Nickel	<2.0		5.0	2.0	ug/L		06/18/14 09:02	06/20/14 00:28	1
Selenium	<1.1		2.5	1.1	ug/L		06/18/14 09:02	06/20/14 00:28	1
Vanadium	<3.2		10	3.2	ug/L		06/18/14 09:02	06/20/14 00:28	1
<b>Zinc</b>	<b>73</b>		20	8.4	ug/L		06/18/14 09:02	06/20/14 00:28	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

**Client Sample ID: TB-1**

**Lab Sample ID: 680-102397-2**

**Date Collected: 06/16/14 00:00**

**Matrix: Water**

**Date Received: 06/17/14 09:35**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			06/26/14 16:11	1
Benzene	<0.25		1.0	0.25	ug/L			06/26/14 16:11	1
2-Butanone	<1.0		10	1.0	ug/L			06/26/14 16:11	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			06/26/14 16:11	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			06/26/14 16:11	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			06/26/14 16:11	1
Chloroform	<0.14		1.0	0.14	ug/L			06/26/14 16:11	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			06/26/14 16:11	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			06/26/14 16:11	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			06/26/14 16:11	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			06/26/14 16:11	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			06/26/14 16:11	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			06/26/14 16:11	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			06/26/14 16:11	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			06/26/14 16:11	1
Methyl isobutyl ketone (MIBK)	<1.0		10	1.0	ug/L			06/26/14 16:11	1
p-Cymene	<0.13		1.0	0.13	ug/L			06/26/14 16:11	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			06/26/14 16:11	1
Toluene	<0.33		1.0	0.33	ug/L			06/26/14 16:11	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			06/26/14 16:11	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/26/14 16:11	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			06/26/14 16:11	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			06/26/14 16:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		70 - 130		06/26/14 16:11	1
Dibromofluoromethane	102		70 - 130		06/26/14 16:11	1
Toluene-d8 (Surr)	93		70 - 130		06/26/14 16:11	1

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## Surrogate Summary

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick - Offsite IM

TestAmerica Job ID: 680-102397-1

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (70-130)	DBFM (70-130)	TOL (70-130)
680-102397-1	Roberts 22	101	106	101
680-102397-2	TB-1	95	102	93
LCS 680-336388/4	Lab Control Sample	93	104	92
LCS 680-336558/4	Lab Control Sample	110	103	109
LCSD 680-336388/5	Lab Control Sample Dup	99	106	97
LCSD 680-336558/5	Lab Control Sample Dup	112	109	115
MB 680-336388/8	Method Blank	95	107	92
MB 680-336558/9	Method Blank	100	106	101

#### Surrogate Legend

BFB = 4-Bromofluorobenzene  
DBFM = Dibromofluoromethane  
TOL = Toluene-d8 (Surr)

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (38-130)	2FP (25-130)	NBZ (39-130)	PHL (25-130)	TPH (10-143)	TBP (31-141)
680-102397-1	Roberts 22	81	64	85	79	82	99
LCS 680-334852/20-A	Lab Control Sample	67	59	70	61	78	71
LCSD 680-334852/21-A	Lab Control Sample Dup	83	70	81	74	93	84
MB 680-334852/19-A	Method Blank	69	69	79	79	83	72

#### Surrogate Legend

FBP = 2-Fluorobiphenyl  
2FP = 2-Fluorophenol  
NBZ = Nitrobenzene-d5  
PHL = Phenol-d5  
TPH = Terphenyl-d14  
TBP = 2,4,6-Tribromophenol

### Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCB2 (10-130)	TCX1 (39-130)
680-102397-1	Roberts 22	83	60
MB 680-335731/6-A	Method Blank	67	68

#### Surrogate Legend

DCB = DCB Decachlorobiphenyl  
TCX = Tetrachloro-m-xylene



## Surrogate Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

### Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

#### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB2 (10-130)	TCX2 (39-130)
LCS 680-335731/10-A	Lab Control Sample	59	54
LCS 680-335731/7-A	Lab Control Sample	58	49
LCSD 680-335731/11-A	Lab Control Sample Dup	56	49

#### Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick - Offsite IM

TestAmerica Job ID: 680-102397-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-336388/8

Matrix: Water

Analysis Batch: 336388

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			06/26/14 14:45	1
Benzene	<0.25		1.0	0.25	ug/L			06/26/14 14:45	1
2-Butanone	<1.0		10	1.0	ug/L			06/26/14 14:45	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			06/26/14 14:45	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			06/26/14 14:45	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			06/26/14 14:45	1
Chloroform	<0.14		1.0	0.14	ug/L			06/26/14 14:45	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			06/26/14 14:45	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			06/26/14 14:45	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			06/26/14 14:45	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			06/26/14 14:45	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			06/26/14 14:45	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			06/26/14 14:45	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			06/26/14 14:45	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			06/26/14 14:45	1
Methyl isobutyl ketone (MIBK)	<1.0		10	1.0	ug/L			06/26/14 14:45	1
p-Cymene	<0.13		1.0	0.13	ug/L			06/26/14 14:45	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			06/26/14 14:45	1
Toluene	<0.33		1.0	0.33	ug/L			06/26/14 14:45	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			06/26/14 14:45	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/26/14 14:45	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			06/26/14 14:45	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			06/26/14 14:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		70 - 130		06/26/14 14:45	1
Dibromofluoromethane	107		70 - 130		06/26/14 14:45	1
Toluene-d8 (Surr)	92		70 - 130		06/26/14 14:45	1

Lab Sample ID: LCS 680-336388/4

Matrix: Water

Analysis Batch: 336388

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	91.8		ug/L		92	39 - 162
Benzene	50.0	47.8		ug/L		96	74 - 123
2-Butanone	100	96.8		ug/L		97	55 - 142
Carbon disulfide	50.0	53.8		ug/L		108	63 - 142
Carbon tetrachloride	50.0	56.9		ug/L		114	70 - 131
Chlorobenzene	50.0	47.7		ug/L		95	79 - 120
Chloroform	50.0	50.3		ug/L		101	76 - 128
cis-1,2-Dichloroethene	50.0	47.0		ug/L		94	78 - 127
1,2-Dichlorobenzene	50.0	42.6		ug/L		85	77 - 124
1,4-Dichlorobenzene	50.0	42.8		ug/L		86	76 - 124
1,1-Dichloroethane	50.0	48.8		ug/L		98	69 - 132
1,1-Dichloroethene	50.0	52.7		ug/L		105	73 - 134
1,2-Dichloropropane	50.0	46.7		ug/L		93	71 - 126
Ethylbenzene	50.0	47.4		ug/L		95	78 - 125

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-336388/4

Matrix: Water

Analysis Batch: 336388

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	50.0	47.1		ug/L		94	79 - 124
Methyl isobutyl ketone (MIBK)	100	88.1		ug/L		88	51 - 143
p-Cymene	50.0	49.2		ug/L		98	69 - 129
Tetrachloroethene	50.0	52.8		ug/L		106	77 - 128
Toluene	50.0	45.7		ug/L		91	77 - 125
1,2,4-Trichlorobenzene	50.0	44.2		ug/L		88	67 - 134
1,2,3-Trichloropropane	50.0	51.4		ug/L		103	74 - 126
Vinyl chloride	50.0	51.5		ug/L		103	58 - 141
Xylenes, Total	150	144		ug/L		96	80 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	93		70 - 130
Dibromofluoromethane	104		70 - 130
Toluene-d8 (Surr)	92		70 - 130

Lab Sample ID: LCSD 680-336388/5

Matrix: Water

Analysis Batch: 336388

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	103		ug/L		103	39 - 162	11	50
Benzene	50.0	49.9		ug/L		100	74 - 123	4	30
2-Butanone	100	101		ug/L		101	55 - 142	5	30
Carbon disulfide	50.0	51.8		ug/L		104	63 - 142	4	30
Carbon tetrachloride	50.0	57.7		ug/L		115	70 - 131	1	30
Chlorobenzene	50.0	50.4		ug/L		101	79 - 120	6	30
Chloroform	50.0	50.1		ug/L		100	76 - 128	0	30
cis-1,2-Dichloroethene	50.0	47.9		ug/L		96	78 - 127	2	30
1,2-Dichlorobenzene	50.0	45.2		ug/L		90	77 - 124	6	30
1,4-Dichlorobenzene	50.0	45.6		ug/L		91	76 - 124	6	30
1,1-Dichloroethane	50.0	49.1		ug/L		98	69 - 132	1	30
1,1-Dichloroethene	50.0	51.0		ug/L		102	73 - 134	3	30
1,2-Dichloropropane	50.0	50.1		ug/L		100	71 - 126	7	30
Ethylbenzene	50.0	49.1		ug/L		98	78 - 125	3	30
Methylene Chloride	50.0	47.9		ug/L		96	79 - 124	2	30
Methyl isobutyl ketone (MIBK)	100	95.2		ug/L		95	51 - 143	8	30
p-Cymene	50.0	50.5		ug/L		101	69 - 129	3	50
Tetrachloroethene	50.0	53.8		ug/L		108	77 - 128	2	30
Toluene	50.0	47.5		ug/L		95	77 - 125	4	30
1,2,4-Trichlorobenzene	50.0	47.0		ug/L		94	67 - 134	6	30
1,2,3-Trichloropropane	50.0	55.4		ug/L		111	74 - 126	7	30
Vinyl chloride	50.0	49.6		ug/L		99	58 - 141	4	30
Xylenes, Total	150	151		ug/L		100	80 - 124	4	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	99		70 - 130
Dibromofluoromethane	106		70 - 130

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-336388/5

Matrix: Water

Analysis Batch: 336388

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	97		70 - 130

Lab Sample ID: MB 680-336558/9

Matrix: Water

Analysis Batch: 336558

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			06/27/14 12:06	1
Benzene	<0.25		1.0	0.25	ug/L			06/27/14 12:06	1
2-Butanone	<1.0		10	1.0	ug/L			06/27/14 12:06	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			06/27/14 12:06	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			06/27/14 12:06	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			06/27/14 12:06	1
Chloroform	<0.14		1.0	0.14	ug/L			06/27/14 12:06	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			06/27/14 12:06	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			06/27/14 12:06	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			06/27/14 12:06	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			06/27/14 12:06	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			06/27/14 12:06	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			06/27/14 12:06	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			06/27/14 12:06	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			06/27/14 12:06	1
Methyl isobutyl ketone (MIBK)	<1.0		10	1.0	ug/L			06/27/14 12:06	1
p-Cymene	<0.13		1.0	0.13	ug/L			06/27/14 12:06	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			06/27/14 12:06	1
Toluene	<0.33		1.0	0.33	ug/L			06/27/14 12:06	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			06/27/14 12:06	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/27/14 12:06	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			06/27/14 12:06	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			06/27/14 12:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		70 - 130		06/27/14 12:06	1
Dibromofluoromethane	106		70 - 130		06/27/14 12:06	1
Toluene-d8 (Surr)	101		70 - 130		06/27/14 12:06	1

Lab Sample ID: LCS 680-336558/4

Matrix: Water

Analysis Batch: 336558

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	94.3		ug/L		94	39 - 162
Benzene	50.0	54.6		ug/L		109	74 - 123
2-Butanone	100	93.9		ug/L		94	55 - 142
Carbon disulfide	50.0	53.2		ug/L		106	63 - 142
Carbon tetrachloride	50.0	55.2		ug/L		110	70 - 131
Chlorobenzene	50.0	54.4		ug/L		109	79 - 120
Chloroform	50.0	51.7		ug/L		103	76 - 128

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# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-336558/4

Matrix: Water

Analysis Batch: 336558

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	50.0	53.3		ug/L		107	78 - 127
1,2-Dichlorobenzene	50.0	55.4		ug/L		111	77 - 124
1,4-Dichlorobenzene	50.0	55.5		ug/L		111	76 - 124
1,1-Dichloroethane	50.0	51.5		ug/L		103	69 - 132
1,1-Dichloroethene	50.0	53.0		ug/L		106	73 - 134
1,2-Dichloropropane	50.0	55.8		ug/L		112	71 - 126
Ethylbenzene	50.0	53.5		ug/L		107	78 - 125
Methylene Chloride	50.0	55.5		ug/L		111	79 - 124
Methyl isobutyl ketone (MIBK)	100	105		ug/L		105	51 - 143
p-Cymene	50.0	54.6		ug/L		109	69 - 129
Tetrachloroethene	50.0	52.3		ug/L		105	77 - 128
Toluene	50.0	54.3		ug/L		109	77 - 125
1,2,4-Trichlorobenzene	50.0	55.8		ug/L		112	67 - 134
1,2,3-Trichloropropane	50.0	52.8		ug/L		106	74 - 126
Vinyl chloride	50.0	59.2		ug/L		118	58 - 141
Xylenes, Total	150	167		ug/L		112	80 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	110		70 - 130
Dibromofluoromethane	103		70 - 130
Toluene-d8 (Surr)	109		70 - 130

Lab Sample ID: LCSD 680-336558/5

Matrix: Water

Analysis Batch: 336558

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	93.1		ug/L		93	39 - 162	1	50
Benzene	50.0	58.1		ug/L		116	74 - 123	6	30
2-Butanone	100	93.7		ug/L		94	55 - 142	0	30
Carbon disulfide	50.0	55.2		ug/L		110	63 - 142	4	30
Carbon tetrachloride	50.0	57.7		ug/L		115	70 - 131	5	30
Chlorobenzene	50.0	55.6		ug/L		111	79 - 120	2	30
Chloroform	50.0	55.1		ug/L		110	76 - 128	6	30
cis-1,2-Dichloroethene	50.0	54.8		ug/L		110	78 - 127	3	30
1,2-Dichlorobenzene	50.0	58.5		ug/L		117	77 - 124	5	30
1,4-Dichlorobenzene	50.0	59.3		ug/L		119	76 - 124	7	30
1,1-Dichloroethane	50.0	52.8		ug/L		106	69 - 132	2	30
1,1-Dichloroethene	50.0	55.2		ug/L		110	73 - 134	4	30
1,2-Dichloropropane	50.0	58.6		ug/L		117	71 - 126	5	30
Ethylbenzene	50.0	55.0		ug/L		110	78 - 125	3	30
Methylene Chloride	50.0	59.2		ug/L		118	79 - 124	6	30
Methyl isobutyl ketone (MIBK)	100	109		ug/L		109	51 - 143	4	30
p-Cymene	50.0	61.3		ug/L		123	69 - 129	12	50
Tetrachloroethene	50.0	54.3		ug/L		109	77 - 128	4	30
Toluene	50.0	58.6		ug/L		117	77 - 125	8	30
1,2,4-Trichlorobenzene	50.0	63.6		ug/L		127	67 - 134	13	30
1,2,3-Trichloropropane	50.0	53.9		ug/L		108	74 - 126	2	30

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-336558/5

Matrix: Water

Analysis Batch: 336558

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	50.0	60.8		ug/L		122	58 - 141	3	30
Xylenes, Total	150	173		ug/L		115	80 - 124	3	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	112		70 - 130
Dibromofluoromethane	109		70 - 130
Toluene-d8 (Surr)	115		70 - 130

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-334852/19-A

Matrix: Water

Analysis Batch: 335156

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 334852

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	<1.8		10	1.8	ug/L		06/18/14 15:59	06/19/14 21:02	1
Benzo[g,h,i]perylene	<2.0		10	2.0	ug/L		06/18/14 15:59	06/19/14 21:02	1
Dibenz[a,h]anthracene	<1.7		10	1.7	ug/L		06/18/14 15:59	06/19/14 21:02	1
Indeno[1,2,3-cd]pyrene	<1.8		10	1.8	ug/L		06/18/14 15:59	06/19/14 21:02	1
3 & 4 Methylphenol	<1.3		10	1.3	ug/L		06/18/14 15:59	06/19/14 21:02	1
Naphthalene	<1.2		10	1.2	ug/L		06/18/14 15:59	06/19/14 21:02	1
Phenol	<1.5		10	1.5	ug/L		06/18/14 15:59	06/19/14 21:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	69		38 - 130	06/18/14 15:59	06/19/14 21:02	1
2-Fluorophenol	69		25 - 130	06/18/14 15:59	06/19/14 21:02	1
Nitrobenzene-d5	79		39 - 130	06/18/14 15:59	06/19/14 21:02	1
Phenol-d5	79		25 - 130	06/18/14 15:59	06/19/14 21:02	1
Terphenyl-d14	83		10 - 143	06/18/14 15:59	06/19/14 21:02	1
2,4,6-Tribromophenol	72		31 - 141	06/18/14 15:59	06/19/14 21:02	1

Lab Sample ID: LCS 680-334852/20-A

Matrix: Water

Analysis Batch: 335156

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 334852

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetophenone	100	74.5		ug/L		75	40 - 103
Benzo[g,h,i]perylene	100	69.3		ug/L		69	42 - 114
Dibenz[a,h]anthracene	100	72.6		ug/L		73	48 - 110
Indeno[1,2,3-cd]pyrene	100	63.8		ug/L		64	34 - 115
3 & 4 Methylphenol	100	73.7		ug/L		74	41 - 105
Naphthalene	100	52.1		ug/L		52	29 - 91
Phenol	100	68.8		ug/L		69	34 - 97

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	67		38 - 130
2-Fluorophenol	59		25 - 130

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick - Offsite IM

TestAmerica Job ID: 680-102397-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-334852/20-A

Matrix: Water

Analysis Batch: 335156

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 334852

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	70		39 - 130
Phenol-d5	61		25 - 130
Terphenyl-d14	78		10 - 143
2,4,6-Tribromophenol	71		31 - 141

Lab Sample ID: LCSD 680-334852/21-A

Matrix: Water

Analysis Batch: 335156

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 334852

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetophenone	100	86.0		ug/L		86	40 - 103	14	30
Benzo[g,h,i]perylene	100	83.6		ug/L		84	42 - 114	19	50
Dibenz(a,h)anthracene	100	89.1		ug/L		89	48 - 110	20	40
Indeno[1,2,3-cd]pyrene	100	77.5		ug/L		78	34 - 115	19	40
3 & 4 Methylphenol	100	83.3		ug/L		83	41 - 105	12	50
Naphthalene	100	61.0		ug/L		61	29 - 91	16	40
Phenol	100	78.7		ug/L		79	34 - 97	13	50

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	83		38 - 130
2-Fluorophenol	70		25 - 130
Nitrobenzene-d5	81		39 - 130
Phenol-d5	74		25 - 130
Terphenyl-d14	93		10 - 143
2,4,6-Tribromophenol	84		31 - 141

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Lab Sample ID: MB 680-335731/6-A

Matrix: Water

Analysis Batch: 336284

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 335731

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0028		0.0063	0.0028	ug/L		06/23/14 16:39	06/26/14 00:39	1
gamma-BHC (Lindane)	<0.0024		0.0063	0.0024	ug/L		06/23/14 16:39	06/26/14 00:39	1
Toxaphene, Technical	<0.064		0.63	0.064	ug/L		06/23/14 16:39	06/26/14 00:39	1
Toxaphene, TAUC, Parlar 11-69	<0.064		0.63	0.064	ug/L		06/23/14 16:39	06/26/14 00:39	1
delta-BHC	<0.0028		0.0063	0.0028	ug/L		06/23/14 16:39	06/26/14 00:39	1
Heptachlor	<0.0029		0.0063	0.0029	ug/L		06/23/14 16:39	06/26/14 00:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	67		10 - 130	06/23/14 16:39	06/26/14 00:39	1
Tetrachloro-m-xylene	68		39 - 130	06/23/14 16:39	06/26/14 00:39	1

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick - Offsite IM

TestAmerica Job ID: 680-102397-1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Lab Sample ID: LCS 680-335731/10-A

Matrix: Water

Analysis Batch: 336284

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 335731

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene, Technical	2.00	1.92		ug/L		96	22 - 145
Toxaphene, TAUC, Parlar 11-69	2.00	2.06		ug/L		103	35 - 138

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	59		10 - 130
Tetrachloro-m-xylene	54		39 - 130

Lab Sample ID: LCS 680-335731/7-A

Matrix: Water

Analysis Batch: 336284

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 335731

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-BHC	0.0250	0.0190		ug/L		76	45 - 130
gamma-BHC (Lindane)	0.0250	0.0187		ug/L		75	47 - 130
delta-BHC	0.0250	0.0203		ug/L		81	47 - 140
Heptachlor	0.0250	0.0155		ug/L		62	49 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	58		10 - 130
Tetrachloro-m-xylene	49		39 - 130

Lab Sample ID: LCSD 680-335731/11-A

Matrix: Water

Analysis Batch: 336284

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 335731

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Toxaphene, Technical	2.00	1.94		ug/L		97	22 - 145	1	50
Toxaphene, TAUC, Parlar 11-69	2.00	2.14		ug/L		107	35 - 138	4	50

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl	56		10 - 130
Tetrachloro-m-xylene	49		39 - 130

## Method: 8315A - Carbonyl Compounds (HPLC)

Lab Sample ID: MB 640-109784/1-A

Matrix: Water

Analysis Batch: 109827

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 109784

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	<5.0		50	5.0	ug/L		06/17/14 11:20	06/18/14 10:06	1

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

## Method: 8315A - Carbonyl Compounds (HPLC) (Continued)

Lab Sample ID: LCS 640-109784/2-A

Matrix: Water

Analysis Batch: 109827

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 109784

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Formaldehyde	150	155		ug/L		103	73 - 133

Lab Sample ID: LCSD 640-109784/3-A

Matrix: Water

Analysis Batch: 109827

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 109784

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Formaldehyde	150	155		ug/L		104	73 - 133	0	20

## Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-334819/1-A

Matrix: Water

Analysis Batch: 335309

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 334819

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<1.3		2.5	1.3	ug/L		06/18/14 09:02	06/19/14 22:02	1
Barium	<1.4		5.0	1.4	ug/L		06/18/14 09:02	06/19/14 22:02	1
Cobalt	<0.12		0.50	0.12	ug/L		06/18/14 09:02	06/19/14 22:02	1
Chromium	<2.5		5.0	2.5	ug/L		06/18/14 09:02	06/19/14 22:02	1
Nickel	<2.0		5.0	2.0	ug/L		06/18/14 09:02	06/19/14 22:02	1
Selenium	<1.1		2.5	1.1	ug/L		06/18/14 09:02	06/19/14 22:02	1
Vanadium	<3.2		10	3.2	ug/L		06/18/14 09:02	06/19/14 22:02	1
Zinc	<8.4		20	8.4	ug/L		06/18/14 09:02	06/19/14 22:02	1

Lab Sample ID: LCS 680-334819/2-A

Matrix: Water

Analysis Batch: 335309

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 334819

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	105		ug/L		105	75 - 125
Barium	100	101		ug/L		101	75 - 125
Cobalt	50.0	51.9		ug/L		104	75 - 125
Chromium	100	106		ug/L		106	75 - 125
Nickel	100	107		ug/L		107	75 - 125
Selenium	100	102		ug/L		102	75 - 125
Vanadium	100	104		ug/L		104	75 - 125
Zinc	100	104		ug/L		104	75 - 125

TestAmerica Savannah



## QC Association Summary

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick - Offsite IM

TestAmerica Job ID: 680-102397-1

### GC/MS VOA

#### Analysis Batch: 336388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102397-2	TB-1	Total/NA	Water	8260B	
LCS 680-336388/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-336388/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-336388/8	Method Blank	Total/NA	Water	8260B	

#### Analysis Batch: 336558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102397-1	Roberts 22	Total/NA	Water	8260B	
LCS 680-336558/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-336558/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-336558/9	Method Blank	Total/NA	Water	8260B	

### GC/MS Semi VOA

#### Prep Batch: 334852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102397-1	Roberts 22	Total/NA	Water	3520C	
LCS 680-334852/20-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 680-334852/21-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 680-334852/19-A	Method Blank	Total/NA	Water	3520C	

#### Analysis Batch: 335156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-334852/20-A	Lab Control Sample	Total/NA	Water	8270D	334852
LCSD 680-334852/21-A	Lab Control Sample Dup	Total/NA	Water	8270D	334852
MB 680-334852/19-A	Method Blank	Total/NA	Water	8270D	334852

#### Analysis Batch: 336396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102397-1	Roberts 22	Total/NA	Water	8270D	334852

### GC Semi VOA

#### Prep Batch: 335731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102397-1	Roberts 22	Total/NA	Water	3520C	
LCS 680-335731/10-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 680-335731/7-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 680-335731/11-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 680-335731/6-A	Method Blank	Total/NA	Water	3520C	

#### Analysis Batch: 336284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102397-1	Roberts 22	Total/NA	Water	8081B/8082A	335731
LCS 680-335731/10-A	Lab Control Sample	Total/NA	Water	8081B/8082A	335731
LCS 680-335731/7-A	Lab Control Sample	Total/NA	Water	8081B/8082A	335731
LCSD 680-335731/11-A	Lab Control Sample Dup	Total/NA	Water	8081B/8082A	335731
MB 680-335731/6-A	Method Blank	Total/NA	Water	8081B/8082A	335731

TestAmerica Savannah



## QC Association Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

### HPLC/IC

#### Prep Batch: 109784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102397-1	Roberts 22	Total/NA	Water	8315_W_Prep	
LCS 640-109784/2-A	Lab Control Sample	Total/NA	Water	8315_W_Prep	
LCSD 640-109784/3-A	Lab Control Sample Dup	Total/NA	Water	8315_W_Prep	
MB 640-109784/1-A	Method Blank	Total/NA	Water	8315_W_Prep	

#### Analysis Batch: 109827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102397-1	Roberts 22	Total/NA	Water	8315A	109784
LCS 640-109784/2-A	Lab Control Sample	Total/NA	Water	8315A	109784
LCSD 640-109784/3-A	Lab Control Sample Dup	Total/NA	Water	8315A	109784
MB 640-109784/1-A	Method Blank	Total/NA	Water	8315A	109784

### Metals

#### Prep Batch: 334819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102397-1	Roberts 22	Total/NA	Water	3010A	
LCS 680-334819/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 680-334819/1-A	Method Blank	Total/NA	Water	3010A	

#### Analysis Batch: 335309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-102397-1	Roberts 22	Total/NA	Water	6020A	334819
LCS 680-334819/2-A	Lab Control Sample	Total/NA	Water	6020A	334819
MB 680-334819/1-A	Method Blank	Total/NA	Water	6020A	334819



# Lab Chronicle

Client: Ashland Inc.  
Project/Site: Former Hercules Brunswick - Offsite IM

TestAmerica Job ID: 680-102397-1

**Client Sample ID: Roberts 22**

**Date Collected: 06/16/14 14:57**

**Date Received: 06/17/14 09:35**

**Lab Sample ID: 680-102397-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	336558	06/27/14 17:53	TF1	TAL SAV
Total/NA	Prep	3520C			248.6 mL	0.5 mL	334852	06/18/14 15:59	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248.6 mL	0.5 mL	336396	06/26/14 17:43	SMC	TAL SAV
Total/NA	Prep	3520C			120.1 mL	2.5 mL	335731	06/23/14 16:39	RBS	TAL SAV
Total/NA	Analysis	8081B/8082A		1	120.1 mL	2.5 mL	336284	06/26/14 01:36	JCK	TAL SAV
Total/NA	Prep	8315_W_Prep			100 mL	4.0 mL	109784	06/17/14 11:20	DNS	TAL TAL
Total/NA	Analysis	8315A		1	100 mL	4.0 mL	109827	06/18/14 11:17	DNS	TAL TAL
Total/NA	Prep	3010A			50 mL	250 mL	334819	06/18/14 09:02	SP	TAL SAV
Total/NA	Analysis	6020A		1	50 mL	250 mL	335309	06/20/14 00:28	BWR	TAL SAV

**Client Sample ID: TB-1**

**Date Collected: 06/16/14 00:00**

**Date Received: 06/17/14 09:35**

**Lab Sample ID: 680-102397-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	336388	06/26/14 16:11	CAR	TAL SAV

## Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAL = TestAmerica Tallahassee, 2846 Industrial Plaza Drive, Tallahassee, FL 32301, TEL (850)878-3994



Savannah, GA 31404  
phone 912.354.7858 fax 912.352.0165

## Chain of Custody Record

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

[illegible]



## Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-102397-1

Login Number: 102397

List Source: TestAmerica Savannah

List Number: 1

Creator: Kicklighter, Marilyn D

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-102397-1

Login Number: 102397

List Source: TestAmerica Tallahassee

List Number: 2

List Creation: 06/18/14 10:14 AM

Creator: Carpenter, Jonnie T

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	



# Certification Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

## Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	AFCEE		SAVLAB	
A2LA	DoD ELAP		399.01	02-28-15
A2LA	ISO/IEC 17025		399.01	02-28-15
Alabama	State Program	4	41450	06-30-14 *
Arkansas DEQ	State Program	6	88-0692	01-31-15
California	NELAP	9	3217CA	07-31-14 *
Colorado	State Program	8	N/A	12-31-14
Connecticut	State Program	1	PH-0161	03-31-15
Florida	NELAP	4	E87052	06-30-15
GA Dept. of Agriculture	State Program	4	N/A	06-30-14 *
Georgia	State Program	4	N/A	06-30-15
Guam	State Program	9	09-005r	04-16-15
Hawaii	State Program	9	N/A	06-30-14 *
Illinois	NELAP	5	200022	11-30-14
Indiana	State Program	5	N/A	06-30-14 *
Iowa	State Program	7	353	07-01-15
Kentucky (DW)	State Program	4	90084	12-31-14
Kentucky (UST)	State Program	4	18	06-30-15
Louisiana	NELAP	6	30690	06-30-14 *
Louisiana (DW)	NELAP	6	LA140023	12-31-14
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-14
Massachusetts	State Program	1	M-GA006	06-30-14 *
Michigan	State Program	5	9925	06-30-14 *
Mississippi	State Program	4	N/A	06-30-14 *
Montana	State Program	8	CERT0081	01-01-15
Nebraska	State Program	7	TestAmerica-Savannah	06-30-14 *
New Jersey	NELAP	2	GA769	06-30-15
New Mexico	State Program	6	N/A	06-30-14 *
New York	NELAP	2	10842	03-31-15
North Carolina (DW)	State Program	4	13701	07-31-14 *
North Carolina (VW/SW)	State Program	4	269	12-31-14
Oklahoma	State Program	6	9984	08-31-14
Pennsylvania	NELAP	3	68-00474	06-30-15
Puerto Rico	State Program	2	GA00006	12-31-14
South Carolina	State Program	4	98001	06-30-14 *
Tennessee	State Program	4	TN02961	06-30-14 *
Texas	NELAP	6	T104704185-08-TX	11-30-14
USDA	Federal		SAV 3-04	06-11-17
Virginia	NELAP	3	460161	06-14-15
Washington	State Program	10	C805	06-10-15
West Virginia (DW)	State Program	3	9950C	12-31-14
West Virginia DEP	State Program	3	94	06-30-14 *
Wisconsin	State Program	5	999819810	08-31-14
Wyoming	State Program	8	8TMS-L	06-30-14 *

## Laboratory: TestAmerica Tallahassee

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

\* Certification renewal pending - certification considered valid.

TestAmerica Savannah



## Certification Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

### Laboratory: TestAmerica Tallahassee (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E81005	06-30-15 *
Georgia	State Program	4		06-30-14 *
Louisiana	NELAP	6	30663	06-30-14 *
New Jersey	NELAP	2	FL012	06-30-14 *
Texas	NELAP	6	T104704459-11-2	03-31-15
USDA	Federal		P330-08-00158	08-05-14

\* Certification renewal pending - certification considered valid.

TestAmerica Savannah



## Definitions/Glossary

Client: Ashland Inc.

TestAmerica Job ID: 680-102397-1

Project/Site: Former Hercules Brunswick - Offsite IM

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-103380-1

Client Project/Site: Ashland Brunswick SA GW Monitoring

For:

Ashland Inc.

Ashland Hercules Research Center

500 Hercules Rd Bldg 8139

Wilmington, Delaware 19808

Attn: Timothy Hassett

*Kathryn Smith*

Authorized for release by:

7/29/2014 3:06:45 PM

Kathryn Smith, Project Manager II

(912)354-7858

[kathy.smith@testamericainc.com](mailto:kathy.smith@testamericainc.com)

### LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



# Table of Contents

Cover Page . . . . . 1

Table of Contents . . . . . 2

Case Narrative . . . . . 3

Method Summary . . . . . 4

Sample Summary . . . . . 5

    Definitions/Glossary . . . . . 6

Detection Summary . . . . . 7

Client Sample Results . . . . . 9

Surrogate Summary . . . . . 20

QC Sample Results . . . . . 22

QC Association Summary . . . . . 28

Lab Chronicle . . . . . 31

Chain of Custody . . . . . 33

Receipt Checklists . . . . . 34

Certification Summary . . . . . 36

Definitions/Glossary . . . . . 38





## Case Narrative

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

**Job ID: 680-103380-1**

**Laboratory: TestAmerica Savannah**

### Narrative

#### CASE NARRATIVE

**Client: Ashland Inc.**

**Project: Ashland Brunswick SA GW Monitoring**

**Report Number: 680-103380-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

#### RECEIPT

The samples were received on 07/17/2014; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 3.0° C, 3.8° C, 4.0° C and 4.8° C.

#### VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MW- 57D (680-103380-1), MW- 56D (680-103380-2), MW- 11DD (680-103380-3), Field Blank (680-103380-4), Equipment Blank (680-103380-5) and Trip Blank #1 (680-103380-6) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 07/21/2014.

Sample MW- 11DD (680-103380-3)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly. No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### SEMIVOLATILE ORGANIC COMPOUNDS (AQUEOUS)

Samples MW- 57D (680-103380-1), MW- 56D (680-103380-2), MW- 11DD (680-103380-3), Field Blank (680-103380-4) and Equipment Blank (680-103380-5) were analyzed for Semivolatile Organic Compounds (Aqueous) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 07/21/2014 and analyzed on 07/24/2014.

Phenol-d5 (Surr) recovered low for MB 680-340036/16-A and for LCS 680-340036/17-A.

3 & 4 Methylphenol and Phenol recovered low for LCS 680-340036/17-A. 3 & 4 Methylphenol, Acetophenone, Benzo[g,h,i]perylene, Dibenz(a,h)anthracene, Indeno[1,2,3-cd]pyrene, Naphthalene and Phenol exceeded the RPD limit for LCSD 680-340036/18-A. No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### PESTICIDES AND PCBS

Samples MW- 57D (680-103380-1), MW- 56D (680-103380-2), MW- 11DD (680-103380-3), Field Blank (680-103380-4) and Equipment Blank (680-103380-5) were analyzed for Pesticides and PCBs in accordance with EPA SW-846 Method 8081B\_8082A. The samples were prepared on 07/22/2014 and analyzed on 07/23/2014.

This method incorporates 2nd column confirmation. Corrective action is not taken for surrogate/spike compounds unless results from both columns are unacceptable. Results outside criteria are qualified. No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### FORMALDEHYDE

Samples MW- 57D (680-103380-1), MW- 56D (680-103380-2), MW- 11DD (680-103380-3), Field Blank (680-103380-4) and Equipment Blank (680-103380-5) were analyzed for formaldehyde in accordance with EPA SW-846 Method 8315A. The samples were prepared on 07/18/2014 and analyzed on 07/21/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### METALS (ICPMS)

Samples MW- 57D (680-103380-1), MW- 56D (680-103380-2), MW- 11DD (680-103380-3), Field Blank (680-103380-4) and Equipment Blank (680-103380-5) were analyzed for metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 07/18/2014 and analyzed on 07/23/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.



