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		Hercules Incorporated – Aqualon Division Hopewell, Virginia

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Stephen Spence, Ashland, Inc.

SIGNED:

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If enclosures are not as noted, kindly notify us at once.

Corrective Measures Study Report

Facility Lead Corrective Action

Prepared for:

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Aqualon Division
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Hopewell, Virginia 23860-5245

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LIST OF ACRONYMS

AOC – Area of Concern

bgs – below ground surface

BERA – Baseline Ecological Risk Assessment

CMI – Corrective Measures Implementation

CMS – Corrective Measures Study

COI – Constituent of Interest

COPC – Constituent of Potential Concern

CPEC – Constituent of Potential Ecological Concern

EE – Ecological Evaluation

EI – Environmental Indicator

EPC – Exposure Point Concentration

ESL – Ecological Screening Level

ESV – Ecological Screening Value

LF – Old Landfill and Landfill #156

HASP – Health and Safety Plan

HHRA – Human Health Risk Assessment

HI – Hazard Index

HQ – Hazard Quotient

HRWTF – Hopewell Regional Wastewater Treatment Facility

HSA – Hollow Stem Auger

IRIS – Integrated Risk Information System

LTM – Long-Term Monitoring

MCL – Maximum Contaminant Level

mgd – million gallons per day

mg/L – milligrams per liter

MHB – Main Holding Basin

NAT – Natrosol Lagoon

NFA – No Further Action

ppm – parts per million

QAPP – Quality Assurance Project Plan

QA/QC – Quality Assurance / Quality Control RAB – Reten Aqualon Basin

RBC – Risk-Based Concentration

RBSL – Risk Based Screening Level

RCRA – Resource Conservation and Recovery Act

RFA – RCRA Facility Assessment

RFI – RCRA Facility Investigation

RSL – Regional Screening Level

SAP – Sampling and Analysis Plan

SCV – Secondary Chronic Value

SDB – Sludge Drying Beds

SISR – Site Investigation Summary Report

SLERA – Screening Level Ecological Risk Assessment

SVOC – Semi-Volatile Organic Compound

SWMU – Solid Waste Management Unit

TCLP – Toxicity Characteristic Leaching Potential

TIC – Tentatively Identified Compound

UECA – Uniform Environmental Covenants Act

UCL – Upper Confidence Limit

ug/dL – micrograms per deciliter

ug/L – microgram per liter

USEPA – United States Environmental Protection Agency

VDEQ – Virginia Department of Environmental Quality

VFSP – Vacuum Filter Sludge Pile

VOC – Volatile Organic Compound

VPDES – Virginia Pollution Discharge Elimination System

VRP –Voluntary Remediation Program

WQC – Water Quality Criteria

WQS – Water Quality Standard

WWL – Whitewater Lagoon

1.0 INTRODUCTION

This Corrective Measures Study (CMS) Report has been prepared on behalf of Hercules Incorporated (Hercules) (a wholly owned subsidiary of Ashland, Inc.) for the Ashland Specialty Functional Ingredients (formerly Hercules) facility (Facility) located at 1111 Hercules Road in Hopewell, Virginia. In 2000, Hercules and the United States Environmental Protection Agency (USEPA) entered into a Facility Lead Agreement for the implementation of Corrective Action under the Resource Conservation and Recovery Act (RCRA).

The most recent submittal for the site was the November 2011 *Final RCRA Facility Investigation (RFI) Summary Report* which was appended by the Human Health Risk Assessment (HHRA) and the Baseline Ecological Risk Assessment (BERA). The results of the HHRA indicated that there are no unacceptable risks or hazards to workers, trespassers or recreational users at and near the facility. The results of the BERA did not indicate a potential for adverse effects due to site-related chemicals. In a letter dated March 27, 2012, the USEPA approved the *Final RFI Summary Report* and risk assessments, agreeing that there are no unacceptable risks or hazards associated with site-related constituents, and requested the submittal of the CMS.

1.1 Corrective Measures Study Purpose and Objective

The CMS Report is intended to focus on the overall corrective measures strategy for the site. Given that the USEPA agreed that there are no unacceptable risks or hazards associated with site-related constituents given current and reasonably anticipated future land use, this report will not outline or evaluate various remedial alternatives for the site. Rather, the CMS Report will present the approach for the proposed long-term monitoring (LTM) plan for the site.

On October 9, 2012, Hercules submitted a CMS Outline to the USEPA. Following a conference call between Hercules, GES and the USEPA, the CMS Outline was approved by the USEPA in an email from Mr. Michael Jacobi on November 20, 2012.

1.2 Corrective Measures Study Organization

The CMS Report was developed in accordance with the USEPA-approved CMS Outline as well as the USEPA CMS Scope of Work guidance to the extent practical given the proposed remedy (i.e., LTM).

The CMS Report is presented in the following sections:

- Section 2 contains a description of current site conditions including a description of the history of activities conducted at the Facility and a summary of the results of previous investigations. Documentation of the 2012 well

replacements/repairs and groundwater sampling activities is also included in this section.

- Section 3 presents the constituents of potential concern (COPC) identified in the risk assessments.
- Section 4 describes the potential receptors and exposure pathways for the site.
- Section 5 presents the established media cleanup objectives.
- Section 6 describes the site conceptual geochemical model for the site.
- Section 7 identifies and describes the corrective action alternative considered for the Facility.
- Section 8 presents a summary of the proposed corrective measure evaluation process using USEPA's threshold criteria.
- Section 9 describes the proposed reporting schedule for the Facility.
- Section 10 presents the references used in this CMS Report.

All of the work conducted to date at the site has been previously documented in the following reports and/or deliverables (see **Table 1**) submitted to the USEPA:

- *Facility Lead Corrective Action Agreement Workplan* (October 2001);
- *Hydrogeologic Evaluation* (June 2002);
- *Environmental Indicators* (September 2004);
- *Phase I/II RFI Report* (September 2005);
- *Phase III Site Investigation Summary Report (SISR)* (November 2007);
- *Interim Tentatively Identified Compounds (TIC) Submittals* (December 2009 and July 2010); and
- *Final RFI Summary Report* (appended by the HHRA and BERA) (November 2011).

For further details regarding the information summarized herein, the reader is directed to the previously submitted documents.

2.0 DESCRIPTION OF CURRENT CONDITIONS

2.1 Site Location and Use

Hercules operates the Ashland Specialty Ingredients chemical manufacturing facility in the City of Hopewell, Virginia. **Figure 1** shows the location of the site on the USGS topographic quadrangle map for Hopewell, Virginia. Located on a 390-acre site in the eastern portion of the City, the Facility reacts several different chemicals with purified cellulose and sodium hydroxide precursor to manufacture lines of chemicals known as cellulose derivatives. The site was initially part of a DuPont guncotton manufacturing facility which operated from 1912 through the World War I era. Hercules first acquired part of the current site in 1926 to manufacture purified cotton cellulose for use in the chemical and paper industry. Today, Hercules operates four derivatives lines and provides its chemical products to a variety of end-users in the food, cosmetics, paint, and pharmaceutical industries.

As described in Section 2.3 of the November 2007 *Phase III SISR*, the current and future reasonably anticipated land use for the Facility is industrial. In addition, the Facility will formalize institutional controls for the maintenance of the industrial land use designation through use of notifications on the deed for the property. Such a deed notification will be implemented under Corrective Measures. It should be noted that the Virginia Department of Environmental Quality (VDEQ) advised Hercules to file a deed restriction for the Main Holding Basin (MHB) as a final requirement to receive a Certificate of No Further Action (NFA). This was completed in December 1999. Additional information regarding the future institutional controls intended for the site is included in **Section 7.5**.

2.2 Site History

In 2000, Hercules and USEPA entered into a Facility Lead Agreement for the implementation of Corrective Action under RCRA. The October 2001 *Facility Lead Corrective Action Agreement Workplan* identified 34 solid waste management units (SWMUs) at the Facility. Upon completion of the review of the operational histories and current status of the units, 24 SWMUs were designated as needing NFA as detailed in **Table 2** and depicted on **Figure 2**. Specific unit descriptions and supporting evidence for the NFA designations can be found in the October 2001 *Facility Lead Corrective Action Agreement Workplan* previously submitted to and approved by USEPA.

The remaining ten (10) SWMUs were designated as needing further investigative activities. Since the Reten/Aqualon Basin (RAB) was identified under two separate SWMU numbers; there were only nine (9) physical units for evaluation. Two (2) additional SWMUs (SWMU #16 – Solid Waste Incinerator, or SWI, and SWMU #34 – Teepee Incinerator, or TPI) were subsequently granted NFA status following further assessment as documented in the November 2007 *Phase III SISR*. The following

SWMUs were retained for evaluation in the human health and ecological risk assessments for the site:

- SWMU #3: Eastern Whitewater Lagoon (WWL);
- SWMU #4: Western Whitewater Lagoon (WWL);
- SWMU #5: Old Landfill and Landfill #156 (LF);
- SWMU #7: Natrosol Lagoon (NAT);
- SWMU #8 and #29: Reten/Aqualon Basin (RAB);
- SWMU #14: Sludge Drying Beds (SDB); and
- SWMU #15: Vacuum Filter Sludge Pile (VFSP).

Figure 2 depicts the location of the seven (7) remaining SWMUs as well as the locations of SWMUs granted NFA status and various other existing site features on the Hercules site. Groundwater associated with the MHB (SWMU #1) was also retained for further assessment as detailed in Section 4.1.7 of the November 2007 *Phase III SISR*. In addition, the various surface water bodies within (i.e., West Bear Creek, East Bear Creek and the Unnamed Tributary) and adjacent to the site (i.e., Bailey Creek and Cattail Creek) were characterized and the data were incorporated into the risk assessments.

2.3 Environmental Setting

The following sections describe the regional and site-specific physiographic, geologic, and hydrogeologic conditions pertinent to the site. Much of the information was summarized from the various investigative reports that have been previously prepared for the Facility; see the references list in **Section 10.0** for further information.

The site has been utilized for industrial uses for more than 100 years. As previously indicated, information supporting the Hercules property's current and future industrial land use designation was provided in Section 2.3 of the November 2007 *Phase III SISR*.

2.3.1 Site Physiography

The site is situated in the eastern portion of the City of Hopewell, Virginia, which lies within the Coastal Plain Physiographic Province. The surface topography is characterized by rolling uplands and valleys that slope towards the James River to the northeast of the site. A series of terraces, formed by the transgression and regression of a marine environment, are situated parallel to the James River in the Hopewell area. These terraces have been modified extensively by fluvial processes.

The main portion of the Facility is located on one of these terraces. Surface drainage generally flows to the south or east to one of a series of small channels which dissect the edge of the flat terrace. The channels drain steeply towards Cattail Creek and Bailey Creek, which form the site's southern and eastern property boundaries. The confluence of the two (2) creeks is located just south of the site. Bailey Creek continues to the northeast for approximately two (2) miles until eventually emptying into the James River.

2.3.2 Description of General Geology and Hydrogeology

2.3.2.1 Regional Geology

Based on review of the available literature, the regional geology is described as consisting of Pliocene and Pleistocene terrace deposits underlain by marine sediments. The Hopewell area is located on the second youngest terrace, which reflects the characteristics of a fluvially deposited feature. The terrace deposit (Quaternary) consists of gravel beds/lenses, sand, silt, and clay that become more coarse with depth. This surface deposit is part of the Columbia aquifer, which is unconfined in the area. The area terrace deposits are underlain by the Tertiary Yorktown, Virginia St. Mary's, and Nanjemoy formations.

These Tertiary deposits overlie the Aqua formation, which is a massive, fine to very fine sand. However, the upper portion of the Aqua formation is marked by the presence of the Marlboro clay unit, a 10- to 12-foot thick unit of gray to red clay. According to the literature, all of these units have been identified at locations to the south of Bailey Creek.

To the north of Bailey Creek, the literature indicates that the presence of the Marlboro clay is uncertain, and neither the Yorktown nor Virginia St. Mary's formations are present. This area has been eroded to the point where the Aqua formation is also no longer present, and the terrace deposits lie on the Cretaceous Potomac formation, or the middle Potomac confining unit. This confining unit consists of silty and sandy micaceous clays, locally interbedded with very thin sands or sandy clays.

2.3.2.2 Local Hydrogeology

Review of the various boring logs and related reports indicate that the surface stratigraphy below the topographic highs at the Facility is composed of a fairly thick sequence (10 to 30 feet) of silty clay/clay, which is underlain by a layer of gray silty sand. The silty sand layer ranges in thickness from 10 to 20 feet and forms the uppermost aquifer at the site. The aquifer is underlain by a second silty-clay to clay layer, which ranges in thickness from approximately 15 to 20 feet, and appears to be laterally continuous across the majority of the site. With the exception of monitoring well LF-2 along Cattail Creek, where the clay was not observed, isolated lenses of silt and sand have been observed within the clay.

Deeper borings that have penetrated this clay layer have encountered a second sand/gravel aquifer beneath the clay. Based on the data presented in the February 1992 *Groundwater Quality Assessment Program* and April 1993 *Groundwater*

Quality Assessment Program, the hydraulic conductivity of the lower clay unit is at least three (3) orders of magnitude lower than the upper sand aquifer (WESTON, 1993), which suggests that the clay serves as an aquatard between the upper and lower sand units. Three (3) cross-sections (A-A', B-B', and C-C') exhibit the relationship of the major stratigraphic units described above (**Figure 3**).

In general, groundwater from the upper sand discharges to surface water where it overlies the upper clay formation. Historical surface water elevations (see Figure 1-2 in the September 2005 *Phase I/II RFI Report*) confirm this groundwater/surface water relationship. As provided in the *Final RFI Summary Report*, a generalized groundwater contour map was developed based on the groundwater elevations (April/May 2011) measured in the shallow wells screened in the upper sand unit (see **Figure 4**). As depicted on **Figure 4**, groundwater in the shallow sand mimics topography to a large extent. The groundwater elevation for the wells installed downgradient (to the east) of the former Sludge Drying Beds indicate that there is a localized "mound" in the vicinity of the drying beds. The groundwater flow in this area is controlled by the deeply incised swales to the northwest, southwest, and to the east (Bailey Creek) of the SWMU.

Given the separation between the water level in the Whitewater (Eastern and Western) and Natrosol Lagoons, and the depth of water in the wells (NAT-2, NAT-3, NAT-4, WWL-1, and WWL-2) adjacent to these surface impoundments, it appears that the surficial clay is retarding vertical groundwater movement from the lagoons to the upper sand.

Vertical hydraulic gradients can also be observed and quantified using the well couplets (5 and 8 series wells) at the site. The data collected as part of the 2011 Phase III field investigation indicate that the groundwater moves from the lower sand unit through the clay and into the shallow sand unit. Historical data presented in the 1993 WESTON *Groundwater Quality Assessment Program – Field Investigation Report* support this observation.

Further information on the site-specific geology and hydrogeology is contained in the June 2002 *Hydrogeologic Evaluation* previously submitted to USEPA. A compilation of the boring logs and well construction diagrams for the site was included as Attachment A to the November 2007 *Phase III SISR*.

2.3.2.3 Surface Water Bodies

As shown on **Figure 2**, five (5) surface water bodies (Cattail Creek, Bailey Creek, East and West Bear Creeks, and Unnamed Tributary) are situated adjacent to and downgradient of the various SWMUs being evaluated as part of Corrective Action. West Bear Creek and East Bear Creek extend through the site, southwest of the NAT and RAB. The Unnamed Tributary extends along the western boundary of the site. Cattail Creek and Bailey Creek form the southern property boundary with Bailey Creek extending north along the facility's eastern property boundary.

As described in **Section 2.3.1**, surface drainage generally flows to the south or east to one of a series of small channels which dissect the edge of the flat terrace formation at the site. The channels drain steeply towards Cattail Creek and Bailey Creek. The confluence of the two (2) creeks is located just south of the site. Bailey Creek continues to the northeast for approximately two (2) miles until eventually emptying into the James River.

Based upon groundwater/surface water elevation data, Cattail and Bailey Creeks are the ultimate discharge points for groundwater from both the upper and lower aquifers beneath the facility. Based on this information, the "existing area of contaminated groundwater" is located entirely on the Facility site within the upper silty sand aquifer, or discharges into the onsite streams. The potential for vertical migration is limited by the pervasive marine clay layer, and the potential for lateral migration is limited by Bailey and Cattail Creeks.