## Method Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-103380-1

Project/Site: Ashland Brunswick SA GW Monitoring

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
8081B/8082A	Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	SW846	TAL SAV
8315A	Carbonyl Compounds (HPLC)	SW846	TAL TAL
6020A	Metals (ICP/MS)	SW846	TAL SAV

### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAL = TestAmerica Tallahassee, 2846 Industrial Plaza Drive, Tallahassee, FL 32301, TEL (850)878-3994



## Sample Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-103380-1

Project/Site: Ashland Brunswick SA GW Monitoring

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-103380-1	MW- 57D	Water	07/16/14 09:57	07/17/14 10:26
680-103380-2	MW- 56D	Water	07/16/14 10:46	07/17/14 10:26
680-103380-3	MW- 11DD	Water	07/16/14 11:49	07/17/14 10:26
680-103380-4	Field Blank	Water	07/16/14 12:45	07/17/14 10:26
680-103380-5	Equipment Blank	Water	07/16/14 12:40	07/17/14 10:26
680-103380-6	Trip Blank #1	Water	07/16/14 00:00	07/17/14 10:26



## Definitions/Glossary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
*	RPD of the LCS and LCSD exceeds the control limits
*	ISTD response or retention time outside acceptable limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

#### GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

#### HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



# Detection Summary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

## Client Sample ID: MW- 57D

## Lab Sample ID: 680-103380-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.1		1.0	0.25	ug/L	1		8260B	Total/NA
Chlorobenzene	0.58	J	1.0	0.25	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	0.37	J	1.0	0.15	ug/L	1		8260B	Total/NA
Benzo[g,h,i]perylene	4.9	J *	10	2.1	ug/L	1		8270D	Total/NA
Dibenz(a,h)anthracene	2.8	J *	10	1.8	ug/L	1		8270D	Total/NA
Formaldehyde	23	J	50	5.0	ug/L	1		8315A	Total/NA
Arsenic	1.7	J	2.5	1.3	ug/L	1		6020A	Total Recoverable
Barium	310		5.0	1.3	ug/L	1		6020A	Total Recoverable
Cobalt	2.0		0.50	0.15	ug/L	1		6020A	Total Recoverable

## Client Sample ID: MW- 56D

## Lab Sample ID: 680-103380-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	41		1.0	0.25	ug/L	1		8260B	Total/NA
Chlorobenzene	86		1.0	0.25	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	0.93	J	1.0	0.15	ug/L	1		8260B	Total/NA
1,2-Dichlorobenzene	0.75	J	1.0	0.21	ug/L	1		8260B	Total/NA
1,4-Dichlorobenzene	0.99	J	1.0	0.28	ug/L	1		8260B	Total/NA
1,2-Dichloropropane	1.2		1.0	0.13	ug/L	1		8260B	Total/NA
Ethylbenzene	2.9		1.0	0.11	ug/L	1		8260B	Total/NA
p-Isopropyltoluene	0.42	J	1.0	0.13	ug/L	1		8260B	Total/NA
Toluene	0.61	J	1.0	0.33	ug/L	1		8260B	Total/NA
Vinyl chloride	0.79	J	1.0	0.18	ug/L	1		8260B	Total/NA
Xylenes, Total	3.5		2.0	0.20	ug/L	1		8260B	Total/NA
Toxaphene - Total	2.1	J	4.9	0.50	ug/L	1		8081B/8082A	Total/NA
Formaldehyde	24	J	50	5.0	ug/L	1		8315A	Total/NA
Arsenic	2.8		2.5	1.3	ug/L	1		6020A	Total Recoverable
Barium	1100		5.0	1.3	ug/L	1		6020A	Total Recoverable
Cobalt	4.2		0.50	0.15	ug/L	1		6020A	Total Recoverable
Nickel	3.0	J	5.0	2.0	ug/L	1		6020A	Total Recoverable

## Client Sample ID: MW- 11DD

## Lab Sample ID: 680-103380-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	120		5.0	1.3	ug/L	5		8260B	Total/NA
Chlorobenzene	180		5.0	1.3	ug/L	5		8260B	Total/NA
Chloroform	540		5.0	0.70	ug/L	5		8260B	Total/NA
cis-1,2-Dichloroethene	1.1	J	5.0	0.75	ug/L	5		8260B	Total/NA
1,2-Dichlorobenzene	2.6	J	5.0	1.1	ug/L	5		8260B	Total/NA
1,4-Dichlorobenzene	3.9	J	5.0	1.4	ug/L	5		8260B	Total/NA
Ethylbenzene	8.1		5.0	0.55	ug/L	5		8260B	Total/NA
Methylene Chloride	200		25	5.0	ug/L	5		8260B	Total/NA
p-Isopropyltoluene	7.9		5.0	0.65	ug/L	5		8260B	Total/NA
Toluene	2.2	J	5.0	1.7	ug/L	5		8260B	Total/NA
Xylenes, Total	32		10	1.0	ug/L	5		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah



## Detection Summary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

### Client Sample ID: MW- 11DD (Continued)

Lab Sample ID: 680-103380-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Toxaphene - Total	3.4	J p	4.7	0.48	ug/L	1			8081B/8082A	Total/NA
Formaldehyde	17	J	50	5.0	ug/L	1			8315A	Total/NA
Arsenic	3.1		2.5	1.3	ug/L	1			6020A	Total Recoverable
Barium	2000		5.0	1.3	ug/L	1			6020A	Total Recoverable
Cobalt	4.6		0.50	0.15	ug/L	1			6020A	Total Recoverable
Zinc	11	J	20	8.3	ug/L	1			6020A	Total Recoverable

### Client Sample ID: Field Blank

Lab Sample ID: 680-103380-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Barium	6.9		5.0	1.3	ug/L	1			6020A	Total Recoverable
Zinc	21		20	8.3	ug/L	1			6020A	Total Recoverable

### Client Sample ID: Equipment Blank

Lab Sample ID: 680-103380-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Barium	8.9		5.0	1.3	ug/L	1			6020A	Total Recoverable
Zinc	18	J	20	8.3	ug/L	1			6020A	Total Recoverable

### Client Sample ID: Trip Blank #1

Lab Sample ID: 680-103380-6

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

**Client Sample ID: MW- 57D**

**Lab Sample ID: 680-103380-1**

**Date Collected: 07/16/14 09:57**

**Matrix: Water**

**Date Received: 07/17/14 10:26**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			07/21/14 14:27	1
Benzene	3.1		1.0	0.25	ug/L			07/21/14 14:27	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			07/21/14 14:27	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			07/21/14 14:27	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			07/21/14 14:27	1
Chlorobenzene	0.58	J	1.0	0.25	ug/L			07/21/14 14:27	1
Chloroform	<0.14		1.0	0.14	ug/L			07/21/14 14:27	1
cis-1,2-Dichloroethene	0.37	J	1.0	0.15	ug/L			07/21/14 14:27	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			07/21/14 14:27	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			07/21/14 14:27	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			07/21/14 14:27	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			07/21/14 14:27	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			07/21/14 14:27	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			07/21/14 14:27	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			07/21/14 14:27	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			07/21/14 14:27	1
p-Isopropyltoluene	<0.13		1.0	0.13	ug/L			07/21/14 14:27	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			07/21/14 14:27	1
Toluene	<0.33		1.0	0.33	ug/L			07/21/14 14:27	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			07/21/14 14:27	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/21/14 14:27	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			07/21/14 14:27	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			07/21/14 14:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		70 - 130		07/21/14 14:27	1
Dibromofluoromethane	123		70 - 130		07/21/14 14:27	1
Toluene-d8 (Surr)	96		70 - 130		07/21/14 14:27	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	<1.4	*	10	1.4	ug/L		07/21/14 15:50	07/24/14 15:11	1
Acetophenone	<1.9	*	10	1.9	ug/L		07/21/14 15:50	07/24/14 15:11	1
Benzo[g,h,i]perylene	4.9	J *	10	2.1	ug/L		07/21/14 15:50	07/24/14 15:11	1
Dibenz[a,h]anthracene	2.8	J *	10	1.8	ug/L		07/21/14 15:50	07/24/14 15:11	1
Indeno[1,2,3-cd]pyrene	<1.9	*	10	1.9	ug/L		07/21/14 15:50	07/24/14 15:11	1
Naphthalene	<1.3	*	10	1.3	ug/L		07/21/14 15:50	07/24/14 15:11	1
Phenol	<1.6	*	10	1.6	ug/L		07/21/14 15:50	07/24/14 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	62		31 - 141	07/21/14 15:50	07/24/14 15:11	1
2-Fluorobiphenyl	73		38 - 130	07/21/14 15:50	07/24/14 15:11	1
2-Fluorophenol (Surr)	54		25 - 130	07/21/14 15:50	07/24/14 15:11	1
Terphenyl-d14 (Surr)	76		10 - 143	07/21/14 15:50	07/24/14 15:11	1
Phenol-d5 (Surr)	61		25 - 130	07/21/14 15:50	07/24/14 15:11	1
Nitrobenzene-d5 (Surr)	79		39 - 130	07/21/14 15:50	07/24/14 15:11	1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.021		0.048	0.021	ug/L		07/22/14 15:10	07/23/14 16:51	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

**Client Sample ID: MW- 57D**

**Lab Sample ID: 680-103380-1**

**Date Collected: 07/16/14 09:57**

**Matrix: Water**

**Date Received: 07/17/14 10:26**

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	<0.021		0.048	0.021	ug/L		07/22/14 15:10	07/23/14 16:51	1
gamma-BHC (Lindane)	<0.018		0.048	0.018	ug/L		07/22/14 15:10	07/23/14 16:51	1
Heptachlor	<0.022		0.048	0.022	ug/L		07/22/14 15:10	07/23/14 16:51	1
Toxaphene, Technical	<0.49		4.8	0.49	ug/L		07/22/14 15:10	07/23/14 16:51	1
Toxaphene - Total	<0.49		4.8	0.49	ug/L		07/22/14 15:10	07/23/14 16:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	70		10 - 130	07/22/14 15:10	07/23/14 16:51	1
Tetrachloro-m-xylene	79		39 - 130	07/22/14 15:10	07/23/14 16:51	1

## Method: 8315A - Carbonyl Compounds (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	23	J	50	5.0	ug/L		07/18/14 09:02	07/21/14 10:24	1

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.7	J	2.5	1.3	ug/L		07/18/14 10:06	07/23/14 13:40	1
Barium	310		5.0	1.3	ug/L		07/18/14 10:06	07/23/14 13:40	1
Cobalt	2.0		0.50	0.15	ug/L		07/18/14 10:06	07/23/14 13:40	1
Chromium	<2.5		5.0	2.5	ug/L		07/18/14 10:06	07/23/14 13:40	1
Nickel	<2.0		5.0	2.0	ug/L		07/18/14 10:06	07/23/14 13:40	1
Selenium	<1.0		2.5	1.0	ug/L		07/18/14 10:06	07/23/14 13:40	1
Vanadium	<3.8		10	3.8	ug/L		07/18/14 10:06	07/23/14 13:40	1
Zinc	<8.3		20	8.3	ug/L		07/18/14 10:06	07/23/14 13:40	1



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

**Client Sample ID: MW- 56D**

**Lab Sample ID: 680-103380-2**

**Date Collected: 07/16/14 10:46**

**Matrix: Water**

**Date Received: 07/17/14 10:26**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			07/21/14 14:52	1
<b>Benzene</b>	<b>41</b>		1.0	0.25	ug/L			07/21/14 14:52	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			07/21/14 14:52	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			07/21/14 14:52	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			07/21/14 14:52	1
<b>Chlorobenzene</b>	<b>86</b>		1.0	0.25	ug/L			07/21/14 14:52	1
Chloroform	<0.14		1.0	0.14	ug/L			07/21/14 14:52	1
<b>cis-1,2-Dichloroethene</b>	<b>0.93</b>	<b>J</b>	1.0	0.15	ug/L			07/21/14 14:52	1
<b>1,2-Dichlorobenzene</b>	<b>0.75</b>	<b>J</b>	1.0	0.21	ug/L			07/21/14 14:52	1
<b>1,4-Dichlorobenzene</b>	<b>0.99</b>	<b>J</b>	1.0	0.28	ug/L			07/21/14 14:52	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			07/21/14 14:52	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			07/21/14 14:52	1
<b>1,2-Dichloropropane</b>	<b>1.2</b>		1.0	0.13	ug/L			07/21/14 14:52	1
<b>Ethylbenzene</b>	<b>2.9</b>		1.0	0.11	ug/L			07/21/14 14:52	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			07/21/14 14:52	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			07/21/14 14:52	1
<b>p-Isopropyltoluene</b>	<b>0.42</b>	<b>J</b>	1.0	0.13	ug/L			07/21/14 14:52	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			07/21/14 14:52	1
<b>Toluene</b>	<b>0.61</b>	<b>J</b>	1.0	0.33	ug/L			07/21/14 14:52	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			07/21/14 14:52	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/21/14 14:52	1
<b>Vinyl chloride</b>	<b>0.79</b>	<b>J</b>	1.0	0.18	ug/L			07/21/14 14:52	1
<b>Xylenes, Total</b>	<b>3.5</b>		2.0	0.20	ug/L			07/21/14 14:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		70 - 130		07/21/14 14:52	1
Dibromofluoromethane	120		70 - 130		07/21/14 14:52	1
Toluene-d8 (Surr)	97		70 - 130		07/21/14 14:52	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	<1.3	*	10	1.3	ug/L		07/21/14 15:50	07/24/14 15:37	1
Acetophenone	<1.8	*	10	1.8	ug/L		07/21/14 15:50	07/24/14 15:37	1
Benzo[g,h,i]perylene	<2.0	*	10	2.0	ug/L		07/21/14 15:50	07/24/14 15:37	1
Dibenz(a,h)anthracene	<1.7	*	10	1.7	ug/L		07/21/14 15:50	07/24/14 15:37	1
Indeno[1,2,3-cd]pyrene	<1.8	*	10	1.8	ug/L		07/21/14 15:50	07/24/14 15:37	1
Naphthalene	<1.2	*	10	1.2	ug/L		07/21/14 15:50	07/24/14 15:37	1
Phenol	<1.5	*	10	1.5	ug/L		07/21/14 15:50	07/24/14 15:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	80		31 - 141	07/21/14 15:50	07/24/14 15:37	1
2-Fluorobiphenyl	70		38 - 130	07/21/14 15:50	07/24/14 15:37	1
2-Fluorophenol (Surr)	61		25 - 130	07/21/14 15:50	07/24/14 15:37	1
Terphenyl-d14 (Surr)	62		10 - 143	07/21/14 15:50	07/24/14 15:37	1
Phenol-d5 (Surr)	74		25 - 130	07/21/14 15:50	07/24/14 15:37	1
Nitrobenzene-d5 (Surr)	94		39 - 130	07/21/14 15:50	07/24/14 15:37	1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.021		0.049	0.021	ug/L		07/22/14 15:10	07/23/14 17:06	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

**Client Sample ID: MW- 56D**

**Lab Sample ID: 680-103380-2**

**Date Collected: 07/16/14 10:46**

**Matrix: Water**

**Date Received: 07/17/14 10:26**

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	<0.021		0.049	0.021	ug/L		07/22/14 15:10	07/23/14 17:06	1
gamma-BHC (Lindane)	<0.018		0.049	0.018	ug/L		07/22/14 15:10	07/23/14 17:06	1
Heptachlor	<0.022		0.049	0.022	ug/L		07/22/14 15:10	07/23/14 17:06	1
Toxaphene, Technical	<0.50		4.9	0.50	ug/L		07/22/14 15:10	07/23/14 17:06	1
<b>Toxaphene - Total</b>	<b>2.1</b>	<b>J</b>	4.9	0.50	ug/L		07/22/14 15:10	07/23/14 17:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	51		10 - 130	07/22/14 15:10	07/23/14 17:06	1
Tetrachloro-m-xylene	92		39 - 130	07/22/14 15:10	07/23/14 17:06	1

## Method: 8315A - Carbonyl Compounds (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Formaldehyde</b>	<b>24</b>	<b>J</b>	50	5.0	ug/L		07/18/14 09:02	07/21/14 10:36	1

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>2.8</b>		2.5	1.3	ug/L		07/18/14 10:06	07/23/14 13:48	1
<b>Barium</b>	<b>1100</b>		5.0	1.3	ug/L		07/18/14 10:06	07/23/14 13:48	1
<b>Cobalt</b>	<b>4.2</b>		0.50	0.15	ug/L		07/18/14 10:06	07/23/14 13:48	1
Chromium	<2.5		5.0	2.5	ug/L		07/18/14 10:06	07/23/14 13:48	1
<b>Nickel</b>	<b>3.0</b>	<b>J</b>	5.0	2.0	ug/L		07/18/14 10:06	07/23/14 13:48	1
Selenium	<1.0		2.5	1.0	ug/L		07/18/14 10:06	07/23/14 13:48	1
Vanadium	<3.8		10	3.8	ug/L		07/18/14 10:06	07/23/14 13:48	1
Zinc	<8.3		20	8.3	ug/L		07/18/14 10:06	07/23/14 13:48	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

**Client Sample ID: MW- 11DD**

**Lab Sample ID: 680-103380-3**

**Date Collected: 07/16/14 11:49**

**Matrix: Water**

**Date Received: 07/17/14 10:26**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<25		130	25	ug/L			07/21/14 15:18	5
<b>Benzene</b>	<b>120</b>		5.0	1.3	ug/L			07/21/14 15:18	5
2-Butanone (MEK)	<5.0		50	5.0	ug/L			07/21/14 15:18	5
Carbon disulfide	<3.0		10	3.0	ug/L			07/21/14 15:18	5
Carbon tetrachloride	<2.5		5.0	2.5	ug/L			07/21/14 15:18	5
<b>Chlorobenzene</b>	<b>180</b>		5.0	1.3	ug/L			07/21/14 15:18	5
<b>Chloroform</b>	<b>540</b>		5.0	0.70	ug/L			07/21/14 15:18	5
<b>cis-1,2-Dichloroethene</b>	<b>1.1</b>	J	5.0	0.75	ug/L			07/21/14 15:18	5
<b>1,2-Dichlorobenzene</b>	<b>2.6</b>	J	5.0	1.1	ug/L			07/21/14 15:18	5
<b>1,4-Dichlorobenzene</b>	<b>3.9</b>	J	5.0	1.4	ug/L			07/21/14 15:18	5
1,1-Dichloroethane	<1.3		5.0	1.3	ug/L			07/21/14 15:18	5
1,1-Dichloroethene	<0.55		5.0	0.55	ug/L			07/21/14 15:18	5
1,2-Dichloropropane	<0.65		5.0	0.65	ug/L			07/21/14 15:18	5
<b>Ethylbenzene</b>	<b>8.1</b>		5.0	0.55	ug/L			07/21/14 15:18	5
<b>Methylene Chloride</b>	<b>200</b>		25	5.0	ug/L			07/21/14 15:18	5
4-Methyl-2-pentanone (MIBK)	<5.0		50	5.0	ug/L			07/21/14 15:18	5
<b>p-Isopropyltoluene</b>	<b>7.9</b>		5.0	0.65	ug/L			07/21/14 15:18	5
Tetrachloroethene	<0.75		5.0	0.75	ug/L			07/21/14 15:18	5
<b>Toluene</b>	<b>2.2</b>	J	5.0	1.7	ug/L			07/21/14 15:18	5
1,2,4-Trichlorobenzene	<1.3		5.0	1.3	ug/L			07/21/14 15:18	5
1,2,3-Trichloropropane	<2.1		5.0	2.1	ug/L			07/21/14 15:18	5
Vinyl chloride	<0.90		5.0	0.90	ug/L			07/21/14 15:18	5
<b>Xylenes, Total</b>	<b>32</b>		10	1.0	ug/L			07/21/14 15:18	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		70 - 130		07/21/14 15:18	5
Dibromofluoromethane	115		70 - 130		07/21/14 15:18	5
Toluene-d8 (Surr)	97		70 - 130		07/21/14 15:18	5

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	<1.3	*	9.8	1.3	ug/L		07/21/14 15:50	07/24/14 16:01	1
Acetophenone	<1.8	*	9.8	1.8	ug/L		07/21/14 15:50	07/24/14 16:01	1
Benzo[g,h,i]perylene	<2.0	*	9.8	2.0	ug/L		07/21/14 15:50	07/24/14 16:01	1
Dibenz(a,h)anthracene	<1.7	*	9.8	1.7	ug/L		07/21/14 15:50	07/24/14 16:01	1
Indeno[1,2,3-cd]pyrene	<1.8	*	9.8	1.8	ug/L		07/21/14 15:50	07/24/14 16:01	1
Naphthalene	<1.2	*	9.8	1.2	ug/L		07/21/14 15:50	07/24/14 16:01	1
Phenol	<1.5	*	9.8	1.5	ug/L		07/21/14 15:50	07/24/14 16:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	81		31 - 141	07/21/14 15:50	07/24/14 16:01	1
2-Fluorobiphenyl	70		38 - 130	07/21/14 15:50	07/24/14 16:01	1
2-Fluorophenol (Surr)	59		25 - 130	07/21/14 15:50	07/24/14 16:01	1
Terphenyl-d14 (Surr)	68		10 - 143	07/21/14 15:50	07/24/14 16:01	1
Phenol-d5 (Surr)	66		25 - 130	07/21/14 15:50	07/24/14 16:01	1
Nitrobenzene-d5 (Surr)	91		39 - 130	07/21/14 15:50	07/24/14 16:01	1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.021		0.047	0.021	ug/L		07/22/14 15:10	07/23/14 17:20	1

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# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

**Client Sample ID: MW- 11DD**

**Lab Sample ID: 680-103380-3**

**Date Collected: 07/16/14 11:49**

**Matrix: Water**

**Date Received: 07/17/14 10:26**

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	<0.021		0.047	0.021	ug/L		07/22/14 15:10	07/23/14 17:20	1
gamma-BHC (Lindane)	<0.018		0.047	0.018	ug/L		07/22/14 15:10	07/23/14 17:20	1
Heptachlor	<0.022		0.047	0.022	ug/L		07/22/14 15:10	07/23/14 17:20	1
Toxaphene, Technical	<0.48		4.7	0.48	ug/L		07/22/14 15:10	07/23/14 17:20	1
<b>Toxaphene - Total</b>	<b>3.4</b>	<b>J p</b>	4.7	0.48	ug/L		07/22/14 15:10	07/23/14 17:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	63		10 - 130				07/22/14 15:10	07/23/14 17:20	1
Tetrachloro-m-xylene	89		39 - 130				07/22/14 15:10	07/23/14 17:20	1

## Method: 8315A - Carbonyl Compounds (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Formaldehyde</b>	<b>17</b>	<b>J</b>	50	5.0	ug/L		07/18/14 09:02	07/21/14 10:47	1

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>3.1</b>		2.5	1.3	ug/L		07/18/14 10:06	07/23/14 13:55	1
<b>Barium</b>	<b>2000</b>		5.0	1.3	ug/L		07/18/14 10:06	07/23/14 13:55	1
<b>Cobalt</b>	<b>4.6</b>		0.50	0.15	ug/L		07/18/14 10:06	07/23/14 13:55	1
Chromium	<2.5		5.0	2.5	ug/L		07/18/14 10:06	07/23/14 13:55	1
Nickel	<2.0		5.0	2.0	ug/L		07/18/14 10:06	07/23/14 13:55	1
Selenium	<1.0		2.5	1.0	ug/L		07/18/14 10:06	07/23/14 13:55	1
Vanadium	<3.8		10	3.8	ug/L		07/18/14 10:06	07/23/14 13:55	1
<b>Zinc</b>	<b>11</b>	<b>J</b>	20	8.3	ug/L		07/18/14 10:06	07/23/14 13:55	1

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# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

**Client Sample ID: Field Blank**

**Lab Sample ID: 680-103380-4**

**Date Collected: 07/16/14 12:45**

**Matrix: Water**

**Date Received: 07/17/14 10:26**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			07/21/14 13:35	1
Benzene	<0.25		1.0	0.25	ug/L			07/21/14 13:35	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			07/21/14 13:35	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			07/21/14 13:35	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			07/21/14 13:35	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			07/21/14 13:35	1
Chloroform	<0.14		1.0	0.14	ug/L			07/21/14 13:35	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			07/21/14 13:35	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			07/21/14 13:35	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			07/21/14 13:35	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			07/21/14 13:35	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			07/21/14 13:35	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			07/21/14 13:35	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			07/21/14 13:35	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			07/21/14 13:35	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			07/21/14 13:35	1
p-Isopropyltoluene	<0.13		1.0	0.13	ug/L			07/21/14 13:35	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			07/21/14 13:35	1
Toluene	<0.33		1.0	0.33	ug/L			07/21/14 13:35	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			07/21/14 13:35	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/21/14 13:35	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			07/21/14 13:35	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			07/21/14 13:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		70 - 130		07/21/14 13:35	1
Dibromofluoromethane	122		70 - 130		07/21/14 13:35	1
Toluene-d8 (Surr)	97		70 - 130		07/21/14 13:35	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	<1.3	*	10	1.3	ug/L		07/21/14 15:50	07/24/14 16:25	1
Acetophenone	<1.8	*	10	1.8	ug/L		07/21/14 15:50	07/24/14 16:25	1
Benzo[g,h,i]perylene	<2.0	*	10	2.0	ug/L		07/21/14 15:50	07/24/14 16:25	1
Dibenz(a,h)anthracene	<1.7	*	10	1.7	ug/L		07/21/14 15:50	07/24/14 16:25	1
Indeno[1,2,3-cd]pyrene	<1.8	*	10	1.8	ug/L		07/21/14 15:50	07/24/14 16:25	1
Naphthalene	<1.2	*	10	1.2	ug/L		07/21/14 15:50	07/24/14 16:25	1
Phenol	<1.5	*	10	1.5	ug/L		07/21/14 15:50	07/24/14 16:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	77		31 - 141	07/21/14 15:50	07/24/14 16:25	1
2-Fluorobiphenyl	82		38 - 130	07/21/14 15:50	07/24/14 16:25	1
2-Fluorophenol (Surr)	73		25 - 130	07/21/14 15:50	07/24/14 16:25	1
Terphenyl-d14 (Surr)	96		10 - 143	07/21/14 15:50	07/24/14 16:25	1
Phenol-d5 (Surr)	86		25 - 130	07/21/14 15:50	07/24/14 16:25	1
Nitrobenzene-d5 (Surr)	97		39 - 130	07/21/14 15:50	07/24/14 16:25	1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.021		0.048	0.021	ug/L		07/22/14 15:10	07/23/14 17:34	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

**Client Sample ID: Field Blank**

**Lab Sample ID: 680-103380-4**

**Date Collected: 07/16/14 12:45**

**Matrix: Water**

**Date Received: 07/17/14 10:26**

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	<0.021		0.048	0.021	ug/L		07/22/14 15:10	07/23/14 17:34	1
gamma-BHC (Lindane)	<0.018		0.048	0.018	ug/L		07/22/14 15:10	07/23/14 17:34	1
Heptachlor	<0.022		0.048	0.022	ug/L		07/22/14 15:10	07/23/14 17:34	1
Toxaphene, Technical	<0.49		4.8	0.49	ug/L		07/22/14 15:10	07/23/14 17:34	1
Toxaphene - Total	<0.49		4.8	0.49	ug/L		07/22/14 15:10	07/23/14 17:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	81		10 - 130				07/22/14 15:10	07/23/14 17:34	1
Tetrachloro-m-xylene	62		39 - 130				07/22/14 15:10	07/23/14 17:34	1

## Method: 8315A - Carbonyl Compounds (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	<5.0		50	5.0	ug/L		07/18/14 09:02	07/21/14 10:59	1

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<1.3		2.5	1.3	ug/L		07/18/14 10:06	07/23/14 14:02	1
<b>Barium</b>	<b>6.9</b>		5.0	1.3	ug/L		07/18/14 10:06	07/23/14 14:02	1
Cobalt	<0.15		0.50	0.15	ug/L		07/18/14 10:06	07/23/14 14:02	1
Chromium	<2.5		5.0	2.5	ug/L		07/18/14 10:06	07/23/14 14:02	1
Nickel	<2.0		5.0	2.0	ug/L		07/18/14 10:06	07/23/14 14:02	1
Selenium	<1.0		2.5	1.0	ug/L		07/18/14 10:06	07/23/14 14:02	1
Vanadium	<3.8		10	3.8	ug/L		07/18/14 10:06	07/23/14 14:02	1
<b>Zinc</b>	<b>21</b>		20	8.3	ug/L		07/18/14 10:06	07/23/14 14:02	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

**Client Sample ID: Equipment Blank**

**Lab Sample ID: 680-103380-5**

**Date Collected: 07/16/14 12:40**

**Matrix: Water**

**Date Received: 07/17/14 10:26**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			07/21/14 14:01	1
Benzene	<0.25		1.0	0.25	ug/L			07/21/14 14:01	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			07/21/14 14:01	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			07/21/14 14:01	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			07/21/14 14:01	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			07/21/14 14:01	1
Chloroform	<0.14		1.0	0.14	ug/L			07/21/14 14:01	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			07/21/14 14:01	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			07/21/14 14:01	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			07/21/14 14:01	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			07/21/14 14:01	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			07/21/14 14:01	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			07/21/14 14:01	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			07/21/14 14:01	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			07/21/14 14:01	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			07/21/14 14:01	1
p-Isopropyltoluene	<0.13		1.0	0.13	ug/L			07/21/14 14:01	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			07/21/14 14:01	1
Toluene	<0.33		1.0	0.33	ug/L			07/21/14 14:01	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			07/21/14 14:01	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/21/14 14:01	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			07/21/14 14:01	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			07/21/14 14:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	97		70 - 130		07/21/14 14:01	1
Dibromofluoromethane	120		70 - 130		07/21/14 14:01	1
Toluene-d8 (Surr)	96		70 - 130		07/21/14 14:01	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	<1.4	*	11	1.4	ug/L		07/21/14 15:50	07/24/14 16:50	1
Acetophenone	<1.9	*	11	1.9	ug/L		07/21/14 15:50	07/24/14 16:50	1
Benzo[g,h,i]perylene	<2.1	*	11	2.1	ug/L		07/21/14 15:50	07/24/14 16:50	1
Dibenz(a,h)anthracene	<1.8	*	11	1.8	ug/L		07/21/14 15:50	07/24/14 16:50	1
Indeno[1,2,3-cd]pyrene	<1.9	*	11	1.9	ug/L		07/21/14 15:50	07/24/14 16:50	1
Naphthalene	<1.3	*	11	1.3	ug/L		07/21/14 15:50	07/24/14 16:50	1
Phenol	<1.6	*	11	1.6	ug/L		07/21/14 15:50	07/24/14 16:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	81		31 - 141	07/21/14 15:50	07/24/14 16:50	1
2-Fluorobiphenyl	79		38 - 130	07/21/14 15:50	07/24/14 16:50	1
2-Fluorophenol (Surr)	71		25 - 130	07/21/14 15:50	07/24/14 16:50	1
Terphenyl-d14 (Surr)	81		10 - 143	07/21/14 15:50	07/24/14 16:50	1
Phenol-d5 (Surr)	81		25 - 130	07/21/14 15:50	07/24/14 16:50	1
Nitrobenzene-d5 (Surr)	88		39 - 130	07/21/14 15:50	07/24/14 16:50	1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.022		0.049	0.022	ug/L		07/22/14 15:10	07/23/14 17:49	1

TestAmerica Savannah



# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

**Client Sample ID: Equipment Blank**

**Lab Sample ID: 680-103380-5**

**Date Collected: 07/16/14 12:40**

**Matrix: Water**

**Date Received: 07/17/14 10:26**

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	<0.022		0.049	0.022	ug/L		07/22/14 15:10	07/23/14 17:49	1
gamma-BHC (Lindane)	<0.019		0.049	0.019	ug/L		07/22/14 15:10	07/23/14 17:49	1
Heptachlor	<0.022		0.049	0.022	ug/L		07/22/14 15:10	07/23/14 17:49	1
Toxaphene, Technical	<0.50		4.9	0.50	ug/L		07/22/14 15:10	07/23/14 17:49	1
Toxaphene - Total	<0.50		4.9	0.50	ug/L		07/22/14 15:10	07/23/14 17:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	78		10 - 130				07/22/14 15:10	07/23/14 17:49	1
Tetrachloro-m-xylene	61		39 - 130				07/22/14 15:10	07/23/14 17:49	1

## Method: 8315A - Carbonyl Compounds (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	<5.0		50	5.0	ug/L		07/18/14 09:02	07/21/14 11:11	1

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<1.3		2.5	1.3	ug/L		07/18/14 10:06	07/23/14 14:10	1
Barium	8.9		5.0	1.3	ug/L		07/18/14 10:06	07/23/14 14:10	1
Cobalt	<0.15		0.50	0.15	ug/L		07/18/14 10:06	07/23/14 14:10	1
Chromium	<2.5		5.0	2.5	ug/L		07/18/14 10:06	07/23/14 14:10	1
Nickel	<2.0		5.0	2.0	ug/L		07/18/14 10:06	07/23/14 14:10	1
Selenium	<1.0		2.5	1.0	ug/L		07/18/14 10:06	07/23/14 14:10	1
Vanadium	<3.8		10	3.8	ug/L		07/18/14 10:06	07/23/14 14:10	1
Zinc	18 J		20	8.3	ug/L		07/18/14 10:06	07/23/14 14:10	1

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# Client Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

**Client Sample ID: Trip Blank #1**

**Lab Sample ID: 680-103380-6**

**Date Collected: 07/16/14 00:00**

**Matrix: Water**

**Date Received: 07/17/14 10:26**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			07/21/14 13:10	1
Benzene	<0.25		1.0	0.25	ug/L			07/21/14 13:10	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			07/21/14 13:10	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			07/21/14 13:10	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			07/21/14 13:10	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			07/21/14 13:10	1
Chloroform	<0.14		1.0	0.14	ug/L			07/21/14 13:10	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			07/21/14 13:10	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			07/21/14 13:10	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			07/21/14 13:10	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			07/21/14 13:10	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			07/21/14 13:10	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			07/21/14 13:10	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			07/21/14 13:10	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			07/21/14 13:10	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			07/21/14 13:10	1
p-Isopropyltoluene	<0.13		1.0	0.13	ug/L			07/21/14 13:10	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			07/21/14 13:10	1
Toluene	<0.33		1.0	0.33	ug/L			07/21/14 13:10	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			07/21/14 13:10	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/21/14 13:10	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			07/21/14 13:10	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			07/21/14 13:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		70 - 130					07/21/14 13:10	1
Dibromofluoromethane	120		70 - 130					07/21/14 13:10	1
Toluene-d8 (Surr)	96		70 - 130					07/21/14 13:10	1

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## Surrogate Summary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (70-130)	DBFM (70-130)	TOL (70-130)
680-103380-1	MW- 57D	98	123	96
680-103380-2	MW- 56D	96	120	97
680-103380-3	MW- 11DD	98	115	97
680-103380-4	Field Blank	96	122	97
680-103380-5	Equipment Blank	97	120	96
680-103380-6	Trip Blank #1	98	120	96
LCS 680-339987/5	Lab Control Sample	105	103	101
LCSD 680-339987/6	Lab Control Sample Dup	108	116	107
MB 680-339987/9	Method Blank	98	122	96

**Surrogate Legend**

BFB = 4-Bromofluorobenzene  
DBFM = Dibromofluoromethane  
TOL = Toluene-d8 (Surr)

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (31-141)	FBP (38-130)	2FP (25-130)	TPH (10-143)	PHL (25-130)	NBZ (39-130)
680-103380-1	MW- 57D	62	73	54	76	61	79
680-103380-2	MW- 56D	80	70	61	62	74	94
680-103380-3	MW- 11DD	81	70	59	68	66	91
680-103380-4	Field Blank	77	82	73	96	86	97
680-103380-5	Equipment Blank	81	79	71	81	81	88
LCS 680-340036/17-A	Lab Control Sample	48	41	34	52	18 X	44
LCSD 680-340036/18-A	Lab Control Sample Dup	73	72	69	80	69	84
MB 680-340036/16-A	Method Blank	40	40	26	51	19 X	46

**Surrogate Legend**

TBP = 2,4,6-Tribromophenol (Surr)  
FBP = 2-Fluorobiphenyl  
2FP = 2-Fluorophenol (Surr)  
TPH = Terphenyl-d14 (Surr)  
PHL = Phenol-d5 (Surr)  
NBZ = Nitrobenzene-d5 (Surr)

### Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCB1 (10-130)	TCX1 (39-130)
680-103380-1	MW- 57D	70	79
680-103380-4	Field Blank	81	62
680-103380-5	Equipment Blank	78	61
LCS 680-340233/10-A	Lab Control Sample	68	54
LCS 680-340233/12-A	Lab Control Sample	81	66

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## Surrogate Summary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

### Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCB1 (10-130)	TCX1 (39-130)
LCSD 680-340233/11-A	Lab Control Sample Dup	76	66
LCSD 680-340233/13-A	Lab Control Sample Dup	83	63
MB 680-340233/9-A	Method Blank	79	66
<b>Surrogate Legend</b>			
DCB = DCB Decachlorobiphenyl			
TCX = Tetrachloro-m-xylene			

### Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCB1 (10-130)	TCX2 (39-130)
680-103380-2	MW- 56D	51	92
680-103380-3	MW- 11DD	63	89
<b>Surrogate Legend</b>			
DCB = DCB Decachlorobiphenyl			
TCX = Tetrachloro-m-xylene			



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-339987/9

Matrix: Water

Analysis Batch: 339987

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<5.0		25	5.0	ug/L			07/21/14 11:55	1
Benzene	<0.25		1.0	0.25	ug/L			07/21/14 11:55	1
2-Butanone (MEK)	<1.0		10	1.0	ug/L			07/21/14 11:55	1
Carbon disulfide	<0.60		2.0	0.60	ug/L			07/21/14 11:55	1
Carbon tetrachloride	<0.50		1.0	0.50	ug/L			07/21/14 11:55	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			07/21/14 11:55	1
Chloroform	<0.14		1.0	0.14	ug/L			07/21/14 11:55	1
cis-1,2-Dichloroethene	<0.15		1.0	0.15	ug/L			07/21/14 11:55	1
1,2-Dichlorobenzene	<0.21		1.0	0.21	ug/L			07/21/14 11:55	1
1,4-Dichlorobenzene	<0.28		1.0	0.28	ug/L			07/21/14 11:55	1
1,1-Dichloroethane	<0.25		1.0	0.25	ug/L			07/21/14 11:55	1
1,1-Dichloroethene	<0.11		1.0	0.11	ug/L			07/21/14 11:55	1
1,2-Dichloropropane	<0.13		1.0	0.13	ug/L			07/21/14 11:55	1
Ethylbenzene	<0.11		1.0	0.11	ug/L			07/21/14 11:55	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			07/21/14 11:55	1
4-Methyl-2-pentanone (MIBK)	<1.0		10	1.0	ug/L			07/21/14 11:55	1
p-Isopropyltoluene	<0.13		1.0	0.13	ug/L			07/21/14 11:55	1
Tetrachloroethene	<0.15		1.0	0.15	ug/L			07/21/14 11:55	1
Toluene	<0.33		1.0	0.33	ug/L			07/21/14 11:55	1
1,2,4-Trichlorobenzene	<0.25		1.0	0.25	ug/L			07/21/14 11:55	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/21/14 11:55	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			07/21/14 11:55	1
Xylenes, Total	<0.20		2.0	0.20	ug/L			07/21/14 11:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		70 - 130		07/21/14 11:55	1
Dibromofluoromethane	122		70 - 130		07/21/14 11:55	1
Toluene-d8 (Surr)	96		70 - 130		07/21/14 11:55	1

Lab Sample ID: LCS 680-339987/5

Matrix: Water

Analysis Batch: 339987

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	95.3		ug/L		95	39 - 162
Benzene	50.0	52.2		ug/L		104	74 - 123
2-Butanone (MEK)	100	105		ug/L		105	55 - 142
Carbon disulfide	50.0	44.3		ug/L		89	63 - 142
Carbon tetrachloride	50.0	48.9		ug/L		98	70 - 131
Chlorobenzene	50.0	51.8		ug/L		104	79 - 120
Chloroform	50.0	49.2		ug/L		98	76 - 128
cis-1,2-Dichloroethene	50.0	48.0		ug/L		96	78 - 127
1,2-Dichlorobenzene	50.0	52.3		ug/L		105	77 - 124
1,4-Dichlorobenzene	50.0	51.6		ug/L		103	76 - 124
1,1-Dichloroethane	50.0	48.6		ug/L		97	69 - 132
1,1-Dichloroethene	50.0	44.3		ug/L		89	73 - 134
1,2-Dichloropropane	50.0	49.4		ug/L		99	71 - 126
Ethylbenzene	50.0	50.7		ug/L		101	78 - 125

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-339987/5

Matrix: Water

Analysis Batch: 339987

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	50.0	47.3		ug/L		95	79 - 124
4-Methyl-2-pentanone (MIBK)	100	105		ug/L		105	51 - 143
p-Isopropyltoluene	50.0	49.8		ug/L		100	69 - 129
Tetrachloroethene	50.0	48.0		ug/L		96	77 - 128
Toluene	50.0	49.8		ug/L		100	77 - 125
1,2,4-Trichlorobenzene	50.0	51.3		ug/L		103	67 - 134
1,2,3-Trichloropropane	50.0	53.1		ug/L		106	74 - 126
Vinyl chloride	50.0	36.9		ug/L		74	58 - 141
Xylenes, Total	150	155		ug/L		103	80 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	105		70 - 130
Dibromofluoromethane	103		70 - 130
Toluene-d8 (Surr)	101		70 - 130

Lab Sample ID: LCSD 680-339987/6

Matrix: Water

Analysis Batch: 339987

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	113		ug/L		113	39 - 162	17	50
Benzene	50.0	57.4		ug/L		115	74 - 123	9	30
2-Butanone (MEK)	100	111		ug/L		111	55 - 142	5	30
Carbon disulfide	50.0	49.7		ug/L		99	63 - 142	12	30
Carbon tetrachloride	50.0	53.5		ug/L		107	70 - 131	9	30
Chlorobenzene	50.0	56.0		ug/L		112	79 - 120	8	30
Chloroform	50.0	58.2		ug/L		116	76 - 128	17	30
cis-1,2-Dichloroethene	50.0	58.6		ug/L		117	78 - 127	20	30
1,2-Dichlorobenzene	50.0	56.1		ug/L		112	77 - 124	7	30
1,4-Dichlorobenzene	50.0	56.9		ug/L		114	76 - 124	10	30
1,1-Dichloroethane	50.0	53.5		ug/L		107	69 - 132	10	30
1,1-Dichloroethene	50.0	51.4		ug/L		103	73 - 134	15	30
1,2-Dichloropropane	50.0	52.2		ug/L		104	71 - 126	5	30
Ethylbenzene	50.0	54.7		ug/L		109	78 - 125	8	30
Methylene Chloride	50.0	55.2		ug/L		110	79 - 124	15	30
4-Methyl-2-pentanone (MIBK)	100	106		ug/L		106	51 - 143	0	30
p-Isopropyltoluene	50.0	53.6		ug/L		107	69 - 129	7	50
Tetrachloroethene	50.0	52.1		ug/L		104	77 - 128	8	30
Toluene	50.0	55.7		ug/L		111	77 - 125	11	30
1,2,4-Trichlorobenzene	50.0	55.4		ug/L		111	67 - 134	8	30
1,2,3-Trichloropropane	50.0	55.4		ug/L		111	74 - 126	4	30
Vinyl chloride	50.0	49.2		ug/L		98	58 - 141	29	30
Xylenes, Total	150	168		ug/L		112	80 - 124	8	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	108		70 - 130
Dibromofluoromethane	116		70 - 130

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# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-339987/6

Matrix: Water

Analysis Batch: 339987

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	107		70 - 130

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-340036/16-A

Matrix: Water

Analysis Batch: 340693

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 340036

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	<1.3		10	1.3	ug/L		07/21/14 15:50	07/24/14 13:26	1
Acetophenone	<1.8		10	1.8	ug/L		07/21/14 15:50	07/24/14 13:26	1
Benzo[g,h,i]perylene	<2.0		10	2.0	ug/L		07/21/14 15:50	07/24/14 13:26	1
Dibenz(a,h)anthracene	<1.7		10	1.7	ug/L		07/21/14 15:50	07/24/14 13:26	1
Indeno[1,2,3-cd]pyrene	<1.8		10	1.8	ug/L		07/21/14 15:50	07/24/14 13:26	1
Naphthalene	<1.2		10	1.2	ug/L		07/21/14 15:50	07/24/14 13:26	1
Phenol	<1.5		10	1.5	ug/L		07/21/14 15:50	07/24/14 13:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	40		31 - 141	07/21/14 15:50	07/24/14 13:26	1
2-Fluorobiphenyl	40		38 - 130	07/21/14 15:50	07/24/14 13:26	1
2-Fluorophenol (Surr)	26		25 - 130	07/21/14 15:50	07/24/14 13:26	1
Terphenyl-d14 (Surr)	51		10 - 143	07/21/14 15:50	07/24/14 13:26	1
Phenol-d5 (Surr)	19	X	25 - 130	07/21/14 15:50	07/24/14 13:26	1
Nitrobenzene-d5 (Surr)	46		39 - 130	07/21/14 15:50	07/24/14 13:26	1

Lab Sample ID: LCS 680-340036/17-A

Matrix: Water

Analysis Batch: 341112

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 340036

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3 & 4 Methylphenol	100	31.8	*	ug/L		32	41 - 105
Acetophenone	100	44.8		ug/L		45	40 - 103
Benzo[g,h,i]perylene	100	45.2		ug/L		45	42 - 114
Dibenz(a,h)anthracene	100	48.1		ug/L		48	48 - 110
Indeno[1,2,3-cd]pyrene	100	43.9		ug/L		44	34 - 115
Naphthalene	100	35.9		ug/L		36	29 - 91
Phenol	100	29.2	*	ug/L		29	34 - 97

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	48		31 - 141
2-Fluorobiphenyl	41		38 - 130
2-Fluorophenol (Surr)	34		25 - 130
Terphenyl-d14 (Surr)	52		10 - 143
Phenol-d5 (Surr)	18	X	25 - 130
Nitrobenzene-d5 (Surr)	44		39 - 130

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-340036/18-A

Matrix: Water

Analysis Batch: 340693

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 340036

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
3 & 4 Methylphenol	100	70.0	*	ug/L		70	41 - 105	75	50
Acetophenone	100	81.1	*	ug/L		81	40 - 103	58	30
Benzo[g,h,i]perylene	100	77.1	*	ug/L		77	42 - 114	52	50
Dibenz[a,h]anthracene	100	81.7	*	ug/L		82	48 - 110	52	40
Indeno[1,2,3-cd]pyrene	100	76.7	*	ug/L		77	34 - 115	54	40
Naphthalene	100	67.9	*	ug/L		68	29 - 91	62	40
Phenol	100	61.4	*	ug/L		61	34 - 97	71	50

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	73		31 - 141
2-Fluorobiphenyl	72		38 - 130
2-Fluorophenol (Surr)	69		25 - 130
Terphenyl-d14 (Surr)	80		10 - 143
Phenol-d5 (Surr)	69		25 - 130
Nitrobenzene-d5 (Surr)	84		39 - 130

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Lab Sample ID: MB 680-340233/9-A

Matrix: Water

Analysis Batch: 340495

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 340233

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.022		0.050	0.022	ug/L		07/22/14 15:10	07/23/14 15:39	1
delta-BHC	<0.022		0.050	0.022	ug/L		07/22/14 15:10	07/23/14 15:39	1
gamma-BHC (Lindane)	<0.019		0.050	0.019	ug/L		07/22/14 15:10	07/23/14 15:39	1
Heptachlor	<0.023		0.050	0.023	ug/L		07/22/14 15:10	07/23/14 15:39	1
Toxaphene, Technical	<0.51		5.0	0.51	ug/L		07/22/14 15:10	07/23/14 15:39	1
Toxaphene - Total	<0.51		5.0	0.51	ug/L		07/22/14 15:10	07/23/14 15:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	79		10 - 130	07/22/14 15:10	07/23/14 15:39	1
Tetrachloro-m-xylene	66		39 - 130	07/22/14 15:10	07/23/14 15:39	1

Lab Sample ID: LCS 680-340233/10-A

Matrix: Water

Analysis Batch: 340495

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 340233

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-BHC	0.200	0.143		ug/L		72	45 - 130
delta-BHC	0.200	0.168		ug/L		84	47 - 140
gamma-BHC (Lindane)	0.200	0.145		ug/L		73	47 - 130
Heptachlor	0.200	0.145		ug/L		72	49 - 130

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

## Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Lab Sample ID: LCS 680-340233/10-A

Matrix: Water

Analysis Batch: 340495

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 340233

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	68		10 - 130
Tetrachloro-m-xylene	54		39 - 130

Lab Sample ID: LCS 680-340233/12-A

Matrix: Water

Analysis Batch: 340495

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 340233

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toxaphene, Technical	16.0	14.4		ug/L		90	22 - 145
Toxaphene - Total	16.0	17.2		ug/L		108	35 - 138

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	81		10 - 130
Tetrachloro-m-xylene	66		39 - 130

Lab Sample ID: LCSD 680-340233/11-A

Matrix: Water

Analysis Batch: 340495

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 340233

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
alpha-BHC	0.200	0.174		ug/L		87	45 - 130	19	30
delta-BHC	0.200	0.219		ug/L		110	47 - 140	27	30
gamma-BHC (Lindane)	0.200	0.180		ug/L		90	47 - 130	21	30
Heptachlor	0.200	0.181		ug/L		91	49 - 130	23	30

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	76		10 - 130
Tetrachloro-m-xylene	66		39 - 130

Lab Sample ID: LCSD 680-340233/13-A

Matrix: Water

Analysis Batch: 340495

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 340233

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Toxaphene, Technical	16.0	16.0		ug/L		100	22 - 145	11	50
Toxaphene - Total	16.0	18.0		ug/L		112	35 - 138	4	50

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	83		10 - 130
Tetrachloro-m-xylene	63		39 - 130

TestAmerica Savannah



# QC Sample Results

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

## Method: 8315A - Carbonyl Compounds (HPLC)

Lab Sample ID: MB 640-110345/1-A

Matrix: Water

Analysis Batch: 110383

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 110345

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	<5.0		50	5.0	ug/L		07/18/14 09:02	07/21/14 08:49	1

Lab Sample ID: LCS 640-110345/2-A

Matrix: Water

Analysis Batch: 110383

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 110345

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Formaldehyde	150	148		ug/L		99	73 - 133

Lab Sample ID: LCSD 640-110345/3-A

Matrix: Water

Analysis Batch: 110383

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 110345

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Formaldehyde	150	152		ug/L		101	73 - 133	2	20

## Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-339693/1-A

Matrix: Water

Analysis Batch: 340599

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 339693

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<1.3		2.5	1.3	ug/L		07/18/14 10:06	07/23/14 12:06	1
Barium	<1.3		5.0	1.3	ug/L		07/18/14 10:06	07/23/14 12:06	1
Cobalt	<0.15		0.50	0.15	ug/L		07/18/14 10:06	07/23/14 12:06	1
Chromium	<2.5		5.0	2.5	ug/L		07/18/14 10:06	07/23/14 12:06	1
Nickel	<2.0		5.0	2.0	ug/L		07/18/14 10:06	07/23/14 12:06	1
Selenium	<1.0		2.5	1.0	ug/L		07/18/14 10:06	07/23/14 12:06	1
Vanadium	<3.8		10	3.8	ug/L		07/18/14 10:06	07/23/14 12:06	1
Zinc	<8.3		20	8.3	ug/L		07/18/14 10:06	07/23/14 12:06	1

Lab Sample ID: LCS 680-339693/2-A

Matrix: Water

Analysis Batch: 340599

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 339693

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	104		ug/L		104	75 - 125
Barium	100	107		ug/L		107	75 - 125
Cobalt	50.0	50.5		ug/L		101	75 - 125
Chromium	100	103		ug/L		103	75 - 125
Nickel	100	104		ug/L		104	75 - 125
Selenium	100	94.9		ug/L		95	75 - 125
Vanadium	100	99.7		ug/L		100	75 - 125
Zinc	100	102		ug/L		102	75 - 125

TestAmerica Savannah



# QC Association Summary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

## GC/MS VOA

### Analysis Batch: 339987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-103380-1	MW- 57D	Total/NA	Water	8260B	
680-103380-2	MW- 56D	Total/NA	Water	8260B	
680-103380-3	MW- 11DD	Total/NA	Water	8260B	
680-103380-4	Field Blank	Total/NA	Water	8260B	
680-103380-5	Equipment Blank	Total/NA	Water	8260B	
680-103380-6	Trip Blank #1	Total/NA	Water	8260B	
LCS 680-339987/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-339987/6	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-339987/9	Method Blank	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 340036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-103380-1	MW- 57D	Total/NA	Water	3520C	
680-103380-2	MW- 56D	Total/NA	Water	3520C	
680-103380-3	MW- 11DD	Total/NA	Water	3520C	
680-103380-4	Field Blank	Total/NA	Water	3520C	
680-103380-5	Equipment Blank	Total/NA	Water	3520C	
LCS 680-340036/17-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 680-340036/18-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 680-340036/16-A	Method Blank	Total/NA	Water	3520C	

### Analysis Batch: 340693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-103380-1	MW- 57D	Total/NA	Water	8270D	340036
680-103380-2	MW- 56D	Total/NA	Water	8270D	340036
680-103380-3	MW- 11DD	Total/NA	Water	8270D	340036
680-103380-4	Field Blank	Total/NA	Water	8270D	340036
680-103380-5	Equipment Blank	Total/NA	Water	8270D	340036
LCSD 680-340036/18-A	Lab Control Sample Dup	Total/NA	Water	8270D	340036
MB 680-340036/16-A	Method Blank	Total/NA	Water	8270D	340036

### Analysis Batch: 341112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-340036/17-A	Lab Control Sample	Total/NA	Water	8270D	340036

## GC Semi VOA

### Prep Batch: 340233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-103380-1	MW- 57D	Total/NA	Water	3520C	
680-103380-2	MW- 56D	Total/NA	Water	3520C	
680-103380-3	MW- 11DD	Total/NA	Water	3520C	
680-103380-4	Field Blank	Total/NA	Water	3520C	
680-103380-5	Equipment Blank	Total/NA	Water	3520C	
LCS 680-340233/10-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 680-340233/12-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 680-340233/11-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 680-340233/13-A	Lab Control Sample Dup	Total/NA	Water	3520C	

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## QC Association Summary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

### GC Semi VOA (Continued)

#### Prep Batch: 340233 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-340233/9-A	Method Blank	Total/NA	Water	3520C	

#### Analysis Batch: 340495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-103380-1	MW- 57D	Total/NA	Water	8081B/8082A	340233
680-103380-2	MW- 56D	Total/NA	Water	8081B/8082A	340233
680-103380-3	MW- 11DD	Total/NA	Water	8081B/8082A	340233
680-103380-4	Field Blank	Total/NA	Water	8081B/8082A	340233
680-103380-5	Equipment Blank	Total/NA	Water	8081B/8082A	340233
LCS 680-340233/10-A	Lab Control Sample	Total/NA	Water	8081B/8082A	340233
LCS 680-340233/12-A	Lab Control Sample	Total/NA	Water	8081B/8082A	340233
LCSD 680-340233/11-A	Lab Control Sample Dup	Total/NA	Water	8081B/8082A	340233
LCSD 680-340233/13-A	Lab Control Sample Dup	Total/NA	Water	8081B/8082A	340233
MB 680-340233/9-A	Method Blank	Total/NA	Water	8081B/8082A	340233

### HPLC/IC

#### Prep Batch: 110345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-103380-1	MW- 57D	Total/NA	Water	8315_W_Prep	
680-103380-2	MW- 56D	Total/NA	Water	8315_W_Prep	
680-103380-3	MW- 11DD	Total/NA	Water	8315_W_Prep	
680-103380-4	Field Blank	Total/NA	Water	8315_W_Prep	
680-103380-5	Equipment Blank	Total/NA	Water	8315_W_Prep	
LCS 640-110345/2-A	Lab Control Sample	Total/NA	Water	8315_W_Prep	
LCSD 640-110345/3-A	Lab Control Sample Dup	Total/NA	Water	8315_W_Prep	
MB 640-110345/1-A	Method Blank	Total/NA	Water	8315_W_Prep	

#### Analysis Batch: 110383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-103380-1	MW- 57D	Total/NA	Water	8315A	110345
680-103380-2	MW- 56D	Total/NA	Water	8315A	110345
680-103380-3	MW- 11DD	Total/NA	Water	8315A	110345
680-103380-4	Field Blank	Total/NA	Water	8315A	110345
680-103380-5	Equipment Blank	Total/NA	Water	8315A	110345
LCS 640-110345/2-A	Lab Control Sample	Total/NA	Water	8315A	110345
LCSD 640-110345/3-A	Lab Control Sample Dup	Total/NA	Water	8315A	110345
MB 640-110345/1-A	Method Blank	Total/NA	Water	8315A	110345

### Metals

#### Prep Batch: 339693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-103380-1	MW- 57D	Total Recoverable	Water	3005A	
680-103380-2	MW- 56D	Total Recoverable	Water	3005A	
680-103380-3	MW- 11DD	Total Recoverable	Water	3005A	
680-103380-4	Field Blank	Total Recoverable	Water	3005A	
680-103380-5	Equipment Blank	Total Recoverable	Water	3005A	
LCS 680-339693/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 680-339693/1-A	Method Blank	Total Recoverable	Water	3005A	

TestAmerica Savannah



## QC Association Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-103380-1

Project/Site: Ashland Brunswick SA GW Monitoring

### Metals (Continued)

#### Analysis Batch: 340599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-103380-1	MW- 57D	Total Recoverable	Water	6020A	339693
680-103380-2	MW- 56D	Total Recoverable	Water	6020A	339693
680-103380-3	MW- 11DD	Total Recoverable	Water	6020A	339693
680-103380-4	Field Blank	Total Recoverable	Water	6020A	339693
680-103380-5	Equipment Blank	Total Recoverable	Water	6020A	339693
LCS 680-339693/2-A	Lab Control Sample	Total Recoverable	Water	6020A	339693
MB 680-339693/1-A	Method Blank	Total Recoverable	Water	6020A	339693



# Lab Chronicle

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

**Client Sample ID: MW- 57D**

**Date Collected: 07/16/14 09:57**

**Date Received: 07/17/14 10:26**

**Lab Sample ID: 680-103380-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	339987	07/21/14 14:27	MMT	TAL SAV
Total/NA	Prep	3520C			239.7 mL	0.5 mL	340036	07/21/14 15:50	RBS	TAL SAV
Total/NA	Analysis	8270D		1	239.7 mL	0.5 mL	340693	07/24/14 15:11	RAM	TAL SAV
Total/NA	Prep	3520C			129.2 mL	2.5 mL	340233	07/22/14 15:10	RBS	TAL SAV
Total/NA	Analysis	8081B/8082A		1	129.2 mL	2.5 mL	340495	07/23/14 16:51	JCK	TAL SAV
Total/NA	Prep	8315_W_Prep			100 mL	4.0 mL	110345	07/18/14 09:02	DNS	TAL TAL
Total/NA	Analysis	8315A		1	100 mL	4.0 mL	110383	07/21/14 10:24	DNS	TAL TAL
Total Recoverable	Prep	3005A			50 mL	250 mL	339693	07/18/14 10:06	BJB	TAL SAV
Total Recoverable	Analysis	6020A		1	50 mL	250 mL	340599	07/23/14 13:40	BWR	TAL SAV

**Client Sample ID: MW- 56D**

**Date Collected: 07/16/14 10:46**

**Date Received: 07/17/14 10:26**

**Lab Sample ID: 680-103380-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	339987	07/21/14 14:52	MMT	TAL SAV
Total/NA	Prep	3520C			249.9 mL	0.5 mL	340036	07/21/14 15:50	RBS	TAL SAV
Total/NA	Analysis	8270D		1	249.9 mL	0.5 mL	340693	07/24/14 15:37	RAM	TAL SAV
Total/NA	Prep	3520C			128.7 mL	2.5 mL	340233	07/22/14 15:10	RBS	TAL SAV
Total/NA	Analysis	8081B/8082A		1	128.7 mL	2.5 mL	340495	07/23/14 17:06	JCK	TAL SAV
Total/NA	Prep	8315_W_Prep			100 mL	4.0 mL	110345	07/18/14 09:02	DNS	TAL TAL
Total/NA	Analysis	8315A		1	100 mL	4.0 mL	110383	07/21/14 10:36	DNS	TAL TAL
Total Recoverable	Prep	3005A			50 mL	250 mL	339693	07/18/14 10:06	BJB	TAL SAV
Total Recoverable	Analysis	6020A		1	50 mL	250 mL	340599	07/23/14 13:48	BWR	TAL SAV

**Client Sample ID: MW- 11DD**

**Date Collected: 07/16/14 11:49**

**Date Received: 07/17/14 10:26**

**Lab Sample ID: 680-103380-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	5 mL	5 mL	339987	07/21/14 15:18	MMT	TAL SAV
Total/NA	Prep	3520C			255.8 mL	0.5 mL	340036	07/21/14 15:50	RBS	TAL SAV
Total/NA	Analysis	8270D		1	255.8 mL	0.5 mL	340693	07/24/14 16:01	RAM	TAL SAV
Total/NA	Prep	3520C			131.6 mL	2.5 mL	340233	07/22/14 15:10	RBS	TAL SAV
Total/NA	Analysis	8081B/8082A		1	131.6 mL	2.5 mL	340495	07/23/14 17:20	JCK	TAL SAV
Total/NA	Prep	8315_W_Prep			100 mL	4.0 mL	110345	07/18/14 09:02	DNS	TAL TAL
Total/NA	Analysis	8315A		1	100 mL	4.0 mL	110383	07/21/14 10:47	DNS	TAL TAL
Total Recoverable	Prep	3005A			50 mL	250 mL	339693	07/18/14 10:06	BJB	TAL SAV
Total Recoverable	Analysis	6020A		1	50 mL	250 mL	340599	07/23/14 13:55	BWR	TAL SAV

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# Lab Chronicle

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

## Client Sample ID: Field Blank

Date Collected: 07/16/14 12:45

Date Received: 07/17/14 10:26

## Lab Sample ID: 680-103380-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	339987	07/21/14 13:35	MMT	TAL SAV
Total/NA	Prep	3520C			247.7 mL	0.5 mL	340036	07/21/14 15:50	RBS	TAL SAV
Total/NA	Analysis	8270D		1	247.7 mL	0.5 mL	340693	07/24/14 16:25	RAM	TAL SAV
Total/NA	Prep	3520C			130.9 mL	2.5 mL	340233	07/22/14 15:10	RBS	TAL SAV
Total/NA	Analysis	8081B/8082A		1	130.9 mL	2.5 mL	340495	07/23/14 17:34	JCK	TAL SAV
Total/NA	Prep	8315_W_Prep			100 mL	4.0 mL	110345	07/18/14 09:02	DNS	TAL TAL
Total/NA	Analysis	8315A		1	100 mL	4.0 mL	110383	07/21/14 10:59	DNS	TAL TAL
Total Recoverable	Prep	3005A			50 mL	250 mL	339693	07/18/14 10:06	BJB	TAL SAV
Total Recoverable	Analysis	6020A		1	50 mL	250 mL	340599	07/23/14 14:02	BWR	TAL SAV

## Client Sample ID: Equipment Blank

Date Collected: 07/16/14 12:40

Date Received: 07/17/14 10:26

## Lab Sample ID: 680-103380-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	339987	07/21/14 14:01	MMT	TAL SAV
Total/NA	Prep	3520C			234.5 mL	0.5 mL	340036	07/21/14 15:50	RBS	TAL SAV
Total/NA	Analysis	8270D		1	234.5 mL	0.5 mL	340693	07/24/14 16:50	RAM	TAL SAV
Total/NA	Prep	3520C			127.8 mL	2.5 mL	340233	07/22/14 15:10	RBS	TAL SAV
Total/NA	Analysis	8081B/8082A		1	127.8 mL	2.5 mL	340495	07/23/14 17:49	JCK	TAL SAV
Total/NA	Prep	8315_W_Prep			100 mL	4.0 mL	110345	07/18/14 09:02	DNS	TAL TAL
Total/NA	Analysis	8315A		1	100 mL	4.0 mL	110383	07/21/14 11:11	DNS	TAL TAL
Total Recoverable	Prep	3005A			50 mL	250 mL	339693	07/18/14 10:06	BJB	TAL SAV
Total Recoverable	Analysis	6020A		1	50 mL	250 mL	340599	07/23/14 14:10	BWR	TAL SAV

## Client Sample ID: Trip Blank #1

Date Collected: 07/16/14 00:00

Date Received: 07/17/14 10:26

## Lab Sample ID: 680-103380-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	339987	07/21/14 13:10	MMT	TAL SAV

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAL = TestAmerica Tallahassee, 2846 Industrial Plaza Drive, Tallahassee, FL 32301, TEL (850)878-3994

TestAmerica Savannah



## Savannah

5102 LaRoche Avenue

Savannah, GA 31404

phone 912.354.7858 fax 912.352.0165

## TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

## Chain of Custody Record

Project Manager: Jon Alix Tel/Fax: 704-543-3925		Site Contact: Tim Hassett Lab Contact: Kathy Smith		Date: 7/16/14		COC No: 1 of 1 COCs	
Analysis Turnaround Time Calendar (C) or Work Days (W) 14		Carrier: Red Ex		Job No.		SDG No.	
TAT if different from Below <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		8081B - Post-Technical toxaphene, total area toxaphene (chlorinated camphene), alpha BHC, delta BHC, gamma BHC (lindane), heptachlor		8208A Select Metals		8270 - Select Semivolatiles - Acetophenone, phenol, 3,4-dimethylphenol, naphthalene, benzofuran, perylene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene	
Sample Date		Sample Time		Sample Type		Matrix	
MW-57D		7/16/14 9:57		G		W 10	
MW-56D		7/16/14 10:46		G		W 10	
MW-11DD		7/16/14 11:49		G		W 10	
Sample Identification		Sample Date		Sample Time		Sample Type	
MW-57D		7/16/14		9:57		G	
MW-56D		7/16/14		10:46		G	
MW-11DD		7/16/14		11:49		G	
Sample Specific Notes:		8208A Select Metals		8270 - Select Semivolatiles - Acetophenone, phenol, 3,4-dimethylphenol, naphthalene, benzofuran, perylene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene		8315A FORM	
Barcode		680-103380 Chain of Custody					
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other 1		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client		Disposal By Lab	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		Special Instructions/QC Requirements & Comments:		Note for TA - Tallahassee: Contact TA - Savannah re: 8315A FORM samples		3.6 ac 0.1 4.0 3.8	
Relinquished by: Alex Harrison		Company: Antea Group		Date/Time: 7/16/14		Date/Time: 7/17/14	
Relinquished by:		Company:		Date/Time:		Date/Time:	
Relinquished by:		Company:		Date/Time:		Date/Time:	



## Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-103380-1

**Login Number: 103380**

**List Source: TestAmerica Savannah**

**List Number: 1**

**Creator: Kicklighter, Marilyn D**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	False	Field Blank and Equipment Blank not listed on the COC
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	One container received broken for sample -1
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-103380-1

**Login Number: 103380**

**List Source: TestAmerica Tallahassee**

**List Number: 2**

**List Creation: 07/17/14 04:24 PM**

**Creator: Gaskin, Jeremy P**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	False	



# Certification Summary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

## Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	AFCEE		SAVLAB	
A2LA	DoD ELAP		399.01	02-28-15
A2LA	ISO/IEC 17025		399.01	02-28-15
Alabama	State Program	4	41450	06-30-15
Arkansas DEQ	State Program	6	88-0692	01-31-15
California	NELAP	9	3217CA	07-31-14 *
Colorado	State Program	8	N/A	12-31-14
Connecticut	State Program	1	PH-0161	03-31-15
Florida	NELAP	4	E87052	06-30-15
GA Dept. of Agriculture	State Program	4	N/A	06-30-14 *
Georgia	State Program	4	N/A	06-30-15
Georgia	State Program	4	803	06-30-15
Guam	State Program	9	09-005r	04-16-15
Hawaii	State Program	9	N/A	06-30-15
Illinois	NELAP	5	200022	11-30-14
Indiana	State Program	5	N/A	06-30-15
Iowa	State Program	7	353	07-01-15
Kentucky (DW)	State Program	4	90084	12-31-14
Kentucky (UST)	State Program	4	18	06-30-15
Louisiana	NELAP	6	30690	06-30-14 *
Louisiana (DW)	NELAP	6	LA140023	12-31-14
Maine	State Program	1	GA00006	08-16-14 *
Maryland	State Program	3	250	12-31-14
Massachusetts	State Program	1	M-GA006	06-30-15
Michigan	State Program	5	9925	06-30-14 *
Mississippi	State Program	4	N/A	06-30-14 *
Montana	State Program	8	CERT0081	01-01-15
Nebraska	State Program	7	TestAmerica-Savannah	06-30-14 *
New Jersey	NELAP	2	GA769	06-30-15
New Mexico	State Program	6	N/A	06-30-14 *
New York	NELAP	2	10842	03-31-15
North Carolina (DW)	State Program	4	13701	07-31-15
North Carolina (VW/SW)	State Program	4	269	12-31-14
Oklahoma	State Program	6	9984	08-31-14
Pennsylvania	NELAP	3	68-00474	06-30-15
Puerto Rico	State Program	2	GA00006	12-31-14
South Carolina	State Program	4	98001	06-30-14 *
Tennessee	State Program	4	TN02961	06-30-15
Texas	NELAP	6	T104704185-08-TX	11-30-14
USDA	Federal		SAV 3-04	06-11-17
Virginia	NELAP	3	460161	06-14-15
Washington	State Program	10	C805	06-10-15
West Virginia (DW)	State Program	3	9950C	12-31-14
West Virginia DEP	State Program	3	94	06-30-14 *
Wisconsin	State Program	5	999819810	08-31-14
Wyoming	State Program	8	8TMS-L	06-30-14 *

## Laboratory: TestAmerica Tallahassee

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

\* Certification renewal pending - certification considered valid.

TestAmerica Savannah



## Certification Summary

Client: Ashland Inc.

TestAmerica Job ID: 680-103380-1

Project/Site: Ashland Brunswick SA GW Monitoring

### Laboratory: TestAmerica Tallahassee (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E81005	06-30-15
Georgia	State Program	4		06-30-15
Louisiana	NELAP	6	30663	06-30-15
New Jersey	NELAP	2	FL012	06-30-15
Texas	NELAP	6	T104704459-11-2	03-31-15
USDA	Federal		P330-08-00158	08-05-14



## Definitions/Glossary

Client: Ashland Inc.  
Project/Site: Ashland Brunswick SA GW Monitoring

TestAmerica Job ID: 680-103380-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
*	RPD of the LCS and LCSD exceeds the control limits
*	ISTD response or retention time outside acceptable limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

#### GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

#### HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



## ***Appendix L***

### ***Trend Graphs and Mann Kendall Test Results***





## GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **3-Sep-14** Job ID: **WB52014B2**  
 Facility Name: **Former Hercules Brunswick Facility** Constituent: **Benzene**  
 Conducted By: **GH** Concentration Units: **ug/L**

Sampling Point ID: **MW-10D**

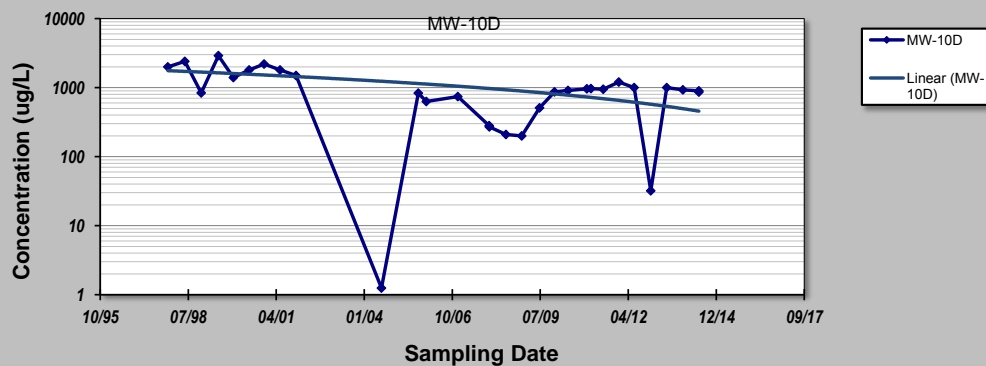
Sampling Event	Sampling Date	BENZENE CONCENTRATION (ug/L)						
1	12/5/1997	2000						
2	6/16/1998	2400						
3	12/18/1998	840						
4	7/1/1999	2900						
5	12/20/1999	1400						
6	6/15/2000	1800						
7	12/1/2000	2200						
8	6/1/2001	1800						
9	12/1/2001	1500						
10	7/27/2004	1.25						
11	9/20/2005	830						
12	12/20/2005	630						
13	12/13/2006	740						
14	12/4/2007	280						
15	12/5/2007	270						
16	6/11/2008	210						
17	12/9/2008	200						
18	6/29/2009	510						
19	12/16/2009	870						
20	5/19/2010	910						
21	12/17/2010	960						
22	2/2/2011	970						
23	6/23/2011	950						
24	12/16/2011	1200						
25	6/8/2012	1000						
26	12/13/2012	32						
27	6/13/2013	1000						
28	12/12/2013	930						
29	6/12/2014	900						
30	6/12/2014	860						
31								
32								
33								
34								
35								

Coefficient of Variation: **0.68**

Mann-Kendall Statistic (S): **-95**

Confidence Factor: **95.3%**

Concentration Trend: **Decreasing**



### Notes:

- At least four independent sampling events per well are required for calculating the trend. Methodology is valid for 4 to 40 samples.
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, Ground Water, 41(3):355-367, 2003.

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## GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **3-Sep-14** Job ID: **WB52014B2**  
 Facility Name: **Former Hercules Brunswick Facility** Constituent: **Chlorobenzene**  
 Conducted By: **GH** Concentration Units: **ug/L**

Sampling Point ID: **MW-10D**

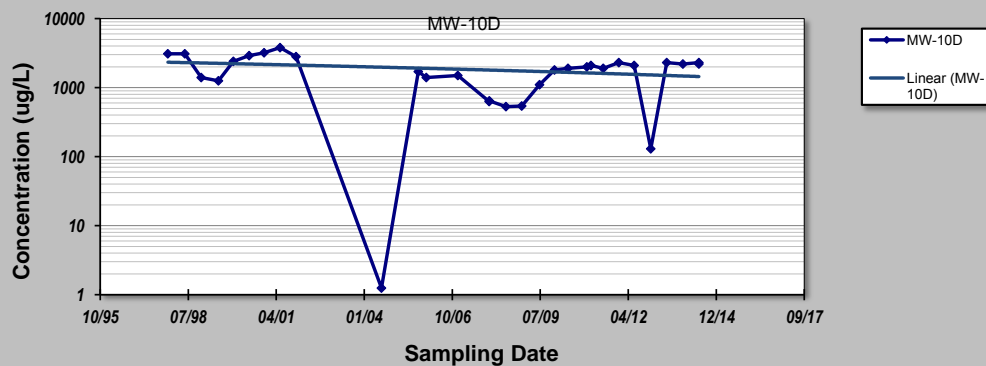
Sampling Event	Sampling Date	CHLOROBENZENE CONCENTRATION (ug/L)						
1	12/5/1997	3100						
2	6/16/1998	3100						
3	12/18/1998	1400						
4	7/1/1999	1250						
5	12/20/1999	2400						
6	6/15/2000	2900						
7	12/1/2000	3200						
8	6/1/2001	3800						
9	12/1/2001	2800						
10	7/27/2004	1.25						
11	9/20/2005	1700						
12	12/20/2005	1400						
13	12/13/2006	1500						
14	12/4/2007	630						
15	12/5/2007	640						
16	6/11/2008	530						
17	12/9/2008	540						
18	6/29/2009	1100						
19	12/16/2009	1800						
20	5/19/2010	1900						
21	12/17/2010	2000						
22	2/2/2011	2100						
23	6/23/2011	1900						
24	12/16/2011	2300						
25	6/8/2012	2100						
26	12/13/2012	130						
27	6/13/2013	2300						
28	12/12/2013	2200						
29	6/12/2014	2300						
30	6/12/2014	2200						
31								
32								
33								
34								
35								

Coefficient of Variation: **0.52**

Mann-Kendall Statistic (S): **-11**

Confidence Factor: **57.0%**

Concentration Trend: **Stable**



### Notes:

- At least four independent sampling events per well are required for calculating the trend. Methodology is valid for 4 to 40 samples.
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, Ground Water, 41(3):355-367, 2003.

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## GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **3-Sep-14** Job ID: **WB52014B2**  
 Facility Name: **Former Hercules Brunswick Facility** Constituent: **Methylene Chloride**  
 Conducted By: **GH** Concentration Units: **ug/L**

Sampling Point ID: **MW-10D**

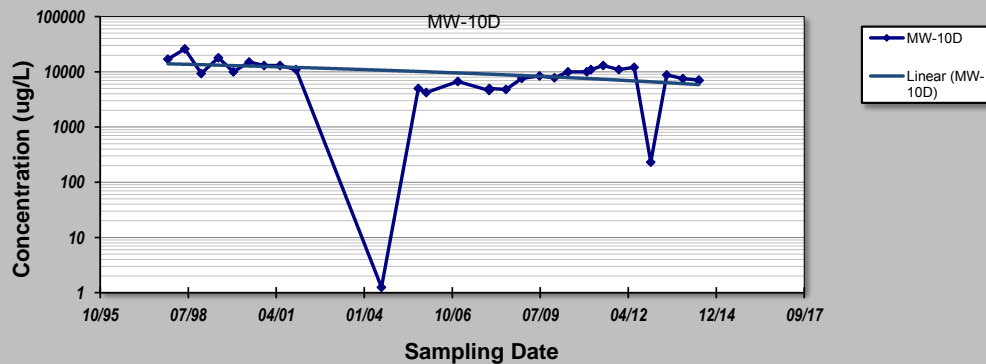
Sampling Event	Sampling Date	METHYLENE CHLORIDE CONCENTRATION (ug/L)						
1	12/5/1997	17000						
2	6/16/1998	26000						
3	12/18/1998	9300						
4	7/1/1999	18000						
5	12/20/1999	10000						
6	6/15/2000	15000						
7	12/1/2000	13000						
8	6/1/2001	13000						
9	12/1/2001	11000						
10	7/27/2004	1.25						
11	9/20/2005	5000						
12	12/20/2005	4200						
13	12/13/2006	6700						
14	12/4/2007	4600						
15	12/5/2007	5000						
16	6/11/2008	4800						
17	12/9/2008	7600						
18	6/29/2009	8400						
19	12/16/2009	7800						
20	5/19/2010	10000						
21	12/17/2010	10000						
22	2/2/2011	11000						
23	6/23/2011	13000						
24	12/16/2011	11000						
25	6/8/2012	12000						
26	12/13/2012	230						
27	6/13/2013	8800						
28	12/12/2013	7500						
29	6/12/2014	7100						
30	6/12/2014	6900						
31								
32								
33								
34								
35								

Coefficient of Variation: **0.56**

Mann-Kendall Statistic (S): **-91**

Confidence Factor: **94.6%**

Concentration Trend: **Prob. Decreasing**



### Notes:

- At least four independent sampling events per well are required for calculating the trend. Methodology is valid for 4 to 40 samples.
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, Ground Water, 41(3):355-367, 2003.