2.4 Investigative History and Regulatory Background

2.4.1 Phase I and II Investigations

The October 2001 *Facility Lead Corrective Action Agreement Workplan* contained the documents necessary to implement the first phase of field investigation. The Phase I Investigation was conducted in December 2001 and a limited summary of the sampling results from the Phase I Investigation was provided to the USEPA in the February 2002 *SWMU Summary Information Report – Phase I Investigation*.

In 2002, Hercules prepared and submitted the *Phase II Sampling and Analysis Plan (SAP)* outlining a proposed second phase of field investigation. The Phase II Investigation was conducted in November 2002 and a limited summary of the sampling results from the Phase II Investigation was provided to the USEPA in the April 2003 *SWMU Summary Information Report – Phase II Investigation*.

Based largely on the information obtained from the first two (2) phases of field investigation, the Facility's two (2) Environmental Indicators (EIs), *Current Human Exposures Under Control* and *Migration of Contaminated Groundwater Under Control*, were prepared in September 2004. The evaluation of the two (2) EIs resulted in "Yes" determinations, indicating USEPA's agreement that potential human exposures and contaminated groundwater were "under control" at the Facility.

In September 2005, Hercules prepared and submitted the *Phase I/II RFI Report* to formally document the results of the first two (2) phases of field investigations. The USEPA provided written comments to the *Phase I/II RFI Report* in August 2006. Hercules incorporated USEPA recommendations into the April 2007 *Phase III SAP – Revision No. 1* (Phase III SAP) and included those recommendations as part of the subsequent field investigation. Responses to the USEPA's comments were later incorporated into the November 2007 *Phase III SISR*.

2.4.2 Phase III Investigation

In April 2007, Hercules prepared and submitted the *Phase III SAP*, which was an addendum to the original October 2001 *Facility Lead Corrective Action Agreement Workplan.* The April 2007 *Phase III SAP* incorporated responses to comments received in March 2007 from the USEPA on the originally submitted *Phase III SAP (*GES, February 2007*).* The revised *Phase III SAP* outlined a proposed third phase of field investigation and included an updated Quality Assurance Project Plan (QAPP) and Health & Safety Plan (HASP). The USEPA subsequently approved the *Phase III SAP* in a letter dated April 25, 2007.

The Phase III Investigation was conducted in May and June 2007. In November 2007, Hercules submitted the *Phase III SISR* which documented the results of the third phase of field investigation and incorporated USEPA's written comments on the September 2005 *Phase I/II RFI Report*. The *Phase III SISR* also included the results of the Ecological Evaluation (EE) and the Screening Level Ecological Risk Assessment (SLERA) report as an attachment. The USEPA provided Hercules with written comments on the *Phase III SISR* in May 2008. Following a meeting with the USEPA in October 2008, Hercules submitted the *Final Response to Comments on the Phase III SISR* in December 2008.

In September 2009, the USEPA provided Hercules with additional technical comments on the December 2008 *Final Response to Comments on the Phase III SISR*. Following Hercules' submittal of draft responses to USEPA's comments and a meeting with USEPA, Hercules submitted the *Final Response to Comments on the Final Response to USEPA's Comments on the Phase III SISR* in November 2009. The response to comments document was subsequently approved by USEPA in December 2009.

2.4.3 Supplemental Phase III Investigation

As indicated in the May 2008 comments on the *Phase III SISR*, the USEPA requested additional sampling from several SWMUs. Hercules prepared and submitted the *Workplan for Additional Sample Collection* in March 2009. Following Workplan approval by the USEPA, Hercules conducted the field activities in late March 2009. The results of those field activities were presented in Section 3.4 of the November 2011 *Final RFI Summary Report*.

2.4.4 TIC Evaluation

As indicated in the May 2008 comments on the *Phase III SISR*, the USEPA requested additional characterization of the unknown TICs detected at the site during the 2007 Phase III Investigation. In December 2009, Hercules submitted the *Interim TIC Submittal* for USEPA's review prior to completion of the human health and ecological risk assessments for the site. The USEPA subsequently requested third-party review of the TICs identified in the December 2009 submittal. Following the third-party review, in July 2010, Hercules prepared and submitted a *Supplemental Interim TIC Submittal* that outlined the path forward with respect to the incorporation

of the TICs into the risk assessments for the site. The USEPA approved the proposed path forward in July 2010.

Additional information regarding the TIC evaluation was included in the HHRA and BERA, included as Attachments A and B, respectively, to the November 2011 *Final RFI Summary Report*.

2.4.5 2011 Site-Wide Groundwater Sampling Event and Geochemical Evaluation

In April and May 2011, Hercules collected a comprehensive round of groundwater samples from the site monitoring well network in order to evaluate the spatial and temporal data trends of the dissolved-phase plumes at the site. In addition to the collection of dissolved data, Hercules also collected soil data for geochemical/geotechnical analysis. The sampling events were described in detail in Section 3.5 of the November 2011 *Final RFI Summary Report* and the results of the geochemical evaluation were included in Section 9.0. Additional detail regarding the site conceptual geochemical model is provided in **Section 6.0** of this report.

2.4.6 Human Health and Ecological Risk Assessments

In 2011, risk evaluations were conducted for the remaining SWMUs and areas of interest (i.e., surface water bodies) by incorporating all of the site-wide validated Phase III Investigation data (along with limited Phase I Investigation data). The HHRA and BERA were appended to the November 2011 *Final RFI Summary Report*. The USEPA approved the risk assessments in the March 27, 2012 *Final RFI Summary Report* approval letter in which the agency agreed that no unacceptable human health risks/ hazards or potential for adverse ecological effects exist at the site and no further investigation is necessary.

Additional detail regarding the COPCs, potential receptors and exposure pathways evaluated as part of the HHRA and BERA is included in **Sections 3.0 and 4.0** to this report.

2.5 Retained SWMU Summary

The following sections present additional background information regarding the seven (7) SWMUs and the two (2) areas of interest (MHB and surface water bodies) that were included in the quantitative risk assessments. The locations of these SWMUs and areas are shown on **Figure 2**.

2.5.1 Eastern and Western Whitewater Lagoons (WWL) – SWMUs #3 and #4

2.5.1.1 SWMU Background

The Eastern and Western WWL consist of two (2) unlined surface impoundments (see **Figure 2**). The *RCRA Facility Assessment (RFA)* reported that the lagoons were constructed during the early to mid-1950s. However, the lagoons do not show on plant topographical maps until 1962. The two (2) lagoons lie adjacent to one another, and are joined by a pipe at their southern ends. The lagoons were used primarily for

disposal of whitewater, a waste stream from the Chemical Cotton Process. Starting in approximately 1976, the Eastern WWL also received waste-activated sludge from the Facility's Bioplant.

2.5.1.2 Summary of Previous Field Investigations

The four (4) monitoring wells associated with the WWL were installed in November 2002 as part of the Phase II Investigation. Two (2) monitoring wells (WWL-1 and WWL-2) were installed immediately downgradient of each of the lagoons, and one (1) nested pair of wells (WWL-3U and WWL-3L) was installed along the eastern side of the Eastern WWL to evaluate the potential influence from the adjacent MHB. As indicated in the *Final RFI Summary Report*, groundwater associated with the WWL has been the subject of investigation since 2002.

The Eastern and Western WWL were further evaluated in the HHRA and BERA, included as Attachments A and B, respectively, to the *Final RFI Summary Report*. The results of the HHRA and BERA indicated that there are no unacceptable risks or hazards to human health or ecological receptors associated with the Eastern and Western WWLs.

The WWL monitoring wells were sampled again in 2012 as part of an additional site-wide sampling event as well as in June and November 2013 as the start of a semi-annual sampling schedule. The results of the 2012 site-wide sampling event are presented in **Section 2.6** of this report. An annual groundwater monitoring report for 2013 will be prepared and submitted to USEPA which will include the results for both semi-annual sampling events.

2.5.2 Old Landfill and Landfill #156 (LF) – SWMU #5

2.5.2.1 SWMU Background

Landfill #156 was a permitted solid waste landfill which was operational from 1972 to 1988. The Old Landfill is the adjacent area to the east which was used for waste disposal dating back to the 1930's. The location of SWMU #5 is shown on **Figure 2**. The VADEQ agreed in 1989 that Landfill #156 had been properly closed.

2.5.2.2 Summary of Previous Field Investigations

The five (5) LF monitoring wells (LF-1 through LF-5) were installed in November 2002 as part of the Phase II Investigation. Four (4) of the monitoring wells (LF-1, 2, 3 and 4) were installed immediately downgradient of the waste-containing areas. As indicated in the *Final RFI Summary Report*, groundwater associated with the LF has been the subject of investigation since 2002. A landfill soil cover evaluation was also conducted during the 2007 Phase III Investigation and additional soil sampling was conducted during the 2009 Supplemental Phase III Investigation.

The LF areas were further evaluated in the HHRA and BERA, included as Attachments A and B, respectively, to the *Final RFI Summary Report*. The results of the HHRA and BERA indicated that there are no unacceptable risks or hazards to human health or ecological receptors associated with the LF areas.

The LF monitoring wells were sampled again in 2012 as part of an additional site-wide sampling event as well as in June and November 2013 as the start of a semi-annual sampling schedule. The results of the 2012 site-wide sampling event are presented in **Section 2.6** of this report. An annual groundwater monitoring report for 2013 will be prepared and submitted to USEPA which will include the results for both semi-annual sampling events.

2.5.3 Natrosol Lagoon (NAT) – SWMU #7

2.5.3.1 SWMU Background

The NAT (shown on **Figure 2**) was an unlined impoundment that received cellulose derivatives manufacturing waste from 1962 through 1988. The lagoon was closed under the VDEQ's Virginia Pollutant Discharge Elimination System (VPDES) program and a Closure Report was submitted to the VDEQ in May 1995 documenting closure of the lagoon by dredging, excavation, and off-site disposal of sludge as a non-hazardous solid waste. The lagoon was covered with a layer of top soil and vegetated to stabilize the soil. It was allowed to fill with surface and groundwater following removal of the residual sludge.

2.5.3.2 Summary of Previous Field Investigations

The groundwater quality downgradient of the NAT was previously investigated during closure activities under the VPDES permit in the late 1990s. As documented in the *Final RFI Summary Report*, in 2007, the groundwater associated with the NAT was further evaluated and a SLERA was conducted. The NAT wells were sampled in 2011 as well.

The NAT was further evaluated in the HHRA and BERA, included as Attachments A and B, respectively, to the *Final RFI Summary Report*. The results of the HHRA and BERA indicated that there are no unacceptable risks or hazards to human health or ecological receptors associated with the NAT.

The NAT monitoring wells were sampled again in 2012 as part of an additional site-wide sampling event as well as in June and November 2013 as the start of a semi-annual sampling schedule. The results of the 2012 site-wide sampling event are presented in **Section 2.6** of this report. An annual groundwater monitoring report for 2013 will be prepared and submitted to USEPA which will include the results for both semi-annual sampling events.

2.5.4 Reten/Aqualon Basin (RAB) – SWMU #8 and #29

2.5.4.1 SWMU Background

The RAB was originally constructed in 1976 to treat nonhazardous wastewaters from acrylamide polymer manufacturing and absorbent fiber areas. The original basin was constructed with gunnite wall and an asphalt bottom. In early 1989, the RAB was enlarged (deeper and laterally), and was fitted with a 40-mil plastic liner. The

expanded unit (called the Anoxic Basin) was used for treatment of all neutralized wastewater from June 1989 until late December 1989, when it was removed from service due to liner tears in the north end. Primary constituents of the handled wastewaters included ethylene glycol, propylene glycol, sodium nitrate, sodium acetate, sodium chloride, sodium glycolate, cellulose derivatives, and a variety of organic diluents.

2.5.4.2 Summary of Previous Field Investigations

The four (4) RAB monitoring wells (RABMW-1, -2, -3, and -4) were installed in early 1990 around the perimeter of the basin to assist with the determination of the cause of the liner failure. As detailed in the *Final RFI Summary Report*, groundwater sampling for the RAB wells was conducted in 2001, 2007 and 2011. In addition, as part of the 2002 *Hydrogeologic Evaluation*, a surface water monitoring point was installed in the middle of the RAB to evaluate if the water elevation in the basin was similar to the adjacent groundwater elevation. Based on the data derived from the field collection efforts, it was concluded that groundwater discharges to the stream to the south of the RAB and is influenced by the water in the basin.

While the RAB is no longer used for the management of wastewater, historical operational issues (torn liner) could have resulted in the observed groundwater impacts. The RAB was further evaluated in the HHRA and BERA, included as Attachments A and B, respectively, to the *Final RFI Summary Report*. The results of the HHRA and BERA indicated that there are no unacceptable risks or hazards to human health or ecological receptors associated with the RAB.

The RAB monitoring wells were sampled again in 2012 as part of an additional site-wide sampling event as well as in June and November 2013 as the start of a semi-annual sampling schedule. The results of the 2012 site-wide sampling event along with documentation of well replacement/repairs are presented in **Section 2.6** of this report. An annual groundwater monitoring report for 2013 will be prepared and submitted to USEPA which will include the results for both semi-annual sampling events.

2.5.5 Sludge Drying Beds (SDB) – SWMU #14

2.5.5.1 SWMU Background

The SDBs consisted of three (3) unlined rectangular beds probably constructed in late 1970 to replace the vacuum filter press. Sludge from the bioplant was pumped to the beds to dry, and was then periodically removed and landfilled as a non-hazardous waste. In approximately 1976, the Facility began pumping the sludge to the Eastern WWL (SWMU #3), and ceased use of the SDBs.

2.5.5.2 Summary of Previous Field Investigations

During an April 2000 field investigation, the SDB was investigated with a core sampler to identify the presence of any residual sludge materials. No visual evidence of sludge was identified in any of the three beds.

As documented in the *Final RFI Summary Report*, soil sampling of the SDBs was conducted during the Phase I and Phase III Investigations. The Phase III investigation also included the installation of the three (3) SDB monitoring wells (SDB-MW-1, 2 and 3). A SLERA was conducted for the unit as well during the Phase III Investigation. Groundwater samples were collected from the three (3) SDB monitoring wells in 2007 and 2011.

The SDBs were further evaluated in the HHRA and BERA included as attachments to the *Final RFI Summary Report*. The results of the HHRA and BERA indicated that there are no unacceptable risks or hazards to human health or ecological receptors associated with the SDBs.

The SDB monitoring wells were sampled again in 2012 as part of an additional site-wide sampling event as well as in June and November 2013 as the start of a semi-annual sampling schedule. The results of the 2012 site-wide sampling event are presented in **Section 2.6** of this report. An annual groundwater monitoring report for 2013 will be prepared and submitted to USEPA which will include the results for both semi-annual sampling events.

2.5.6 Vacuum Filter Sludge Pile (VFSP) - SWMU #15

2.5.6.1 SWMU Background

The VFSP was a triangular-shaped surface impoundment used for temporary storage of sludge generated by a vacuum filter press during the 1960's and 1970's. The sludge was transported to the VFSP via conveyor belt, and the resulting filtrate was piped to the Facility's Aeration Basin for treatment. The solid cake sludge in the VFSP was then periodically removed and landfilled as a non-hazardous waste.

2.5.6.2 Summary of Previous Field Investigations

As documented in the *Final RFI Summary Report*, sludge sampling of the VFSP was conducted as part of the Phase I and III investigations at the site. The Phase III Investigation also included the installation and sampling of a monitoring well (VFSP-MW-1) in order to assess water quality downgradient of the SWMU. A SLERA was also conducted for the unit as part of the Phase III investigative activities. Supplemental sampling at the VFSP was conducted in 2009 in support of the ecological risk assessment at the site. In addition, the VFSP well was sampled again in 2011.

The VFSP was retained for further evaluation in the human health and ecological risk assessments for the site. The results of the HHRA and BERA indicated that there are no unacceptable risks or hazards to human health or ecological receptors associated with the VFSP.