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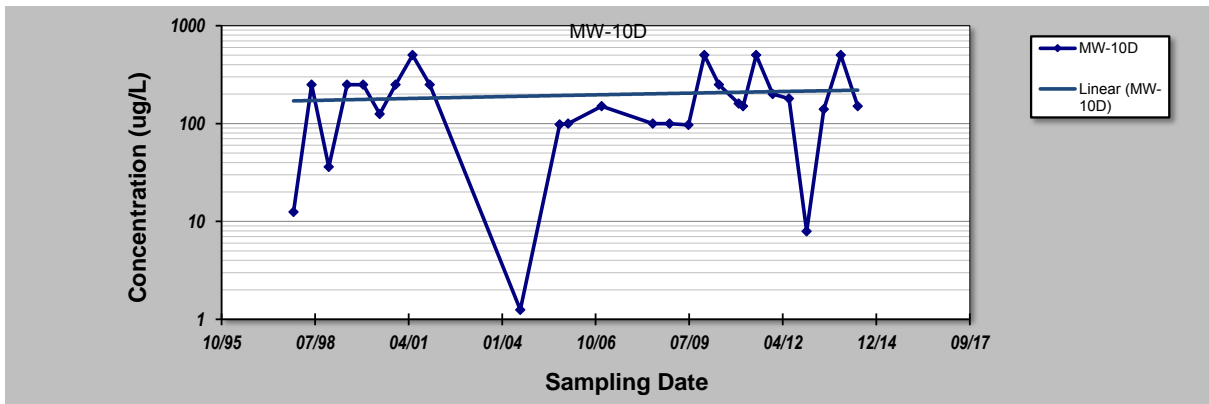
## GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: <b>3-Sep-14</b>	Job ID: <b>WB52014B2</b>
Facility Name: <b>Former Hercules Brunswick Facility</b>	Constituent: <b>Total Xylenes</b>
Conducted By: <b>GH</b>	Concentration Units: <b>ug/L</b>

Sampling Point ID: **MW-10D**

Sampling Event	Sampling Date	TOTAL XYLENES CONCENTRATION (ug/L)					
1	12/5/1997	12.5					
2	6/16/1998	250					
3	12/18/1998	36					
4	7/1/1999	250					
5	12/20/1999	250					
6	6/15/2000	125					
7	12/1/2000	250					
8	6/1/2001	500					
9	12/1/2001	250					
10	7/27/2004	1.25					
11	9/20/2005	98					
12	12/20/2005	100					
13	12/13/2006	150					
14	6/11/2008	100					
15	12/9/2008	100					
16	6/29/2009	97					
17	12/16/2009	500					
18	5/19/2010	250					
19	12/17/2010	160					
20	2/2/2011	150					
21	6/23/2011	500					
22	12/16/2011	200					
23	6/8/2012	180					
24	12/13/2012	7.9					
25	6/13/2013	140					
26	12/12/2013	500					
27	6/12/2014	150					
28							
29							
30							

Coefficient of Variation: **0.76**  
 Mann-Kendall Statistic (S): **26**  
 Confidence Factor: **69.7%**  
 Concentration Trend: **No Trend**



### Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0); >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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# GSI MANN-KENDALL TOOLKIT

## for Constituent Trend Analysis

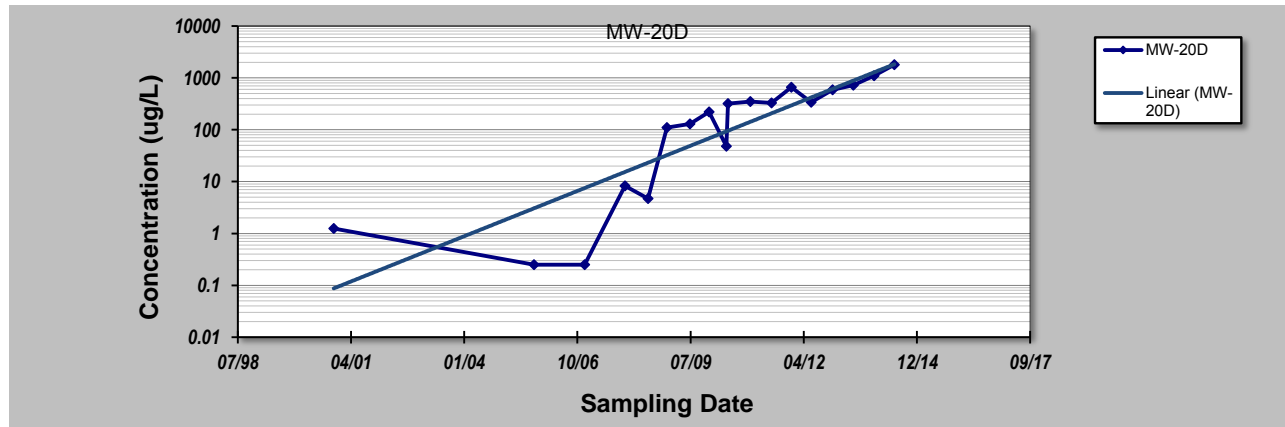
Evaluation Date: **3-Sep-14**  
 Facility Name: **Former Hercules Brunswick Facility**  
 Conducted By: **GH**

Job ID: **WB52014B2**  
 Constituent: **Benzene**  
 Concentration Units: **ug/L**

Sampling Point ID: **MW-20D**

Sampling Event	Sampling Date	BENZENE CONCENTRATION (ug/L)						
1	11/17/2000	1.25						
2	9/21/2005	0.25						
3	12/14/2006	0.25						
4	12/5/2007	8.3						
5	6/25/2008	4.7						
6	12/10/2008	110						
7	6/30/2009	130						
8	12/16/2009	220						
9	5/18/2010	48						
10	6/2/2010	320						
11	12/16/2010	350						
12	6/22/2011	330						
13	12/14/2011	660						
14	6/6/2012	340						
15	12/12/2012	590						
16	6/13/2013	720						
17	12/13/2013	1100						
18	6/10/2014	1800						
19								
20								

Coefficient of Variation:	1.26							
Mann-Kendall Statistic (S):	132							
Confidence Factor:	>99.9%							
Concentration Trend:	Increasing							



### Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ( $S > 0$ ) or decreasing ( $S < 0$ ):  $>95\%$  = Increasing or Decreasing;  $\geq 90\%$  = Probably Increasing or Probably Decreasing;  $< 90\%$  and  $S > 0$  = No Trend;  $< 90\%$ ,  $S \leq 0$ , and  $COV \geq 1$  = No Trend;  $< 90\%$  and  $COV < 1$  = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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# GSI MANN-KENDALL TOOLKIT

## for Constituent Trend Analysis

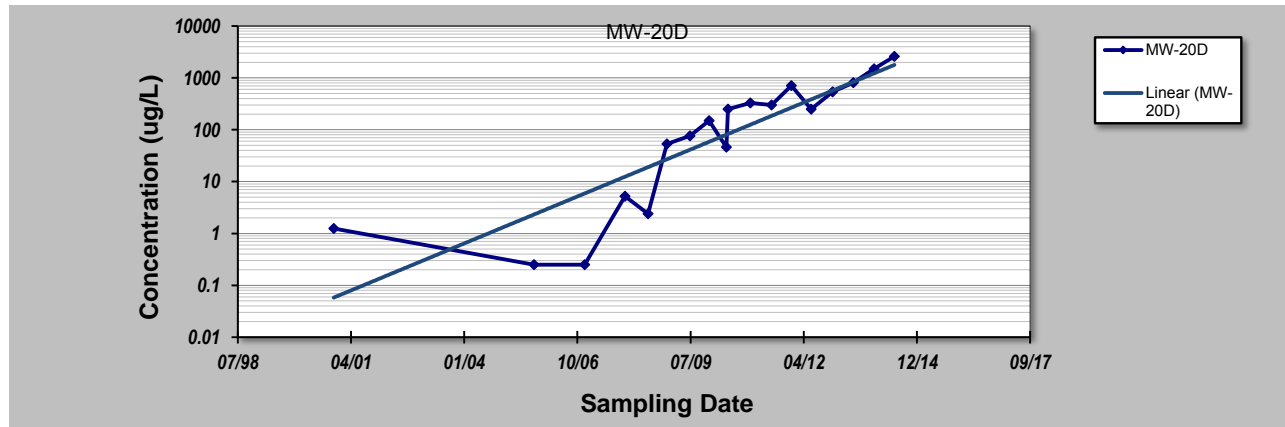
Evaluation Date: **3-Sep-14**  
 Facility Name: **Former Hercules Brunswick Facility**  
 Conducted By: **GH**

Job ID: **WB52014B2**  
 Constituent: **Chlorobenzene**  
 Concentration Units: **ug/L**

Sampling Point ID: **MW-20D**

Sampling Event	Sampling Date	CHLOROBENZENE CONCENTRATION (ug/L)						
1	11/17/2000	1.25						
2	9/21/2005	0.25						
3	12/14/2006	0.25						
4	12/5/2007	5.2						
5	6/25/2008	2.4						
6	12/10/2008	53						
7	6/30/2009	76						
8	12/16/2009	150						
9	5/18/2010	46						
10	6/2/2010	250						
11	12/16/2010	330						
12	6/22/2011	300						
13	12/14/2011	710						
14	6/6/2012	250						
15	12/12/2012	540						
16	6/13/2013	810						
17	12/13/2013	1500						
18	6/10/2014	2600						
19								
20								

Coefficient of Variation:	1.58							
Mann-Kendall Statistic (S):	129							
Confidence Factor:	>99.9%							
Concentration Trend:	Increasing							



### Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ( $S > 0$ ) or decreasing ( $S < 0$ ):  $>95\%$  = Increasing or Decreasing;  $\geq 90\%$  = Probably Increasing or Probably Decreasing;  $< 90\%$  and  $S > 0$  = No Trend;  $< 90\%$ ,  $S \leq 0$ , and  $COV \geq 1$  = No Trend;  $< 90\%$  and  $COV < 1$  = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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# GSI MANN-KENDALL TOOLKIT

## for Constituent Trend Analysis

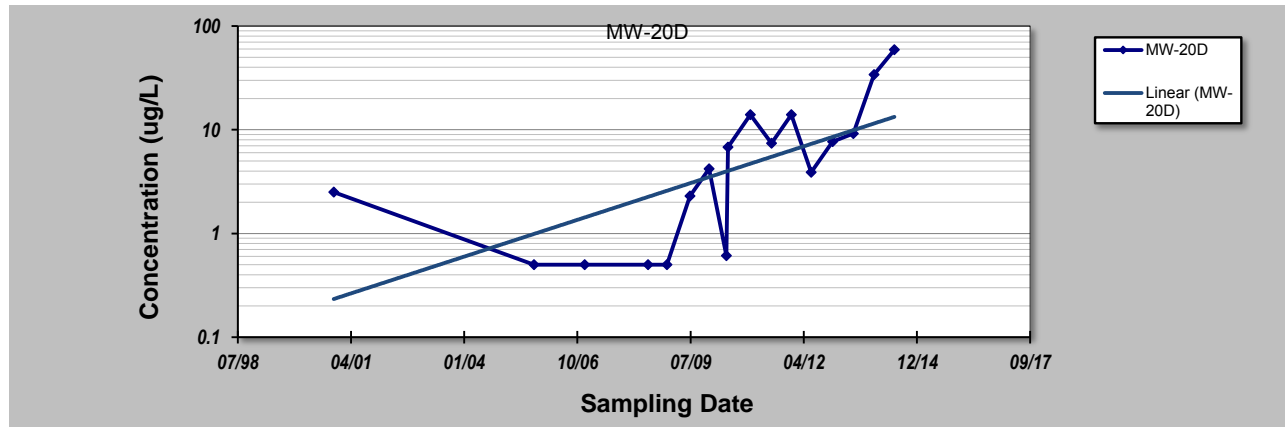
Evaluation Date: **3-Sep-14**  
 Facility Name: **Former Hercules Brunswick Facility**  
 Conducted By: **GH**

Job ID: **WB52014B2**  
 Constituent: **Total Xylenes**  
 Concentration Units: **ug/L**

Sampling Point ID: **MW-20D**

Sampling Event	Sampling Date	TOTAL XYLENES CONCENTRATION (ug/L)						
1	11/17/2000	2.5						
2	9/21/2005	0.5						
3	12/14/2006	0.5						
4	6/25/2008	0.5						
5	12/10/2008	0.5						
6	6/30/2009	2.3						
7	12/16/2009	4.2						
8	5/18/2010	0.61						
9	6/2/2010	6.8						
10	12/16/2010	14						
11	6/22/2011	7.4						
12	12/14/2011	14						
13	6/6/2012	3.9						
14	12/12/2012	7.7						
15	6/13/2013	9.2						
16	12/13/2013	34						
17	6/10/2014	59						
18								
19								
20								

Coefficient of Variation:	1.54							
Mann-Kendall Statistic (S):	93							
Confidence Factor:	>99.9%							
Concentration Trend:	Increasing							



### Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ( $S > 0$ ) or decreasing ( $S < 0$ ):  $>95\%$  = Increasing or Decreasing;  $\geq 90\%$  = Probably Increasing or Probably Decreasing;  $< 90\%$  and  $S > 0$  = No Trend;  $< 90\%$ ,  $S \leq 0$ , and  $COV \geq 1$  = No Trend;  $< 90\%$  and  $COV < 1$  = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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# GSI MANN-KENDALL TOOLKIT

## for Constituent Trend Analysis

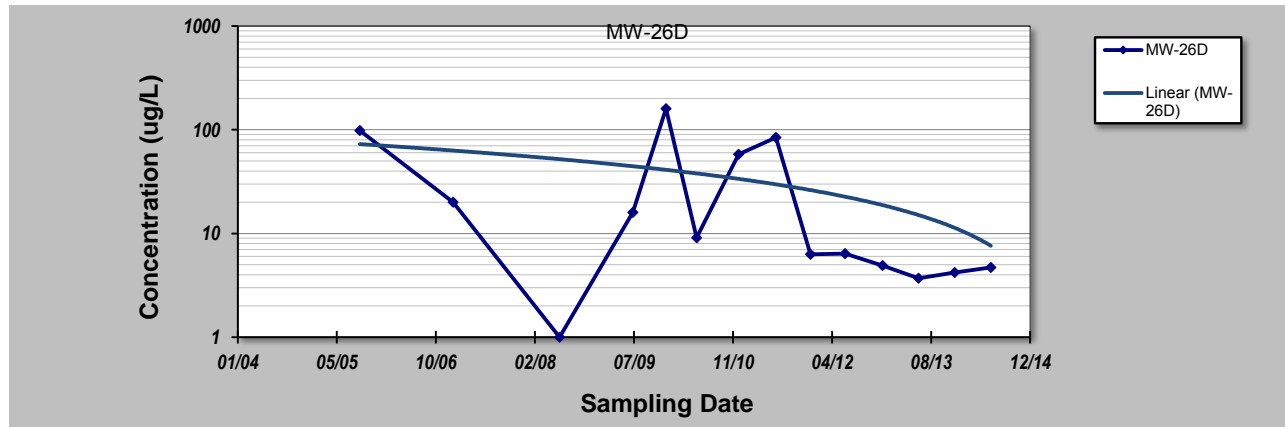
Evaluation Date: **3-Sep-14**  
 Facility Name: **Former Hercules Brunswick Facility**  
 Conducted By: **GH**

Job ID: **WB52014B2**  
 Constituent: **Benzene**  
 Concentration Units: **ug/L**

Sampling Point ID: **MW-26D**

Sampling Event	Sampling Date	BENZENE CONCENTRATION (ug/L)						
1	9/21/2005	98						
2	1/5/2007	20						
3	6/25/2008	1						
4	6/30/2009	16						
5	12/15/2009	160						
6	5/18/2010	9.1						
7	12/16/2010	58						
8	6/23/2011	84						
9	12/14/2011	6.3						
10	6/6/2012	6.4						
11	12/12/2012	4.9						
12	6/11/2013	3.7						
13	12/11/2013	4.2						
14	6/11/2014	4.7						
15								
16								
17								
18								
19								
20								

Coefficient of Variation:	1.42							
Mann-Kendall Statistic (S):	-41							
Confidence Factor:	98.7%							
Concentration Trend:	Decreasing							



### Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ( $S > 0$ ) or decreasing ( $S < 0$ ):  $> 95\%$  = Increasing or Decreasing;  $\geq 90\%$  = Probably Increasing or Probably Decreasing;  $< 90\%$  and  $S > 0$  = No Trend;  $< 90\%$ ,  $S \leq 0$ , and  $COV \geq 1$  = No Trend;  $< 90\%$  and  $COV < 1$  = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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## for Constituent Trend Analysis

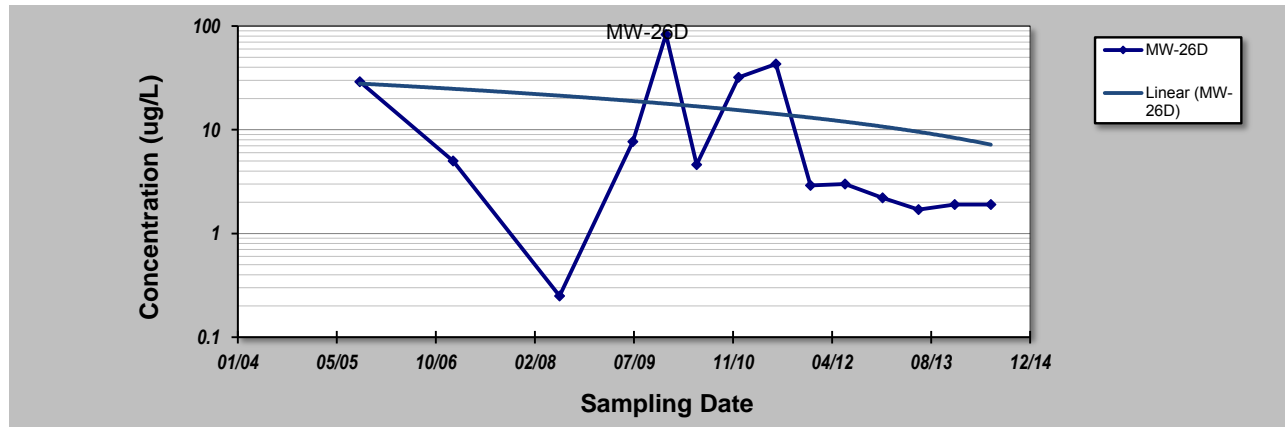
Evaluation Date: **3-Sep-14**  
 Facility Name: **Former Hercules Brunswick Facility**  
 Conducted By: **GH**

Job ID: **WB52014B2**  
 Constituent: **Chlorobenzene**  
 Concentration Units: **ug/L**

Sampling Point ID: **MW-26D**

Sampling Event	Sampling Date	CHLOROBENZENE CONCENTRATION (ug/L)						
1	9/21/2005	29						
2	1/5/2007	5						
3	6/25/2008	0.25						
4	6/30/2009	7.7						
5	12/15/2009	83						
6	5/18/2010	4.6						
7	12/16/2010	32						
8	6/23/2011	43						
9	12/14/2011	2.9						
10	6/6/2012	3						
11	12/12/2012	2.2						
12	6/11/2013	1.7						
13	12/11/2013	1.9						
14	6/11/2014	1.9						
15								
16								
17								
18								
19								
20								

Coefficient of Variation:	1.53							
Mann-Kendall Statistic (S):	-36							
Confidence Factor:	97.3%							
Concentration Trend:	Decreasing							



### Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ( $S > 0$ ) or decreasing ( $S < 0$ ):  $> 95\%$  = Increasing or Decreasing;  $\geq 90\%$  = Probably Increasing or Probably Decreasing;  $< 90\%$  and  $S > 0$  = No Trend;  $< 90\%$ ,  $S \leq 0$ , and  $COV \geq 1$  = No Trend;  $< 90\%$  and  $COV < 1$  = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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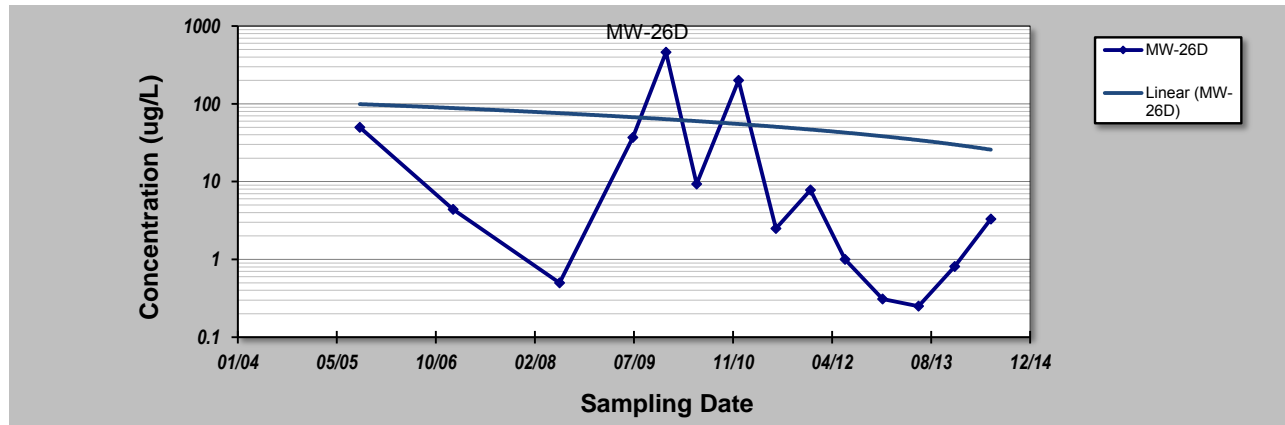
Evaluation Date: **3-Sep-14**  
 Facility Name: **Former Hercules Brunswick Facility**  
 Conducted By: **GH**

Job ID: **WB52014B2**  
 Constituent: **Total Xylenes**  
 Concentration Units: **ug/L**

Sampling Point ID: **MW-26D**

Sampling Event	Sampling Date	TOTAL XYLENES CONCENTRATION (ug/L)						
1	9/21/2005	50						
2	1/5/2007	4.4						
3	6/25/2008	0.5						
4	6/30/2009	37						
5	12/15/2009	460						
6	5/18/2010	9.3						
7	12/16/2010	200						
8	6/23/2011	2.5						
9	12/14/2011	7.8						
10	6/6/2012	1						
11	12/12/2012	0.31						
12	6/11/2013	0.25						
13	12/11/2013	0.81						
14	6/11/2014	3.3						
15								
16								
17								
18								
19								
20								

Coefficient of Variation:	2.30							
Mann-Kendall Statistic (S):	-37							
Confidence Factor:	97.6%							
Concentration Trend:	Decreasing							



### Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ( $S > 0$ ) or decreasing ( $S < 0$ ):  $> 95\%$  = Increasing or Decreasing;  $\geq 90\%$  = Probably Increasing or Probably Decreasing;  $< 90\%$  and  $S > 0$  = No Trend;  $< 90\%$ ,  $S \leq 0$ , and  $COV \geq 1$  = No Trend;  $< 90\%$  and  $COV < 1$  = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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# GSI MANN-KENDALL TOOLKIT

## for Constituent Trend Analysis

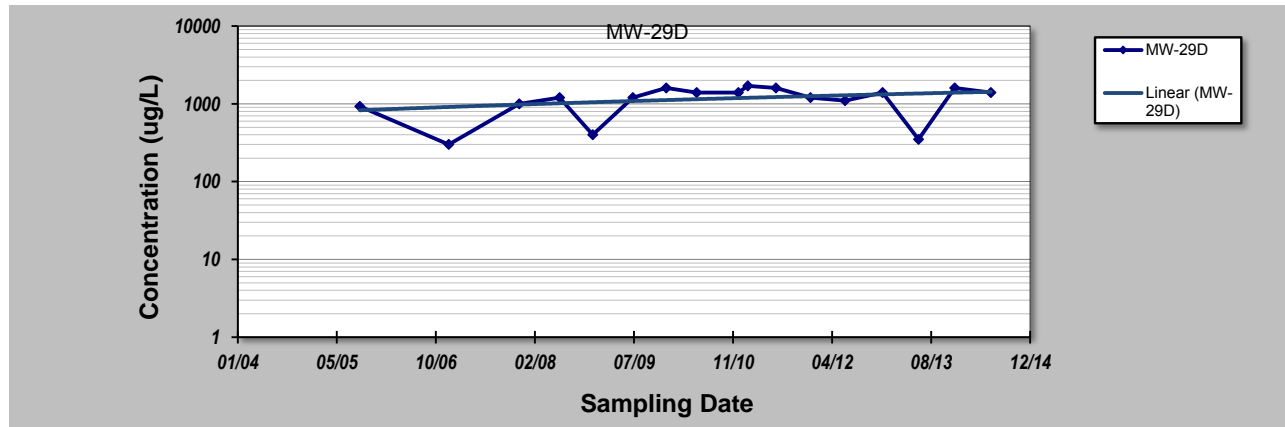
Evaluation Date: **3-Sep-14**  
 Facility Name: **Former Hercules Brunswick Facility**  
 Conducted By: **GH**

Job ID: **WB52014B2**  
 Constituent: **Benzene**  
 Concentration Units: **ug/L**

Sampling Point ID: **MW-29D**

Sampling Event	Sampling Date	BENZENE CONCENTRATION (ug/L)						
1	9/21/2005	930						
2	12/14/2006	300						
3	12/5/2007	1000						
4	6/25/2008	1200						
5	12/10/2008	400						
6	6/30/2009	1200						
7	12/16/2009	1600						
8	5/18/2010	1400						
9	12/15/2010	1400						
10	2/1/2011	1700						
11	6/23/2011	1600						
12	12/14/2011	1200						
13	6/6/2012	1100						
14	12/12/2012	1400						
15	6/11/2013	350						
16	12/11/2013	1600						
17	6/11/2014	1400						
18								
19								
20								

Coefficient of Variation:	0.38							
Mann-Kendall Statistic (S):	42							
Confidence Factor:	95.4%							
Concentration Trend:	Increasing							



### Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ( $S > 0$ ) or decreasing ( $S < 0$ ):  $> 95\%$  = Increasing or Decreasing;  $\geq 90\%$  = Probably Increasing or Probably Decreasing;  $< 90\%$  and  $S > 0$  = No Trend;  $< 90\%$ ,  $S \leq 0$ , and  $COV \geq 1$  = No Trend;  $< 90\%$  and  $COV < 1$  = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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# GSI MANN-KENDALL TOOLKIT

## for Constituent Trend Analysis

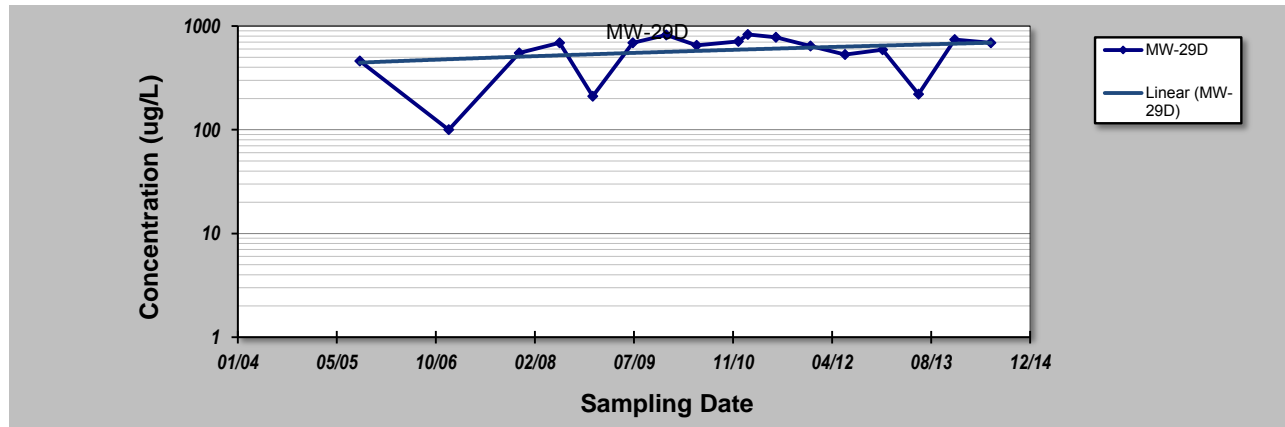
Evaluation Date: **3-Sep-14**  
 Facility Name: **Former Hercules Brunswick Facility**  
 Conducted By: **GH**

Job ID: **WB52014B2**  
 Constituent: **Chlorobenzene**  
 Concentration Units: **ug/L**

Sampling Point ID: **MW-29D**

Sampling Event	Sampling Date	CHLOROBENZENE CONCENTRATION (ug/L)						
1	9/21/2005	460						
2	12/14/2006	100						
3	12/5/2007	550						
4	6/25/2008	690						
5	12/10/2008	210						
6	6/30/2009	690						
7	12/16/2009	820						
8	5/18/2010	650						
9	12/15/2010	710						
10	2/1/2011	830						
11	6/23/2011	780						
12	12/14/2011	640						
13	6/6/2012	530						
14	12/12/2012	590						
15	6/11/2013	220						
16	12/11/2013	740						
17	6/11/2014	690						
18								
19								
20								

Coefficient of Variation:	0.37							
Mann-Kendall Statistic (S):	25							
Confidence Factor:	83.6%							
Concentration Trend:	No Trend							



### Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ( $S > 0$ ) or decreasing ( $S < 0$ ):  $> 95\%$  = Increasing or Decreasing;  $\geq 90\%$  = Probably Increasing or Probably Decreasing;  $< 90\%$  and  $S > 0$  = No Trend;  $< 90\%$ ,  $S \leq 0$ , and  $COV \geq 1$  = No Trend;  $< 90\%$  and  $COV < 1$  = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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# GSI MANN-KENDALL TOOLKIT

## for Constituent Trend Analysis

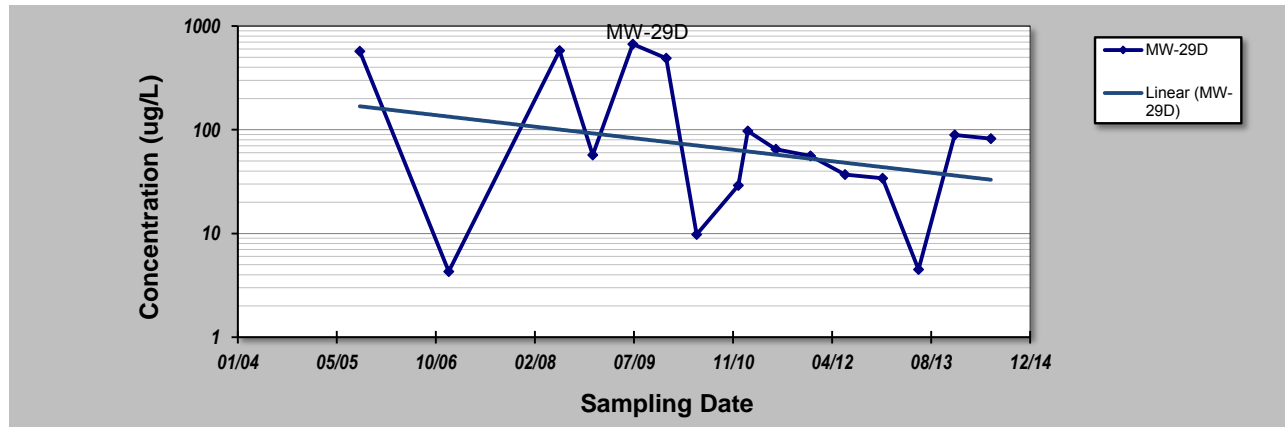
Evaluation Date: **3-Sep-14**  
 Facility Name: **Former Hercules Brunswick Facility**  
 Conducted By: **GH**

Job ID: **WB52014B2**  
 Constituent: **Total Xylenes**  
 Concentration Units: **ug/L**

Sampling Point ID: **MW-29D**

Sampling Event	Sampling Date	TOTAL XYLENES CONCENTRATION (ug/L)						
1	9/21/2005	570						
2	12/14/2006	4.3						
3	6/25/2008	580						
4	12/10/2008	57						
5	6/30/2009	670						
6	12/16/2009	490						
7	5/18/2010	9.8						
8	12/15/2010	29						
9	2/1/2011	97						
10	6/23/2011	65						
11	12/14/2011	56						
12	6/6/2012	37						
13	12/12/2012	34						
14	6/11/2013	4.5						
15	12/11/2013	89						
16	6/11/2014	82						
17								
18								
19								
20								

Coefficient of Variation:	1.34							
Mann-Kendall Statistic (S):	-24							
Confidence Factor:	84.7%							
Concentration Trend:	No Trend							



### Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ( $S > 0$ ) or decreasing ( $S < 0$ ):  $> 95\%$  = Increasing or Decreasing;  $\geq 90\%$  = Probably Increasing or Probably Decreasing;  $< 90\%$  and  $S > 0$  = No Trend;  $< 90\%$ ,  $S \leq 0$ , and  $COV \geq 1$  = No Trend;  $< 90\%$  and  $COV < 1$  = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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# GSI MANN-KENDALL TOOLKIT

## for Constituent Trend Analysis

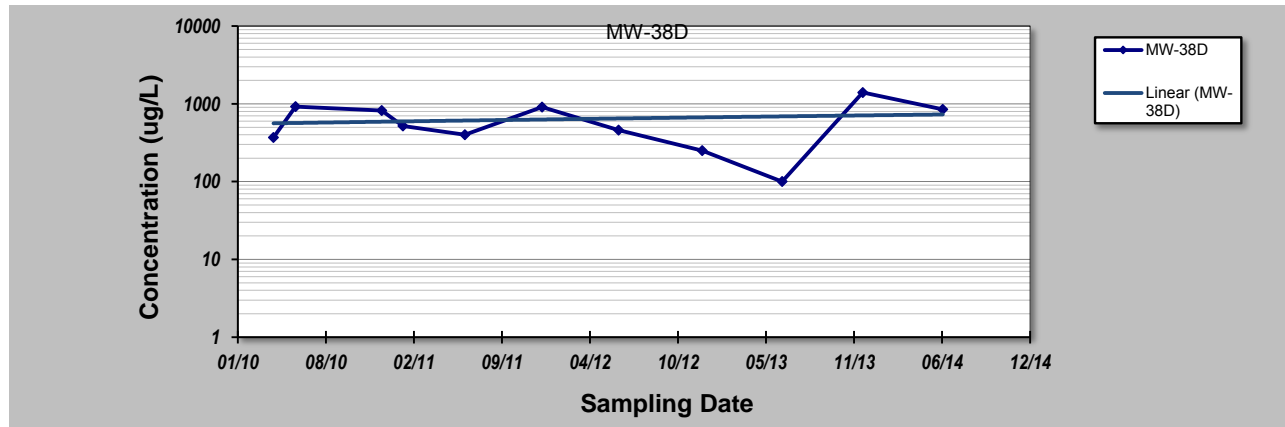
Evaluation Date: **3-Sep-14**  
 Facility Name: **Former Hercules Brunswick Facility**  
 Conducted By: **GH**

Job ID: **WB52014B2**  
 Constituent: **Benzene**  
 Concentration Units: **ug/L**

Sampling Point ID: **MW-38D**

Sampling Event	Sampling Date	BENZENE CONCENTRATION (ug/L)						
1	4/13/2010	370						
2	6/2/2010	920						
3	12/15/2010	820						
4	2/1/2011	520						
5	6/22/2011	400						
6	12/14/2011	910						
7	6/5/2012	460						
8	12/12/2012	250						
9	6/11/2013	100						
10	12/11/2013	1400						
11	6/11/2014	850						
12								
13								
14								
15								
16								
17								
18								
19								
20								

Coefficient of Variation:	0.59							
Mann-Kendall Statistic (S):	-3							
Confidence Factor:	56.0%							
Concentration Trend:	Stable							



### Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ( $S > 0$ ) or decreasing ( $S < 0$ ):  $> 95\%$  = Increasing or Decreasing;  $\geq 90\%$  = Probably Increasing or Probably Decreasing;  $< 90\%$  and  $S > 0$  = No Trend;  $< 90\%$ ,  $S \leq 0$ , and  $COV \geq 1$  = No Trend;  $< 90\%$  and  $COV < 1$  = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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# GSI MANN-KENDALL TOOLKIT