The VFSP monitoring well was sampled again in 2012 as part of an additional site-wide sampling event as well as in June and November 2013 as the start of a semi-annual sampling schedule. The results of the 2012 site-wide sampling event are presented in **Section 2.6** of this report. An annual groundwater monitoring report for

2013 will be prepared and submitted to USEPA which will include the results for both semi-annual sampling events.

2.5.7 Main Holding Basin (MHB) Wells

2.5.7.1 SWMU Background

The MHB was a five-acre, unlined surface impoundment, constructed in 1962 for wastewater pretreatment. The MHB had a maximum capacity of 22.5 million gallons. During operation, process waste streams entered the west end of the basin where they received anaerobic treatment and were subsequently discharged. Of the approximately 6 to 8 million gallons per day (mgd) discharged, approximately 2.4 mgd were diverted to an activated sludge pretreatment system for further organic reduction. The effluent from this biological pretreatment system then combined with the remaining 3.6 to 5.6 mgd from the MHB and was conveyed to the Hopewell Regional Wastewater Treatment Facility (HRWTF). In 1989, the MHB was removed from service and free water was removed. Sludge and soils removal was completed and, in February 1993, Hercules received a Certification of Satisfactory Completion of Remediation (Certification) from the VDEQ Voluntary Remediation Program (VRP).

2.5.7.2 Summary of Previous Field Investigations

As indicated in the *Final RFI Summary Report*, groundwater assessment conducted from 1991 to 1993 determined a release to groundwater. Therefore, VDEQ directed that groundwater work should continue under the VDEQ VRP. Hercules completed groundwater testing under the VRP, demonstrating that the MHB was not a source of contamination; however, shallow groundwater in the MHB vicinity averaged several parts per million (ppm) of diethyl ether. VDEQ concurred that routine VPDES permit toxicity testing at the downgradient permitted Outfall (006) indicated no adverse impact on surface water from the groundwater. Because the USEPA Region 3 Risk-Based Concentration (RBC) tables indicated 1.2 milligrams per liter (mg/L) maximum ether concentration for tap water, VDEQ advised Hercules to file a deed restriction for the area as a final requirement to receive the Certification from the VDEQ. This was completed and the Certification was issued on November 22, 1999. As part of the 2007 Phase III Investigation, groundwater samples were collected from the following MHB wells: MW-1, 2, 3, 4, 4U, 5, 5U, 6, 7, 7L, 8U, 8L, 8D, 9, and 10. The MHB wells were sampled again in 2011.

While the “source” material (i.e., wastewater and sludge) has long been removed, residual groundwater impacts remain. As such, the MHB groundwater was carried forward and evaluated in the HHRA and BERA. The results of the HHRA and BERA indicated that there are no unacceptable risks or hazards to human health or ecological receptors associated with the MHB.

The MHB monitoring wells were sampled again in 2012 as part of an additional site-wide sampling event as well as in June and November 2013 as the start of a semi-annual sampling schedule. The results of the 2012 site-wide sampling event along with documentation of well replacements/repairs are presented in **Section 2.6** of this

report. An annual groundwater monitoring report for 2013 will be prepared and submitted to USEPA which will include the results for both semi-annual sampling events.

2.5.8 Surface Water Bodies

As documented in the Final RFI Summary Report, during the Phase III investigation surface water and sediment samples were collected from the various surface water bodies (Cattail Creek, Bailey Creek, East Bear Creek, West Bear Creek, and Unnamed Tributary) situated adjacent to and downgradient of the various SWMUs evaluated as part of Corrective Action. Groundwater and surface water elevation data collected throughout the various phases of assessment suggest that the shallow and deep groundwater discharges to the various streams that bisect the site.

The initial set of surface water and sediment data collected as part of the Phase III investigation exhibited constituents which were considered to be site-related. Generally speaking, the spatial distribution of the detections related well to the presence of the same constituents measured in groundwater, soil, or sludge at adjacent SWMUs. A SLERA was also conducted for the surface water bodies as part of the Phase III activities.

Because various SWMUs are either impoundments themselves or are adjacent to an on-site surface water body, the sediment, surface water and benthic macroinvertebrate data were incorporated and evaluated in the HHRA and BERA. The results of the HHRA and BERA indicated that there are no unacceptable risks or hazards to human health or ecological receptors associated with the surface water bodies at or adjacent to the site.

2.6 2012 Well Replacements/Repairs and Site-Wide Groundwater Sampling Event

During a site visit conducted on July 30, 2012 between GES and Hercules plant personnel, it was determined that several groundwater monitoring wells were in need of repair or replacement. In anticipation of continued groundwater monitoring at the site, Hercules/GES conducted the necessary repairs/replacements as outlined in the sections below. Additionally, as a means to develop a long-term spatial and temporal data set, a comprehensive site-wide groundwater sampling event was conducted in August 2012 as outlined below.

2.6.1 Well Abandonments and Re-Installation

GES personnel mobilized to the site, along with Parratt-Wolff, Inc. (PW) of Hillsborough, North Carolina, on August 15, 2012 and again on August 20, 2012 to perform the following activities:

- abandon MW-8L and RAB-MW1;
- install replacement wells MW-8L-R and RAB-MW1R; and
- make repairs or improvements to the following six (6) monitoring wells:

- MW-6;
- MW-8U;
- WWL-1;
- RAB-MW2;
- RAB-MW3; and
- RAB-MW4.

Delta Geophysics Inc. (Delta) of Catasauqua, Pennsylvania was contracted to locate underground utilities and clear the proposed drilling locations prior to the commencement of field activities.

On August 15, 2012, under the supervision of GES, PW installed replacement well MW-8L-R immediately adjacent to the location of existing well MW-8L. The existing well riser on MW-8L had been damaged below grade. The stick-up well riser of MW-8L was cut to land surface and the well was abandoned in place from the bottom of the well up to the surface with cement grout utilizing a tremie pipe.

The location of replacement well MW-8L-R was hand cleared using a stainless steel hand auger to approximately five (5) feet below ground surface (bgs). During well installation, a 4.25" outer diameter hollow stem auger (HSA) was advanced (using a CME55 truck-mounted rotary drill rig) to approximately 32 feet bgs. A 2-inch schedule 40 PVC well with a 10-slot screen of ten (10) feet was installed. GES logged the subsurface lithology using auger cuttings and continuous split-spoon sample collection and all data were recorded in the field notebook. Well completion included a 1A sand pack to two (2) feet above the screen, two (2) feet of bentonite chips above the sand, and bentonite/cement grout to ground surface. A protective, lockable steel stick-up casing was installed within the existing concrete pad surrounding the MW-8 well series.

On August 16, 2012, under the supervision of GES, PW installed replacement well RAB-MW1R immediately adjacent to the location of existing well RAB-MW1. Well RAB-MW1 historically did not produce enough water to collect groundwater samples given the shallow installation depth of the well. The stick-up well riser of RAB-MW1 was cut to land surface and the well was abandoned in place from the bottom of the well up to the surface with cement grout utilizing a tremie pipe.

The location of replacement well RAB-MW1R was hand cleared using a stainless steel hand auger to approximately five (5) feet bgs. Well installation was executed as outlined above to approximately 35 feet bgs. A protective, lockable steel stick-up casing was installed within a two-foot by two-foot concrete pad surrounded by steel bollards.

Actual well depths are presented in **Table 3**. Copies of the well completion logs are included as **Attachment A**. The locations of the replacement wells are shown on **Figure 2**.

Each newly installed monitoring well was developed using a submersible pump (Whale Pump) to purge the well of water and fines. The wells were surged frequently

and cleared of sediment during pumping. A continuous cycle of purging was exercised over the duration of two (2) hours at each well. Water was cleared of sediment and fines during pumping, and remained clear throughout pumping. MW-8L-R and RAB-MW1R yielded approximately 75- and 40-gallons of water, respectively, during development and all purge water was discharged directly to the facility's existing industrial sewer system at the direction of the Hercules plant personnel.

At the direction of Hercules plant personnel, soil cuttings from well installation activities were placed directly in facility-provided, 30-gallon fiber drums, containerized, labeled as pending characterization and placed in the Hazardous Waste Storage Area for subsequent characterization and disposal. Six (6) drums were generated during the installation of MW-8L-R and seven (7) drums were generated during the installation of RAB-MW1R. GES collected one (1) representative, composite waste characterization sample from each group of drums (i.e., "MW-8 drums" and "RAB drums") for submittal to TestAmerica Laboratories, Inc. (TestAmerica) of Savannah, Georgia. Each sample was analyzed for Toxicity Characteristic Leaching Procedure (TCLP) volatile organic compounds (VOCs), TCLP semi-volatile organic compounds (SVOCs), TCLP metals, reactivity, corrositivity and ignitability. All analytical results were non-detect and below their respective regulatory limits. Hercules plant personnel performed the profiling, management and disposal of the drums. A copy of the laboratory analytical report is provided as **Attachment B**.

2.6.2 Well Repairs and Improvements

As the result of a collapsed concrete pad, monitoring well WWL-1 was fitted with a new flushmount steel manhole cover within a two-foot by two-foot concrete pad. Prior to pouring concrete, clean soil from another area onsite was backfilled into the void around the monitoring well and compacted.

Monitoring well MW-8U had damage to the existing well casing and riser. As a result, a new stick-up PVC casing was retrofitted to the existing riser. A lockable steel stick-up casing and two-foot by two-foot concrete pad were installed at the ground surface.

For protective measures, steel stick-up casings and steel bollards were installed around the remaining RAB wells (i.e., RAB-MW2 through RAB-MW4). Additional steel bollards were also installed around the MW-8 series wells and MW-6 due to an increase in onsite construction activities in the surrounding area.

All of the newly installed/repaired monitoring wells were surveyed by a Virginia licensed surveyor (Koontz-Bryant P.C. of Richmond, Virginia) on July 10, 2013. The survey data were then added to the site-wide mapping.

2.6.3 Groundwater Sampling Methodology

In accordance with the *Phase III SAP*, from August 20 to 24, 2012, groundwater samples were collected from 36 monitoring wells and analyzed for the target compounds listed below. These target compounds were presented as constituents of interest (COI) in groundwater for the 2011 site-wide HHRA:

- 1,1,2,2-Tetrachloroethane;
- 1,1-Dichloroethane;
- Chloroform;
- Diethyl ether;
- t-Butanol;
- Tetrachloroethene;
- Trichloroethene;
- 1,4-Dioxane;
- Ethanol;
- Methanol;
- Aluminum;
- Arsenic;
- Barium;
- Cadmium;
- Chromium;
- Cobalt;
- Iron;
- Lead;
- Manganese;
- Mercury;
- Nickel; and
- Vanadium.

VOC and SVOC TICs were not analyzed and have been eliminated from further monitoring based on their de minimis contribution to the risks calculated in the 2011 risk assessments. Additional information regarding the COI in groundwater is provided in **Section 3.2**.

Several compounds were detected during the 2011 groundwater sampling event in at least one sample above their respective Tapwater Regional Screening Level (RSL), but were not detected in 2007. As such, these compounds were not included in the human health or ecological risk evaluations for the site. Although the detected 2011 concentrations would not have changed the results of the risk assessments, the following compounds were added to the groundwater analyte list for the 2012 sampling event:

- 1,2-Dichloroethane;
- Bis(2-ethylhexyl)phthalate;
- Bis(2-chloroethyl)ether;
- Naphthalene;
- Antimony;
- Beryllium;
- Copper; and
- Selenium.

In addition to the aforementioned compounds, the following constituents were analyzed to document the biogeochemistry of the aquifer:

- Chloride;
- Methane;
- Ferrous Iron;
- Nitrite;
- Nitrate;
- Sulfate;
- Total Kjeldahl Nitrogen (TKN); and
- Total Organic Carbon (TOC).

Select wells (i.e., WWL-1, WWL-2, LF-2, NAT-1, NAT-4 and RAB-MW1R through MW4) were not sampled for SVOCs based on the lack of previous analytical detections in those wells. Two (2) sets of QA/QC samples were collected and a percentage of the data were validated by a third party as described below. The 2012 sample collection matrix is presented as **Table 4**.

The groundwater sampling of all onsite wells was performed using low-flow sampling protocols in accordance with the approved *Phase III SAP*. Groundwater quality field parameters were measured during sampling as documented in **Table 5.** Due to obstructions encountered and/or damage to well MW-5D groundwater samples were not collected from this well.

2.6.4 Sampling Results

As indicated in the *Final RFI Summary Report* and associated attachments, the HHRA documented that there were no unacceptable risks or hazards to human health receptors associated with groundwater exposure at the site. The objective of the 2012 sampling event was to add to the existing data set to demonstrate that the current groundwater conditions and observed concentrations are consistent with the groundwater data incorporated into the HHRA.

Environmental Data Quality, Inc. (EDQ) of Exton, Pennsylvania performed third-party data validation on 10% of the groundwater analytical data in accordance with USEPA approved *April 2007 QAPP - Revision No. 2.* The complete laboratory analytical reports along with the data validation reports are included in **Attachments C and D**, respectively. The full analytical results (detections and non-detects) are presented in **Table 6**.

The evaluation of the 2012 detected groundwater concentrations was conducted using the same data evaluation process presented in the 2011 HHRA. The first step in the data evaluation process was to identify COI. The maximum detected concentration of each constituent was compared to the applicable Risk Based Screening Levels (RBSLs). Although groundwater is not used as a source of drinking water at the site, the Tapwater RSLs derived from the USEPA Regional Screening Table (dated May 2013) were conservatively used to identify COI for the direct contact pathway. The screening levels for non-carcinogenic analytical parameters have been adjusted to reflect a Hazard Quotient (HQ) of 0.1. The use of the HQ for screening purposes compensates for the potential cumulative effects of the noncarcinogenic analytical parameters. In some instances, the USEPA Maximum Contaminant Level (MCL) was used due to the lack of a Tapwater RSL for a given constituent. If neither Tapwater RSLs nor MCLs were available for a particular constituent, surrogate screening values for constituents with structural similarity (as identified in the HHRA) were used.

The results of the screening process for direct contact (i.e., incidental ingestion and dermal contact) with groundwater are presented in **Table 7**. For screening purposes only, groundwater samples from all exposure areas were combined. For each detected constituent, this table presents the maximum detected concentrations, the sample with the maximum detect and the screening values. The maximum detected concentration of each constituent in groundwater is compared to the screening value. For those detected constituents that are considered to be volatile and/or toxic via the inhalation exposure route (i.e., organic constituents as well as mercury), the maximum detected groundwater concentration is also screened against the USEPA 2002 screening values appropriate for the vapor intrusion pathway. These values are generic screening values that are protective of indoor air for residential land uses. Because the site is a non-residential property, comparison of the groundwater data to these values is a conservative method to identify COI. The screening values are obtained from Table 2c of the USEPA guidance and represent concentrations in groundwater based on a hazard index of 1 and/or a target risk level of 1 x 10-6, to be as conservative as possible.

As indicated in **Table 7**, the following constituents were detected at concentrations exceeding the screening values and are identified as COI in groundwater based on the 2012 data for the direct contact (i.e., incidental ingestion and dermal contact) pathway and/or vapor intrusion pathway:

- 1,1,2,2-Tetrachloroethane;
- 1,1-Dichloroethane;
- 1,2-Dichloroethane;
- Chloroform;
- Diethyl ether;
- t-Butanol;
- Tetrachloroethene;
- Trichloroethene;
- 1,4-Dioxane;
- Ethanol;
- Aluminum;
- Antimony;
- Arsenic;
- Barium;
- Beryllium;
- Cadmium;
- Cobalt;
- Copper;
- Iron;
- Manganese;
- Mercury;
- Nickel;
- Selenium; and
- Vanadium.

Although methanol, chromium and lead did not exceed the screening values and were therefore not identified as COI, these constituents did have EPCs calculated for select areas in the 2011 HHRA. As such, the compounds were carried forward into the next evaluation step.

The detected concentrations for the COI identified above were then compared to the applicable exposure point concentrations (EPCs) for each area presented in the 2011 HHRA as shown in **Tables 8 through 14**. As detailed in the HHRA (Attachment A to the *Final RFI Summary Report*), EPCs were calculated using the 2007 groundwater data for use in the risk characterization conducted in the risk assessment. EPCs are the concentrations that a receptor may contact in an environmental medium. The

analytical results for samples from a given medium (in this case, groundwater) were combined to derive a single EPC for each COI that conservatively represents the level of that COI to which potential receptors may be exposed. These EPCs were used to evaluate incidental groundwater exposure by a construction worker.

For all areas with the exception of the MHB, five (5) samples or less were available from the 2007 data set to represent that area. For these areas, EPCs were based on the maximum detected concentrations. For groundwater of the MHB, EPCs were based on the lower of the upper confidence limit (UCL) or the maximum detected concentrations. Details of the statistical calculations were provided in the HHRA. For groundwater associated with the RAB and SDB, analytical results from 2007 for selected inorganic COI were available for both total and dissolved phases. EPCs were determined for both phases, and the higher of the two (2) EPCs was selected as the final EPC for the HHRA and has been used for evaluation of the 2012 data.

EPCs for COI for the vapor intrusion from groundwater pathway for each area were the same EPCs used for direct contact with groundwater. Those EPCs were used to evaluate inhalation exposure by an indoor worker.

As documented in the USEPA-approved HHRA, the risk characterization was conducted using the aforementioned EPCs and no unacceptable risks were identified. The total HIs, potential cumulative cancer risks and predicted fetal blood lead levels met the target benchmarks. The use of EPCs as the primary screening mechanism is therefore protective of human health and the environment. As previously mentioned, the objective of the 2012 groundwater data evaluation included in this section is to demonstrate that the current groundwater conditions and concentrations are consistent with the groundwater data incorporated into the HHRA.

For purposes of evaluating the 2012 groundwater data, the detected COI concentrations in a given area were first screened against the applicable EPCs. In some cases, a constituent may not have had an EPC identified in the 2011 HHRA. In these instances, the detected concentrations are screened against the current RBSLs (Tapwater RSL or MCL, if no Tapwater RSL is available).

A generalized flow chart which summarizes the aforementioned groundwater COI and detected COI concentration screening process is included as **Figure 5**. The results of the aforementioned screening process are summarized in the sections below.

2.6.4.1 Eastern and Western Whitewater Lagoons (SWMUs #3 and #4) Results

The analytical detections identified in the groundwater samples collected from monitoring wells WWL-1, WWL-2, WWL-3U and WWL-3L are summarized in **Table 8**.

The following organic COIs were detected above their respective EPC:

- t-Butanol (250 micrograms per liter (ug/L) in WWL-1 only); and
- Methanol (2.5 J ug/L and 1.9 J ug/L in WWL-2 and WWL-3U, respectively).

No other organic COIs exceeded their respective EPC or, in the absence of an EPC, their respective Tapwater RSL.

The following inorganic COIs were detected above their respective EPC:

- Barium (2,500 ug/L in WWL-2 only);
- Cadmium (0.18 J ug/L in WWL-1 only);
- Cobalt (120 ug/L in WWL-2 only);
- Manganese (37,000 ug/L in WWL-2 only); and
- Nickel (27 ug/L in WWL-2 only).

The following inorganic COIs was detected above its adjusted Tapwater RSL (in the absence of an EPC):

- Antimony (2.4 J ug/L in WWL-1); and

However, the antimony concentration is less than the non-adjusted Tapwater RSL of 6 ug/L.

An evaluation of these results is included in **Section 2.6.4.8**.

2.6.4.2 Old Landfill and Landfill #156 (SWMU #5) Results

The analytical detections identified in the groundwater samples collected from monitoring wells LF-1 through LF-5 are summarized in **Table 9**.

The following organic COI was detected at concentrations exceeding its respective EPC:

- 1,1-Dichloroethane (ranging from 1.7 ug/L to 3.1 ug/L)

The following organic COIs (which did not have EPCs identified in the HHRA) were detected in the samples collected from the LF wells at concentrations that exceed their respective Tapwater RSL:

- 1,2-Dichloroethane (0.24 J ug/L in LF-5 only); and
- Trichloroethylene (ranging from 0.58 J ug/L to 0.97 J ug/L).

The following inorganic COIs were detected above their respective EPC in the LF wells:

- Aluminum (360 ug/L and 650 ug/L in LF-2 and LF-3, respectively);
- Chromium (4.5 J ug/L and 7.2 ug/L in LF-3 and LF-5, respectively);
- Lead (1.2 J ug/L in LF-2 only);

- Nickel (9.8 ug/L in LF-3 only); and
- Vanadium (3.4 J ug/L in LF-3 only).

No other COI exceedances of EPCs or, in the absence of EPCs, Tapwater RSLs were detected in the LF wells.

An evaluation of these results is included in **Section 2.6.4.8**.

2.6.4.3 Natrosol Lagoon (SWMU #7) Results

The analytical detections identified in the groundwater samples collected from monitoring wells NAT-1 through NAT-4 are summarized in **Table 10**. In addition, a blind field duplicate sample was collected from monitoring well NAT-3 and is presented in the table as well.

The following organic COI was detected at a concentration exceeding its respective EPC:

- Trichloroethylene (TCE) (37 ug/L in NAT-1 only)

The following inorganic COIs were detected in the NAT wells at concentrations exceeding their respective EPC:

- Cadmium (0.36 J ug/L and 0.42 J ug/L in NAT-1 and NAT-4, respectively);
- Chromium (31 ug/L in NAT-3 duplicate only);
- Lead (ranging from 1.2 J ug/L to 1.6 ug/L); and
- Nickel (35 ug/L in NAT-3 duplicate only).

No other COI exceedances of EPCs or, in the absence of EPCs, Tapwater RSLs were detected in the LF wells.

An evaluation of these results is included in **Section 2.6.4.8**.

2.6.4.4 Reten/Aqualon Basin (SWMU #8 and #29) Results

The analytical detections identified in the groundwater samples collected from monitoring wells RAB-MW1R through RAB-MW4 are summarized in **Table 11**. The sample collected from RAB-MW2 was field filtered using a 0.45 micron filter due to elevated turbidity (i.e., 18.00 NTU) and the sample was analyzed for total metals as well as dissolved metals. Both the total and dissolved metals detections are summarized in **Table 11.**

The following organic COIs were detected at concentrations exceeding their respective EPCs in samples collected from the RAB wells:

- Diethyl ether (12 ug/L in RAB-MW2 only);

- t-Butanol (19,000 ug/L in RAB-MW1R only); and
- Methanol (1.1 J ug/L in RAB-MW2 only).

The following inorganic COIs were detected in the RAB wells at concentrations exceeding their respective EPC:

- Barium (260 ug/L and 240 ug/L in RAB-MW1R and RAB-MW3, respectively);
- Cadmium (0.99 ug/L and 0.51 ug/L in RAB-MW2 and RAB-MW4, respectively)
- Cobalt (170 ug/L/140 ug/L in RAB-MW2 (total/dissolved));
- Iron (170,000 ug/L in RAB-MW3 only);
- Manganese (12,000 ug/L in RAB-MW2 (total and dissolved)); and
- Nickel (120 ug/L/100 ug/L in RAB-MW2 (total/dissolved)).

No other COI exceedances of EPCs or, in the absence of EPCs, Tapwater RSLs were detected in the RAB wells.

An evaluation of these results is included in **Section 2.6.4.8**.

2.6.4.5 Sludge Drying Beds (SWMU #14) Results

The analytical detections identified in the groundwater samples collected from monitoring wells SDB-MW-1 through SDB-MW-3 are summarized in **Table 12**.

No organic COIs were detected at concentrations exceeding their respective EPCs or, in the absence of EPCs, their respective Tapwater RSLs.

The following inorganic COI was detected at a concentration exceeding its respective EPC:

- Nickel (33 ug/L in SDB-MW-3 only)

The following inorganic COI (which did not have an EPC identified in the HHRA) was detected at a concentration exceeding its respective Tapwater RSL:

- Selenium (9.2 ug/L in SDB-MW-3 only)

It should be noted that the detected selenium concentration is less than the non-adjusted Tapwater RSL of 78 ug/L.

No other COI exceedances of EPCs or, in the absence of EPCs, Tapwater RSLs were detected in the SDB wells.

An evaluation of these results is included in **Section 2.6.4.8**.

2.6.4.6 Vacuum Filter Sludge Pile (SWMU #15) Results

The analytical detections identified in the groundwater sample collected from monitoring well VFSP-MW-1 are summarized in **Table 13**.

No organic COIs were detected at concentrations exceeding their respective EPCs or, in the absence of EPCs, their respective Tapwater RSLs.

The following inorganic COIs were detected in VFSP-MW1 at concentrations exceeding their respective EPC:

- Barium (190 ug/L);
- Cobalt (2.7 ug/L);
- Iron (4,300 ug/L);
- Manganese (820 ug/L); and
- Nickel (2.2 J ug/L).

No other COI exceedances of EPCs or, in the absence of EPCs, Tapwater RSLs were detected in the VFSP well.

An evaluation of these results is included in **Section 2.6.4.8**.

2.6.4.7 Main Holding Basin Wells Results

The analytical detections identified in the groundwater samples collected from monitoring wells MW-1, MW-2, MW-3, MW-4, MW-4U, MW-5, MW-5U, MW-6, MW-7L, MW-7U, MW-8D, MW-8U, MW-9 and MW-10 are summarized in **Table 14**. In addition, a blind field duplicate sample was collected from monitoring well MW-10 as presented in the table.

The following organic COIs were detected in the MHB wells at concentrations exceeding their respective EPCs:

- Chloroform (0.79 J ug/L and 0.9 J ug/L in MW-10 and its field duplicate, respectively);
- Diethyl ether (12,000 ug/L in MW-2 only);
- t-Butanol (ranging from 2,200 ug/L to 4,300 ug/L);
- 1,4-dioxane (ranging from 18 ug/L to 24 ug/L);
- Ethanol (7.8 ug/L in MW-2 only); and
- Methanol (2.3 J ug/L in MW-4U only).

The following inorganic COIs were detected above their respective EPC in the MHB wells:

- Aluminum (ranging from 600 ug/L to 1,200 ug/L);
- Arsenic (29 ug/L in MW-8L-R only);
- Barium (ranging from 760 ug/L to 1,200 ug/L);

- Cadmium (ranging from 3.7 ug/L to 20 ug/L);
- Cobalt (350 ug/L in MW-7U only);
- Iron (ranging from 84,000 ug/L to 120,000 ug/L);
- Lead (ranging from 0.82 J ug/L to 2.3 ug/L);
- Manganese (38,000 ug/L in MW-7U only);
- Mercury (4.2 ug/L in MW-7U only); and
- Nickel (ranging from 61 ug/L to 110 ug/L).

The following inorganic COIs (which did not have EPCs identified in the HHRA) were detected in the samples collected from the MHB wells at concentrations that exceed their respective Tapwater RSL:

- Beryllium (2.6 ug/L in MW-7U only); and
- Copper (170 ug/L in MW-7U only).

It should be noted that both the detected beryllium and copper concentrations are less than their respective non-adjusted Tapwater RSLs of 16 ug/L and 620 ug/L.

No other COI exceedances of EPCs or, in the absence of EPCs, Tapwater RSLs were detected in the MHB wells.

An evaluation of these results is included in **Section 2.6.4.8**.

2.6.4.8 Summary of Results

Exceedances of EPCs and, in the absence of EPCs, Tapwater RSLs were observed in groundwater samples collected at the site during the 2012 site-wide groundwater sampling event. However, in most cases, the concentrations were only slightly above the EPC/Tapwater RSL and the concentrations were within the same order of magnitude.

Although EPC exceedances were observed in 2012, the concentrations detected are not expected to change the results of the previous risk assessment work which indicated no unacceptable risks for the construction work potentially exposed to COI in groundwater or the indoor worker potentially exposed to COI in indoor air (vapor intrusion from groundwater).

The risk levels calculated in the 2011 HHRA were generally low (ranging from 0.046 to 0.16 for the non-cancer hazard index, 9.32 x 10-10 to 6.63 x 10-6 for theoretical excess lifetime cancer risk and averaging 5.63 micrograms per deciliter (ug/dL) for predicted fetal blood lead levels). Assuming that the exposure factors used for the construction worker receptor in the risk calculations remain the same, the 2012 concentrations would not result in exceedances of the benchmarks used in the previous assessment (i.e. upperbound target of 1 x 10-4 for potential cumulative cancer risks, target non-cancer hazard index of 1 and an upperbound fetal blood lead level of 10 ug/dL).

3.0 CONSTITUENTS OF POTENTIAL CONCERN (COPCS)

As previously indicated, all available soil, groundwater, sludge, sediment and surface water data collected during the phased investigations were included, as appropriate, in the human health and ecological risk assessments for the Facility in 2011. The following sections and referenced tables summarize the COPCs identified, by environmental media, in the risk assessments.

3.1 Soil COPCs

3.1.1 Human Health

During the RFI investigations, surface soil samples (defined as 0- to 2-feet below ground surface [bgs]) were collected from the LF, SDBs and VFSP. Solid samples collected from the SDBs and VFSP were considered sludge/soil. For the purposes of the human health risk assessment, samples collected from these locations were conservatively evaluated as soil. Samples were collected as follows:

- 13 samples (plus one duplicate) collected from the LF;
- 18 samples (plus one duplicate) collected from the SDBs; and
- 18 samples (plus one duplicate) collected from the VFSP.

Soil samples were analyzed for VOCs plus TICs, SVOCs plus TICs, acrylamide, alcohols and glycols, metals and other inorganic parameters (e.g., chlorides, nitrates, nitrites, sulfate and total organic carbon).

COPCs (referred to as COI in the HHRA) for the direct contact pathway were identified as those constituents whose maximum detected concentrations exceeded their respective USEPA RSL for Industrial Soil. Other COI were identified in cases where a constituent lacked an Industrial Soil RSL, did not have an appropriate surrogate and could not be eliminated based on low inherent toxicity. **Table 15** summarizes the COI identified in soil.

3.1.2 Ecological

As indicated in **Section 3.1.1**, a total of 13 soil samples (plus one duplicate sample) were collected from the LF for the analysis of VOCs plus TICs, SVOCs plus TICs, acrylamide, alcohols and glycols, metals and other inorganic parameters. The solid matrix samples collected from the SDBs and VFSP may represent sediment because there are periods when standing water is present in these SWMUs. At the request of the USEPA, for purposes of the BERA, samples collected from the SDBs and VFSP were considered to represent sediment and are discussed in **Section 3.3.2**.

The final screening benchmarks used to identify constituents of potential ecological concern (CPEC) for LF soil in the BERA are listed below.

- USEPA 2010 Ecological Soil Screening Levels (Eco-SSLs);

- USEPA 2001 Region 4 Ecological Screening Values (ESVs); and
- USEPA 2003 Region 5 Ecological Screening Levels (ESLs).

Table 16 summarizes constituents that were detected at concentrations greater than the screening benchmarks and were retained as CPEC for the LF soil.

3.2 Groundwater COPCs

3.2.1 Human Health

As previously indicated, the 2011 risk assessments evaluated groundwater analytical data collected during the 2007 site-wide groundwater monitoring event. Other groundwater monitoring data were collected at the site prior to 2007; however, the 2007 sampling event was the first comprehensive, site-wide monitoring event conducted at the site. Samples were collected as follows:

- Four (4) samples collected from the vicinity of the WWLs;
- Five (5) samples collected from the vicinity of the LF;
- Four (4) samples (plus one duplicate sample) collected from the vicinity of the NAT;
- Three (3) samples collected from the vicinity of the RAB;
- Three (3) samples collected from the vicinity of the SDBs;
- One (1) sample collected from the vicinity of the VFSP; and
- 15 samples (plus one duplicate sample) collected from the vicinity of the MHB.

Groundwater samples were analyzed for VOCs plus TICs, SVOCs plus TICs, acrylamide, alcohols and glycols, total and dissolved metals, and other inorganic parameters (e.g., chlorides, nitrates, nitrites, sulfate).

3.2.1.1 Direct Contact COPCs

As indicated in **Section 2.6.2**, COI for the direct contact pathway were identified as those constituents whose maximum detected concentrations exceeded their respective Tapwater RSL or, in the absence of a Tapwater RSL, the USEPA MCL. Although groundwater at the site is not used as a source of drinking water, the Tapwater RSLs were conservatively used to identify COI for the direct contact pathway. The Tapwater RSLs for non-carcinogenic constituents were adjusted to reflect a screening HQ of 0.1. **Table 17** summarizes the COI identified for groundwater (direct contact pathway).