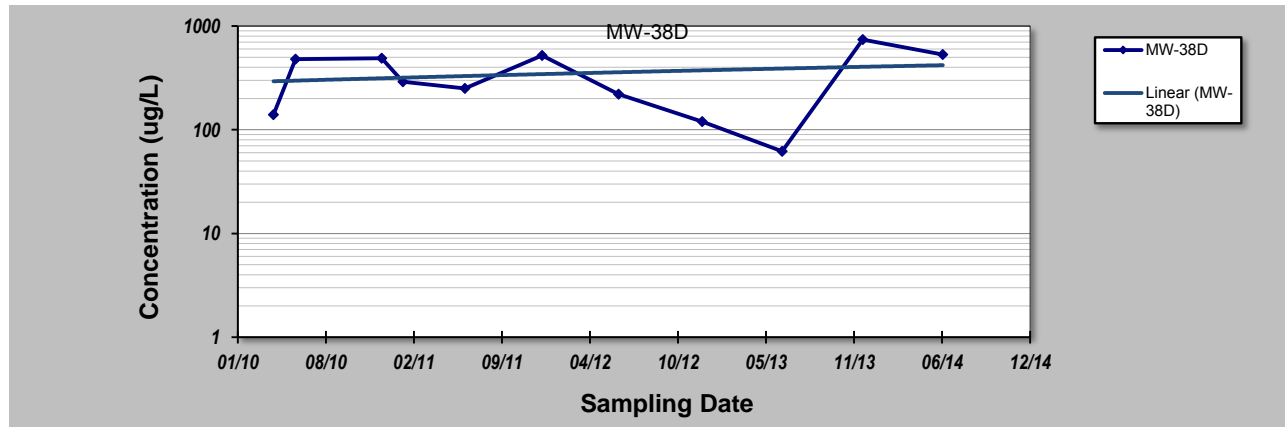
## for Constituent Trend Analysis

Evaluation Date: **3-Sep-14**  
 Facility Name: **Former Hercules Brunswick Facility**  
 Conducted By: **GH**

Job ID: **WB52014B2**  
 Constituent: **Chlorobenzene**  
 Concentration Units: **ug/L**

Sampling Point ID: **MW-38D**

Sampling Event	Sampling Date	CHLOROBENZENE CONCENTRATION (ug/L)						
1	4/13/2010	140						
2	6/2/2010	480						
3	12/15/2010	490						
4	2/1/2011	290						
5	6/22/2011	250						
6	12/14/2011	520						
7	6/5/2012	220						
8	12/12/2012	120						
9	6/11/2013	62						
10	12/11/2013	740						
11	6/11/2014	530						
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.61						
Mann-Kendall Statistic (S):		3						
Confidence Factor:		56.0%						
Concentration Trend:		No Trend						



### Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ( $S > 0$ ) or decreasing ( $S < 0$ ):  $> 95\%$  = Increasing or Decreasing;  $\geq 90\%$  = Probably Increasing or Probably Decreasing;  $< 90\%$  and  $S > 0$  = No Trend;  $< 90\%$ ,  $S \leq 0$ , and  $COV \geq 1$  = No Trend;  $< 90\%$  and  $COV < 1$  = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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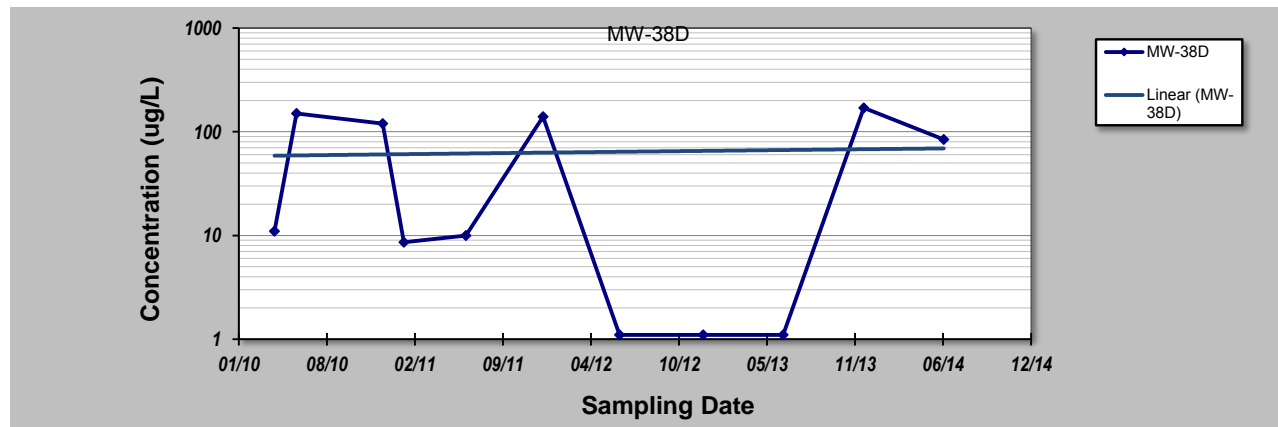
## GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **3-Sep-14**  
 Facility Name: **Former Hercules Brunswick Facility**  
 Conducted By: **GH**

Job ID: **WB52014B2**  
 Constituent: **Total Xylenes**  
 Concentration Units: **ug/L**

Sampling Point ID: **MW-38D**

Sampling Event	Sampling Date	TOTAL XYLENES CONCENTRATION (ug/L)						
1	4/13/2010	11						
2	6/2/2010	150						
3	12/15/2010	120						
4	2/1/2011	8.6						
5	6/22/2011	10						
6	12/14/2011	140						
7	6/5/2012	1.1						
8	12/12/2012	1.1						
9	6/11/2013	1.1						
10	12/11/2013	170						
11	6/11/2014	84						
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.10						
Mann-Kendall Statistic (S):		-8						
Confidence Factor:		70.3%						
Concentration Trend:		No Trend						



### Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ( $S > 0$ ) or decreasing ( $S < 0$ ):  $> 95\%$  = Increasing or Decreasing;  $\geq 90\%$  = Probably Increasing or Probably Decreasing;  $< 90\%$  and  $S > 0$  = No Trend;  $< 90\%$ ,  $S \leq 0$ , and  $COV \geq 1$  = No Trend;  $< 90\%$  and  $COV < 1$  = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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## **Trend Evaluation Results**

The trend evaluation results for each of the monitoring wells along with a description of each of the COPCs evaluated is provided below.

### **MW-10D Trend Evaluation**

**Benzene** – Benzene concentration in this well fluctuated during the late 1990s, ultimately reaching a high of 2,900 ug/L in July 1999. The concentration steadily decreased thereafter through the end of 2008, when it reached a low of 200 ug/L. Between 2009 and 2011 the concentration steadily increased, with a high of 1,200 ug/L in December 2011. Since the end of 2011, the concentration has been consistently decreasing, with the most recent result being 860 ug/L in June 2014. Overall, the regression analysis trend line shows that the trend is decreasing. Of note, the lows of non-detect (<2.5 ug/L) and 32 ug/L reported in July 2004 and December 2012, respectively, are clearly data outliers that are not likely to be representative of actual site conditions.

Review of the Mann Kendall trend evaluation showed a decreasing trend with a confidence factor (CF) of 95.3%. The confidence factor is a measure of the degree of confidence in the trend direction based on the calculated S factor. A CF in excess of 95% is considered indicative of a trend (increasing, decreasing, or stable). A CF between 90 and 95% is considered probable for trend, and a CF less than 90% is considered indicative of no trend.

**Chlorobenzene** – Like benzene, the chlorobenzene concentrations in MW-10D showed a similar pattern, fluctuated during the late 1990s, and ultimately reaching a high of 3,800 ug/L in June 2001. The concentration steadily decreased thereafter through the end of 2008, when it reached a low of 540 ug/L. Between 2009 and 2011 the concentration steadily increased, with a high of 2,300 ug/L in December 2011. Since the end of 2011, the concentration has remained consistently above 2,000 ug/L. Overall, the regression analysis trend line appears stable (neither increasing nor decreasing). Of note, the lows of non-detect (<2.5 ug/L) and 130 ug/L reported in July 2004 and December 2012, respectively, are clearly data outliers that are not likely to be representative of actual site conditions. The Mann Kendall trend evaluation indicates that the chlorobenzene concentrations when evaluated over the historical sampling results from monitoring well MW-10D can be characterized as stable with no apparent trend (57% CF).

**Total Xylenes** – Xylenes were typically not found above method detection limits in MW-10D historically, with only four instances of measureable concentrations occurring through the end of 2009 (in December 1998, June 2005, December 2006, and June 2009). After 2009 detections became more frequent, but typically did not exceed 200 ug/L, with a peak concentration of 250 ug/L recorded in May 2010. The regression trend line is flat throughout the monitoring period, but it should be noted that half the detection limit was used to quantify non-detected results, and detection limits as high as 1,000 ug/L were recorded in several instances, creating a regression chart with a number of peaks ranging up to



500 ug/L that are not confirmed values. Likewise, review of the Mann Kendall evaluation result indicates that the total xylene concentrations exhibit no trend (69.7% CF), but again, the analysis is primarily tracking variability in detection limits over time.

**Methylene Chloride** – Methylene chloride concentrations in MW-10D fluctuated, but decreased steadily through mid 2008, with a peak concentration of 26,000 ug/L in June 1998 and a low of 4,800 ug/L in June 2008. Concentrations then increased steadily through 2012 (13,000 peak in June 2011), then commenced a decreasing trend that continues through the present (most recent concentration 6,900 ug/L in June 2014). Review of the regression evaluation shows that the methylene chloride concentrations are probably decreasing (94.6% CF).

#### **MW-20D Trend Evaluation**

**Benzene** – Benzene concentrations were non-detect through three initial rounds of sampling collected between 2005 and 2005. December 2006 marked the beginning of an ongoing increasing concentration trend, with peak concentrations occurring during the most recent two sampling rounds (1,100 and 1,800 ug/L in December 2013 and June 2014, respectively). Both the regression trend and Mann Kendall evaluations show an increasing trend (99.9% CF for the Mann Kendall analysis).

**Chlorobenzene** – Like benzene chlorobenzene concentrations in MW-20D were non-detect through three initial rounds of sampling collected between 2005 and 2005. December 2006 also marked the beginning of an ongoing increasing concentration trend, with peak concentrations occurring during the two most recent sampling rounds (1,500 and 2,600 ug/L in December 2013 and June 2014, respectively). Both the regression trend and Mann Kendall evaluations show an increasing trend (99.9% CF for the Mann Kendall analysis).

**Total Xylenes** – Total xylene concentrations remained undetected through 2008, then began a consistently increasing trend which continues into the present with peak concentrations of 34 and 59 ug/L reported during the past two sampling events (December 2013 and June 2014, respectively). Both the regression trend and Mann Kendall evaluations show an increasing trend (99.9% CF for the Mann Kendall analysis).

#### **MW-26D Trend Evaluation**

**Benzene** – After initially decreasing between 2005 and 2008 (lowest concentration was 1 ug/L in June 2008), concentrations increased during 2009, peaking at 160 ug/L in December of that year. Concentrations remained elevated through mid 2011, and have steadily decreased since then (most recent concentration was 4.7 ug/L in June 2014).

**Chlorobenzene** – Like benzene, chlorobenzene concentrations in MW-26D initially decreased through 2008, peaked at 83 ug/L in December 2009, then steadily decreased to the most recent result of 1.9 ug/L



(June 2014). Overall, both the regression trend and Mann Kendall evaluations show a decreasing trend (97.3% CF).

**Total Xylenes** – Total xylene concentrations remained undetected through 2008, then began an increasing trend through 2009, peaking at 460 ug/L in December 2009. Concentrations subsequently decreased steadily through mid 2013, with a low of 0.25 ug/L in June 2013. Since then, concentrations have increased slightly, with a concentration of 3.3 ug/L at the most recent sampling event (June 2014). Overall, the regression trend appears to be decreasing, and the Mann Kendall evaluation yielded a decreasing trend (97.6%).

#### **MW-29D Trend Evaluation**

**Benzene** – Benzene concentrations in MW-29D have fluctuated, but exhibited a consistently increasing trend since 2005, with concentrations generally above 1,000 ug/L, a peak concentration of 1,700 ug/L in February 2011, and a most recent concentration of 1,400 in June 2014. The regression evaluation for benzene concentration at MW-29D indicated that the trend is increasing, which is confirmed by the Mann Kendall evaluation (95.4% CF).

**Chlorobenzene** – Like benzene, chlorobenzene concentrations in MW-29D have fluctuated but overall have shown a consistently increasing trend since 2005, with concentrations generally above 500 ug/L, a peak concentration of 830 ug/L in February 2011, and a most recent concentration of 690 ug/L in June 2014. The regression evaluation for chlorobenzene concentration at MW-29D shows an apparently increasing trend, while the Mann Kendall analysis showed no trend (83.6% CF).

**Total Xylenes** – Total xylene concentrations in MW-29D fluctuated between 2005 and 2009, peaking in December 2009 at 670 ug/L. Concentrations subsequently decreased consistently through June 2013, when they reached a low of 4.5 ug/L. Concentrations have increased in the subsequent two sampling events, with the most recent concentration reported at 82 ug/L (June 2014). The regression evaluation trend graph shows a decreasing trend line for total xylene concentrations at MW-29D, while the Mann Kendall evaluation result is stable with no apparent trend (84.7% CF).

#### **MW-38D Trend Evaluation**

**Benzene** – Benzene concentrations were reported at 370 ug/L in April 2010 and increased to 920 ug/L in June 2010. After the June 2010, the three subsequent sampling events each had reported decreases in benzene concentrations with respect to the previous sampling event with a low of 400 ug/L reported in June 2011. Afterwards, a peak concentration of benzene was reported in December of 2011 of 910 ug/L and then the benzene decreased to 460 ug/L in June 2012. Review of the benzene regression trend line, indicates there is a slightly decreasing trend even though there is significant consistent fluctuations in benzene concentration throughout the historical data set. The Mann Kendall evaluation result is

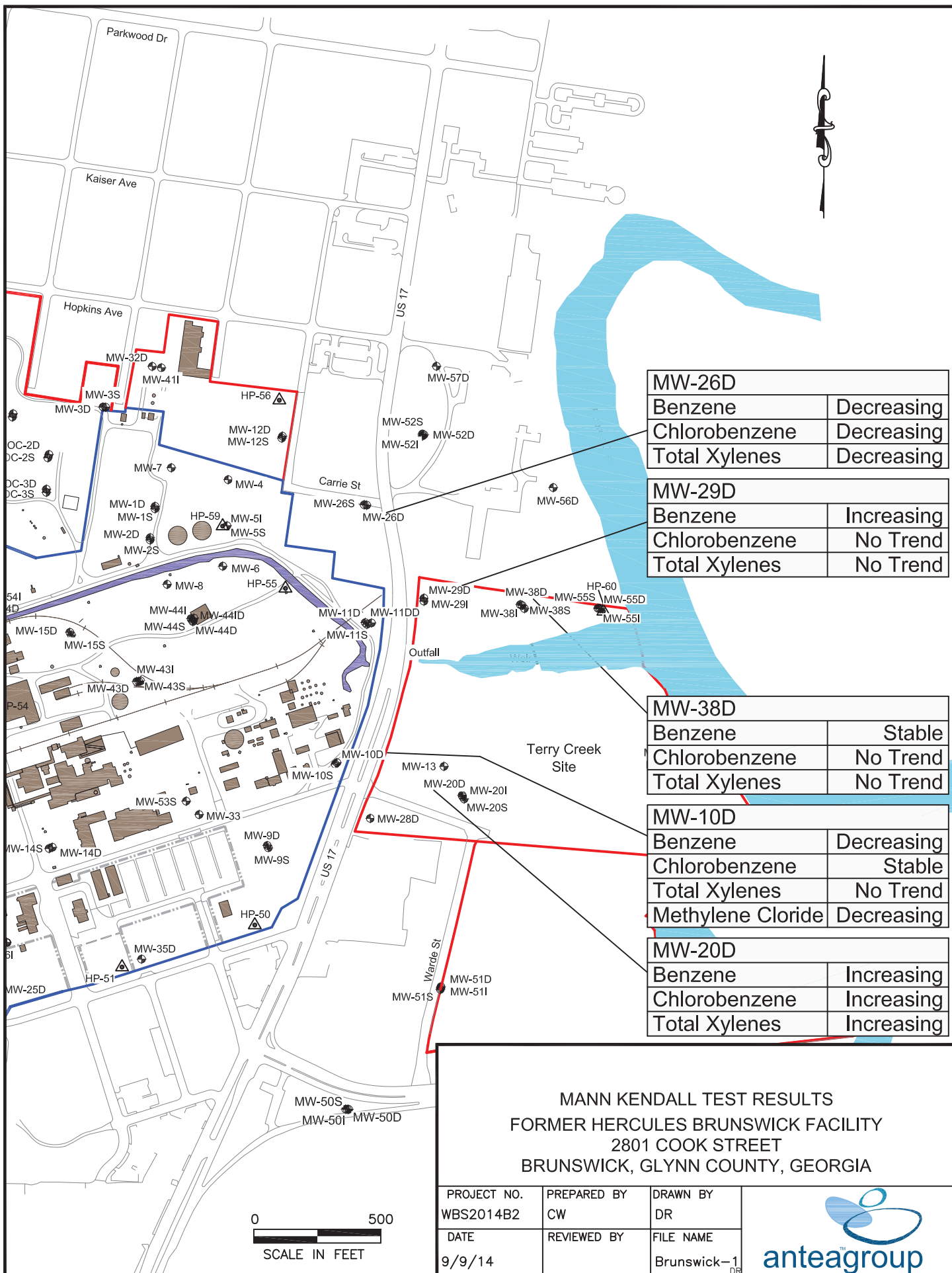


stable with no apparent trend which is in generally in agreement with the regression evaluation trend line.

**Chlorobenzene** – In April 2010 the chlorobenzene concentration was reported at 140 ug/L and increased to 480 ug/L in June 2010 and remained nearly the same at 490 ug/L in December 2010. After December 2010, decreases in concentrations were reported in the two subsequent sampling events to a low of 250 ug/L in June 2011. In December 2011, the concentrations peaked at 520 ug/L and then subsequently decreased to 220 ug/L in June 2012. Another peak concentration (740 ug/L) was reported in December 2013, and most recently the reported concentration was 530 ug/L (June 2014). Review of the chlorobenzene regression trend evaluation shows an increasing trend line. The Mann Kendall analysis showed no trend (56% CF).

**Total Xylenes** – In April 2010, the concentrations were at 11 ug/L and increased to 150 ug/L in June 2010. After June 2010, the three subsequent events showed a marked decrease and were non-detect in the June 2011 event. In late 2011 the concentrations peaked at 140 ug/L and decreased to 1.1 ug/L in the June 2012 event. The concentration subsequently elevated to 170 ug/L in December 2013, and was most recently reported at 84 ug/L (June 2014). The overall regression appears flat with no discernable trend, which is corroborated by the Mann Kendall analysis result also showing no trend (70.3% CF).





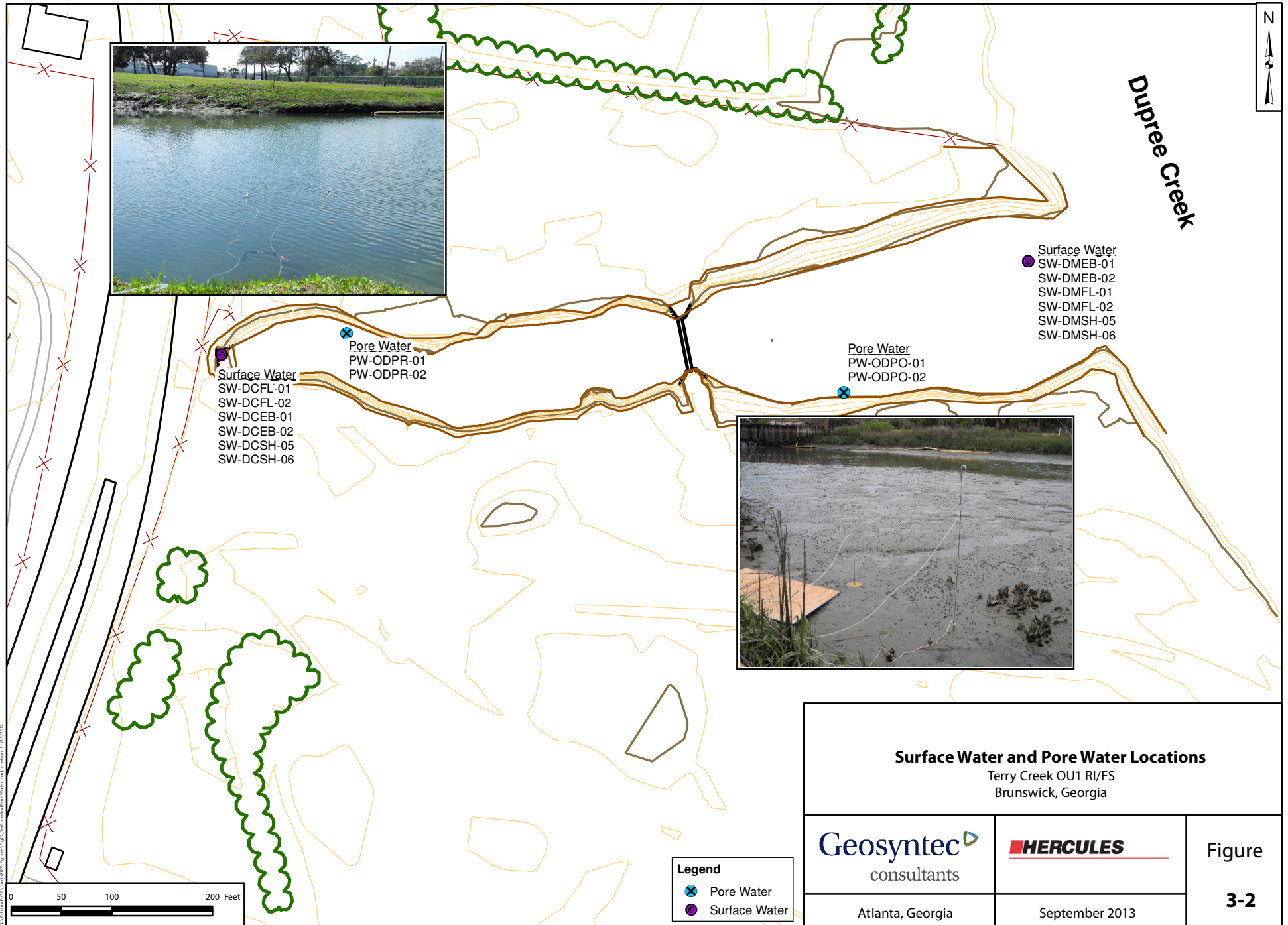


## ***Appendix M***

### ***April 2012 and August 2012 GeoSyntec Surface Water Analytical Data***









Surface Water Sample Identification  
Geosyntec Consultants - 2012

<u>ID</u>	<u>Conditions</u>
SW-DCEB-01	ebb tide, filtered
SW-DCEB-02	ebb tide, unfiltered
SW-DCEB-03	ebb tide, filtered, wet weather
SW-DCEB-04	ebb tide, unfiltered, wet weather
SW-DCFL-01	flood tide, filtered
SW-DCFL-02	flood tide, unfiltered
SW-DCFL-03	flood tide, filtered, wet weather
SW-DCFL-04	flood tide, unfiltered, wet weather
SW-DMEB-01	ebb tide, filtered
SW-DMEB-02	ebb tide, unfiltered
SW-DMEB-03	ebb tide, filtered, wet weather
SW-DMEB-04	ebb tide, unfiltered, wet weather
SW-DMFL-01	flood tide, filtered
SW-DMFL-02	flood tide, unfiltered



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Table	x_coord	y_coord	Elevation
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	4-Nitroaniline	0.47 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.47 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	4-Nitrophenol	0.47 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.47 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Benzaldehyde	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	4-Bromophenyl phenyl ether	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.11 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Heptachlor epoxide	0.0063 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.0063 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Endosulfan sulfate	0.0071 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.28 - 0.28	0.0071 UJ	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Caprolactam	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.12 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	2,4-Dimethylphenol	0.65 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.65 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	4-Chloroaniline	0.34 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.34 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	2,2-oxybis[1-chloropropane]	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Phenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.12 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	PCB-1260	0.21 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.21 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	PCB-1254	0.27 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.27 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	PCB-1268	0.27 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.27 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	PCB-1221	0.29 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.29 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	PCB-1232	0.12 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.12 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Bis(2-chloroethyl)ether	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Bis(2-chloroethoxy)methane	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Bis(2-ethylhexyl) phthalate	0.61 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.61 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Di-n-octyl phthalate	0.16 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.16 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Hexachlorobenzene	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Anthracene	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	2,4-Dichlorophenol	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	2,4-Dinitrotoluene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.11 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	PCB-1248	0.38 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.38 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	PCB-1016	0.075 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.075 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Pyrene	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Dimethyl phthalate	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Dibenzofuran	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	3 & 4 Methylphenol	0.62 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.62 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Atrazine	0.33 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.33 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Benzo[g,h,i]perylene	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Indeno[1,2,3-cd]pyrene	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Benzo[b]fluoranthene	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Fluoranthene	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Benzo[k]fluoranthene	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Acenaphthylene	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Chrysene	0.043 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.043 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Aldrin	0.0074 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.0074 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Aldrin + Dieldrin	0.017 ug/L		ESDAT Combined	REG	ESDAT Combined Cor	REG	0.28 - 0.28	0.017	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	alpha-BHC	0.006 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.006 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	beta-BHC	0.007 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.007 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	delta-BHC	0.005 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.005 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Endosulfan II	0.01 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.28 - 0.28	0.01 UJ	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	4,4-DDT	0.01 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.01 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Benzo[a]pyrene	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	alpha-Chlordane	0.0063 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.0063 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	gamma-Chlordane	0.0054 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.0054 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	2,4-Dinitrophenol	1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	1 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	4,6-Dinitro-2-methylphenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.12 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	PCB-1242	0.19 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.19 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Endrin ketone	0.0088 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.0088 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Dibenz[a,h]anthracene	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Benzo[a]anthracene	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Cyanide, Total	0.005 mg/L		9012A	U	General Chemistry	REG	0.28 - 0.28	0.005 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	gamma-BHC (Lindane)	0.0062 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.0062 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	4-Chloro-3-methylphenol	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.11 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Dieldrin	0.0096 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.0096 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	2,6-Dinitrotoluene	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.12 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	N-Nitrosodi-n-propylamine	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.12 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Hexachloroethane	0.47 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.47 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	4-Chlorophenyl phenyl ether	0.095 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Endrin	0.01 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.28 - 0.28	0.01 UJ	872642.297	424733.0503	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Lable	x_coord	y_coord	Elevation
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Methoxychlor	0.014 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.014 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	4,4-DDD	0.0068 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.0068 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	4,4-DDE	0.0081 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.0081 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Endrin aldehyde	0.017 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.017 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Aluminum	0.07 mg/L	6020A	J		Metals	REG	0.28 - 0.28	0.07 J	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Iron	0.044 mg/L	6020A	U		Metals	REG	0.28 - 0.28	0.044 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Lead	0.0021 mg/L	6020A			Metals	REG	0.28 - 0.28	0.0021	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Magnesium	52 mg/L	6020A			Metals	REG	0.28 - 0.28	52	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Manganese	0.035 mg/L	6020A			Metals	REG	0.28 - 0.28	0.035	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Mercury	0.000091 mg/L	7470A	U		Metals	REG	0.28 - 0.28	0.000091 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Nickel	0.002 mg/L	6020A	U		Metals	REG	0.28 - 0.28	0.002 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Potassium	9.6 mg/L	6020A			Metals	REG	0.28 - 0.28	9.6	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Silver	0.00018 mg/L	6020A	U		Metals	REG	0.28 - 0.28	0.00018 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Sodium	210 mg/L	6020A			Metals	REG	0.28 - 0.28	210	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Thallium	0.00025 mg/L	6020A	U		Metals	REG	0.28 - 0.28	0.00025 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Antimony	0.002 mg/L	6020A	U		Metals	REG	0.28 - 0.28	0.002 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Arsenic	0.0039 mg/L	6020A			Metals	REG	0.28 - 0.28	0.0039	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Barium	0.086 mg/L	6020A			Metals	REG	0.28 - 0.28	0.086	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Beryllium	0.00015 mg/L	6020A	U		Metals	REG	0.28 - 0.28	0.00015 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Cadmium	0.00013 mg/L	6020A	U		Metals	REG	0.28 - 0.28	0.00013 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Chromium	0.0025 mg/L	6020A	U		Metals	REG	0.28 - 0.28	0.0025 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Cobalt	0.0005 mg/L	6020A	U		Metals	REG	0.28 - 0.28	0.0005 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Copper	0.0011 mg/L	6020A	U		Metals	REG	0.28 - 0.28	0.0011 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Vanadium	0.0041 mg/L	6020A	J		Metals	REG	0.28 - 0.28	0.0041 J	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Zinc	0.0084 mg/L	6020A	U		Metals	REG	0.28 - 0.28	0.0084 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Calcium	84 mg/L	6020A			Metals	REG	0.28 - 0.28	84	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Heptachlor	0.0074 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.0074 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Hexachlorocyclopentadiene	0.47 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.47 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Selenium	0.0011 mg/L	6020A	U		Metals	REG	0.28 - 0.28	0.0011 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Isophorone	0.095 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Toxaphene, Technical	0.53 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.53 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Acenaphthene	0.095 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Diethyl phthalate	0.12 ug/L	8270D_LL	J		GC/MS Semi VOA	REG	0.28 - 0.28	0.12 J	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Di-n-butyl phthalate	0.37 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.37 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Phenanthrene	0.095 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Butyl benzyl phthalate	0.11 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.11 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	N-Nitrosodiphenylamine	0.35 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.35 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Fluorene	0.095 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Carbazole	0.095 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Hexachlorobutadiene	0.095 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Pentachlorophenol	0.38 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.38 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	2,4,6-Trichlorophenol	0.16 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.16 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	2-Nitroaniline	0.15 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.15 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	2-Nitrophenol	0.095 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Naphthalene	0.095 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	2-Methylnaphthalene	0.095 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	2-Chloronaphthalene	0.095 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	3,3-Dichlorobenzidine	1.9 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	1.9 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	1,1-Biphenyl	0.095 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	2-Methylphenol	0.7 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.7 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	2-Chlorophenol	0.11 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.11 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	2,4,5-Trichlorophenol	0.11 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.11 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Endosulfan I	0.0044 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.0044 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Acetophenone	0.95 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.95 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Nitrobenzene	0.095 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.095 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	3-Nitroaniline	0.15 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.15 U	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	DDT+DDE+DDD	0.0249 ug/L	ESDAT Combined	REG		ESDAT Combined Cor	REG	0.28 - 0.28	0.0249	872642.297	424733.0503	
SW-DCEB-01	4/4/2012	0.28	0.28	SW	Normal	Toxaphene, TAUC, Parlar 11-69	0.53 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.53 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	4-Nitroaniline	0.52 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.52 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	4-Nitrophenol	0.52 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.52 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Ethylbenzene	2.3 ug/L	8260B			GC/MS VOA	REG	0.28 - 0.28	2.3	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Styrene	0.11 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	0.11 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Benzaldehyde	0.19 ug/L	8270D_LL	J		GC/MS Semi VOA	REG	0.28 - 0.28	0.19 J	872642.297	424733.0503	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Table	x_coord	y_coord	Elevation	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	cis-1,3-Dichloropropene	0.11 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	0.11 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	trans-1,3-Dichloropropene	0.21 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	0.21 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	4-Bromophenyl phenyl ether	0.12 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.12 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Heptachlor epoxide	0.0061 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.0061 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Endosulfan sulfate	0.007 ug/L	8081B_8082A	UJ		GC Semi VOA	REG	0.28 - 0.28	0.007 UJ	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Caprolactam	0.13 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.13 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2,4-Dimethylphenol	0.71 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.71 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,4-Dichlorobenzene	0.28 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	0.28 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	4-Chloroaniline	0.37 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.37 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,2-Dibromoethane	0.25 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	0.25 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,2-Dichloroethane	0.1 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	4-Methyl-2-pentanone	1 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2,2-oxybis[1-chloropropane]	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Methylcyclohexane	0.1 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Toluene	0.33 ug/L	8260B	J		GC/MS VOA	REG	0.28 - 0.28	0.33 J	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Chlorobenzene	0.78 ug/L	8260B	J		GC/MS VOA	REG	0.28 - 0.28	0.78 J	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Phenol	0.13 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.13 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Cyclohexane	0.25 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	0.25 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	PCB-1260	0.2 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.2 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	PCB-1254	0.27 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.27 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	PCB-1268	0.27 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.27 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	PCB-1221	0.29 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.29 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	PCB-1232	0.11 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.11 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Bis(2-chloroethyl)ether	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Bis(2-chloroethoxy)methane	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Bis(2-ethylhexyl) phthalate	0.66 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.66 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Di-n-octyl phthalate	0.18 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.18 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Hexachlorobenzene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Anthracene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,2,4-Trichlorobenzene	0.25 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	0.25 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2,4-Dichlorophenol	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2,4-Dinitrotoluene	0.12 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.12 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Dibromochloromethane	0.1 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	PCB-1248	0.37 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.37 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	PCB-1016	0.073 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.073 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Tetrachloroethene	0.15 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	0.15 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Pyrene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Dimethyl phthalate	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Dibenzofuran	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Xylenes, Total	16 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28		16	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	cis-1,2-Dichloroethene	0.15 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	0.15 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	trans-1,2-Dichloroethene	0.2 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	0.2 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	3 & 4 Methylphenol	0.68 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.68 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Methyl tert-butyl ether	0.2 ug/L	8260B	U		GC/MS VOA	REG	0.28 - 0.28	0.2 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Atrazine	0.36 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.36 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Benzo[g,h,i]perylene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Indeno[1,2,3-cd]pyrene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Benzo[b]fluoranthene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Fluoranthene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Benzo[k]fluoranthene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Acenaphthylene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Chrysene	0.046 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.28 - 0.28	0.046 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Aldrin	0.0072 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.0072 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Aldrin + Dieldrin	0.0165 ug/L	ESDAT Combined			ESDAT Combined Cor	REG	0.28 - 0.28	0.0165	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	alpha-BHC	0.0058 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.0058 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	beta-BHC	0.0069 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.0069 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	delta-BHC	0.0049 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.28 - 0.28	0.0049 U	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Endosulfan II	0.01 ug/L	8081B_8082A	UJ		GC Semi VOA	REG	0.28 - 0.28	0.01 UJ	872642.297	424733.0503		
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	4,4-DDT	0.0099 ug/L	8081B_8082A	U		GC Semi VOA	REG						