3.2.1.2 Vapor Intrusion COPCs

The vapor intrusion pathway was also evaluated for a current or future hypothetical industrial scenario. To identify COI for the vapor intrusion pathway, groundwater concentrations were compared to USEPA screening values appropriate for the vapor

intrusion pathway obtained from the *Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils* (OSWER, December 2001). These values are generic screening values that are protective of indoor air for residential land uses. Because the site is a non-residential property, comparison of the groundwater data to these values is a conservative method to identify COI. **Table 17** summarizes the constituents that were identified as COI for vapor intrusion from groundwater to indoor air.

As previously indicated, additional site-wide groundwater sampling events were conducted in 2011 and 2012. The analytical results of the 2011 sampling event were included in the *Final RFI Summary Report* along with a groundwater trend evaluation. The 2012 groundwater data are summarized in **Tables 8 through 14** of this report and the results were discussed in **Section 2.6.2**.

3.2.2 Ecological

No CPEC for groundwater were identified in the BERA. Groundwater is not considered a potential exposure medium for ecological receptors as there are no direct pathways for groundwater contact. The potential for groundwater to migrate to surface water was considered through the direct evaluation of surface water.

3.3 Sediment COPCs

3.3.1 Human Health

Sediment samples were collected from the Eastern WWL, Western WWL, NAT, East Bear Creek, West Bear Creek, the Unnamed Tributary, Cattail Creek and Bailey Creek. Solid samples from the lagoons are considered sludge/sediment. For the purposes of the human health risk assessment, samples collected from these locations were evaluated as sediment. Samples were collected as follows:

- 10 samples collected from the Eastern WWL;
- 11 samples (plus one duplicate sample) collected from the Western WWL;
- Six (6) samples collected from the NAT;
- Four (4) samples collected from East Bear Creek;
- Four (4) samples (plus one duplicate sample) collected from West Bear Creek;
- Five (5) samples collected from the Unnamed Tributary;
- Three (3) samples (plus one duplicate sample) collected from Cattail Creek; and
- One (1) sample collected from Bailey Creek.

Sediment samples were analyzed for VOCs plus TICs, SVOCs plus TICs, acrylamide, alcohols and glycols, PCBs, metals and other inorganic parameters.

The COI identification process for constituents in sediment was identical to that for soil. The screening values were based on the USEPA RSL for Industrial Soil. Other COI were identified in cases where a constituent lacked an Industrial Soil RSL, did not have an appropriate surrogate and could not be eliminated based on low inherent toxicity. **Table 18** summarizes the COI identified for sediment.

3.3.2 Ecological

The sediment samples collected from the Eastern WWL, Western WWL, NAT, East Bear Creek, West Bear Creek, the Unnamed Tributary, Cattail Creek and Bailey Creek outlined in **Section 3.3.1** were included in the ecological risk assessment. As indicated in **Section 3.1.2**, the solid matrix samples collected from the SDBs (18 samples plus one duplicate sample) and VFSP (18 samples plus one duplicate sample) were considered to represent sediment and were evaluated as such in the BERA.

The final screening benchmarks used to identify CPEC for sediment of each aquatic habitat are listed below.

- USEPA 2006 Region 3 Freshwater Sediment Screening Benchmarks;
- USEPA 2003 Region 5 RCRA Ecological Screening Levels for Sediment; and
- USEPA 1999 Freshwater Sediment Toxicity Reference Values.

Table 16 summarizes the constituents that were detected at concentrations greater than the screening benchmarks and were retained as CPEC for sediment.

3.4 Surface Water COPCs

3.4.1 Human Health

Surface water samples were collected from Eastern WWL, Western WWL, NAT, SDBs, VFSP, East Bear Creek, West Bear Creek, the Unnamed Tributary, Cattail Creek and Bailey Creek. Samples were collected as follows:

- Three (3) samples collected from the Eastern WWL;
- Three (3) samples collected from the Western WWL;
- Two (2) samples collected from the NAT;
- Three (3) samples (plus one duplicate sample) collected from the SDBs;
- One (1) sample collected from the VFSP;
- Three (3) samples collected from East Bear Creek;
- Three (3) samples collected from West Bear Creek;
- Three (3) samples collected from the Unnamed Tributary;
- Three (3) samples (plus one duplicate sample) collected from Cattail Creek; and

- One (1) sample collected from Bailey Creek.

Surface water samples were analyzed for VOCs plus TICs, SVOCs plus TICs, acrylamide, alcohols and glycols, total metals and other inorganic parameters.

For constituents in surface water, screening values were based primarily on the 2010 Virginia Water Quality Standards (WQS) for Human Health. In the absence of a Virginia WQS, the USEPA Tapwater RSLs were conservatively used to identify COI in surface water. **Table 18** summarizes the COI that were identified in surface water.

3.4.2 Ecological

The surface water samples collected from the Eastern WWL, Western WWL, NAT, SDBs, VFSP, East Bear Creek, West Bear Creek, the Unnamed Tributary, Cattail Creek and Bailey Creek outlined in **Section 3.4.1** were included in the ecological risk assessment.

The final screening benchmarks used to identify CPEC for surface water of each aquatic habitat are listed below.

- USEPA 2006 Region 3 Freshwater Screening Benchmarks;
- USEPA 2009 National Recommended Water Quality Criteria (WQC) – Chronic Freshwater Values;
- USEPA 2001 Region 4 Freshwater Chronic Screening Values;
- USEPA 2003 Region 5 RCRA Ecological Screening Levels for Water; and
- ORNL Freshwater Tier II Secondary Chronic Values (SCVs).

Table 16 summarizes the following constituents that were detected at concentrations greater than the screening benchmarks and were retained as CPEC for surface water.

3.5 Identification of COPC for Unknown TICs

The screening process to identify COPC (referred to as COI in the HHRA or CPEC in the case of the BERA) for unknown TICs was identical to the screening process presented above for standard analytes in each medium. The basis for the constituent-specific screening values used in the comparisons for unknown TICs is the probable TIC identity or probable TIC chemical class assigned to the unknown TICs. If RSLs or ecological screening benchmarks were not available for an assigned identity, surrogate screening values were selected based on constituents with structural similarity. In addition, for unknown TICs assigned to a chemical class, a representative chemical was selected to conservatively represent that chemical class. Those unknown TICs whose concentrations were below the RSLs or screening benchmarks were eliminated as COPC.

3.5.1 Unknown TICs in Soil

3.5.1.1 Human Health – Direct Contact

There were no unknown TICs that were identified as COI for direct contact with soil from the Landfill Areas, SDBs and VFSP at the site.

3.5.1.2 Ecological

Table 16 summarizes the unknown TICs that were identified as CPEC in soil from the Landfill Areas.

3.5.2 Unknown TICs in Groundwater

3.5.2.1 Human Health – Direct Contact

Table 17 summarizes the unknown TICs that were identified as COI for direct contact with site groundwater.

3.5.2.2 Human Health – Vapor Intrusion

Table 17 summarizes the following unknown TICs that were identified as COI for vapor intrusion from site groundwater.

3.5.2.3 Ecological

As indicated in **Section 3.2.2**, no CPEC for groundwater were identified in the BERA. Groundwater is not considered a potential exposure medium for ecological receptors as there are no direct pathways for groundwater contact. The potential for groundwater to migrate to surface water was been considered through the direct evaluation of surface water.

3.5.3 Unknown TICs in Sediment

3.5.3.1 Human Health

Table 18 summarizes the unknown TICs that were identified as COI for direct contact with sediment of the Eastern WWL, West Bear Creek, the Unnamed Tributary and Cattail Creek.

3.5.3.2 Ecological

Table 16 summarizes the unknown TICs that were identified as CPEC for sediment.

3.5.4 Unknown TICs in Surface Water

3.5.4.1 Human Health

There were no unknown TICs that were identified as COI for direct contact with surface water from the site.

3.5.4.2 Ecological

Table 16 summarizes the unknown TIC that was identified as a CPEC for surface water of the Eastern WWL.

4.0 POTENTIAL RECEPTORS AND EXPOSURE PATHWAYS

4.1 Human Health

As an active facility, potential human receptors were identified based on the assumption that current and future land use is non-residential. Additional information regarding the Facility's industrial land use designation was included in Section 2.3 of the USEPA-approved November 2007 *Phase III SISR*.

In addition, land use restrictions will be implemented for the site that will prohibit future residential use. These land use restrictions will also prohibit the use of groundwater for any purpose. Further detail regarding the land use restrictions is included in **Section 7.5**. Recreational use of the offsite surface water bodies (Bailey Creek and Cattail Creek) is possible. As outlined in Section 4.2 of the HHRA, the following potential receptors were evaluated for the site:

- Current/Future Onsite Outdoor Industrial Worker;
- Current/Future Onsite Indoor Industrial Worker;
- Current/Future Onsite Construction Worker;
- Current/Future Onsite Youth Trespasser;
- Current/Future Offsite Recreational Adult; and
- Current/Future Offsite Recreational Youth.

In the HHRA, receptors were evaluated based on the media (i.e., surface water vs. soil) they would likely come in contact with and the frequency of site visits (i.e., employee vs. trespasser). For example, an outdoor worker is evaluated for direct exposure to surface soil and onsite standing surface water whereas a temporary construction worker may be evaluated for direct exposure to surface soil as well as shallow groundwater. Offsite streams were also taken into account as potentially complete exposure pathways for the recreational receptors' swimming. Specifically, the receptors identified above were evaluated for the following exposure routes:

- Outdoor Industrial Worker
    - Surface soil from onsite SWMUs (LF, SDBs and VFSP) via incidental ingestion, dermal contact, inhalation of particulates and inhalation of volatiles;
    - Sediment from onsite SWMUs (Eastern and Western WWLs, NAT) via incidental ingestion and dermal contact; and
    - Surface water from onsite SWMUs (Eastern and Western WWLs, NAT, SDBs and VFSP) via incidental ingestion and dermal contact.
- Indoor Industrial Worker
    - Indoor air (vapor intrusion from groundwater) from onsite groundwater (associated with Eastern and Western WWLs, LF, NAT, RAB, SDBs, VFSP and MHB) via inhalation
- Construction Worker

    - Surface soil from onsite SWMUs via incidental ingestions, dermal contact, inhalation of particulates and inhalation of volatiles;
    - Onsite groundwater via incidental ingestion, dermal contact and inhalation of volatiles; and
    - Sediment and surface water from onsite SWMUs via incidental ingestion and dermal contact.
- Youth Trespasser
    - Sediment and surface water from onsite surface water bodies (East Bear Creek, West Bear Creek and the Unnamed Tributary) via incidental ingestion and dermal contact.
- Recreational Adult and Youth
    - Sediment and surface water from offsite surface water bodies (Cattail Creek and Bailey Creek) via incidental ingestion and dermal contact.

Additional information regarding the potential human receptors and exposure routes can be found in Section 4.0 of the HHRA.

4.2 Ecological

In order to identify potential species or ecosystems that could be at risk, representative ecological receptors were selected based on the potential to be exposed to CPEC. Potential habitats were identified during initial site reconnaissance (conducted as part of the 2007 SLERA) as well as more recent site visits and USEPA recommendations. The following habitats have been identified at the site:

- Terrestrial habitat of the Landfill area;
- Aquatic habitat of the Eastern and Western WWLs, NAT, SDBs and VFSP (lentic systems); and
- Aquatic habitat of East and West Bear Creek, the Unnamed Tributary, Bailey Creek and Cattail Creek (lotic systems).

The selection of representative species and receptor groups was based on species residence in the receptor habitats, dynamics, toxicological sensitivity to constituents and ecological relevance. Other factors that can affect the perceived value of different species, such as status as a game or commercial species or as a threatened or endangered species, were also considered.

The following representative species and receptor groups were evaluated as potential ecological receptors at the site:

- Terrestrial birds (American robin and red-tailed hawk);
- Terrestrial mammals (short-tailed shrew and red fox);
- Aquatic invertebrates and fish;

- Semi-aquatic birds (mallard and great blue heron); and
- Semi-aquatic mammals (mink).

The following potentially complete and significant exposure pathways were identified for the site:

- Incidental ingestion of surface soil by terrestrial birds and mammals;
- Ingestion of plants, invertebrates and small animal prey by terrestrial birds and mammals;
- Direct contact with sediment and surface water by macroinvertebrates and fish;
- Incidental ingestion of sediment by semi-aquatic birds and mammals;
- Ingestion of surface water by semi-aquatic birds and mammals; and
- Ingestion of prey (invertebrates and fish) by semi-aquatic birds and mammals.

Additional information regarding the potential ecological receptors can be found in Section 3.3 of the BERA.

5.0 MEDIA CLEAN UP OBJECTIVES

As indicated in **Section 3.0**, COI in the human health risk assessment and CPEC in the ecological risk assessment were identified by comparing soil, sediment, surface water and groundwater data to appropriate human health and ecological screening levels/benchmarks considered to be protective of human health and the relevant ecological receptors in each area of the site. Based on the current and anticipated future land use of the site, the potential current and future receptors were selected and evaluated for the various exposure routes identified in **Section 4.0**. The following sections describe the benchmarks used in the HHRA and BERA for evaluating potential risk associated with site-related constituents and the results of the quantitative risk assessments.

5.1 Human Health

EPCs for the COI for each exposure area or medium were either statistically calculated or were modeled using USEPA fate and transport equations. For the toxicity assessment, toxicity values for the COI were derived from the USEPA Integrated Risk Information System (IRIS) database and other relevant USEPA sources. In some cases, toxicity values were selected based on appropriate surrogate constituents.

The risk characterization was conducted for each potential receptor, exposure pathway and constituent in each area of interest, assuming an industrial use scenario. Benchmarks used in the assessment were consistent with USEPA guidance and consisted of an upperbound target of 1×10^{-4} for potential cumulative cancer risks, a target noncancer hazard index (HI) of 1, and an upperbound fetal blood lead level of 10 ug/dL.

The results of the human health risk assessment indicated that for all receptors and exposure areas, the total HIs, potential cumulative cancer risks, and predicted fetal blood lead levels meet the target benchmarks. As previously indicated, in a letter dated March 27, 2012, the USEPA agreed that the human health risk assessment was acceptable and indicated no unacceptable risk or hazards to workers, trespassers or recreational users at and near the Facility.

5.2 Ecological

The ecological receptors were evaluated for potential exposure to CPEC in each area through ingestion of source material (soil, sediment and surface water) and ingestion of food sources that could accumulate the CPEC via bioconcentration. Macroinvertebrate sample results provided a direct measure of effects in each of the aquatic habitats of the site. The sample results were scored and compared relative to each other to assess the biotic integrity of each location.

The risk characterization provided quantitative estimates (ecological HQs) of the potential for adverse effects. In general, ecological HQs of one or less indicated negligible potential for increased mortality or decreased reproduction to the receptor. An ecological HQ greater than one does not necessarily indicate adverse effects.

These results must be evaluated along with the actual observed effects on the receptor species, results from other analyses such as the macroinvertebrate sampling and consideration of uncertainties and conservative assumptions.

The results of the ecological risk assessment indicated that HQs greater than 1 were calculated for each of the remaining SWMUs and surface water bodies. Although some HQs greater than 1 were calculated, the HQs were considered to be overestimated. The inclusion of multiple conservative assumptions typically results in calculated HQs that are an order of magnitude (or more) higher than would be calculated for a more realistic scenario. The uncertainty in most aspects of the ecological assessment was so high, that visual observations of habitat quality are a more useful indicator of potential adverse effects than the quantitative calculations. In general, adverse ecological hazards to terrestrial and aquatic receptors at the site were not visually observable and likely associated with disturbance to physical habitat rather than the presence of chemical constituents.

In the March 27, 2012 letter, the USEPA agreed that the ecological risk assessment was acceptable, did not show a potential for adverse effects due to site-related constituents and no further investigation was deemed necessary.