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	4,6-Dinitro-2-methylphenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.13 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	PCB-1242	0.18 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.18 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Endrin ketone	0.0086 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.0086 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Dibenz(a,h)anthracene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,3-Dichlorobenzene	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.25 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Carbon tetrachloride	9 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28		9 872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Benzo[a]anthracene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Cyanide, Total	0.005 mg/L		9012A	U	General Chemistry	REG	0.28 - 0.28	0.005 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	gamma-BHC (Lindane)	0.006 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.006 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2-Hexanone	1 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	4-Chloro-3-methylphenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.12 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Dieldrin	0.0093 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.0093 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2,6-Dinitrotoluene	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.13 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	N-Nitrosodi-n-propylamine	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.13 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Acetone	6.1 ug/L		8260B	J	GC/MS VOA	REG	0.28 - 0.28	6.1 J	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Chloroform	3.3 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28		3.3 872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Hexachloroethane	0.52 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.52 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	4-Chlorophenyl phenyl ether	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Benzene	0.53 ug/L		8260B	J	GC/MS VOA	REG	0.28 - 0.28	0.53 J	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,1,1-Trichloroethane	0.5 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.5 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Endrin	0.0099 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.28 - 0.28	0.0099 UJ	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Methoxychlor	0.013 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.013 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	4,4-DDD	0.0067 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.0067 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	4,4-DDE	0.0079 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.0079 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Endrin aldehyde	0.016 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.016 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Aluminum	0.11 mg/L		6020A	U	Metals	REG	0.28 - 0.28		0.11 872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Iron	0.17 mg/L		6020A	U	Metals	REG	0.28 - 0.28		0.17 872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Lead	0.0005 mg/L		6020A	U	Metals	REG	0.28 - 0.28	0.0005 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Magnesium	54 mg/L		6020A	U	Metals	REG	0.28 - 0.28		54 872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Manganese	0.037 mg/L		6020A	U	Metals	REG	0.28 - 0.28		0.037 872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Mercury	0.000091 mg/L		7470A	U	Metals	REG	0.28 - 0.28	0.000091 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Nickel	0.002 mg/L		6020A	U	Metals	REG	0.28 - 0.28	0.002 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Potassium	10 mg/L		6020A	U	Metals	REG	0.28 - 0.28		10 872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Silver	0.00018 mg/L		6020A	U	Metals	REG	0.28 - 0.28	0.00018 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Sodium	230 mg/L		6020A	U	Metals	REG	0.28 - 0.28		230 872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Thallium	0.00025 mg/L		6020A	U	Metals	REG	0.28 - 0.28	0.00025 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Antimony	0.002 mg/L		6020A	U	Metals	REG	0.28 - 0.28	0.002 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Arsenic	0.0037 mg/L		6020A	U	Metals	REG	0.28 - 0.28		0.0037 872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Barium	0.088 mg/L		6020A	U	Metals	REG	0.28 - 0.28		0.088 872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Beryllium	0.00015 mg/L		6020A	U	Metals	REG	0.28 - 0.28	0.00015 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Cadmium	0.00013 mg/L		6020A	U	Metals	REG	0.28 - 0.28	0.00013 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Chromium	0.0025 mg/L		6020A	U	Metals	REG	0.28 - 0.28	0.0025 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Cobalt	0.0005 mg/L		6020A	U	Metals	REG	0.28 - 0.28	0.0005 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Copper	0.0012 mg/L		6020A	J	Metals	REG	0.28 - 0.28	0.0012 J	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Vanadium	0.0045 mg/L		6020A	J	Metals	REG	0.28 - 0.28	0.0045 J	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Zinc	0.0099 mg/L		6020A	J	Metals	REG	0.28 - 0.28	0.0099 J	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Calcium	84 mg/L		6020A	U	Metals	REG	0.28 - 0.28		84 872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Bromomethane	0.8 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.8 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Chloromethane	0.33 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.33 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Chloroethane	1 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Vinyl chloride	0.18 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.18 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Methylene Chloride	1 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Carbon disulfide	0.6 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.6 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Bromoform	0.5 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.5 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Bromodichloromethane	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.25 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,1-Dichloroethane	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.25 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,1-Dichloroethene	0.11 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.11 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Trichlorofluoromethane	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.25 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Dichlorodifluoromethane	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.25 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.5 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Heptachlor	0.0072 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.0072 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Hexachlorocyclopentadiene	0.52 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.52 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Selenium	0.0011 mg/L		6020A	U	Metals	REG	0.28 - 0.28	0.0011 U	872642.297	424733.0503	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Lable	x_coord	y_coord	Elevation
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Isophorone	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,2-Dichloropropane	0.13 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.13 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2-Butanone	1 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,1,2-Trichloroethane	0.13 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.13 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Trichloroethene	0.13 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.13 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Methyl acetate	0.19 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.19 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,1,2,2-Tetrachloroethane	0.18 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.18 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Toxaphene, Technical	0.51 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.51 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Acenaphthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Diethyl phthalate	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.11 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Di-n-butyl phthalate	0.4 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.4 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Phenanthrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Butyl benzyl phthalate	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.12 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	N-Nitrosodiphenylamine	0.38 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.38 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Fluorene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Carbazole	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Hexachlorobutadiene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Pentachlorophenol	0.41 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.41 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2,4,6-Trichlorophenol	0.18 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.18 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2-Nitroaniline	0.17 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.17 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2-Nitrophenol	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Naphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2-Methylnaphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2-Chloronaphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	3,3-Dichlorobenzidine	2.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	2.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,1-Biphenyl	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2-Methylphenol	0.76 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.76 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,2-Dichlorobenzene	0.21 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.21 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2-Chlorophenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.12 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	2,4,5-Trichlorophenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.12 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Endosulfan I	0.0043 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.0043 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	1,2-Dibromo-3-Chloropropane	0.44 ug/L		8260B	U	GC/MS VOA	REG	0.28 - 0.28	0.44 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Isopropylbenzene	0.91 ug/L		8260B	J	GC/MS VOA	REG	0.28 - 0.28	0.91 J	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Acetophenone	0.39 ug/L		8270D_LL	J	GC/MS Semi VOA	REG	0.28 - 0.28	0.39 J	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Nitrobenzene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.1 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	3-Nitroaniline	0.17 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.28 - 0.28	0.17 U	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	DDT+DDE+DDD	0.0245 ug/L		ESDAT Combined	REG	ESDAT Combined Corr	REG	0.28 - 0.28	0.0245	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Total Suspended Solids	5.5 mg/L		160.2		General Chemistry	REG	0.28 - 0.28	5.5	872642.297	424733.0503	
SW-DCEB-02	4/4/2012	0.28	0.28	SW	Normal	Toxaphene, TAUC, Parlar 11-69	0.51 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.28 - 0.28	0.51 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	4-Nitroaniline	0.54 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.54 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	4-Nitrophenol	0.54 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.54 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Benzaldehyde	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	4-Bromophenyl phenyl ether	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.13 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Heptachlor epoxide	0.0061 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0061 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Endosulfan sulfate	0.0069 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	1.36 - 1.36	0.0069 UJ	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Caprolactam	0.18 ug/L		8270D_LL	J	GC/MS Semi VOA	REG	1.36 - 1.36	0.18 J	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	2,4-Dimethylphenol	0.75 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.75 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	4-Chloroaniline	0.39 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.39 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	2,2-oxybis[1-chloropropane]	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Phenol	0.14 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.14 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	PCB-1260	0.2 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.2 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	PCB-1254	0.27 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.27 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	PCB-1268	0.27 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.27 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	PCB-1221	0.29 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.29 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	PCB-1232	0.11 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Bis(2-chloroethyl)ether	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Bis(2-chloroethoxy)methane	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Bis(2-ethylhexyl) phthalate	0.7 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.7 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Di-n-octyl phthalate	0.18 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.18 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Hexachlorobenzene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Anthracene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	2,4-Dichlorophenol	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	2,4-Dinitrotoluene	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.13 U	872642.297	424733.0503	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Table	x_coord	y_coord	Elevation
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	PCB-1248	0.37 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.37 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	PCB-1016	0.072 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.072 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Pyrene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Dimethyl phthalate	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Dibenzofuran	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Parlar 26	0.0025 ug/L		8276 U		GC/MS Semi VOA	REG	1.36 - 1.36	0.0025 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Parlar 62	0.025 ug/L		8276 U		GC/MS Semi VOA	REG	1.36 - 1.36	0.025 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	3 & 4 Methylphenol	0.72 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.72 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Parlar 41	0.0025 ug/L		8276 U		GC/MS Semi VOA	REG	1.36 - 1.36	0.0025 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Parlar 44	0.0025 ug/L		8276 U		GC/MS Semi VOA	REG	1.36 - 1.36	0.0025 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Parlar 40	0.0025 ug/L		8276 U		GC/MS Semi VOA	REG	1.36 - 1.36	0.0025 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Atrazine	0.38 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.38 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Benzo[g,h,i]perylene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Indeno[1,2,3-cd]pyrene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Benzo[b]fluoranthene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Fluoranthene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Benzo[k]fluoranthene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Acenaphthylene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Chrysene	0.049 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.049 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Aldrin	0.0071 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0071 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Aldrin + Dieldrin	0.0164 µg/L		ESDAT Combined		ESDAT Combined Cor	REG	1.36 - 1.36	0.0164	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	alpha-BHC	0.0058 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0058 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	beta-BHC	0.0068 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0068 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	delta-BHC	0.0049 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0049 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Endosulfan II	0.01 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	1.36 - 1.36	0.01 UJ	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	4,4-DDT	0.0099 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0099 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Benzo[a]pyrene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	alpha-Chlordane	0.0061 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0061 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	gamma-Chlordane	0.0052 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0052 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	2,4-Dinitrophenol	1.2 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	1.2 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	4,6-Dinitro-2-methylphenol	0.14 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.14 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	PCB-1242	0.18 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.18 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Endrin ketone	0.0086 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0086 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Dibenz[a,h]anthracene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Benzo[a]anthracene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Cyanide, Total	0.006 mg/L		9012A	J	General Chemistry	REG	1.36 - 1.36	0.006 J	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Hx-Sed	0.006 ug/L		8276		GC/MS Semi VOA	REG	1.36 - 1.36	0.006	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	gamma-BHC (Lindane)	0.006 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.006 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	4-Chloro-3-methylphenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.13 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Dieldrin	0.0093 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0093 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	2,6-Dinitrotoluene	0.14 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.14 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	N-Nitrosodi-n-propylamine	0.14 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.14 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Parlar 50	0.0025 ug/L		8276 U		GC/MS Semi VOA	REG	1.36 - 1.36	0.0025 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Hexachloroethane	0.54 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.54 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	4-Chlorophenyl phenyl ether	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Hp-Sed	0.0028 ug/L		8276		GC/MS Semi VOA	REG	1.36 - 1.36	0.0028	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Endrin	0.0099 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	1.36 - 1.36	0.0099 UJ	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Methoxychlor	0.013 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.013 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	4,4-DDD	0.0066 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0066 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	4,4-DDE	0.0079 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0079 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Endrin aldehyde	0.016 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.016 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Aluminum	0.05 mg/L		6020A	U	Metals	REG	1.36 - 1.36	0.05 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Iron	0.044 mg/L		6020A	U	Metals	REG	1.36 - 1.36	0.044 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Lead	0.0005 mg/L		6020A	U	Metals	REG	1.36 - 1.36	0.0005 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Magnesium	1100 mg/L		6020A	U	Metals	REG	1.36 - 1.36	1100	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Manganese	0.099 mg/L		6020A	U	Metals	REG	1.36 - 1.36	0.099	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Mercury	0.000091 mg/L		7470A	U	Metals	REG	1.36 - 1.36	0.000091 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Nickel	0.002 mg/L		6020A	U	Metals	REG	1.36 - 1.36	0.002 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Potassium	340 mg/L		6020A	U	Metals	REG	1.36 - 1.36	340	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Silver	0.00036 mg/L		6020A	U	Metals	REG	1.36 - 1.36	0.00036 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Sodium	8200 mg/L		6020A	U	Metals	REG	1.36 - 1.36	8200	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Thallium	0.00025 mg/L		6020A	U	Metals	REG	1.36 - 1.36	0.00025 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Antimony	0.004 mg/L		6020A	U	Metals	REG	1.36 - 1.36	0.004 U	872642.297	424733.0503	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Arsenic	0.0025 mg/L		6020A		Metals	REG	1.36 - 1.36	0.0025	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Barium	0.028 mg/L		6020A		Metals	REG	1.36 - 1.36	0.028	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Beryllium	0.0003 mg/L		6020A	U	Metals	REG	1.36 - 1.36	0.0003 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Cadmium	0.00026 mg/L		6020A	U	Metals	REG	1.36 - 1.36	0.00026 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Chromium	0.0025 mg/L		6020A	U	Metals	REG	1.36 - 1.36	0.0025 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Cobalt	0.0014 mg/L		6020A		Metals	REG	1.36 - 1.36	0.0014	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Copper	0.0011 mg/L		6020A	U	Metals	REG	1.36 - 1.36	0.0011 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Vanadium	0.0039 mg/L		6020A	J	Metals	REG	1.36 - 1.36	0.0039 J	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Zinc	0.014 mg/L		6020A	J	Metals	REG	1.36 - 1.36	0.014 J	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Calcium	310 mg/L		6020A		Metals	REG	1.36 - 1.36	310	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Heptachlor	0.0071 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0071 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Hexachlorocyclopentadiene	0.54 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.54 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Selenium	0.0022 mg/L		6020A	U	Metals	REG	1.36 - 1.36	0.0022 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Isophorone	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Toxaphene, Technical	0.51 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.51 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Toxaphene, 8276	0.51 ug/L		8276 U		GC/MS Semi VOA	REG	1.36 - 1.36	0.51 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Acenaphthene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Diethyl phthalate	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.12 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Di-n-butyl phthalate	0.42 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.42 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Phenanthrene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Butyl benzyl phthalate	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.13 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	N-Nitrosodiphenylamine	0.4 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.4 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Fluorene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Carbazole	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Hexachlorobutadiene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Pentachlorophenol	0.44 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.44 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	2,4,6-Trichlorophenol	0.18 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.18 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	2-Nitroaniline	0.17 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.17 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	2-Nitrophenol	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Naphthalene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	2-Methylnaphthalene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	2-Chloronaphthalene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	3,3-Dichlorobenzidine	2.2 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	2.2 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	1,1-Biphenyl	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	2-Methylphenol	0.8 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.8 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	2-Chlorophenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.13 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	2,4,5-Trichlorophenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.13 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Endosulfan I	0.0043 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0043 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Acetophenone	1.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	1.1 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Nitrobenzene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	3-Nitroaniline	0.17 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.17 U	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	DDT+DDE+DDD	0.0244 ug/L		ESDAT Combined		ESDAT Combined Cor	REG	1.36 - 1.36	0.0244	872642.297	424733.0503	
SW-DCFL-01	4/4/2012	1.36	1.36	SW	Normal	Toxaphene, TAUC, Parlar 11-69	0.51 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.51 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	4-Nitroaniline	0.51 ug/L		8270D_LL	R	GC/MS Semi VOA	REG	1.36 - 1.36	0.51 R	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	4-Nitrophenol	0.51 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.51 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Ethylbenzene	0.11 ug/L		8260B	U	GC/MS VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Styrene	0.11 ug/L		8260B	U	GC/MS VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Benzaldehyde	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	cis-1,3-Dichloropropene	0.11 ug/L		8260B	U	GC/MS VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	trans-1,3-Dichloropropene	0.21 ug/L		8260B	U	GC/MS VOA	REG	1.36 - 1.36	0.21 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	4-Bromophenyl phenyl ether	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.12 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Heptachlor epoxide	0.0057 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.0057 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Endosulfan sulfate	0.0065 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	1.36 - 1.36	0.0065 UJ	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Caprolactam	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.13 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2,4-Dimethylphenol	0.71 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.71 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,4-Dichlorobenzene	0.28 ug/L		8260B	U	GC/MS VOA	REG	1.36 - 1.36	0.28 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	4-Chloroaniline	0.37 ug/L		8270D_LL	R	GC/MS Semi VOA	REG	1.36 - 1.36	0.37 R	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,2-Dibromoethane	0.25 ug/L		8260B	U	GC/MS VOA	REG	1.36 - 1.36	0.25 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,2-Dichloroethane	0.1 ug/L		8260B	U	GC/MS VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	4-Methyl-2-pentanone	1 ug/L		8260B	U	GC/MS VOA	REG	1.36 - 1.36	1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2,2-oxybis[1-chloropropane]	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Methylcyclohexane	0.1 ug/L		8260B	U	GC/MS VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Toluene	0.33 ug/L		8260B	U	GC/MS VOA	REG	1.36 - 1.36	0.33 U	872642.297	424733.0503	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Table	x_coord	y_coord	Elevation
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Chlorobenzene	0.25 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.25 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Phenol	0.13 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.13 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Cyclohexane	0.25 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.25 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	PCB-1260	0.19 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.19 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	PCB-1254	0.25 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.25 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	PCB-1268	0.25 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.25 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	PCB-1221	0.27 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.27 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	PCB-1232	0.1 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Bis(2-chloroethyl)ether	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Bis(2-chloroethoxy)methane	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Bis(2-ethylhexyl) phthalate	0.66 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.66 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Di-n-octyl phthalate	0.17 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.17 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Hexachlorobenzene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Anthracene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,2,4-Trichlorobenzene	0.25 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.25 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2,4-Dichlorophenol	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2,4-Dinitrotoluene	0.12 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.12 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Dibromochloromethane	0.1 ug/L	8260B	UJ		GC/MS VOA	REG	1.36 - 1.36	0.1 UJ	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	PCB-1248	0.34 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.34 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	PCB-1016	0.068 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.068 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Tetrachloroethene	0.15 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.15 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Pyrene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Dimethyl phthalate	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Dibenzofuran	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Xylenes, Total	0.2 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.2 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Parlar 26	0.0026 ug/L	8276 U			GC/MS Semi VOA	REG	1.36 - 1.36	0.0026 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Parlar 62	0.026 ug/L	8276 U			GC/MS Semi VOA	REG	1.36 - 1.36	0.026 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	cis-1,2-Dichloroethene	0.15 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.15 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	trans-1,2-Dichloroethene	0.2 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.2 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	3 & 4 Methylphenol	0.68 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.68 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Methyl tert-butyl ether	0.2 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.2 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Parlar 41	0.0026 ug/L	8276 U			GC/MS Semi VOA	REG	1.36 - 1.36	0.0026 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Parlar 44	0.0026 ug/L	8276 U			GC/MS Semi VOA	REG	1.36 - 1.36	0.0026 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Parlar 40	0.0026 ug/L	8276 U			GC/MS Semi VOA	REG	1.36 - 1.36	0.0026 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Atrazine	0.36 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.36 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Benzo[g,h,i]perylene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Indeno[1,2,3-cd]pyrene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Benzo[b]fluoranthene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Fluoranthene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Benzo[k]fluoranthene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Acenaphthylene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Chrysene	0.046 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.046 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Aldrin	0.0067 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.0067 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Aldrin + Dieldrin	0.0154 ug/L	ESDAT Combined			ESDAT Combined Cor	REG	1.36 - 1.36	0.0154	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	alpha-BHC	0.0054 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.0054 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	beta-BHC	0.0064 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.0064 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	delta-BHC	0.0046 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.0046 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Endosulfan II	0.0093 ug/L	8081B_8082A	UJ		GC Semi VOA	REG	1.36 - 1.36	0.0093 UJ	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	4,4-DDT	0.0092 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.0092 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Benzo[a]pyrene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	alpha-Chlordane	0.0057 ug/L	8081B_8082A	UJ		GC Semi VOA	REG	1.36 - 1.36	0.0057 UJ	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	gamma-Chlordane	0.0049 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.0049 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2,4-Dinitrophenol	1.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	1.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	4,6-Dinitro-2-methylphenol	0.13 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.13 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	PCB-1242	0.17 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.17 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Endrin ketone	0.008 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.008 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Dibenz(a,h)anthracene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,3-Dichlorobenzene	0.25 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.25 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Carbon tetrachloride	0.5 ug/L	8260B	UJ		GC/MS VOA	REG	1.36 - 1.36	0.5 UJ	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Benzo[a]anthracene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Cyanide, Total	0.005 mg/L	9012A	U		General Chemistry	REG	1.36 - 1.36	0.005 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Hx-Sed	0.0096 ug/L	8276			GC/MS Semi VOA	REG	1.36 - 1.36	0.0096	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	gamma-BHC (Lindane)	0.0056 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.0056 U	872642.297	424733.0503	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Lable	x_coord	y_coord	Elevation
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2-Hexanone	1 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	4-Chloro-3-methylphenol	0.12 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.12 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Dieldrin	0.0087 ug/L	8081B_8082A	UJ		GC Semi VOA	REG	1.36 - 1.36	0.0087 UJ	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2,6-Dinitrotoluene	0.13 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.13 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	N-Nitrosodi-n-propylamine	0.13 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.13 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Parlar 50	0.0026 ug/L		8276 U		GC/MS Semi VOA	REG	1.36 - 1.36	0.0026 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Acetone	5 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	5 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Chloroform	0.14 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.14 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Hexachloroethane	0.51 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.51 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	4-Chlorophenyl phenyl ether	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Hp-Sed	0.0066 ug/L		8276 U		GC/MS Semi VOA	REG	1.36 - 1.36	0.0066	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Benzene	0.25 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.25 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,1,1-Trichloroethane	0.5 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.5 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Endrin	0.0092 ug/L	8081B_8082A	UJ		GC Semi VOA	REG	1.36 - 1.36	0.0092 UJ	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Methoxychlor	0.012 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.012 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	4,4-DDD	0.0062 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.0062 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	4,4-DDE	0.0073 ug/L	8081B_8082A	UJ		GC Semi VOA	REG	1.36 - 1.36	0.0073 UJ	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Endrin aldehyde	0.015 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.015 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Aluminum	0.89 mg/L	6020A			Metals	REG	1.36 - 1.36	0.89	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Iron	0.54 mg/L	6020A			Metals	REG	1.36 - 1.36	0.54	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Lead	0.0005 mg/L	6020A	U		Metals	REG	1.36 - 1.36	0.0005 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Magnesium	1100 mg/L	6020A			Metals	REG	1.36 - 1.36	1100	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Manganese	0.14 mg/L	6020A			Metals	REG	1.36 - 1.36	0.14	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Mercury	0.000091 mg/L	7470A	U		Metals	REG	1.36 - 1.36	0.000091 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Nickel	0.004 mg/L	6020A	U		Metals	REG	1.36 - 1.36	0.004 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Potassium	370 mg/L	6020A			Metals	REG	1.36 - 1.36	370	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Silver	0.00036 mg/L	6020A	U		Metals	REG	1.36 - 1.36	0.00036 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Sodium	8300 mg/L	6020A			Metals	REG	1.36 - 1.36	8300	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Thallium	0.00025 mg/L	6020A	U		Metals	REG	1.36 - 1.36	0.00025 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Antimony	0.004 mg/L	6020A	U		Metals	REG	1.36 - 1.36	0.004 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Arsenic	0.0031 mg/L	6020A	J		Metals	REG	1.36 - 1.36	0.0031 J	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Barium	0.032 mg/L	6020A			Metals	REG	1.36 - 1.36	0.032	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Beryllium	0.00015 mg/L	6020A	U		Metals	REG	1.36 - 1.36	0.00015 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Cadmium	0.00026 mg/L	6020A	U		Metals	REG	1.36 - 1.36	0.00026 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Chromium	0.005 mg/L	6020A	U		Metals	REG	1.36 - 1.36	0.005 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Cobalt	0.0012 mg/L	6020A			Metals	REG	1.36 - 1.36	0.0012	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Copper	0.0022 mg/L	6020A	U		Metals	REG	1.36 - 1.36	0.0022 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Vanadium	0.0064 mg/L	6020A	U		Metals	REG	1.36 - 1.36	0.0064 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Zinc	0.017 mg/L	6020A	U		Metals	REG	1.36 - 1.36	0.017 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Calcium	320 mg/L	6020A			Metals	REG	1.36 - 1.36	320	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Bromomethane	0.8 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.8 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Chloromethane	0.33 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.33 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Chloroethane	1 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Vinyl chloride	0.18 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.18 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Methylene Chloride	1 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Carbon disulfide	0.6 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.6 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Bromoform	0.5 ug/L	8260B	UJ		GC/MS VOA	REG	1.36 - 1.36	0.5 UJ	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Bromodichloromethane	0.25 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.25 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,1-Dichloroethane	0.25 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.25 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,1-Dichloroethene	0.11 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Trichlorofluoromethane	0.25 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.25 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Dichlorodifluoromethane	0.25 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.25 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.5 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Heptachlor	0.0067 ug/L	8081B_8082A	U		GC Semi VOA	REG	1.36 - 1.36	0.0067 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Hexachlorocyclopentadiene	0.51 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.51 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Selenium	0.0022 mg/L	6020A	U		Metals	REG	1.36 - 1.36	0.0022 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Isophorone	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,2-Dichloropropane	0.13 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.13 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2-Butanone	1 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	1 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,1,2-Trichloroethane	0.13 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.13 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Trichloroethene	0.13 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.13 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Methyl acetate	0.19 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.19 U	872642.297	424733.0503	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,1,2,2-Tetrachloroethane	0.18 ug/L	8260B	U		GC/MS VOA	REG	1.36 - 1.36	0.18 U	872642.297	424733.0503	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Table	x_coord	y_coord	Elevation	
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Toxaphene, Technical	0.48 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.48 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Toxaphene, 8276	0.48 ug/L		8276 U		GC/MS Semi VOA	REG	1.36 - 1.36	0.48 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Acenaphthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Diethyl phthalate	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.11 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Di-n-butyl phthalate	0.4 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.4 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Phenanthrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Butyl benzyl phthalate	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.12 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	N-Nitrosodiphenylamine	0.38 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.38 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Fluorene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Carbazole	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Hexachlorobutadiene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Pentachlorophenol	0.41 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.41 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2,4,6-Trichlorophenol	0.17 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.17 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2-Nitroaniline	0.16 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.16 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2-Nitrophenol	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Naphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2-Methylnaphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2-Chloronaphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	3,3-Dichlorobenzidine	2.1 ug/L		8270D_LL	R	GC/MS Semi VOA	REG	1.36 - 1.36	2.1 R	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,1-Biphenyl	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2-Methylphenol	0.76 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.76 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,2-Dichlorobenzene	0.21 ug/L		8260B	U	GC/MS VOA	REG	1.36 - 1.36	0.21 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2-Chlorophenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.12 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	2,4,5-Trichlorophenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.12 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Endosulfan I	0.004 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.004 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	1,2-Dibromo-3-Chloropropane	0.44 ug/L		8260B	UJ	GC/MS VOA	REG	1.36 - 1.36	0.44 UJ	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Isopropylbenzene	0.1 ug/L		8260B	U	GC/MS VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Acetophenone	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Nitrobenzene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	1.36 - 1.36	0.1 U	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	3-Nitroaniline	0.16 ug/L		8270D_LL	R	GC/MS Semi VOA	REG	1.36 - 1.36	0.16 R	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	DDT+DDE+DDD	0.0227 ug/L		ESDAT Combined		ESDAT Combined Cor	REG	1.36 - 1.36	0.0227	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Total Suspended Solids	30 mg/L		160.2		General Chemistry	REG	1.36 - 1.36	30	872642.297	424733.0503		
SW-DCFL-02	4/4/2012	1.36	1.36	SW	Normal	Toxaphene, TAUC, Parlar 11-69	0.48 ug/L		8081B_8082A	U	GC Semi VOA	REG	1.36 - 1.36	0.48 U	872642.297	424733.0503		
SW-DCSH-05	5/4/2012	1.4	1.4	SW	Normal	Total Suspended Solids	24 mg/L		160.2		General Chemistry	REG	1.4 - 1.4		24	872642.297	424733.0503	
SW-DCSL-06	4/4/2012	0.304	0.304	SW	Normal	Total Suspended Solids	5 mg/L		160.2	U	General Chemistry	REG	0.304 - 0.304	5 U	872642.297	424733.0503		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	4-Nitroaniline	0.51 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.51 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	4-Nitrophenol	0.51 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.51 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Benzaldehyde	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	4-Bromophenyl phenyl ether	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.12 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Heptachlor epoxide	0.0061 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0061 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Endosulfan sulfate	0.0069 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.86 - 0.86	0.0069 UJ	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Caprolactam	0.25 ug/L		8270D_LL	J	GC/MS Semi VOA	REG	0.86 - 0.86	0.25 J	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	2,4-Dimethylphenol	0.71 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.71 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	4-Chloroaniline	0.37 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.37 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	2,2-oxybis[1-chloropropane]	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Phenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.13 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	PCB-1260	0.2 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.2 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	PCB-1254	0.26 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.26 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	PCB-1268	0.26 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.26 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	PCB-1221	0.28 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.28 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	PCB-1232	0.11 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.11 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Bis(2-chloroethyl)ether	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Bis(2-chloroethoxy)methane	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Bis(2-ethylhexyl) phthalate	0.66 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.66 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Di-n-octyl phthalate	0.17 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.17 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Hexachlorobenzene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Anthracene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	2,4-Dichlorophenol	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808		
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	2,4-Dinitrotoluene	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.12 U	873443.756	424825.7808		
SW-DMEB-01	4/																	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Lable	x_coord	y_coord	Elevation
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Dibenzofuran	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Parlar 26	0.0024 ug/L		8276 U		GC/MS Semi VOA	REG	0.86 - 0.86	0.0024 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Parlar 62	0.024 ug/L		8276 U		GC/MS Semi VOA	REG	0.86 - 0.86	0.024 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	3 & 4 Methylphenol	0.68 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.68 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Parlar 41	0.0024 ug/L		8276 U		GC/MS Semi VOA	REG	0.86 - 0.86	0.0024 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Parlar 44	0.0024 ug/L		8276 U		GC/MS Semi VOA	REG	0.86 - 0.86	0.0024 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Parlar 40	0.0024 ug/L		8276 U		GC/MS Semi VOA	REG	0.86 - 0.86	0.0024 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Atrazine	0.36 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.36 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Benzo[g,h,i]perylene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Indeno[1,2,3-cd]pyrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Benzo[b]fluoranthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Fluoranthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Benzo[k]fluoranthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Acenaphthylene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Chrysene	0.046 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.046 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Aldrin	0.0071 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0071 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Aldrin + Dieldrin	0.0163 ug/L		ESDAT Combined		ESDAT Combined Cor	REG	0.86 - 0.86	0.0163	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	alpha-BHC	0.0058 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0058 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	beta-BHC	0.0068 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0068 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	delta-BHC	0.0049 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0049 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Endosulfan II	0.0099 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.86 - 0.86	0.0099 UJ	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	4,4-DDT	0.0098 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0098 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Benzo[a]pyrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	alpha-Chlordane	0.0061 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0061 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	gamma-Chlordane	0.0052 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0052 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	2,4-Dinitrophenol	1.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	1.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	4,6-Dinitro-2-methylphenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.13 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	PCB-1242	0.18 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.18 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Endrin ketone	0.0085 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0085 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Dibenz[a,h]anthracene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Benzo[a]anthracene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Cyanide, Total	0.0062 mg/L		9012A	J	General Chemistry	REG	0.86 - 0.86	0.0062 J	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Hx-Sed	0.0083 ug/L		8276		GC/MS Semi VOA	REG	0.86 - 0.86	0.0083	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	gamma-BHC (Lindane)	0.006 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.006 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	4-Chloro-3-methylphenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.12 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Dieldrin	0.0092 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0092 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	2,6-Dinitrotoluene	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.13 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	N-Nitrosodi-n-propylamine	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.13 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Parlar 50	0.0024 ug/L		8276 U		GC/MS Semi VOA	REG	0.86 - 0.86	0.0024 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Hexachloroethane	0.51 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.51 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	4-Chlorophenyl phenyl ether	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Hp-Sed	0.004 ug/L		8276		GC/MS Semi VOA	REG	0.86 - 0.86	0.004	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Endrin	0.0098 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.86 - 0.86	0.0098 UJ	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Methoxychlor	0.013 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.013 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	4,4-DDD	0.0066 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0066 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	4,4-DDE	0.0078 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0078 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Endrin aldehyde	0.016 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.016 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Aluminum	0.05 mg/L		6020A	U	Metals	REG	0.86 - 0.86	0.05 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Iron	0.044 mg/L		6020A	U	Metals	REG	0.86 - 0.86	0.044 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Lead	0.0005 mg/L		6020A	U	Metals	REG	0.86 - 0.86	0.0005 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Magnesium	980 mg/L		6020A		Metals	REG	0.86 - 0.86	980	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Manganese	0.095 mg/L		6020A		Metals	REG	0.86 - 0.86	0.095	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Mercury	0.000091 mg/L		7470A	U	Metals	REG	0.86 - 0.86	0.000091 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Nickel	0.002 mg/L		6020A	U	Metals	REG	0.86 - 0.86	0.002 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Potassium	330 mg/L		6020A		Metals	REG	0.86 - 0.86	330	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Silver	0.00018 mg/L		6020A	U	Metals	REG	0.86 - 0.86	0.00018 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Sodium	8000 mg/L		6020A		Metals	REG	0.86 - 0.86	8000	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Thallium	0.00025 mg/L		6020A	U	Metals	REG	0.86 - 0.86	0.00025 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Antimony	0.002 mg/L		6020A	U	Metals	REG	0.86 - 0.86	0.002 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Arsenic	0.0028 mg/L		6020A		Metals	REG	0.86 - 0.86	0.0028	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Barium	0.033 mg/L		6020A		Metals	REG	0.86 - 0.86	0.033	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Beryllium	0.0003 mg/L		6020A	U	Metals	REG	0.86 - 0.86	0.0003 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Cadmium	0.00017 mg/L		6020A	J	Metals	REG	0.86 - 0.86	0.00017 J	873443.756	424825.7808	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Lab	x_coord	y_coord	Elevation
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Chromium	0.0025 mg/L		6020A	U	Metals	REG	0.86 - 0.86	0.0025 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Cobalt	0.00086 mg/L		6020A		Metals	REG	0.86 - 0.86	0.00086	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Copper	0.0011 mg/L		6020A	U	Metals	REG	0.86 - 0.86	0.0011 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Vanadium	0.0042 mg/L		6020A	J	Metals	REG	0.86 - 0.86	0.0042 J	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Zinc	0.013 mg/L		6020A	J	Metals	REG	0.86 - 0.86	0.013 J	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Calcium	310 mg/L		6020A		Metals	REG	0.86 - 0.86		310	873443.756	424825.7808
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Heptachlor	0.0071 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0071 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Hexachlorocyclopentadiene	0.51 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.51 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Selenium	0.0022 mg/L		6020A	U	Metals	REG	0.86 - 0.86	0.0022 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Isophorone	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Toxaphene, Technical	0.24 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.24 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Toxaphene, 8276	0.24 ug/L		8276 U		GC/MS Semi VOA	REG	0.86 - 0.86	0.24 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Acenaphthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Diethyl phthalate	0.11 ug/L		8270D_LL	J	GC/MS Semi VOA	REG	0.86 - 0.86	0.11 J	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Di-n-butyl phthalate	0.4 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.4 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Phenanthrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Butyl benzyl phthalate	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.12 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	N-Nitrosodiphenylamine	0.38 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.38 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Fluorene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Carbazole	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Hexachlorobutadiene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Pentachlorophenol	0.41 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.41 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	2,4,6-Trichlorophenol	0.17 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.17 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	2-Nitroaniline	0.16 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.16 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	2-Nitrophenol	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Naphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	2-Methylnaphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	2-Chloronaphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	3,3-Dichlorobenzidine	2 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	2 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	1,1-Biphenyl	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	2-Methylphenol	0.76 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.76 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	2-Chlorophenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.12 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	2,4,5-Trichlorophenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.12 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Endosulfan I	0.0043 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0043 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Acetophenone	1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Nitrobenzene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	3-Nitroaniline	0.16 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.16 U	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	DDT+DDE+DDD	0.0242 ug/L		ESDAT Combined		ESDAT Combined Corr	REG	0.86 - 0.86	0.0242	873443.756	424825.7808	
SW-DMEB-01	4/4/2012	0.86	0.86	SW	Normal	Toxaphene, TAUC, Parlar 11-69	0.51 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.51 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	4-Nitroaniline	0.52 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.52 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	4-Nitrophenol	0.52 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.52 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Ethylbenzene	0.11 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.11 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Styrene	0.11 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.11 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Benzaldehyde	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	cis-1,3-Dichloropropene	0.11 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.11 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	trans-1,3-Dichloropropene	0.21 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.21 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	4-Bromophenyl phenyl ether	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.12 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Heptachlor epoxide	0.0056 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0056 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Endosulfan sulfate	0.0063 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.86 - 0.86	0.0063 UJ	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Caprolactam	0.14 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.14 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	2,4-Dimethylphenol	0.72 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.72 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,4-Dichlorobenzene	0.28 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.28 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	4-Chloroaniline	0.37 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.37 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,2-Dibromoethane	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.25 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,2-Dichloroethane	0.1 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	4-Methyl-2-pentanone	1 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	2,2-oxybis[1-chloropropane]	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Methylcyclohexane	0.1 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Toluene	0.33 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.33 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Chlorobenzene	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.25 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Phenol	0.14 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.14 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Cyclohexane	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.25 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	PCB-1260	0.19 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.19 U	873443.756	424825.7808	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Lable	x_coord	y_coord	Elevation
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	PCB-1254	0.24 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.24 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	PCB-1268	0.24 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.24 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	PCB-1221	0.26 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.26 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	PCB-1232	0.1 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Bis(2-chloroethyl)ether	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Bis(2-chloroethoxy)methane	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Bis(2-ethylhexyl) phthalate	0.67 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.67 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Di-n-octyl phthalate	0.18 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.18 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Hexachlorobenzene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Anthracene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,2,4-Trichlorobenzene	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.25 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	2,4-Dichlorophenol	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	2,4-Dinitrotoluene	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.12 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Dibromochloromethane	0.1 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	PCB-1248	0.34 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.34 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	PCB-1016	0.066 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.066 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Tetrachloroethene	0.15 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.15 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Pyrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Dimethyl phthalate	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Dibenzofuran	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Xylenes, Total	0.2 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.2 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Parlar 26	0.0026 ug/L		8276 U	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.0026 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Parlar 62	0.026 ug/L		8276 U	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.026 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	cis-1,2-Dichloroethene	0.15 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.15 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	trans-1,2-Dichloroethene	0.2 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.2 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	3 & 4 Methylphenol	0.69 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.69 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Methyl tert-butyl ether	0.2 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.2 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Parlar 41	0.0026 ug/L		8276 U	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.0026 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Parlar 44	0.0026 ug/L		8276 U	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.0026 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Parlar 40	0.0026 ug/L		8276 U	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.0026 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Atrazine	0.36 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.36 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Benzo[g,h,i]perylene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Indeno[1,2,3-cd]pyrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Benzo[b]fluoranthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Fluoranthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Benzo[k]fluoranthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Acenaphthylene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Chrysene	0.047 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.047 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Aldrin	0.0065 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0065 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Aldrin + Dieldrin	0.015 ug/L		ESDAT Combined	REG	0.86 - 0.86	0.015	873443.756	424825.7808			
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	alpha-BHC	0.0053 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0053 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	beta-BHC	0.0062 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0062 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	delta-BHC	0.0045 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0045 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Endosulfan II	0.0091 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.86 - 0.86	0.0091 UJ	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	4,4-DDT	0.009 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.009 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Benzo[a]pyrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	alpha-Chlordane	0.0056 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0056 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	gamma-Chlordane	0.0048 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0048 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	2,4-Dinitrophenol	1.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	1.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	4,6-Dinitro-2-methylphenol	0.14 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.14 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	PCB-1242	0.17 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.17 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Endrin ketone	0.0078 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0078 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Dibenz[a,h]anthracene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,3-Dichlorobenzene	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.25 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Carbon tetrachloride	0.5 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.5 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Benzo[a]anthracene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Cyanide, Total	0.005 mg/L		9012A	U	General Chemistry	REG	0.86 - 0.86	0.005 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Hx-Sed	0.0064 ug/L		8276	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.0064	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86														