6.0 GEOCHEMICAL CONCEPTUAL MODEL

As previously presented in the *Final RFI Summary Report*, in April and May 2011, Hercules conducted geochemical sampling of soil and groundwater at the site, in the vicinity of the MHB, in order to identify and quantify groundwater/sediment reactions, and understand the aquifer geochemistry. Sampling results were evaluated as they pertain to microbial biodegradation reactions in the aquifer that have the potential to reduce concentrations of organic constituents in the aquifer. The predominant organics in groundwater include diethyl ether, t-butanol, ethanol, and methanol. In addition, solid samples were collected to quantify the presence of reducible iron and manganese oxyhydroxides that are potential oxidizing agents.

In order to evaluate whether or not microbial biodegradation reactions are occurring at the site, an evaluation of terminal electron accepting processes was conducted. Select biogeochemical parameters were analyzed to quantify decreases in dissolved concentrations of oxidizing agents (terminal electron acceptors) and increases in both aerobic and anaerobic reaction byproducts. More specifically, biodegradation of the predominant organics in groundwater may occur under both aerobic and anaerobic conditions, which are dependent on the bioavailability of certain terminal electron acceptors and the oxidation-reduction potential of the groundwater. Biodegradation of organics under aerobic conditions would result in reduction in dissolved oxygen, oxidation of organics (as an electron donor) and other redox-sensitive species, and production of mineralization products. Reduction of oxygen may result in anaerobic and reducing conditions. Anaerobic biodegradation of organics would result in decreases in terminal electron acceptors including nitrate, sulfate, and oxidized iron and manganese species, along with oxidation of organics (as an electron donor) and increases in reduced species including dissolved manganese, ferrous iron (generally equivalent to dissolved iron), nitrite (as an intermediate product), nitrogen gas, sulfide, and methane.

It was not possible to quantify the loss of organics along specific flow paths, due to multiple sources of COPCs in the MHB. As such, the collected field measurements and laboratory analytical results for the biogeochemical parameters were used to identify the potential for active biodegradation of organic compounds. In summary, intrinsic microorganisms are utilizing naturally-occurring terminal electron acceptors (e.g., dissolved oxygen, nitrate, sulfate, and solid phase iron and Manganese oxyhydroxide minerals) to actively oxidize organics. Supporting evidence is as follows. pH values measured were between 5.65- and 6.91-standard units (s.u.), which were believed to be conducive to microbial growth and biodegradation reactions. Furthermore, ORP values ranging from -128.0- to 84.3-millivolts were identified, which indicated mixtures of redox conditions, and potential aerobic and anaerobic biodegradation reactions. Lower ORP values were consistent with reducing conditions and decreased concentrations of dissolved oxygen at or below 1.0 mg/L. Reducing conditions are believed to be driven by the presence of organics, which are used as electron donors, and the consumption of natural aquifer oxidizing agents. In these areas, decreased concentrations of nitrate and ammonium, observation of sulfide, and/or elevated concentrations of dissolved iron and dissolved

manganese were observed. These results provide strong evidence that the aquifer in vicinity to these wells has been impacted by biodegradation of organics.

Predominant organics have not been eliminated from groundwater by biodegradation reactions to date. However, the presence of reducible iron and manganese minerals in the solid phase in the aquifer, which can be used as terminal electron acceptors, indicate that the aquifer has the ability to continue to promote microbial biodegradation reactions for organics. For example, as indicated in the *Final RFI Summary Report*, the oxidizing capacity of the iron minerals in some locations of the aquifer is about 7.5 times the maximum concentration of methanol in groundwater, which is the dominant dissolved organic compound.

7.0 PROPOSED CORRECTIVE MEASURE ALTERNATIVE

As previously indicated, the results of the 2011 HHRA indicated that there are no unacceptable risks or hazards to workers, trespassers or recreational users at and near the facility. The results of the BERA did not indicate a potential for adverse effects due to site-related chemicals. Given that the USEPA approved the 2011 risk assessments for the site and agreed that there are no unacceptable risks associated with site-related constituents, this CMS does not outline or evaluate various remedial alternatives for the site. Rather, this CMS presents the approach for the proposed LTM plan for the site which will include the necessary engineering and institutional controls.

7.1 Soil

Based on the findings of the HHRA and BERA, there are currently no unacceptable risks to human health and the environment via the soil direct contact or inhalation exposure pathway for the present and anticipated use of the property (industrial use). Soil COI concentrations were evaluated in the HHRA using industrial screening levels and an upperbound target of 1×10^{-4} for potential cumulative cancer risks. The corrective action objective for soils at the Facility is to ensure that the industrial use exposure scenarios evaluated in the risk assessments are maintained in the future.

The proposed remedy for soils is engineering and institutional controls (see **Section 7.5**) to restrict the Facility to non-residential uses.

7.2 Groundwater

Based on the findings of the HHRA and BERA, there are currently no unacceptable risks to human health and the environment via the groundwater direct contact or vapor intrusion exposure pathway for the present and anticipated use of the property (industrial use). Groundwater COI concentrations were evaluated in the HHRA using industrial screening levels and an upperbound target of 1×10^{-4} for potential cumulative cancer risks. The corrective action objective for groundwater at the Facility is to document, through periodic monitoring, that concentrations have not changed and the human health and ecological risks or hazards associated with site groundwater are still acceptable.

The proposed remedy for groundwater is periodic monitoring and institutional controls (see **Section 7.5**) to restrict the Facility to non-residential uses and to restrict groundwater use on-site.

7.3 Sediment

Based on the findings of the HHRA and BERA, there are currently no unacceptable risks to human health and the environment via the sediment direct contact exposure pathway for the present and anticipated use of the property (industrial use). Sediment constituent concentrations were evaluated in the HHRA using industrial screening levels and an upperbound target of 1×10^{-4} for potential cumulative cancer risks. The corrective action objective for sediment at the Facility is to ensure that the industrial use exposure scenarios evaluated in the risk assessments are maintained in the future.

The proposed remedy for sediment is engineering and institutional controls (see **Section 7.5**) to restrict the Facility to non-residential uses.

7.4 Surface Water

Based on the findings of the HHRA and BERA, there are currently no unacceptable risks to human health and the environment via the surface water direct contact exposure pathway for the present and anticipated use of the property (industrial use). Surface water COI concentrations were evaluated in the HHRA using industrial screening levels and an upperbound target of 1×10^{-4} for potential cumulative cancer risks. The corrective action objective for surface water at the Facility is to ensure that the industrial use exposure scenarios evaluated in the risk assessments are maintained in the future.

The proposed remedy for surface water is engineering and institutional controls (see **Section 7.5**) to restrict the Facility to non-residential uses.

7.5 Institutional and Engineering Controls

Institutional and engineering controls will be implemented in order to protect human health and the environment and to maintain the exposure scenarios as outlined in the human health risk assessment. Institutional controls are non-engineered instruments such as administrative and/or legal controls that minimize the potential for human exposure to contamination by limiting land or resource use and inform subsequent purchasers of the environmental conditions at the Facility and of the final remedy for the Facility. Under the proposed final remedy, some constituents may remain in environmental media (soil, sediment, groundwater, surface water) at the Facility above levels appropriate for residential uses. Although no active remediation is required, a combination of institutional and engineering controls is necessary to prevent activities which could interfere with the integrity or protectiveness of the remedy.

A deed restriction for the MHB was filed in 1999 as a final requirement to receive a Certification of Satisfactory Completion of Remediation from the VDEQ. Additional institutional controls and engineering controls to be utilized at the site will do the following:

- Notify prospective buyers of the property of the environmental conditions at the Facility;
- Prohibit the use of the property for residential purposes;
- Prohibit the use of groundwater beneath the property for drinking water or domestic use; and
- Maintain existing security fence around property to prevent trespassers from access to any existing SWMUs.

Additional institutional controls may include, but not be limited to, an environmental covenant to be entered pursuant to the Virginia Uniform Environmental Covenants Act, §10.1-1238 et seq. of the Code of Virginia (UECA) and to be recorded with the

deed for the Facility property. While groundwater beneath the site is not currently used as a drinking water source and there are no plans for such future use, to provide additional protection, institutional controls could be utilized to prohibit the development of wells for drinking water or other domestic uses at the Facility. This restriction could be in the form of a notification to prohibit well drilling under Virginia's Private Well Regulations, 12VAC 5-630-380.

7.6 Long Term Groundwater Monitoring

In order to demonstrate that the human health risks or hazards associated with remaining site-related constituents at the Facility are still acceptable, LTM of groundwater is the proposed corrective measures alternative for the site, along with the use of institutional and engineering controls. No active remediation is required.

7.6.1 Objectives

The primary objective of a LTM remedy is to demonstrate that groundwater COI concentrations at the site are still acceptable (i.e., would not change the results of the 2011 HHRA). Additionally, this alternative would utilize LTM to confirm that field measurements and laboratory analytical results for geochemical parameters continue to show the occurrence of active aerobic and anaerobic biodegradation of organic compounds as was shown in the geochemical evaluation presented in the *Final RFI Summary Report*.

This alternative assumes that no additional monitoring wells would be added to the well network and would include periodic measurement of water levels and collection and analysis of groundwater samples. The geochemical parameters would include those for assessing redox conditions, for assessing microbial metabolism and measuring degradation processes, in addition to monitoring changes in groundwater COI concentrations. Additional detail of the LTM plan will be provided in the Corrective Measures Implementation (CMI) Workplan which will be submitted to USEPA following review and approval of the CMS Report. Groundwater data presented in this report have been used to determine the proposed groundwater analyte list for the LTM and as such, is presented in **Section 7.6.2** below.

7.6.2 LTM Analyte Selection Process

The currently proposed analyte list for each monitoring well has been selected based on an evaluation of the 2011 and 2012 site-wide groundwater data sets. The analyte selection process used was similar to the data evaluation process that was used for the 2012 groundwater data presented in **Section 2.6** of this report as well as the 2011 HHRA.

Detected concentrations from 2011 and 2012 for a given well were screened against the applicable EPCs which were based on the 2007 data and included in the 2011 HHRA. In some cases, a detected constituent may not have had an EPC identified in the 2011 HHRA. In these instances, the detected concentrations were screened

against their respective Tapwater RSL. In the absence of a Tapwater RSL, the detected concentrations were screened against their respective USEPA MCLs. If neither Tapwater RSLs nor MCLs are available for a particular constituent, surrogate screening values for constituents with structural similarity (as identified in the HHRA) were used. The screening results of the 2011 and 2012 detected concentrations are shown in **Tables 19 through 25.**

If a detected constituent exceeded its respective EPC, Tapwater RSL or MCL, it was retained for further monitoring and was included in the proposed analyte list for that well. The proposed analyte list is provided as **Table 26**.

As previously stated, a more detailed LTM sampling plan will be presented in the CMI Workplan. The CMI Workplan will outline how the LTM data will be evaluated and how reductions, if any, to the sampling program may be made. The CMI Workplan will also provide a rationale and plan to reduce and discontinue the LTM if certain criteria are met over the life of the LTM program. Additionally, the CMI Workplan will include a contingency plan for re-evaluating site risks in the case of an unforeseen statistical increase in groundwater COI concentrations.

8.0 EVALUATION OF PROPOSED CORRECTIVE MEASURE

This section provides an evaluation of the proposed corrective measure using USEPA's RCRA program criteria. These criteria generally consist of three (3) threshold criteria and seven (7) balancing criteria. The criteria are applied in two phases. In the first phase, the three (3) threshold criteria are evaluated as general goals. In the second phase, if there is more than one corrective measure alternative which meets the threshold criteria, the seven (7) balancing criteria are evaluated to determine which proposed corrective measure alternative provides the best relative combination of attributes.

For the Hopewell site, because LTM of groundwater is the only corrective measure alternative presented, the evaluation of the balancing criteria is not required. As such, the proposed alternative was evaluated using only the following threshold criteria:

- Protectiveness of human health and the environment;
- Ability to attain media clean up objectives; and
- Ability to control the source.

8.1 Protectiveness of Human Health and the Environment

As previously documented, the results of the human health and ecological risk assessments indicated that there are no unacceptable risks/hazards associated with remaining source material and site-related constituents present in environmental media at the site. As such, LTM of groundwater will be implemented to document that conditions do not change over time to the point where the assumptions and EPCs used in the risk assessments would become invalid.

Evaluation of these criteria also considers other aspects of the alternative, such as institutional and engineering controls, relevant to protecting human health and the environment. Groundwater is not used for drinking water at the Facility. With respect to future uses, the proposed corrective measure alternative will require groundwater use restrictions to minimize the potential for human exposure to contamination and to protect the integrity of the corrective measure. Land use restrictions will also be required to ensure that the exposure scenario (i.e., industrial land use) will be maintained at the site moving forward. Facility fencing and security measures (i.e. guard house) are currently in place that restrict access to the site by the general public. Additionally, the remaining SWMUs/AOCs are situated away from active manufacturing areas and are not frequently accessed by site personnel.

8.2 Ability to Attain Media Clean Up Objectives

The 2011 quantitative human health and ecological risk assessments indicated that there were no unacceptable human health risks or hazards associated with the site media constituents or potential for adverse ecological impact. Given these results, the

proposed corrective measure alternative of LTM for groundwater will document that concentrations at the site are stable and not increasing such that they would alter the conclusion of the quantitative risk assessments.

8.3 Source Control

As documented in **Section 2.5**, the remaining SWMUs at the Facility are out of service and remaining source material (i.e., sludge in the Eastern/Western WWL and VFSP) has been in place for many years. Given these reasons, it is expected that the source strength has diminished and the groundwater concentrations are expected to continue to decrease. This hypothesis was further substantiated by the results of the 2011 geochemical evaluation, in which sampling results indicated that intrinsic microorganisms are utilizing naturally-occurring terminal electron acceptors to actively oxidize organics in the aquifers. Although organics have not been eliminated in groundwater by biodegradation reactions to date; the presence of reducible iron and manganese minerals in the solid phase in the aquifer, which can be used as terminal electron acceptors, indicate that the aquifer has the ability to continue to promote microbial biodegradation reactions for organics in the future. e.

The proposed LTM of groundwater is intended to document that groundwater concentrations are stable and not increasing at the site. As previously indicated, the proposed alternative also requires the implementation and maintenance of institutional controls to ensure that Facility property is not used for residential purposes and a restriction on the use of groundwater beneath the property for potable purposes.

9.0 REPORTING

Following USEPA approval of the CMS Report, Hercules will prepare the CMI Workplan which will outline the detailed groundwater sampling plan that will be implemented at the site. Once the CMI Workplan has been approved, Hercules will submit annual monitoring reports documenting the LTM activities for that calendar year. The annual monitoring report will be prepared to address the items outlined in the USEPA CMS Scope of Work Progress Report Guidance to the extent possible.

Prior to the submittal of this CMS Report, Hercules conducted two (2) semi-annual groundwater monitoring events in 2013 (June and November). Groundwater samples were collected as outlined in **Table 26**. Periodic monitoring has been conducted since 2011 in order to create a spatial and temporal data set from which long-term groundwater trends can be evaluated. A comprehensive monitoring report will be prepared for 2013 and submitted to USEPA. Moving forward, a semi-annual sampling schedule will be proposed that will implement the LTM plan for the site. The results of these semi-annual sampling events will be reported to USEPA in the aforementioned annual monitoring reports.

10.0 REFERENCES

Groundwater Quality Assessment Program. Prepared by Roy F. Weston, Inc., February 1992.

Groundwater Quality Assessment Program – Field Investigation Report. Prepared by Roy F. Weston, Inc., April 1993.

Facility Lead Corrective Action Agreement Workplan. Prepared by Groundwater & Environmental Services, Inc., October 2001.

Hydrogeologic Evaluation. Prepared by Groundwater & Environmental Services, Inc., June 2002.

Current Human Exposures Under Control Environmental Indicator. Prepared by Groundwater & Environmental Services, Inc., September 2004.

Migration of Contaminated Groundwater Under Control Environmental Indicator. Prepared by Groundwater & Environmental Services, Inc., September 2004.

RCRA Facility Investigation Report – Phase I and II Investigations. Prepared by Groundwater & Environmental Services, Inc., September 2005.