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	N-Nitrosodi-n-propylamine	0.14 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.14 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Parlar 50	0.0026 ug/L		8276 U	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.0026 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Acetone	5 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	5 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Chloroform	0.14 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.14 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Hexachloroethane	0.52 ug/L		8270D_LL U	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.52 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	4-Chlorophenyl phenyl ether	0.1 ug/L		8270D_LL U	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Hp-Sed	0.0051 ug/L		8276 U	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.0051 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Benzene	0.25 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.25 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,1,1-Trichloroethane	0.5 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.5 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Endrin	0.009 ug/L		8081B_8082A UJ	UJ	GC Semi VOA	REG	0.86 - 0.86	0.009 UJ	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Methoxychlor	0.012 ug/L		8081B_8082A U	U	GC Semi VOA	REG	0.86 - 0.86	0.012 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	4,4-DDD	0.0061 ug/L		8081B_8082A U	U	GC Semi VOA	REG	0.86 - 0.86	0.0061 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	4,4-DDE	0.0072 ug/L		8081B_8082A U	U	GC Semi VOA	REG	0.86 - 0.86	0.0072 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Endrin aldehyde	0.015 ug/L		8081B_8082A U	U	GC Semi VOA	REG	0.86 - 0.86	0.015 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Aluminum	2 mg/L		6020A		Metals	REG	0.86 - 0.86	2	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Iron	1.3 mg/L		6020A		Metals	REG	0.86 - 0.86	1.3	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Lead	0.0015 mg/L		6020A U	U	Metals	REG	0.86 - 0.86	0.0015 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Magnesium	940 mg/L		6020A		Metals	REG	0.86 - 0.86	940	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Manganese	0.12 mg/L		6020A		Metals	REG	0.86 - 0.86	0.12	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Mercury	0.000091 mg/L		7470A U	U	Metals	REG	0.86 - 0.86	0.000091 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Nickel	0.002 mg/L		6020A U	U	Metals	REG	0.86 - 0.86	0.002 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Potassium	300 mg/L		6020A		Metals	REG	0.86 - 0.86	300	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Silver	0.0009 mg/L		6020A U	U	Metals	REG	0.86 - 0.86	0.0009 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Sodium	7800 mg/L		6020A		Metals	REG	0.86 - 0.86	7800	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Thallium	0.00025 mg/L		6020A U	U	Metals	REG	0.86 - 0.86	0.00025 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Antimony	0.01 mg/L		6020A U	U	Metals	REG	0.86 - 0.86	0.01 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Arsenic	0.0032 mg/L		6020A		Metals	REG	0.86 - 0.86	0.0032	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Barium	0.039 mg/L		6020A		Metals	REG	0.86 - 0.86	0.039	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Beryllium	0.0003 mg/L		6020A U	U	Metals	REG	0.86 - 0.86	0.0003 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Cadmium	0.00065 mg/L		6020A U	U	Metals	REG	0.86 - 0.86	0.00065 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Chromium	0.0034 mg/L		6020A J	J	Metals	REG	0.86 - 0.86	0.0034 J	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Cobalt	0.0015 mg/L		6020A		Metals	REG	0.86 - 0.86	0.0015	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Copper	0.0012 mg/L		6020A J	J	Metals	REG	0.86 - 0.86	0.0012 J	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Vanadium	0.0083 mg/L		6020A J	J	Metals	REG	0.86 - 0.86	0.0083 J	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Zinc	0.017 mg/L		6020A U	U	Metals	REG	0.86 - 0.86	0.017 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Calcium	280 mg/L		6020A		Metals	REG	0.86 - 0.86	280	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Bromomethane	0.8 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.8 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Chloromethane	0.33 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.33 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Chloroethane	1 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Vinyl chloride	0.18 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.18 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Methylene Chloride	1 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Carbon disulfide	0.6 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.6 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Bromoform	0.5 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.5 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Bromodichloromethane	0.25 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.25 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,1-Dichloroethane	0.25 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.25 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,1-Dichloroethene	0.11 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.11 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Trichlorofluoromethane	0.25 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.25 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Dichlorodifluoromethane	0.25 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.25 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.5 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Heptachlor	0.0065 ug/L		8081B_8082A U	U	GC Semi VOA	REG	0.86 - 0.86	0.0065 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Hexachlorocyclopentadiene	0.52 ug/L		8270D_LL U	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.52 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Selenium	0.0011 mg/L		6020A		Metals	REG	0.86 - 0.86	0.0011 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Isophorone	0.1 ug/L		8270D_LL U	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,2-Dichloropropane	0.13 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.13 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	2-Butanone	1 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,1,2-Trichloroethane	0.13 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.13 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Trichloroethene	0.13 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.13 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Methyl acetate	0.19 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.19 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,1,2,2-Tetrachloroethane	0.18 ug/L		8260B U	U	GC/MS VOA	REG	0.86 - 0.86	0.18 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Toxaphene, Technical	0.47 ug/L		8081B_8082A U	U	GC Semi VOA	REG	0.86 - 0.86	0.47 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Toxaphene, 8276	0.47 ug/L		8276 U	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.47 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Acenaphthene	0.1 ug/L		8270D_LL U	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Diethyl phthalate	0.11 ug/L		8270D_LL U	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.11 U	873443.756	424825.7808	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Lable	x_coord	y_coord	Elevation
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Di-n-butyl phthalate	0.41 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.41 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Phenanthrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Butyl benzyl phthalate	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.12 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	N-Nitrosodiphenylamine	0.38 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.38 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Fluorene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Carbazole	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Hexachlorobutadiene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Pentachlorophenol	0.42 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.42 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	2,4,6-Trichlorophenol	0.18 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.18 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	2-Nitroaniline	0.17 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.17 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	2-Nitrophenol	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Naphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	2-Methylnaphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	2-Chloronaphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	3,3-Dichlorobenzidine	2.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	2.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,1-Biphenyl	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	2-Methylphenol	0.77 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.77 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,2-Dichlorobenzene	0.21 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.21 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	2-Chlorophenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.12 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	2,4,5-Trichlorophenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.12 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Endosulfan I	0.0039 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.0039 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	1,2-Dibromo-3-Chloropropane	0.44 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.44 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Isopropylbenzene	0.1 ug/L		8260B	U	GC/MS VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Acetophenone	1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Nitrobenzene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.1 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	3-Nitroaniline	0.17 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.86 - 0.86	0.17 U	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	DDT+DDE+DDD	0.0223 ug/L		ESDAT Combined		ESDAT Combined Corr	REG	0.86 - 0.86	0.0223	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Total Suspended Solids	29 mg/L		160.2		General Chemistry	REG	0.86 - 0.86	29	873443.756	424825.7808	
SW-DMEB-02	4/4/2012	0.86	0.86	SW	Normal	Toxaphene, TAUC, Parlar 11-69	0.47 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.86 - 0.86	0.47 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	4-Nitroaniline	0.47 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.47 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	4-Nitrophenol	0.47 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.47 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Benzaldehyde	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	4-Bromophenyl phenyl ether	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Heptachlor epoxide	0.0056 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0056 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Endosulfan sulfate	0.0064 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.8 - 0.8	0.0064 UJ	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Caprolactam	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.12 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	2,4-Dimethylphenol	0.64 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.64 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	4-Chloroaniline	0.34 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.34 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	2,2-oxybis[1-chloropropane]	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Phenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.12 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	PCB-1260	0.19 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.19 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	PCB-1254	0.24 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.24 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	PCB-1268	0.24 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.24 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	PCB-1221	0.26 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.26 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	PCB-1232	0.1 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Bis(2-chloroethoxy)ether	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Bis(2-chloroethoxy)methane	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Bis(2-ethylhexyl) phthalate	0.6 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.6 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Di-n-octyl phthalate	0.16 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.16 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Hexachlorobenzene	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Anthracene	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	2,4-Dichlorophenol	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	2,4-Dinitrotoluene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	PCB-1248	0.34 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.34 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	PCB-1016	0.066 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.066 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Pyrene	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Dimethyl phthalate	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Dibenzofuran	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	3 & 4 Methylphenol	0.62 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.62 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Atrazine	0.33 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.33 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Benzo[g,h,i]perylene	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Indeno[1,2,3-cd]pyrene	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Benzo[b]fluoranthene	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Fluoranthene	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Benzo[k]fluoranthene	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Acenaphthylene	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Chrysene	0.042 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.042 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Aldrin	0.0065 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0065 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Aldrin + Dieldrin	0.015 ug/L		ESDAT Combined		ESDAT Combined Corr	REG	0.8 - 0.8	0.015	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	alpha-BHC	0.0053 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0053 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	beta-BHC	0.0063 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0063 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	delta-BHC	0.0045 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0045 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Endosulfan II	0.0092 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.8 - 0.8	0.0092 UJ	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	4,4-DDT	0.0091 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0091 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Benzo[a]pyrene	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	alpha-Chlordane	0.0056 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0056 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	gamma-Chlordane	0.0048 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0048 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	2,4-Dinitrophenol	1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	1 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	4,6-Dinitro-2-methylphenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.12 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	PCB-1242	0.17 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.17 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Endrin ketone	0.0079 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0079 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Dibenz[a,h]anthracene	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Benzo[a]anthracene	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Cyanide, Total	0.005 mg/L		9012A	U	General Chemistry	REG	0.8 - 0.8	0.005 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	gamma-BHC (Lindane)	0.0055 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0055 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	4-Chloro-3-methylphenol	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Dieldrin	0.0085 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0085 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	2,6-Dinitrotoluene	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.12 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	N-Nitrosodi-n-propylamine	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.12 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Hexachloroethane	0.47 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.47 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	4-Chlorophenyl phenyl ether	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Endrin	0.0091 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.8 - 0.8	0.0091 UJ	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Methoxychlor	0.012 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.012 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	4,4-DDD	0.0061 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0061 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	4,4-DDE	0.0072 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0072 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Endrin aldehyde	0.015 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.015 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Aluminum	0.05 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.05 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Iron	0.044 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.044 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Lead	0.0015 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.0015 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Magnesium	1100 mg/L		6020A	U	Metals	REG	0.8 - 0.8	1100	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Manganese	0.13 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.13	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Mercury	0.000091 mg/L		7470A	U	Metals	REG	0.8 - 0.8	0.000091 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Nickel	0.002 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.002 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Potassium	350 mg/L		6020A	U	Metals	REG	0.8 - 0.8	350	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Silver	0.00036 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.00036 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Sodium	8800 mg/L		6020A	U	Metals	REG	0.8 - 0.8	8800	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Thallium	0.00025 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.00025 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Antimony	0.004 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.004 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Arsenic	0.0024 mg/L		6020A	J	Metals	REG	0.8 - 0.8	0.0024 J	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Barium	0.029 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.029	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Beryllium	0.0003 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.0003 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Cadmium	0.00026 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.00026 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Chromium	0.0025 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.0025 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Cobalt	0.0012 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.0012	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Copper	0.0011 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.0011 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Vanadium	0.0042 mg/L		6020A	J	Metals	REG	0.8 - 0.8	0.0042 J	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Zinc	0.014 mg/L		6020A	J	Metals	REG	0.8 - 0.8	0.014 J	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Calcium	310 mg/L		6020A	U	Metals	REG	0.8 - 0.8	310	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Heptachlor	0.0065 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0065 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Hexachlorocyclopentadiene	0.47 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.47 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Selenium	0.0022 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.0022 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Isophorone	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Toxaphene, Technical	0.47 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.47 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Acenaphthene	0.093 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Diethyl phthalate	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012																



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Lable	x_coord	y_coord	Elevation
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Phenanthrene	0.093	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Butyl benzyl phthalate	0.11	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	N-Nitrosodiphenylamine	0.35	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.35 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Fluorene	0.093	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Carbazole	0.093	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Hexachlorobutadiene	0.093	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Pentachlorophenol	0.37	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.37 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	2,4,6-Trichlorophenol	0.16	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.16 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	2-Nitroaniline	0.15	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.15 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	2-Nitrophenol	0.093	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Naphthalene	0.093	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	2-Methylnaphthalene	0.093	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	2-Chloronaphthalene	0.093	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	3,3-Dichlorobenzidine	1.9	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	1.9 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	1,1-Biphenyl	0.093	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	2-Methylphenol	0.69	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.69 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	2-Chlorophenol	0.11	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	2,4,5-Trichlorophenol	0.11	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Endosulfan I	0.0039	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0039 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Acetophenone	0.093	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Nitrobenzene	0.093	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.093 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	3-Nitroaniline	0.15	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.15 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	DDT+DDE+DDD	0.0224	µg/L	ESDAT Combined		ESDAT Combined Cor	REG	0.8 - 0.8	0.0224	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	Toxaphene, TAUC, Parlar 11-69	0.47	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.47 U	873443.756	424825.7808	
SW-DMFL-01	4/4/2012	0.8	0.8	SW	Normal	4-Nitroaniline	0.52	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.52 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	4-Nitrophenol	0.52	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.52 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Ethylbenzene	0.11	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Styrene	0.11	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Benzaldehyde	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	cis-1,3-Dichloropropene	0.11	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	trans-1,3-Dichloropropene	0.21	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.21 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	4-Bromophenyl phenyl ether	0.13	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.13 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Heptachlor epoxide	0.0061	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0061 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Endosulfan sulfate	0.0069	ug/L	8081B_8082A	UJ	GC Semi VOA	REG	0.8 - 0.8	0.0069 UJ	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Caprolactam	0.14	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.14 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2,4-Dimethylphenol	0.72	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.72 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,4-Dichlorobenzene	0.28	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.28 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	4-Chloroaniline	0.38	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.38 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,2-Dibromoethane	0.25	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,2-Dichloroethane	0.1	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	4-Methyl-2-pentanone	1	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2,2-oxybis[1-chloropropane]	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Methylcyclohexane	0.1	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Toluene	0.33	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.33 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Chlorobenzene	0.25	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Phenol	0.14	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.14 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Cyclohexane	0.25	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	PCB-1260	0.2	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.2 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	PCB-1254	0.26	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.26 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	PCB-1268	0.26	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.26 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	PCB-1221	0.28	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.28 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	PCB-1232	0.11	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Bis(2-chloroethyl)ether	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Bis(2-chloroethoxy)methane	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Bis(2-ethylhexyl) phthalate	0.67	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.67 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Di-n-octyl phthalate	0.18	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.18 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Hexachlorobenzene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Anthracene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,2,4-Trichlorobenzene	0.25	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2,4-Dichlorophenol	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0														



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Lable	x_coord	y_coord	Elevation
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	PCB-1016	0.072	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.072 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Tetrachloroethene	0.15	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.15 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Pyrene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Dimethyl phthalate	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Dibenzofuran	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Xylenes, Total	0.2	ug/L	8260B	J	GC/MS VOA	REG	0.8 - 0.8	0.2 J	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	cis-1,2-Dichloroethene	0.15	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.15 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	trans-1,2-Dichloroethene	0.2	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.2 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	3 & 4 Methylphenol	0.69	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.69 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Methyl tert-butyl ether	0.2	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.2 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Atrazine	0.37	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.37 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Benzo[g,h,i]perylene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Indeno[1,2,3-cd]pyrene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Benzo[b]fluoranthene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Fluoranthene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Benzo[k]fluoranthene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Acenaphthylene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Chrysene	0.047	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.047 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Aldrin	0.0071	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0071 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Aldrin + Dieldrin	0.0163	ug/L	ESDAT Combined	U	ESDAT Combined Cor	REG	0.8 - 0.8	0.0163	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	alpha-BHC	0.0058	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0058 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	beta-BHC	0.0068	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0068 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	delta-BHC	0.0049	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0049 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Endosulfan II	0.0099	ug/L	8081B_8082A	UJ	GC Semi VOA	REG	0.8 - 0.8	0.0099 UJ	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	4,4-DDT	0.0098	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0098 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Benzo[a]pyrene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	alpha-Chlordane	0.0061	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0061 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	gamma-Chlordane	0.0052	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0052 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2,4-Dinitrophenol	1.2	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	1.2 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	4,6-Dinitro-2-methylphenol	0.14	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.14 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	PCB-1242	0.18	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.18 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Endrin ketone	0.0085	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0085 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Dibenz[a,h]anthracene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,3-Dichlorobenzene	0.25	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Carbon tetrachloride	0.5	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.5 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Benzo[a]anthracene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Cyanide, Total	0.005	mg/L	9012A	U	General Chemistry	REG	0.8 - 0.8	0.005 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	gamma-BHC (Lindane)	0.006	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.006 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2-Hexanone	1	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	4-Chloro-3-methylphenol	0.13	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.13 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Dieldrin	0.0092	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0092 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2,6-Dinitrotoluene	0.14	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.14 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	N-Nitrosodi-n-propylamine	0.14	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.14 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Acetone	5	ug/L	8260B	UJ	GC/MS VOA	REG	0.8 - 0.8	5 UJ	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Chloroform	0.14	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.14 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Hexachloroethane	0.52	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.52 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	4-Chlorophenyl phenyl ether	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Benzene	0.25	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,1,1-Trichloroethane	0.5	ug/L	8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.5 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Endrin	0.0098	ug/L	8081B_8082A	UJ	GC Semi VOA	REG	0.8 - 0.8	0.0098 UJ	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Methoxychlor	0.013	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.013 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	4,4-DDD	0.0066	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0066 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	4,4-DDE	0.0078	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0078 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Endrin aldehyde	0.016	ug/L	8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.016 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Aluminum	0.0029	mg/L	6020A		Metals	REG	0.8 - 0.8	0.0029	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Iron	1	mg/L	6020A		Metals	REG	0.8 - 0.8	1	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Lead	0.0015	mg/L	6020A	U	Metals	REG	0.8 - 0.8	0.0015 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Magnesium	1100	mg/L	6020A		Metals	REG	0.8 - 0.8	1100	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Manganese	0.15	mg/L	6020A		Metals	REG	0.8 - 0.8	0.15	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Mercury	0.000091	mg/L	7470A	U	Metals	REG	0.8 - 0.8	0.000091 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Nickel	0.0025	mg/L	6020A	J	Metals	REG	0.8 - 0.8	0.0025 J	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Potassium	340	mg/L	6020A		Metals	REG	0.8 - 0.8	340	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Silver	0.00036	mg/L	6020A	U	Metals	REG	0.8 - 0.8	0.00036 U	873443.756	424825.7808	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Sodium	8700 mg/L	6020A			Metals	REG	0.8 - 0.8	8700	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Thallium	0.00025 mg/L	6020A	U		Metals	REG	0.8 - 0.8	0.00025 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Antimony	0.004 mg/L	6020A	U		Metals	REG	0.8 - 0.8	0.004 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Arsenic	0.0029 mg/L	6020A	J		Metals	REG	0.8 - 0.8	0.0029 J	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Barium	0.03 mg/L	6020A			Metals	REG	0.8 - 0.8	0.03	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Beryllium	0.00015 mg/L	6020A	U		Metals	REG	0.8 - 0.8	0.00015 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Cadmium	0.00026 mg/L	6020A	U		Metals	REG	0.8 - 0.8	0.00026 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Chromium	0.0026 mg/L	6020A	J		Metals	REG	0.8 - 0.8	0.0026 J	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Cobalt	0.0013 mg/L	6020A			Metals	REG	0.8 - 0.8	0.0013	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Copper	0.0011 mg/L	6020A	U		Metals	REG	0.8 - 0.8	0.0011 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Vanadium	0.0078 mg/L	6020A	J		Metals	REG	0.8 - 0.8	0.0078 J	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Zinc	0.019 mg/L	6020A	J		Metals	REG	0.8 - 0.8	0.019 J	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Calcium	310 mg/L	6020A			Metals	REG	0.8 - 0.8	310	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Bromomethane	0.8 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.8 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Chloromethane	0.33 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.33 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Chloroethane	1 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Vinyl chloride	0.18 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.18 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Methylene Chloride	1 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Carbon disulfide	0.6 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.6 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Bromoform	0.5 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.5 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Bromodichloromethane	0.25 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,1-Dichloroethane	0.25 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,1-Dichloroethene	0.11 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Trichlorofluoromethane	0.25 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Dichlorodifluoromethane	0.25 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.5 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Heptachlor	0.0071 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.8 - 0.8	0.0071 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Hexachlorocyclopentadiene	0.52 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.52 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Selenium	0.0022 mg/L	6020A			Metals	REG	0.8 - 0.8	0.0022 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Isophorone	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,2-Dichloropropane	0.13 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.13 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2-Butanone	1 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,1,2-Trichloroethane	0.13 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.13 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Trichloroethene	0.13 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.13 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Methyl acetate	0.19 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.19 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,1,2,2-Tetrachloroethane	0.18 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.18 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Toxaphene, Technical	0.51 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.8 - 0.8	0.51 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Acenaphthene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Diethyl phthalate	0.12 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.12 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Di-n-butyl phthalate	0.41 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.41 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Phenanthrene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Butyl benzyl phthalate	0.13 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.13 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	N-Nitrosodiphenylamine	0.39 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.39 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Fluorene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Carbazole	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Hexachlorobutadiene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Pentachlorophenol	0.42 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.42 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2,4,6-Trichlorophenol	0.18 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.18 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2-Nitroaniline	0.17 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.17 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2-Nitrophenol	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Naphthalene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2-Methylnaphthalene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2-Chloronaphthalene	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	3,3-Dichlorobenzidine	2.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	2.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,1-Biphenyl	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2-Methylphenol	0.78 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.78 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,2-Dichlorobenzene	0.21 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.21 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2-Chlorophenol	0.13 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.13 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	2,4,5-Trichlorophenol	0.13 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.13 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Endosulfan I	0.0043 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.8 - 0.8	0.0043 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	1,2-Dibromo-3-Chloropropane	0.44 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.44 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Isopropylbenzene	0.1 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Acetophenone	1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	1 U	873443.756	424825.7808	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Lable	x_coord	y_coord	Elevation
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Nitrobenzene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	3-Nitroaniline	0.17 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.17 U	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	DDT+DDE+DDD	0.0242 ug/L		ESDAT Combined	REG	GC/MS VOA	REG	0.8 - 0.8	0.0242	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Total Suspended Solids	37 mg/L		160.2	U	General Chemistry	REG	0.8 - 0.8	37	873443.756	424825.7808	
SW-DMFL-02	4/4/2012	0.8	0.8	SW	Normal	Toxaphene, TAUC, Parlar 11-69	0.51 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.51 U	873443.756	424825.7808	
SW-DMSH-05	4/4/2012	1.2	1.2	SW	Normal	Total Suspended Solids	48 mg/L		160.2	U	General Chemistry	REG	1.2 - 1.2	48	873443.756	424825.7808	
SW-DMSL-06	4/4/2012	0.44	0.44	SW	Normal	Total Suspended Solids	44 mg/L		160.2	U	General Chemistry	REG	0.44 - 0.44	44	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	4-Nitroaniline	0.48 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.48 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	4-Nitrophenol	0.48 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.48 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Ethylbenzene	0.11 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Styrene	0.11 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Benzaldehyde	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	cis-1,3-Dichloropropene	0.11 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	trans-1,3-Dichloropropene	0.21 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.21 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	4-Bromophenyl phenyl ether	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Heptachlor epoxide	0.0061 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0061 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Endosulfan sulfate	0.0069 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.8 - 0.8	0.0069 UJ	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Caprolactam	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.12 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2,4-Dimethylphenol	0.66 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.66 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,4-Dichlorobenzene	0.28 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.28 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	4-Chloroaniline	0.34 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.34 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,2-Dibromoethane	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,2-Dichloroethane	0.1 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	4-Methyl-2-pentanone	1 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	1 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2,2-oxybis[1-chloropropane]	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Methylcyclohexane	0.1 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Toluene	0.33 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.33 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Chlorobenzene	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Phenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.12 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Cyclohexane	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	PCB-1260	0.2 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.2 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	PCB-1254	0.26 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.26 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	PCB-1268	0.26 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.26 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	PCB-1221	0.28 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.28 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	PCB-1232	0.11 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Bis(2-chloroethyl)ether	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Bis(2-chloroethoxy)methane	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Bis(2-ethylhexyl) phthalate	0.61 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.61 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Di-n-octyl phthalate	0.16 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.16 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Hexachlorobenzene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Anthracene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,2,4-Trichlorobenzene	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2,4-Dichlorophenol	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2,4-Dinitrotoluene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Dibromochloromethane	0.1 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	PCB-1248	0.37 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.37 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	PCB-1016	0.072 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.072 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Tetrachloroethene	0.15 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.15 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Pyrene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Dimethyl phthalate	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Dibenzofuran	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Xylenes, Total	0.24 ug/L		8260B	J	GC/MS VOA	REG	0.8 - 0.8	0.24 J	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	cis-1,2-Dichloroethene	0.15 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.15 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	trans-1,2-Dichloroethene	0.2 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.2 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	3 & 4 Methylphenol	0.63 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.63 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Methyl tert-butyl ether	0.2 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.2 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Atrazine	0.33 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.33 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Benzo[g,h,i]perylene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Indeno[1,2,3-cd]pyrene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Benzo[b]fluoranthene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Fluoranthene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Benzo[k]fluoranthene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Acenaphthylene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Lable	x_coord	y_coord	Elevation
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Chrysene	0.043 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.043 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Aldrin	0.0071 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0071 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Aldrin + Dieldrin	0.0163 ug/L		ESDAT Combined	U	ESDAT Combined	REG	0.8 - 0.8	0.0163	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	alpha-BHC	0.0058 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0058 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	beta-BHC	0.0068 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0068 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	delta-BHC	0.0049 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0049 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Endosulfan II	0.0099 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.8 - 0.8	0.0099 UJ	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	4,4-DDT	0.0098 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0098 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Benzo[a]pyrene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	alpha-Chlordane	0.0061 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0061 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	gamma-Chlordane	0.0052 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0052 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2,4-Dinitrophenol	1.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	1.1 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	4,6-Dinitro-2-methylphenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.12 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	PCB-1242	0.18 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.18 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Endrin ketone	0.0085 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0085 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Dibenz[a,h]anthracene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,3-Dichlorobenzene	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Carbon tetrachloride	0.5 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.5 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Benzo[a]anthracene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Cyanide, Total	0.005 mg/L		9012A	U	General Chemistry	REG	0.8 - 0.8	0.005 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	gamma-BHC (Lindane)	0.006 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.006 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2-Hexanone	1 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	1 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	4-Chloro-3-methylphenol	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Dieldrin	0.0092 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0092 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2,6-Dinitrotoluene	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.12 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	N-Nitrosodi-n-propylamine	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.12 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Acetone	5.1 ug/L		8260B	J	GC/MS VOA	REG	0.8 - 0.8	5.1 J	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Chloroform	0.14 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.14 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Hexachloroethane	0.48 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.48 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	4-Chlorophenyl phenyl ether	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Benzene	0.25 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,1,1-Trichloroethane	0.5 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.5 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Endrin	0.0098 ug/L		8081B_8082A	UJ	GC Semi VOA	REG	0.8 - 0.8	0.0098 UJ	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Methoxychlor	0.013 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.013 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	4,4-DDD	0.0066 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0066 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	4,4-DDE	0.0078 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.0078 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Endrin aldehyde	0.016 ug/L		8081B_8082A	U	GC Semi VOA	REG	0.8 - 0.8	0.016 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Aluminum	1.7 mg/L		6020A		Metals	REG	0.8 - 0.8	1.7	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Iron	1.1 mg/L		6020A		Metals	REG	0.8 - 0.8	1.1	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Lead	0.0005 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.0005 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Magnesium	1100 mg/L		6020A		Metals	REG	0.8 - 0.8	1100	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Manganese	0.15 mg/L		6020A		Metals	REG	0.8 - 0.8	0.15	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Mercury	0.000091 mg/L		7470A	U	Metals	REG	0.8 - 0.8	0.000091 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Nickel	0.004 mg/L		6020A	UJ	Metals	REG	0.8 - 0.8	0.004 UJ	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Potassium	320 mg/L		6020A		Metals	REG	0.8 - 0.8	320	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Silver	0.0009 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.0009 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Sodium	8800 mg/L		6020A		Metals	REG	0.8 - 0.8	8800	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Thallium	0.00025 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.00025 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Antimony	0.01 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.01 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Arsenic	0.003 mg/L		6020A	J	Metals	REG	0.8 - 0.8	0.003 J	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Barium	0.03 mg/L		6020A		Metals	REG	0.8 - 0.8	0.03	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Beryllium	0.00075 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.00075 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Cadmium	0.00065 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.00065 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Chromium	0.005 mg/L		6020A	UJ	Metals	REG	0.8 - 0.8	0.005 UJ	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Cobalt	0.0013 mg/L		6020A		Metals	REG	0.8 - 0.8	0.0013	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Copper	0.0022 mg/L		6020A	U	Metals	REG	0.8 - 0.8	0.0022 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Vanadium	0.0073 mg/L		6020A	J	Metals	REG	0.8 - 0.8	0.0073 J	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Zinc	0.017 mg/L		6020A	UJ	Metals	REG	0.8 - 0.8	0.017 UJ	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Calcium	310 mg/L		6020A		Metals	REG	0.8 - 0.8	310	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Bromomethane	0.8 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.8 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Chloromethane	0.33 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.33 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Chloroethane	1 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	1 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Vinyl chloride	0.18 ug/L		8260B	U	GC/MS VOA	REG	0.8 - 0.8	0.18 U	873443.756	424825.7808	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Lable	x_coord	y_coord	Elevation
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Methylene Chloride	1 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	1 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Carbon disulfide	0.6 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.6 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Bromoform	0.5 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.5 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Bromodichloromethane	0.25 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,1-Dichloroethane	0.25 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,1-Dichloroethene	0.11 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Trichlorofluoromethane	0.25 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Dichlorodifluoromethane	0.25 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.25 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.5 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Heptachlor	0.0071 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.8 - 0.8	0.0071 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Hexachlorocyclopentadiene	0.48 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.48 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Selenium	0.0022 mg/L	6020A	U		Metals	REG	0.8 - 0.8	0.0022 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Isophorone	0.096 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,2-Dichloropropane	0.13 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.13 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2-Butanone	1 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	1 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,1,2-Trichloroethane	0.13 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.13 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Trichloroethene	0.13 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.13 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Methyl acetate	0.19 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.19 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,1,2,2-Tetrachloroethane	0.18 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.18 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Toxaphene, Technical	0.51 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.8 - 0.8	0.51 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Acenaphthene	0.096 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Diethyl phthalate	0.11 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Di-n-butyl phthalate	0.37 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.37 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Phenanthrene	0.096 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Butyl benzyl phthalate	0.11 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	N-Nitrosodiphenylamine	0.35 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.35 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Fluorene	0.096 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Carbazole	0.096 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Hexachlorobutadiene	0.096 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Pentachlorophenol	0.38 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.38 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2,4,6-Trichlorophenol	0.16 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.16 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2-Nitroaniline	0.15 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.15 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2-Nitrophenol	0.096 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Naphthalene	0.096 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2-Methylnaphthalene	0.096 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2-Chloronaphthalene	0.096 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	3,3-Dichlorobenzidine	1.9 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	1.9 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,1-Biphenyl	0.096 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2-Methylphenol	0.71 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.71 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,2-Dichlorobenzene	0.21 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.21 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2-Chlorophenol	0.11 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	2,4,5-Trichlorophenol	0.11 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.11 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Endosulfan I	0.0043 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.8 - 0.8	0.0043 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	1,2-Dibromo-3-Chloropropane	0.44 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.44 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Isopropylbenzene	0.1 ug/L	8260B	U		GC/MS VOA	REG	0.8 - 0.8	0.1 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Acetophenone	0.096 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Nitrobenzene	0.096 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.096 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	3-Nitroaniline	0.15 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	0.8 - 0.8	0.15 U	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	DDT+DDE+DDD	0.0242 ug/L	ESDAT Combined	REG		ESDAT Combined Cor	REG	0.8 - 0.8	0.0242	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Total Suspended Solids	41 mg/L	160.2	General Chemistry	REG			0.8 - 0.8	41	873443.756	424825.7808	
SW-Dup-01	4/4/2012	0.8	0.8	SW	Field_D	Toxaphene, TAUC, Parlar 11-69	0.51 ug/L	8081B_8082A	U		GC Semi VOA	REG	0.8 - 0.8	0.51 U	873443.756	424825.7808	
SW-DCEB-03	8/21/2012			SW	Normal	4-Nitroaniline	0.51 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	-	0.51 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	4-Nitrophenol	0.51 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	-	0.51 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Benzaldehyde	0.4 ug/L	8270D_LL	J		GC/MS Semi VOA	REG	-	0.4 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	4-Bromophenyl phenyl ether	0.12 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Heptachlor epoxide	0.0062 ug/L	8081B_8082A	U		GC Semi VOA	REG	-	0.0062 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Endosulfan sulfate	0.0071 ug/L	8081B_8082A	U		GC Semi VOA	REG	-	0.0071 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Caprolactam	24 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	-	24	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	2,4-Dimethylphenol	0.7 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	-	0.7 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	4-Chloroaniline	0.36 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	-	0.36 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	2,2'-oxybis[1-chloropropane]	0.1 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Phenol	0.13 ug/L	8270D_LL	U		GC/MS Semi VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	PCB-1260	0.21 ug/L	8081B_8082A	U		GC Semi VOA	REG	-	0.21 U	872642.297	424733.0503	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DCEB-03	8/21/2012			SW	Normal	PCB-1254	0.27 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.27 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	PCB-1268	0.27 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.27 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	PCB-1221	0.29 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.29 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	PCB-1232	0.11 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.11 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Bis(2-chloroethyl)ether	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Bis(2-chloroethoxy)methane	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Bis(2-ethylhexyl) phthalate	0.65 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.65 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Di-n-octyl phthalate	0.17 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.17 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Hexachlorobenzene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Anthracene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	2,4-Dichlorophenol	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	2,4-Dinitrotoluene	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	PCB-1248	0.37 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.37 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	PCB-1016	0.074 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.074 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Pyrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Dimethyl phthalate	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Dibenzofuran	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	3 & 4 Methylphenol	0.67 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.67 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Atrazine	0.35 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.35 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Benzo[g,h,i]perylene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Indeno[1,2,3-cd]pyrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Benzo[b]fluoranthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Fluoranthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Benzo[k]fluoranthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Acenaphthylene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Chrysene	0.046 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.046 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Aldrin	0.0073 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0073 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Aldrin + Dieldrin	0.0168 ug/L		ESDAT Combined		ESDAT Combined Corr	REG	-	0.0168	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	alpha-BHC	0.0059 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0059 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	beta-BHC	0.007 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.007 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	delta-BHC	0.005 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.005 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Endosulfan II	0.01 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.01 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	4,4'-DDT	0.01 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.01 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Benzo[a]pyrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	alpha-Chlordane	0.0062 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0062 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	gamma-Chlordane	0.0053 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0053 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	2,4-Dinitrophenol	1.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	1.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	4,6-Dinitro-2-methylphenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	PCB-1242	0.19 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.19 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Endrin ketone	0.0087 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0087 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Dibenz(a,h)anthracene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Benzo[a]anthracene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	gamma-BHC (Lindane)	0.0061 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0061 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	4-Chloro-3-methylphenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Dieldrin	0.0095 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0095 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	2,6-Dinitrotoluene	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	N-Nitrosodi-n-propylamine	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Hexachloroethane	0.51 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.51 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	4-Chlorophenyl phenyl ether	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Endrin	0.01 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.01 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Methoxychlor	0.014 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.014 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	4,4'-DDD	0.0068 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0068 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	4,4'-DDE	0.008 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.008 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Endrin aldehyde	0.017 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.017 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Heptachlor	0.0073 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0073 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Hexachlorocyclopentadiene	0.51 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.51 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Isochlorone	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Toxaphene, Technical	0.52 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.52 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Acenaphthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Diethyl phthalate	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Di-n-butyl phthalate	0.39 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.39 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Phenanthrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Butyl benzyl phthalate	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DCEB-03	8/21/2012			SW	Normal	N-Nitrosodiphenylamine	0.37 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.37 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Fluorene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Carbazole	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Hexachlorobutadiene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Pentachlorophenol	0.4 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.4 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	2,4,6-Trichlorophenol	0.17 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.17 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	2-Nitroaniline	0.16 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.16 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	2-Nitrophenol	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Naphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	2-Methylnaphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	2-Chloronaphthalene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	3,3'-Dichlorobenzidine	2 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	2 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	1,1'-Biphenyl	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	2-Methylphenol	0.75 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.75 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	2-Chlorophenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	2,4,5-Trichlorophenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Endosulfan I	0.0044 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0044 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Acetophenone	0.11 ug/L		8270D_LL	J	GC/MS Semi VOA	REG	-	0.11 J	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Nitrobenzene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	3-Nitroaniline	0.16 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.16 U	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	DDT+DDE+DDD	0.0248 ug/L		ESDAT Combined		ESDAT Combined Cor	REG	-	0.0248	872642.297	424733.0503	
SW-DCEB-03	8/21/2012			SW	Normal	Toxaphene, TAUC, Parlar 11-69	0.52 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.52 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	4-Nitroaniline	0.48 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.48 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	4-Nitrophenol	0.48 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.48 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Ethylbenzene	0.4 ug/L		8260B	J	GC/MS VOA	REG	-	0.4 J	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Styrene	0.11 ug/L		8260B	U	GC/MS VOA	REG	-	0.11 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Benzaldehyde	0.43 ug/L		8270D_LL	J	GC/MS Semi VOA	REG	-	0.43 J	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	cis-1,3-Dichloropropene	0.11 ug/L		8260B	U	GC/MS VOA	REG	-	0.11 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	trans-1,3-Dichloropropene	0.21 ug/L		8260B	U	GC/MS VOA	REG	-	0.21 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	4-Bromophenyl phenyl ether	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Heptachlor epoxide	0.0056 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0056 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Endosulfan sulfate	0.0064 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0064 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Caprolactam	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2,4-Dimethylphenol	0.66 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.66 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,4-Dichlorobenzene	0.28 ug/L		8260B	U	GC/MS VOA	REG	-	0.28 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	4-Chloroaniline	0.35 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.35 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,2-Dibromoethane	0.25 ug/L		8260B	U	GC/MS VOA	REG	-	0.25 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,2-Dichloroethane	0.1 ug/L		8260B	U	GC/MS VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	4-Methyl-2-pentanone	1 ug/L		8260B	U	GC/MS VOA	REG	-	1 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2,2'-oxybis[1-chloropropane]	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Methylcyclohexane	0.1 ug/L		8260B	U	GC/MS VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Toluene	0.33 ug/L		8260B	U	GC/MS VOA	REG	-	0.33 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Chlorobenzene	0.25 ug/L		8260B	U	GC/MS VOA	REG	-	0.25 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Phenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Cyclohexane	0.25 ug/L		8260B	U	GC/MS VOA	REG	-	0.25 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	PCB-1260	0.19 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.19 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	PCB-1254	0.24 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.24 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	PCB-1268	0.24 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.24 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	PCB-1221	0.26 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.26 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	PCB-1232	0.1 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Bis(2-chloroethyl)ether	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Bis(2-chloroethoxy)methane	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Bis(2-ethylhexyl) phthalate	0.62 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.62 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Di-n-octyl phthalate	0.16 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.16 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Hexachlorobenzene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Anthracene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,2,4-Trichlorobenzene	0.25 ug/L		8260B	U	GC/MS VOA	REG	-	0.25 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2,4-Dichlorophenol	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2,4-Dinitrotoluene	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Dibromochloromethane	0.1 ug/L		8260B	U	GC/MS VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	PCB-1248	0.34 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.34 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	PCB-1016	0.067 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.067 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Tetrachloroethene	0.2 ug/L		8260B	J	GC/MS VOA	REG	-	0.2 J	872642.297	424733.0503	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DCEB-04	8/21/2012			SW	Normal	Pyrene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Dimethyl phthalate	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Dibenzofuran	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Xylenes, Total	2.5 ug/L		8260B		GC/MS VOA	REG	-		2.5	872642.297	424733.0503
SW-DCEB-04	8/21/2012			SW	Normal	cis-1,2-Dichloroethene	0.15 ug/L		8260B	U	GC/MS VOA	REG	-	0.15 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	trans-1,2-Dichloroethene	0.2 ug/L		8260B	U	GC/MS VOA	REG	-	0.2 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	3 & 4 Methylphenol	0.64 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.64 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Methyl tert-butyl ether	0.2 ug/L		8260B	U	GC/MS VOA	REG	-	0.2 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Atrazine	0.34 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.34 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Benzo[g,h,i]perylene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Indeno[1,2,3-cd]pyrene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Benzo[b]fluoranthene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Fluoranthene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Benzo[k]fluoranthene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Acenaphthylene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Chrysene	0.043 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.043 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Aldrin	0.0066 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0066 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Aldrin + Dieldrin	0.0151 ug/L		ESDAT Combined		ESDAT Combined Cor	REG	-	0.0151	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	alpha-BHC	0.0053 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0053 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	beta-BHC	0.0063 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0063 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	delta-BHC	0.0045 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0045 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Endosulfan II	0.0092 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0092 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	4,4'-DDT	0.0091 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0091 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Benzo[a]pyrene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	alpha-Chlordane	0.0056 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0056 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	gamma-Chlordane	0.0048 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0048 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2,4-Dinitrophenol	1.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	1.1 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	4,6-Dinitro-2-methylphenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	PCB-1242	0.17 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.17 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Endrin ketone	0.0079 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0079 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Dibenz[a,h]anthracene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,3-Dichlorobenzene	0.25 ug/L		8260B	U	GC/MS VOA	REG	-	0.25 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Carbon tetrachloride	0.66 ug/L		8260B	J	GC/MS VOA	REG	-	0.66 J	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Benzo[a]anthracene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Cyanide, Total	0.005 mg/L		9012A	U	General Chemistry	REG	-	0.005 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	gamma-BHC (Lindane)	0.0055 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0055 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2-Hexanone	1 ug/L		8260B	U	GC/MS VOA	REG	-	1 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	4-Chloro-3-methylphenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Dieldrin	0.0085 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0085 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2,6-Dinitrotoluene	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	N-Nitrosodi-n-propylamine	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Acetone	5 ug/L		8260B	U	GC/MS VOA	REG	-	5 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Chloroform	0.39 ug/L		8260B	J	GC/MS VOA	REG	-	0.39 J	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Hexachloroethane	0.48 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.48 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	4-Chlorophenyl phenyl ether	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Benzene	0.25 ug/L		8260B	U	GC/MS VOA	REG	-	0.25 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,1,1-Trichloroethane	0.5 ug/L		8260B	U	GC/MS VOA	REG	-	0.5 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Endrin	0.0091 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0091 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Methoxychlor	0.012 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.012 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	4,4'-DDD	0.0061 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0061 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	4,4'-DDE	0.0072 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0072 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Endrin aldehyde	0.015 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.015 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Aluminum	1.4 mg/L		6020A		Metals	REG	-	1.4	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Iron	0.94 mg/L		6020A		Metals	REG	-	0.94	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Lead	0.001 mg/L		6020A	J	Metals	REG	-	0.001 J	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Magnesium	1100 mg/L		6020A		Metals	REG	-	1100	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Manganese	0.21 mg/L		6020A		Metals	REG	-	0.21	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Mercury	0.000091 mg/L		7470A	U	Metals	REG	-	0.000091 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Nickel	0.002 mg/L		6020A	U	Metals	REG	-	0.002 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Potassium	390 mg/L		6020A		Metals	REG	-	390	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Silver	0.00036 mg/L		6020A	U	Metals	REG	-	0.00036 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Sodium	9300 mg/L		6020A		Metals	REG	-	9300	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Thallium	0.0005 mg/L		6020A	U	Metals	REG	-	0.0005 U	872642.297	424733.0503	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DCEB-04	8/21/2012			SW	Normal	Antimony	0.004 mg/L		6020A	U	Metals	REG	-	0.004 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Arsenic	0.0057 mg/L		6020A		Metals	REG	-	0.0057	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Barium	0.057 mg/L		6020A		Metals	REG	-	0.057	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Beryllium	0.0006 mg/L		6020A	U	Metals	REG	-	0.0006 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Cadmium	0.00026 mg/L		6020A	U	Metals	REG	-	0.00026 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Chromium	0.0025 mg/L		6020A	U	Metals	REG	-	0.0025 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Cobalt	0.0011 mg/L		6020A		Metals	REG	-	0.0011	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Copper	0.0015 mg/L		6020A	J	Metals	REG	-	0.0015 J	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Vanadium	0.0074 mg/L		6020A	J	Metals	REG	-	0.0074 J	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Zinc	0.025 mg/L		6020A	J	Metals	REG	-	0.025 J	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Calcium	390 mg/L		6020A		Metals	REG	-	390	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Bromomethane	0.8 ug/L		8260B	U	GC/MS VOA	REG	-	0.8 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Chloromethane	0.33 ug/L		8260B	U	GC/MS VOA	REG	-	0.33 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Chloroethane	1 ug/L		8260B	U	GC/MS VOA	REG	-	1 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Vinyl chloride	0.18 ug/L		8260B	U	GC/MS VOA	REG	-	0.18 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Methylene Chloride	1 ug/L		8260B	U	GC/MS VOA	REG	-	1 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Carbon disulfide	0.6 ug/L		8260B	U	GC/MS VOA	REG	-	0.6 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Bromoform	0.5 ug/L		8260B	U	GC/MS VOA	REG	-	0.5 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Bromodichloromethane	0.25 ug/L		8260B	U	GC/MS VOA	REG	-	0.25 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,1-Dichloroethane	0.25 ug/L		8260B	U	GC/MS VOA	REG	-	0.25 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,1-Dichloroethene	0.11 ug/L		8260B	U	GC/MS VOA	REG	-	0.11 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Trichlorofluoromethane	0.25 ug/L		8260B	U	GC/MS VOA	REG	-	0.25 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Dichlorodifluoromethane	0.25 ug/L		8260B	U	GC/MS VOA	REG	-	0.25 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 ug/L		8260B	U	GC/MS VOA	REG	-	0.5 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Heptachlor	0.0066 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0066 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Hexachlorocyclopentadiene	0.48 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.48 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Selenium	0.0022 mg/L		6020A	U	Metals	REG	-	0.0022 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Isophorone	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,2-Dichloropropane	0.13 ug/L		8260B	U	GC/MS VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2-Butanone	1 ug/L		8260B	U	GC/MS VOA	REG	-	1 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,1,2-Trichloroethane	0.13 ug/L		8260B	U	GC/MS VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Trichloroethene	0.13 ug/L		8260B	U	GC/MS VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Methyl acetate	0.19 ug/L		8260B	U	GC/MS VOA	REG	-	0.19 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,1,2,2-Tetrachloroethane	0.18 ug/L		8260B	U	GC/MS VOA	REG	-	0.18 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Toxaphene, Technical	0.47 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.47 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Acenaphthene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Diethyl phthalate	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Di-n-butyl phthalate	0.38 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.38 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Phenanthrene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Butyl benzyl phthalate	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	N-Nitrosodiphenylamine	0.36 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.36 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Fluorene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Carbazole	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Hexachlorobutadiene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Pentachlorophenol	0.38 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.38 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2,4,6-Trichlorophenol	0.16 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.16 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2-Nitroaniline	0.15 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.15 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2-Nitrophenol	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Naphthalene	0.3 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.3	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2-Methylnaphthalene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2-Chloronaphthalene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	3,3'-Dichlorobenzidine	1.9 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	1.9 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,1'-Biphenyl	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2-Methylphenol	0.71 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.71 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,2-Dichlorobenzene	0.21 ug/L		8260B	U	GC/MS VOA	REG	-	0.21 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2-Chlorophenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	2,4,5-Trichlorophenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Endosulfan I	0.0039 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0039 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	1,2-Dibromo-3-Chloropropane	0.44 ug/L		8260B	U	GC/MS VOA	REG	-	0.44 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Isopropylbenzene	0.16 ug/L		8260B	J	GC/MS VOA	REG	-	0.16 J	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Acetophenone	0.11 ug/L		8270D_LL	J	GC/MS Semi VOA	REG	-	0.11 J	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	Nitrobenzene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCEB-04	8/21/2012			SW	Normal	3-Nitroaniline	0.15 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.15 U	872642.297	424733.0503	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
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Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DCFB-04	8/21/2012			SW	Normal	DDT+DDE+DDD	0.0224	µg/L	ESDAT Combined		ESDAT Combined Cor	REG	-	0.0224	872642.297	424733.0503	
SW-DCFB-04	8/21/2012			SW	Normal	Total Suspended Solids	43	mg/L	160.2		General Chemistry	REG	-	43	872642.297	424733.0503	
SW-DCFB-04	8/21/2012			SW	Normal	Toxaphene, TAUC, Parlar 11-69	0.47	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.47 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	4-Nitroaniline	0.46	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.46 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	4-Nitrophenol	0.46	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.46 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Benzaldehyde	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	4-Bromophenyl phenyl ether	0.11	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Heptachlor epoxide	0.0055	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0055 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Endosulfan sulfate	0.0063	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0063 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Caprolactam	0.21	ug/L	8270D_LL	J	GC/MS Semi VOA	REG	-	0.21 J	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	2,4-Dimethylphenol	0.64	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.64 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	4-Chloroaniline	0.33	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.33 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	2,2'-oxybis[1-chloropropane]	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Phenol	0.12	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	PCB-1260	0.18	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.18 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	PCB-1254	0.24	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.24 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	PCB-1268	0.24	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.24 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	PCB-1221	0.26	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.26 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	PCB-1232	0.1	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Bis(2-chloroethyl)ether	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Bis(2-chloroethoxy)methane	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Bis(2-ethylhexyl) phthalate	0.59	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.59 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Di-n-octyl phthalate	0.16	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.16 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Hexachlorobenzene	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Anthracene	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	2,4-Dichlorophenol	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	2,4-Dinitrotoluene	0.11	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	PCB-1248	0.33	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.33 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	PCB-1016	0.066	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.066 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Pyrene	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Dimethyl phthalate	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Dibenzofuran	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	3 & 4 Methylphenol	0.61	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.61 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Atrazine	0.32	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.32 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Benzo[g,h,i]perylene	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Indeno[1,2,3-cd]pyrene	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Benzo[b]fluoranthene	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Fluoranthene	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Benzo[k]fluoranthene	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Acenaphthylene	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Chrysene	0.042	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.042 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Aldrin	0.0065	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0065 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Aldrin + Dieldrin	0.0149	µg/L	ESDAT Combined		ESDAT Combined Cor	REG	-	0.0149	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	alpha-BHC	0.0053	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0053 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	beta-BHC	0.0062	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0062 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	delta-BHC	0.0044	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0044 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Endosulfan II	0.0091	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0091 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	4,4'-DDT	0.009	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.009 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Benzo[a]pyrene	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	alpha-Chlordane	0.0055	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0055 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	gamma-Chlordane	0.0047	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0047 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	2,4-Dinitrophenol	1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	1 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	4,6-Dinitro-2-methylphenol	0.12	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	PCB-1242	0.17	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.17 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Endrin ketone	0.0078	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0078 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Dibenz[a,h]anthracene	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Benzo[a]anthracene	0.092	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Cyanide, Total	0.013	mg/L	9012A		General Chemistry	REG	-	0.013	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	gamma-BHC (Lindane)	0.0055	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0055 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	4-Chloro-3-methylphenol	0.11	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Dieldrin	0.0084	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0084 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	2,6-Dinitrotoluene	0.12	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	N-Nitrosodi-n-propylamine	0.12	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DCFL-03	8/21/2012			SW	Normal	Hexachloroethane	0.46 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.46 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	4-Chlorophenyl phenyl ether	0.092 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Endrin	0.009 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.009 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Methoxychlor	0.012 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.012 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	4,4'-DDD	0.006 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.006 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	4,4'-DDE	0.0071 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0071 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Endrin aldehyde	0.015 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.015 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Aluminum	0.05 mg/L		6020A	U	Metals	REG	-	0.05 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Iron	0.044 mg/L		6020A	U	Metals	REG	-	0.044 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Lead	0.0005 mg/L		6020A	U	Metals	REG	-	0.0005 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Magnesium	1200 mg/L		6020A		Metals	REG	-	1200	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Manganese	0.091 mg/L		6020A		Metals	REG	-	0.091	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Mercury	0.000091 mg/L		7470A	U	Metals	REG	-	0.000091 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Nickel	0.002 mg/L		6020A	U	Metals	REG	-	0.002 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Potassium	350 mg/L		6020A		Metals	REG	-	350	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Silver	0.00036 mg/L		6020A	U	Metals	REG	-	0.00036 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Sodium	9700 mg/L		6020A		Metals	REG	-	9700	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Thallium	0.00025 mg/L		6020A	U	Metals	REG	-	0.00025 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Antimony	0.004 mg/L		6020A	U	Metals	REG	-	0.004 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Arsenic	0.0026 mg/L		6020A		Metals	REG	-	0.0026	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Barium	0.023 mg/L		6020A		Metals	REG	-	0.023	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Beryllium	0.00015 mg/L		6020A	U	Metals	REG	-	0.00015 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Cadmium	0.00026 mg/L		6020A	U	Metals	REG	-	0.00026 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Chromium	0.0025 mg/L		6020A	U	Metals	REG	-	0.0025 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Cobalt	0.00081 mg/L		6020A		Metals	REG	-	0.00081	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Copper	0.0011 mg/L		6020A	U	Metals	REG	-	0.0011 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Vanadium	0.0048 mg/L		6020A	J	Metals	REG	-	0.0048 J	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Zinc	0.015 mg/L		6020A	J	Metals	REG	-	0.015 J	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Calcium	350 mg/L		6020A		Metals	REG	-	350	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Heptachlor	0.0065 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0065 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Hexachlorocyclopentadiene	0.46 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.46 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Selenium	0.0011 mg/L		6020A	J	Metals	REG	-	0.0011 J	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Isophorone	0.092 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Toxaphene, Technical	0.46 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.46 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Acenaphthene	0.092 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Diethyl phthalate	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Di-n-butyl phthalate	0.36 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.36 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Phenanthrene	0.092 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Butyl benzyl phthalate	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	N-Nitrosodiphenylamine	0.34 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.34 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Fluorene	0.092 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Carbazole	0.092 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Hexachlorobutadiene	0.092 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Pentachlorophenol	0.37 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.37 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	2,4,6-Trichlorophenol	0.16 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.16 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	2-Nitroaniline	0.15 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.15 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	2-Nitrophenol	0.092 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Naphthalene	0.092 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	2-Methylnaphthalene	0.092 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	2-Chloronaphthalene	0.092 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	3,3'-Dichlorobenzidine	1.8 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	1.8 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	1,1'-Biphenyl	0.092 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	2-Methylphenol	0.68 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.68 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	2-Chlorophenol	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	2,4,5-Trichlorophenol	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Endosulfan I	0.0039 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0039 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Acetophenone	0.092 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Nitrobenzene	0.092 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.092 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	3-Nitroaniline	0.15 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.15 U	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	DDT+DDE+DDD	0.0221 ug/L		ESDAT Combined	REG	ESDAT Combined Cor	REG	-	0.0221	872642.297	424733.0503	
SW-DCFL-03	8/21/2012			SW	Normal	Toxaphene, TAUC, Parlar 11-69	0.46 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.46 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	4-Nitroaniline	0.48 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.48 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	4-Nitrophenol	0.48 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.48 U	872642.297	424733.0503	