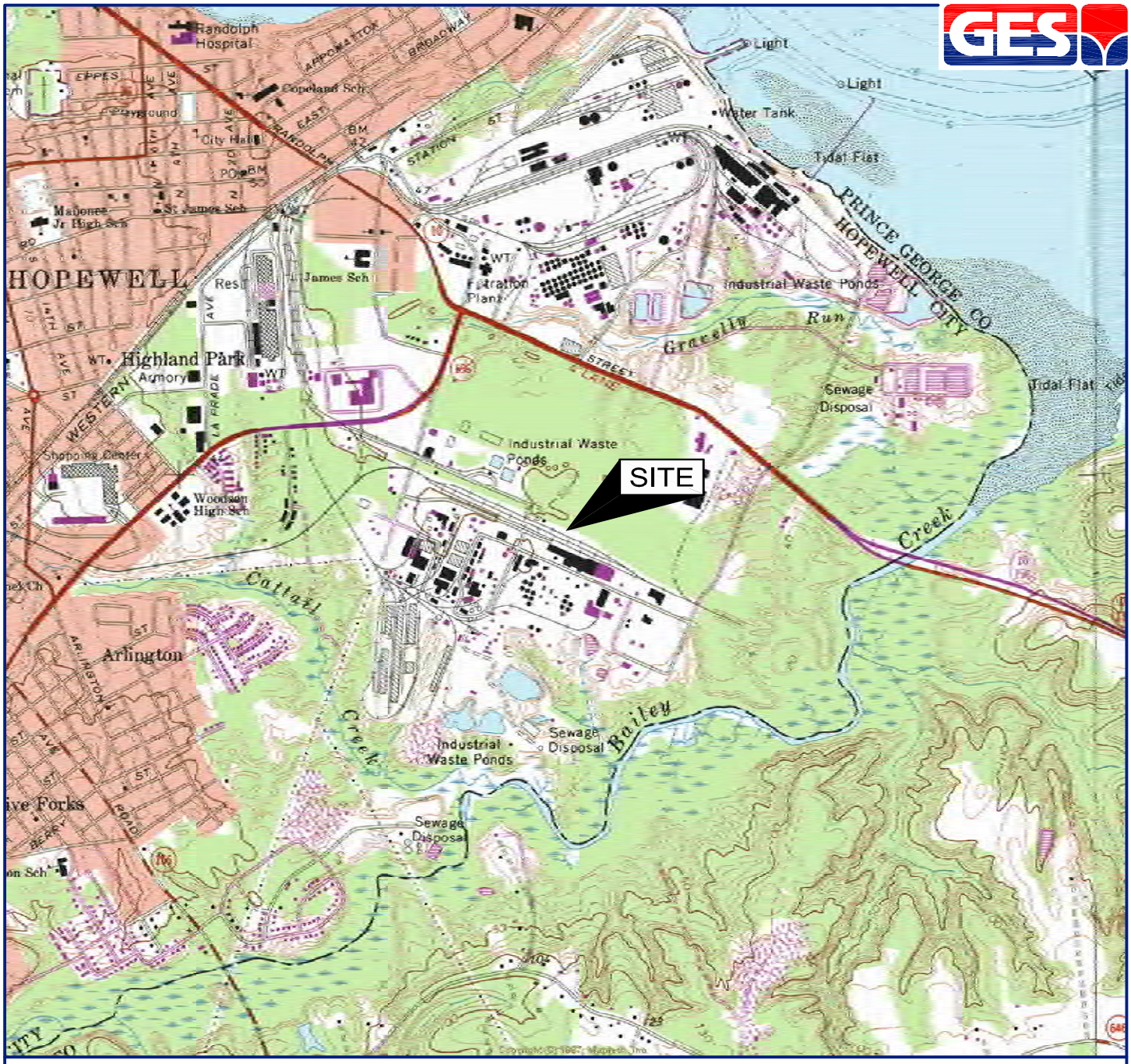
Phase III Sampling and Analysis Plan – Revision No. 1. Prepared by Groundwater & Environmental Services, Inc., April 2007.

Phase III Site Investigation Summary Report. Prepared by Groundwater & Environmental Services, Inc., November 2007.

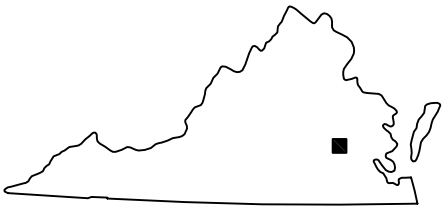
Interim Tentatively Identified Compounds Submittals. Prepared by Groundwater & Environmental Services, Inc. December 2009 and July 2010.

Final RFI Summary Report (appended by the HHRA and BERA). Prepared by Groundwater & Environmental Services, Inc. November 2011.

FIGURES



SOURCE: USGS 7.5 MINUTE SERIES
TOPOGRAPHIC QUADRANGLE 1987
HOPEWELL, VIRGINIA
CONTOUR INTERVAL = 10'



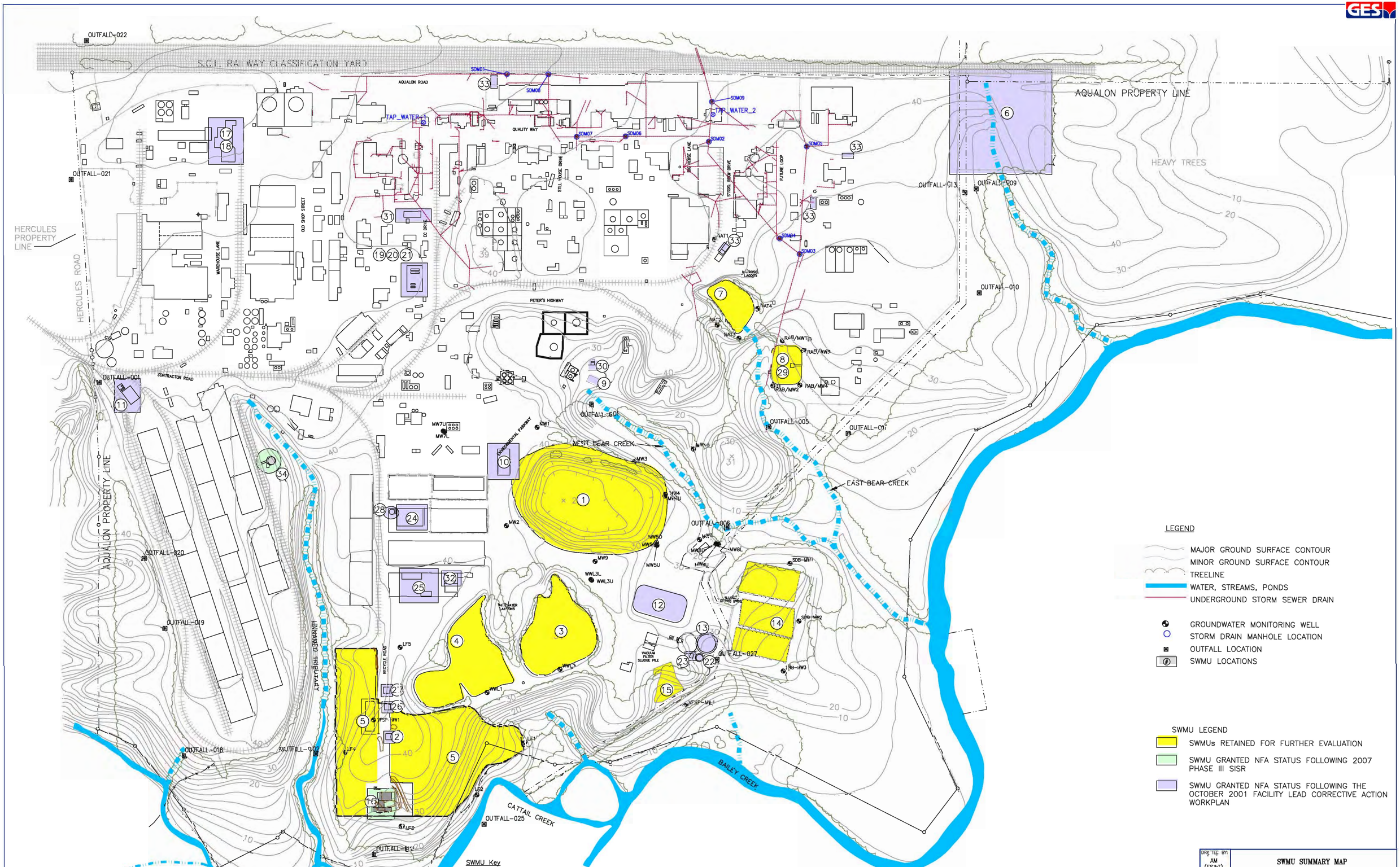
QUADRANGLE LOCATION

LAT. 037° 17' 19.86" N
LONG. 077° 16' 37.63" W

(APPROXIMATE SITE COORDINATES)

DRAFTED BY: W.A.W. (N.J.)	SITE LOCATION MAP
CHECKED BY:	HERCULES INCORPORATED AQUALON DIVISION HOPEWELL, VIRGINIA
REVIEWED BY:	
NORTH	Groundwater & Environmental Services, Inc. 23 SOUTH 13th STREET, SUITE 201, RICHMOND, VA 23219

SCALE IN FEET	DATE	FIGURE
0 — 2000	10-26-07	1



LEGEND

- MAJOR GROUND SURFACE CONTOUR
- MINOR GROUND SURFACE CONTOUR
- TREELINE
- WATER, STREAMS, PONDS
- UNDERGROUND STORM SEWER DRAIN
- GROUNDWATER MONITORING WELL
- STORM DRAIN MANHOLE LOCATION
- OUTFALL LOCATION
- SWMU LOCATIONS

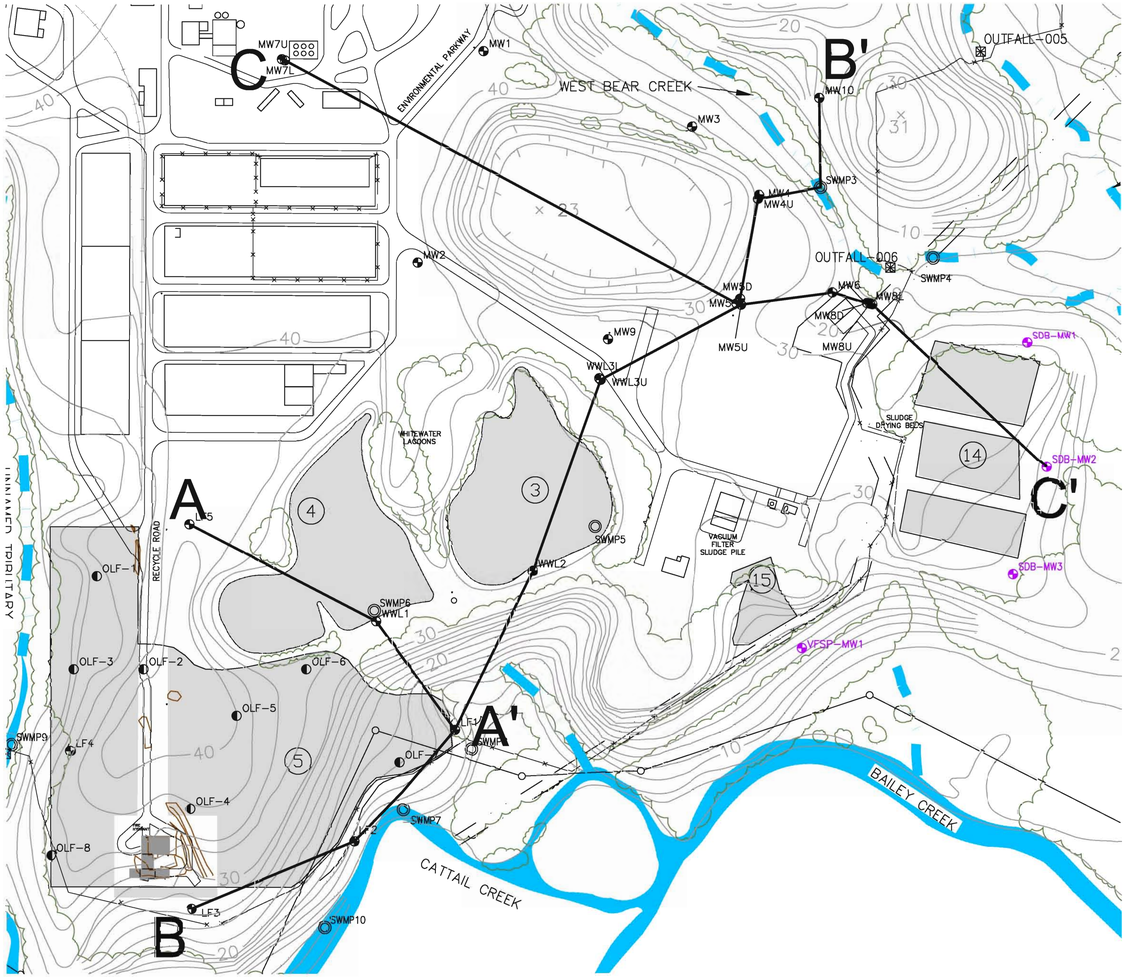
SWMU LEGEND

- SWMUs RETAINED FOR FURTHER EVALUATION
- SWMU GRANTED NFA STATUS FOLLOWING 2007 PHASE III SISR
- SWMU GRANTED NFA STATUS FOLLOWING THE OCTOBER 2001 FACILITY LEAD CORRECTIVE ACTION WORKPLAN

SWMU Key

1. Main Holding Basin (Groundwater)
2. Sandbox
3. Eastern White Water Lagoon
4. Western White Water Lagoon
5. Old Landfill and Landfill #156
6. Landfill #477
7. Natrosol Lagoon
8. Reten/Aqualon (Anoxic) Basin
9. Main Lift Station
10. Neutralization Basin
11. Belt Press Facility
12. Aeration Basin
13. Clarifier
14. Sludge Drying Beds
15. Vacuum Filter Sludge Pile
16. Solid Waste Incinerator
17.,18. Boilers #5 & #6
19.,20.,21. Low Wine Tanks
22. Sludge Thickener
23. Sludge Pump House
24. Salt Pile
25. Drum Storage Area
26. Drum Crusher
27. Asbestos Storage Shed
28. Brine Slurry Tank
29. Anoxic Basin
30. New Main Lift Station (CDLNS)
31. Accumulation Tank T-70
32. Waste Accumulation
33. Satellite Accumulation (Several)
34. Teepee Incinerator

DRAWN BY: AM (ES&T)	SWMU SUMMARY MAP
CHECKED BY: EW	HERCULES INCORPORATED AQUALON DIVISION HOPEWELL, VIRGINIA
REVIEWED BY: MB	Groundwater & Environmental Services, Inc. 23 SOUTH 13TH STREET • SUITE 201 • RICHMOND, VA 23219
NORTH	SCALE IN FEET: 0 – 150 / DATE: 2-25-11 / FIGURE: 2



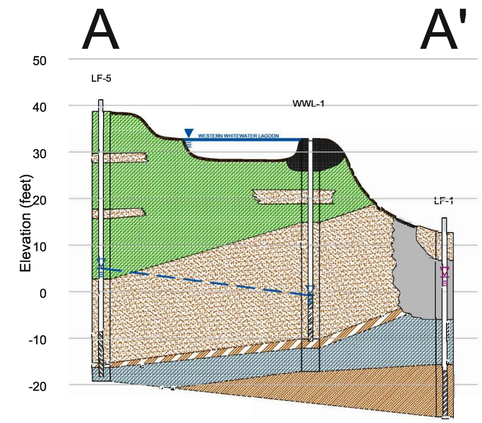
LEGEND

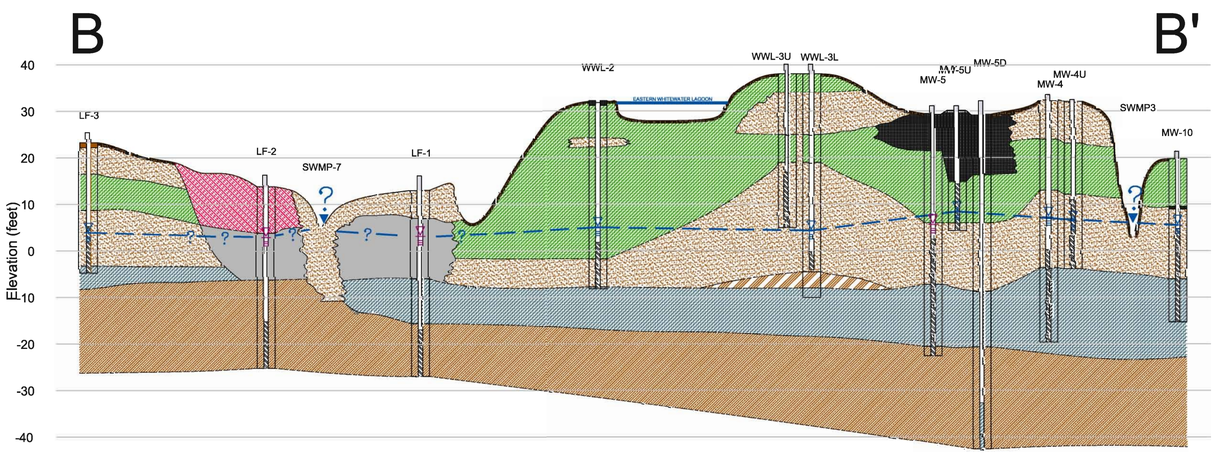
- SURFACE WATER ELEVATION
- UPPER AQUIFER POTENTIOMETRIC SURFACE
- LOWER AQUIFER POTENTIOMETRIC SURFACE