**April 2012 and August 2012 OU1 RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DCFL-04	8/21/2012			SW	Normal	Benzaldehyde	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	4-Bromophenyl phenyl ether	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Heptachlor epoxide	0.0063 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0063 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Endosulfan sulfate	0.0071 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0071 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Caprolactam	0.15 ug/L		8270D_LL	J	GC/MS Semi VOA	REG	-	0.15 J	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	2,4-Dimethylphenol	0.67 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.67 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	4-Chloroaniline	0.35 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.35 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	2,2'-oxybis[1-chloropropane]	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Phenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	PCB-1260	0.21 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.21 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	PCB-1254	0.27 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.27 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	PCB-1268	0.27 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.27 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	PCB-1221	0.29 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.29 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	PCB-1232	0.11 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.11 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Bis(2-chloroethyl)ether	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Bis(2-chloroethoxy)methane	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Bis(2-ethylhexyl) phthalate	0.62 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.62 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Di-n-octyl phthalate	0.16 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.16 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Hexachlorobenzene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Anthracene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	2,4-Dichlorophenol	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	2,4-Dinitrotoluene	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	PCB-1248	0.38 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.38 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	PCB-1016	0.074 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.074 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Pyrene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Dimethyl phthalate	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Dibenzofuran	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	3 & 4 Methylphenol	0.64 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.64 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Atrazine	0.34 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.34 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Benzo[g,h,i]perylene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Indeno[1,2,3-cd]pyrene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Benzo[b]fluoranthene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Fluoranthene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Benzo[k]fluoranthene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Acenaphthylene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Chrysene	0.043 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.043 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Aldrin	0.0073 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0073 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Aldrin + Dieldrin	0.0168 ug/L		ESDAT Combined		ESDAT Combined Cor	REG	-	0.0168	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	alpha-BHC	0.0059 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0059 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	beta-BHC	0.007 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.007 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	delta-BHC	0.005 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.005 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Endosulfan II	0.01 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.01 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	4,4'-DDT	0.01 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.01 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Benzo[a]pyrene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	alpha-Chlordane	0.0063 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0063 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	gamma-Chlordane	0.0053 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0053 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	2,4-Dinitrophenol	1.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	1.1 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	4,6-Dinitro-2-methylphenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	PCB-1242	0.19 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.19 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Endrin ketone	0.0088 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0088 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Dibenz[a,h]anthracene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Benzo[a]anthracene	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Cyanide, Total	0.0065 mg/L		9012A	J	General Chemistry	REG	-	0.0065 J	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	gamma-BHC (Lindane)	0.0062 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0062 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	4-Chloro-3-methylphenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Dieldrin	0.0095 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0095 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	2,6-Dinitrotoluene	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	N-Nitrosodi-n-propylamine	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Hexachloroethane	0.48 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.48 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	4-Chlorophenyl phenyl ether	0.096 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Endrin	0.01 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.01 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Methoxychlor	0.014 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.014 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	4,4'-DDD	0.0068 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0068 U	872642.297	424733.0503	



**April 2012 and August 2012 OU1 RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DCFL-04	8/21/2012			SW	Normal	4,4'-DDE	0.008	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.008 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Endrin aldehyde	0.017	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.017 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Aluminum	1.2	mg/L	6020A		Metals	REG	-		1.2	872642.297	424733.0503
SW-DCFL-04	8/21/2012			SW	Normal	Iron	0.85	mg/L	6020A		Metals	REG	-		0.85	872642.297	424733.0503
SW-DCFL-04	8/21/2012			SW	Normal	Lead	0.00078	mg/L	6020A	J	Metals	REG	-	0.00078 J	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Magnesium	1000	mg/L	6020A		Metals	REG	-	1000	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Manganese	0.12	mg/L	6020A		Metals	REG	-	0.12	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Mercury	0.000091	mg/L	7470A	U	Metals	REG	-	0.000091 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Nickel	0.002	mg/L	6020A	U	Metals	REG	-	0.002 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Potassium	340	mg/L	6020A		Metals	REG	-	340	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Silver	0.00072	mg/L	6020A	U	Metals	REG	-	0.00072 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Sodium	9000	mg/L	6020A		Metals	REG	-	9000	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Thallium	0.00025	mg/L	6020A	U	Metals	REG	-	0.00025 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Antimony	0.008	mg/L	6020A	U	Metals	REG	-	0.008 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Arsenic	0.0034	mg/L	6020A		Metals	REG	-	0.0034	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Barium	0.028	mg/L	6020A		Metals	REG	-	0.028	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Beryllium	0.0006	mg/L	6020A	U	Metals	REG	-	0.0006 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Cadmium	0.00052	mg/L	6020A	U	Metals	REG	-	0.00052 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Chromium	0.0025	mg/L	6020A	U	Metals	REG	-	0.0025 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Cobalt	0.0011	mg/L	6020A		Metals	REG	-	0.0011	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Copper	0.0011	mg/L	6020A	U	Metals	REG	-	0.0011 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Vanadium	0.0074	mg/L	6020A	J	Metals	REG	-	0.0074 J	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Zinc	0.017	mg/L	6020A	J	Metals	REG	-	0.017 J	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Calcium	340	mg/L	6020A		Metals	REG	-	340	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Heptachlor	0.0073	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0073 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Hexachlorocyclopentadiene	0.48	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.48 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Selenium	0.0022	mg/L	6020A	U	Metals	REG	-	0.0022 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Isophorone	0.096	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Toxaphene, Technical	0.52	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.52 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Acenaphthene	0.096	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Diethyl phthalate	0.11	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Di-n-butyl phthalate	0.38	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.38 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Phenanthrene	0.096	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Butyl benzyl phthalate	0.12	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	N-Nitrosodiphenylamine	0.36	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.36 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Fluorene	0.096	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Carbazole	0.096	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Hexachlorobutadiene	0.096	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Pentachlorophenol	0.39	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.39 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	2,4,6-Trichlorophenol	0.16	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.16 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	2-Nitroaniline	0.15	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.15 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	2-Nitrophenol	0.096	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Naphthalene	0.096	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	2-Methylnaphthalene	0.096	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	2-Chloronaphthalene	0.096	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	3,3'-Dichlorobenzidine	1.9	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	1.9 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	1,1'-Biphenyl	0.096	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	2-Methylphenol	0.71	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.71 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	2-Chlorophenol	0.12	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	2,4,5-Trichlorophenol	0.12	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Endosulfan I	0.0044	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0044 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Acetophenone	0.096	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Nitrobenzene	0.096	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.096 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	3-Nitroaniline	0.15	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.15 U	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	DDT+DDE+DDD	0.0248	µg/L	ESDAT Combined		ESDAT Combined Corr	REG	-	0.0248	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Total Suspended Solids	31	mg/L	160.2		General Chemistry	REG	-	31	872642.297	424733.0503	
SW-DCFL-04	8/21/2012			SW	Normal	Toxaphene, TAUC, Parlar 11-69	0.52	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.52 U	872642.297	424733.0503	
SW-DMEB-03	8/21/2012			SW	Normal	4-Nitroaniline	0.51	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.51 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	4-Nitrophenol	0.51	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.51 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Benzaldehyde	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	4-Bromophenyl phenyl ether	0.12	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Heptachlor epoxide	0.0065	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0065 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Endosulfan sulfate	0.0074	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0074 U	873443.756	424825.7808	



**April 2012 and August 2012 OU1 RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
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Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Lable	x_coord	y_coord	Elevation
SW-DMEB-03	8/21/2012			SW	Normal	Caprolactam	0.2 ug/L		8270D_LL	J	GC/MS Semi VOA	REG	-	0.2 J	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	2,4-Dimethylphenol	0.71 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.71 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	4-Chloroaniline	0.37 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.37 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	2,2'-oxybis[1-chloropropane]	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Phenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	PCB-1260	0.22 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.22 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	PCB-1254	0.28 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.28 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	PCB-1268	0.28 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.28 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	PCB-1221	0.3 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.3 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	PCB-1232	0.12 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.12 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Bis(2-chloroethyl)ether	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Bis(2-chloroethoxy)methane	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Bis(2-ethylhexyl) phthalate	0.65 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.65 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Di-n-octyl phthalate	0.17 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.17 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Hexachlorobenzene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Anthracene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	2,4-Dichlorophenol	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	2,4-Dinitrotoluene	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	PCB-1248	0.39 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.39 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	PCB-1016	0.077 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.077 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Pyrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Dimethyl phthalate	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Dibenzofuran	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	3 & 4 Methylphenol	0.67 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.67 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Atrazine	0.36 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.36 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Benzo[g,h,i]perylene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Indeno[1,2,3-cd]pyrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Benzo[b]fluoranthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Fluoranthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Benzo[k]fluoranthene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Acenaphthylene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Chrysene	0.046 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.046 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Aldrin	0.0076 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0076 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Aldrin + Dieldrin	0.0175 ug/L		ESDAT Combined	REG	ESDAT Combined Cor	REG	-	0.0175	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	alpha-BHC	0.0062 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0062 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	beta-BHC	0.0073 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0073 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	delta-BHC	0.0052 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0052 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Endosulfan II	0.011 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.011 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	4,4'-DDT	0.011 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.011 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Benzo[a]pyrene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	alpha-Chlordane	0.0065 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0065 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	gamma-Chlordane	0.0056 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0056 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	2,4-Dinitrophenol	1.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	1.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	4,6-Dinitro-2-methylphenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	PCB-1242	0.2 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.2 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Endrin ketone	0.0091 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0091 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Dibenz(a,h)anthracene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Benzo[a]anthracene	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Cyanide, Total	0.0094 mg/L		9012A	J	General Chemistry	REG	-	0.0094 J	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	gamma-BHC (Lindane)	0.0064 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0064 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	4-Chloro-3-methylphenol	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Dieldrin	0.0099 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0099 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	2,6-Dinitrotoluene	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	N-Nitrosodi-n-propylamine	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Hexachloroethane	0.51 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.51 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	4-Chlorophenyl phenyl ether	0.1 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.1 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Endrin	0.011 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.011 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Methoxychlor	0.014 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.014 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	4,4'-DDD	0.0071 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0071 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	4,4'-DDE	0.0084 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0084 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Endrin aldehyde	0.017 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.017 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Aluminum	0.05 mg/L		6020A	U	Metals	REG	-	0.05 U	873443.756	424825.7808	
SW-DMEB-03	8/21/2012			SW	Normal	Iron	0.044 mg/L		6020A	U	Metals	REG	-	0.044 U	873443.756	424825.7808	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DMEB-03	8/21/2012			SW	Normal	Lead	0.0005	mg/L	6020A	U	Metals	REG	-	0.0005	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Magnesium	1200	mg/L	6020A		Metals	REG	-	1200		873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Manganese	0.0091	mg/L	6020A		Metals	REG	-	0.0091		873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Mercury	0.000091	mg/L	7470A	U	Metals	REG	-	0.000091	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Nickel	0.002	mg/L	6020A	U	Metals	REG	-	0.002	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Potassium	390	mg/L	6020A		Metals	REG	-	390		873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Silver	0.00036	mg/L	6020A	U	Metals	REG	-	0.00036	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Sodium	10000	mg/L	6020A		Metals	REG	-	10000		873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Thallium	0.00025	mg/L	6020A	U	Metals	REG	-	0.00025	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Antimony	0.004	mg/L	6020A	U	Metals	REG	-	0.004	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Arsenic	0.0027	mg/L	6020A		Metals	REG	-	0.0027		873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Barium	0.016	mg/L	6020A		Metals	REG	-	0.016		873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Beryllium	0.0006	mg/L	6020A	U	Metals	REG	-	0.0006	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Cadmium	0.00026	mg/L	6020A	U	Metals	REG	-	0.00026	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Chromium	0.0025	mg/L	6020A	U	Metals	REG	-	0.0025	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Cobalt	0.00075	mg/L	6020A		Metals	REG	-	0.00075		873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Copper	0.0011	mg/L	6020A	U	Metals	REG	-	0.0011	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Vanadium	0.0044	mg/L	6020A	J	Metals	REG	-	0.0044	J	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Zinc	0.015	mg/L	6020A	J	Metals	REG	-	0.015	J	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Calcium	390	mg/L	6020A		Metals	REG	-	390		873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Heptachlor	0.0076	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0076	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Hexachlorocyclopentadiene	0.51	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.51	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Selenium	0.0044	mg/L	6020A	U	Metals	REG	-	0.0044	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Isophorone	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.1	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Toxaphene, Technical	0.54	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.54	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Acenaphthene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.1	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Diethyl phthalate	0.11	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.11	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Di-n-butyl phthalate	0.4	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.4	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Phenanthrene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.1	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Butyl benzyl phthalate	0.12	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.12	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	N-Nitrosodiphenylamine	0.38	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.38	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Fluorene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.1	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Carbazole	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.1	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Hexachlorobutadiene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.1	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Pentachlorophenol	0.41	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.41	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	2,4,6-Trichlorophenol	0.17	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.17	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	2-Nitroaniline	0.16	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.16	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	2-Nitrophenol	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.1	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Naphthalene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.1	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	2-Methylnaphthalene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.1	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	2-Chloronaphthalene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.1	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	3,3'-Dichlorobenzidine	2	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	2	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	1,1'-Biphenyl	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.1	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	2-Methylphenol	0.76	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.76	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	2-Chlorophenol	0.12	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.12	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	2,4,5-Trichlorophenol	0.12	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.12	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Endosulfan I	0.0046	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0046	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Acetophenone	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.1	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Nitrobenzene	0.1	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.1	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	3-Nitroaniline	0.16	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.16	U	873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	DDT+DDE+DDD	0.0265	ug/L	ESDAT Combined		ESDAT Combined Cor	REG	-	0.0265		873443.756	424825.7808
SW-DMEB-03	8/21/2012			SW	Normal	Toxaphene, TAUC, Parlar 11-69	0.54	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.54	U	873443.756	424825.7808
SW-DMEB-04	8/21/2012			SW	Normal	4-Nitroaniline	0.56	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.56	U	873443.756	424825.7808
SW-DMEB-04	8/21/2012			SW	Normal	4-Nitrophenol	0.56	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.56	U	873443.756	424825.7808
SW-DMEB-04	8/21/2012			SW	Normal	Benzaldehyde	0.11	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.11	U	873443.756	424825.7808
SW-DMEB-04	8/21/2012			SW	Normal	4-Bromophenyl phenyl ether	0.13	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.13	U	873443.756	424825.7808
SW-DMEB-04	8/21/2012			SW	Normal	Heptachlor epoxide	0.006	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.006	U	873443.756	424825.7808
SW-DMEB-04	8/21/2012			SW	Normal	Endosulfan sulfate	0.0068	ug/L	8081B_8082A	U	GC Semi VOA	REG	-	0.0068	U	873443.756	424825.7808
SW-DMEB-04	8/21/2012			SW	Normal	Caprolactam	0.19	ug/L	8270D_LL	J	GC/MS Semi VOA	REG	-	0.19	J	873443.756	424825.7808
SW-DMEB-04	8/21/2012			SW	Normal	2,4-Dimethylphenol	0.77	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.77	U	873443.756	424825.7808
SW-DMEB-04	8/21/2012			SW	Normal	4-Chloroaniline	0.4	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.4	U	873443.756	424825.7808
SW-DMEB-04	8/21/2012			SW	Normal	2,2'-oxybis[1-chloropropane]	0.11	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.11	U	873443.756	424825.7808
SW-DMEB-04	8/21/2012			SW	Normal	Phenol	0.14	ug/L	8270D_LL	U	GC/MS Semi VOA	REG	-	0.14	U	873443.756	424825.7808



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DMEB-04	8/21/2012			SW	Normal	PCB-1260	0.2 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.2 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	PCB-1254	0.26 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.26 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	PCB-1268	0.26 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.26 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	PCB-1221	0.28 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.28 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	PCB-1232	0.11 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Bis(2-chloroethyl)ether	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Bis(2-chloroethoxy)methane	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Bis(2-ethylhexyl) phthalate	0.71 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.71 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Di-n-octyl phthalate	0.19 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.19 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Hexachlorobenzene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Anthracene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	2,4-Dichlorophenol	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	2,4-Dinitrotoluene	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	PCB-1248	0.36 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.36 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	PCB-1016	0.071 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.071 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Pyrene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Dimethyl phthalate	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Dibenzofuran	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	3 & 4 Methylphenol	0.73 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.73 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Atrazine	0.39 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.39 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Benzo[g,h,i]perylene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Indeno[1,2,3-cd]pyrene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Benzo[b]fluoranthene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Fluoranthene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Benzo[k]fluoranthene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Acenaphthylene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Chrysene	0.05 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.05 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Aldrin	0.007 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.007 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Aldrin + Dieldrin	0.0161 ug/L		ESDAT Combined		ESDAT Combined Corr	REG	-	0.0161	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	alpha-BHC	0.0057 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0057 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	beta-BHC	0.0067 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0067 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	delta-BHC	0.0048 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0048 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Endosulfan II	0.0098 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0098 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	4,4'-DDT	0.0097 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0097 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Benzo[a]pyrene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	alpha-Chlordane	0.006 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.006 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	gamma-Chlordane	0.0051 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0051 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	2,4-Dinitrophenol	1.2 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	1.2 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	4,6-Dinitro-2-methylphenol	0.14 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.14 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	PCB-1242	0.18 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.18 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Endrin ketone	0.0084 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0084 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Dibenz(a,h)anthracene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Benzo[a]anthracene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Cyanide, Total	0.008 mg/L		9012A	J	General Chemistry	REG	-	0.008 J	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	gamma-BHC (Lindane)	0.0059 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0059 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	4-Chloro-3-methylphenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Dieldrin	0.0091 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0091 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	2,6-Dinitrotoluene	0.14 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.14 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	N-Nitrosodi-n-propylamine	0.14 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.14 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Hexachloroethane	0.56 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.56 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	4-Chlorophenyl phenyl ether	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Endrin	0.0097 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0097 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Methoxychlor	0.013 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.013 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	4,4'-DDD	0.0065 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0065 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	4,4'-DDE	0.0077 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0077 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Endrin aldehyde	0.016 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.016 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Aluminum	1.4 mg/L		6020A		Metals	REG	-	1.4	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Iron	0.96 mg/L		6020A		Metals	REG	-	0.96	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Lead	0.001 mg/L		6020A	U	Metals	REG	-	0.001 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Magnesium	1100 mg/L		6020A		Metals	REG	-	1100	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Manganese	0.034 mg/L		6020A		Metals	REG	-	0.034	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Mercury	0.00012 mg/L		7470A	J	Metals	REG	-	0.00012 J	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Nickel	0.004 mg/L		6020A	U	Metals	REG	-	0.004 U	873443.756	424825.7808	



**April 2012 and August 2012 OUI RFI Surface Water Sample Analytical Data**  
**Former Hercules Plant, Brunswick, Georgia**  
**Geosyntec Consultants**

Field_ID	Sampled_Date-Time	Sample_De	Sample_De	Matrix_Ty	Sample_Ty	OriginalChemName	Result	Result_Uni	Method_Name	QA_Flag	Method_Type	Result_Typ	Sample_Dept	Result_Label	x_coord	y_coord	Elevation
SW-DMEB-04	8/21/2012			SW	Normal	Potassium	360 mg/L		6020A		Metals	REG	-	360	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Silver	0.00072 mg/L		6020A	U	Metals	REG	-	0.00072 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Sodium	9300 mg/L		6020A		Metals	REG	-	9300	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Thallium	0.0005 mg/L		6020A	U	Metals	REG	-	0.0005 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Antimony	0.008 mg/L		6020A	U	Metals	REG	-	0.008 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Arsenic	0.0031 mg/L		6020A	J	Metals	REG	-	0.0031 J	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Barium	0.018 mg/L		6020A	J	Metals	REG	-	0.018 J	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Beryllium	0.0006 mg/L		6020A	U	Metals	REG	-	0.0006 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Cadmium	0.00052 mg/L		6020A	U	Metals	REG	-	0.00052 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Chromium	0.005 mg/L		6020A	U	Metals	REG	-	0.005 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Cobalt	0.00092 mg/L		6020A	J	Metals	REG	-	0.00092 J	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Copper	0.0022 mg/L		6020A	U	Metals	REG	-	0.0022 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Vanadium	0.013 mg/L		6020A	U	Metals	REG	-	0.013 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Zinc	0.034 mg/L		6020A	U	Metals	REG	-	0.034 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Calcium	370 mg/L		6020A		Metals	REG	-	370	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Heptachlor	0.007 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.007 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Hexachlorocyclopentadiene	0.56 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.56 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Selenium	0.0044 mg/L		6020A	U	Metals	REG	-	0.0044 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Isophorone	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Toxaphene, Technical	0.5 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.5 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Acenaphthene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Diethyl phthalate	0.12 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.12 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Di-n-butyl phthalate	0.43 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.43 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Phenanthrene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Butyl benzyl phthalate	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	N-Nitrosodiphenylamine	0.41 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.41 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Fluorene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Carbazole	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Hexachlorobutadiene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Pentachlorophenol	0.44 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.44 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	2,4,6-Trichlorophenol	0.19 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.19 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	2-Nitroaniline	0.18 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.18 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	2-Nitrophenol	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Naphthalene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	2-Methylnaphthalene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	2-Chloronaphthalene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	3,3'-Dichlorobenzidine	2.2 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	2.2 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	1,1'-Biphenyl	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	2-Methylphenol	0.82 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.82 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	2-Chlorophenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	2,4,5-Trichlorophenol	0.13 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.13 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Endosulfan I	0.0042 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.0042 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Acetophenone	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Nitrobenzene	0.11 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.11 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	3-Nitroaniline	0.18 ug/L		8270D_LL	U	GC/MS Semi VOA	REG	-	0.18 U	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	DDT+DDE+DDD	0.0239 ug/L		ESDAT Combined		ESDAT Combined Corr	REG	-	0.0239	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Total Suspended Solids	43 mg/L		160.2		General Chemistry	REG	-	43	873443.756	424825.7808	
SW-DMEB-04	8/21/2012			SW	Normal	Toxaphene, TAUC, Parlar 11-69	0.5 ug/L		8081B_8082A	U	GC Semi VOA	REG	-	0.5 U	873443.756	424825.7808	