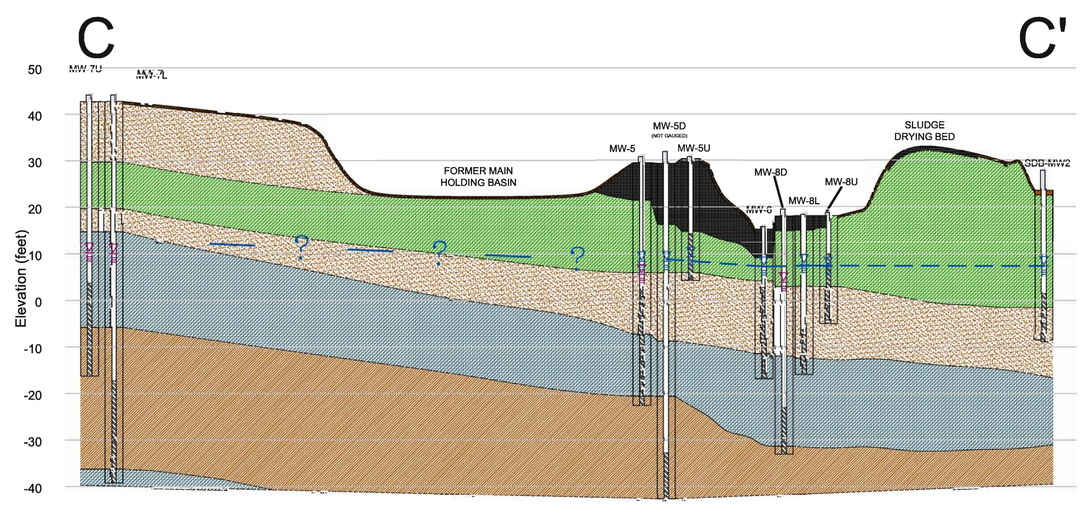
NOTES:
1) SURFACE TOPOGRAPHY IS APPROXIMATE
2) GROUNDWATER ELEVATION DATA WAS COLLECTED IN MAY & JUNE 2007
3) VERTICAL EXAGGERATION IS 10 TIMES
4) LINES DASHED WHERE INFERRED

- ASH, CLAY AND GRAVEL FILL
- FINE TO COARSE SILTY SAND (UPPER SAND)
- COARSE SAND AND GRAVEL (LOWER SAND)
- SILTY CLAY
- CLAYEY FILL MATERIAL
- MARINE CLAY
- TOPSOIL
- ORGANIC MATERIAL
- WASTE MATERIAL
- MAJOR GROUND SURFACE CONTOUR
- MINOR GROUND SURFACE CONTOUR
- TREELINE
- WATER, STREAMS, PONDS
- UNDERGROUND STORM SEWER DRAIN
- GROUNDWATER MONITORING WELL
- NEW GROUNDWATER MONITORING WELL (MAY 2007)
- OUTFALL LOCATION
- SURFACE WATER SAMPLE LOCATION
- SWMU LOCATIONS

SWMU INDEX
3 EASTERN WHITEWATER LAGOON
4 WESTERN WHITEWATER LAGOON
5 OLD LANDFILL AND LANDFILL #156
7 NATROSOL LAGOON
8 RETEN/AQUALON (ANOXIN) BASIN
14 SLUDGE DRYING BEDS
15 VACUUM FILTER SLUDGE PILE







DRAWN BY: JCW	GENERALIZED GEOLOGIC CROSS SECTIONS
CHECKED BY: EW	HERCULES INCORPORATED AQUALON DIVISION HOPEWELL, VIRGINIA
REVIEWED BY: MB	Groundwater & Environmental Services, Inc. 23 SOUTH 13TH STREET, SUITE 201, RICHMOND, VA 23219
NORTH	SCALE IN FEET 0 150 / DATE 10-20-08 / FIGURE 3

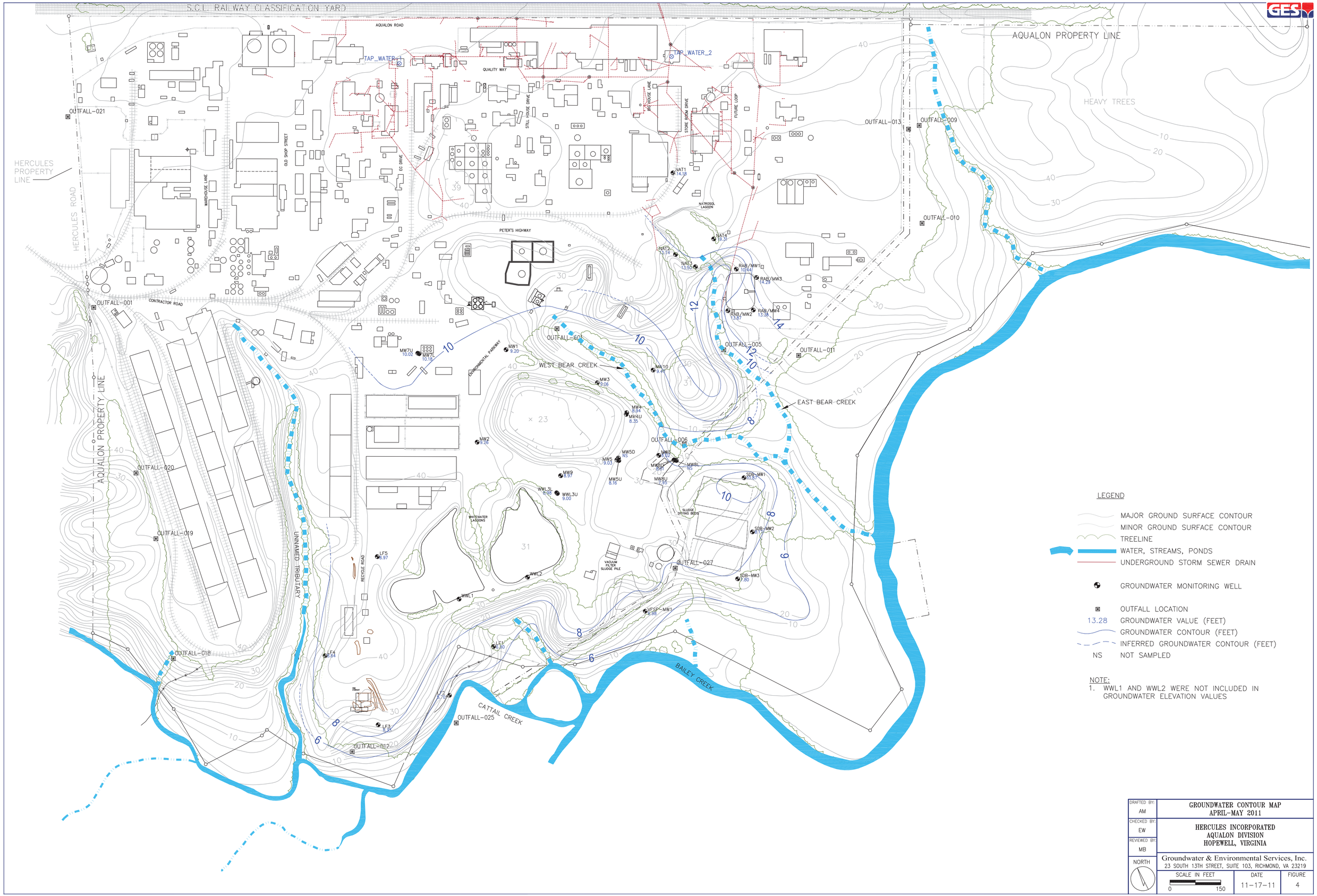
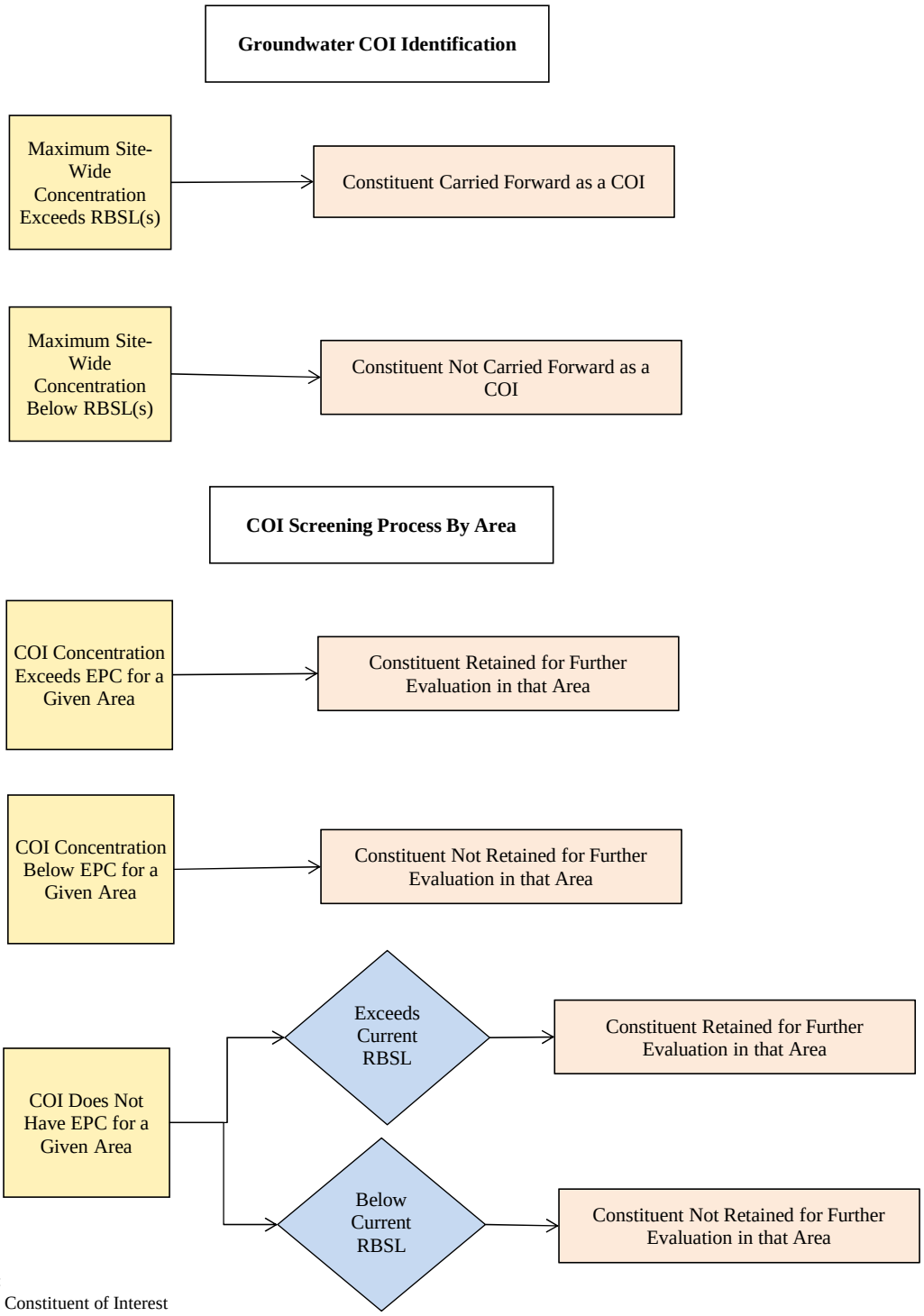

S.C.L. RAILWAY CLASSIFICATION YARD
AQUALON ROAD
QUALITY WAY
TAP_WATER_1
TAP_WATER_2
AQUALON PROPERTY LINE
HEAVY TREES
HERCULES PROPERTY LINE
HERCULES ROAD
OUTFALL-021
OUTFALL-013
OUTFALL-009
OUTFALL-010
OUTFALL-001
CONTRACTOR ROAD
OLD SHOP STREET
WAREHOUSE LANE
EC DRIVE
STILL HOUSE DRIVE
BIG HOUSE LANE
STORE ROOM DRIVE
FUTURE LOOP
NATROSOL LAGOON
PETER'S HIGHWAY
ENVIRONMENTAL PARKWAY
OUTFALL-003
OUTFALL-005
OUTFALL-011
WEST BEAR CREEK
EAST BEAR CREEK
OUTFALL-006
OUTFALL-020
OUTFALL-019
UNNAMED TRIBUTARY
RECYCLE ROAD
WHITEWATER LAGOONS
SLUDGE DRYING BEDS
VACUUM FILTER SLUDGE PILE
OUTFALL-027
OUTFALL-018
OUTFALL-012
OUTFALL-025
CATTAIL CREEK
BAILEY CREEK
NAT1 14.18
NAT2 15.74
NAT3 13.90
NAT4 19.31
RAB/MW1 10.44
RAB/MW2 13.84
RAB/MW3 14.29
RAB/MW4 13.38
MW7U 10.02
MW7L 10.18
MW1 9.20
MW10 9.44
MW3 9.06
MW4 8.94
MW4U 8.35
MW2 9.26
MW5D NS
MW5 9.03
MW5U 8.16
MW6 8.02
MW6D 8.01
MW6L NS
MW8U 7.95
MW9 8.97
WWL3L 8.88
WWL3U 9.00
SDB-MW1 10.87
SDB-MW2 8.12
SDB-MW3 7.80
WWL2
WWL1
VFSP-MW1 8.86
LF5 8.97
LF4 8.84
LF1 8.80
LF2 8.76
LF3 8.33
LEGEND
MAJOR GROUND SURFACE CONTOUR
MINOR GROUND SURFACE CONTOUR
TREELINE
WATER, STREAMS, PONDS
UNDERGROUND STORM SEWER DRAIN
GROUNDWATER MONITORING WELL
OUTFALL LOCATION
13.28 GROUNDWATER VALUE (FEET)
GROUNDWATER CONTOUR (FEET)
INFERRED GROUNDWATER CONTOUR (FEET)
NS NOT SAMPLED
NOTE:
1. WWL1 AND WWL2 WERE NOT INCLUDED IN GROUNDWATER ELEVATION VALUES
DRAFTED BY: AM
CHECKED BY: EW
REVIEWED BY: MB
NORTH
GROUNDWATER CONTOUR MAP
APRIL-MAY 2011
HERCULES INCORPORATED
AQUALON DIVISION
HOPEWELL, VIRGINIA
Groundwater & Environmental Services, Inc.
23 SOUTH 13TH STREET, SUITE 103, RICHMOND, VA 23219
SCALE IN FEET
0 150
DATE 11-17-11
FIGURE 4

Figure 5
Groundwater Data Screening Process Flowchart
Hercules - Aqualon
Hopewell, Virginia



Notes:
COI = Constituent of Interest
EPC = Exposure Point Concentration
RBSLs = Risk Based Screening Levels
RBSLs are identified as the following:

1. Tapwater Regional Screening Levels (RSLs) derived from the Regional Screening Table, dated November 2013
2. USEPA Maximum Contaminant Levels (MCLs)
2. For vapor intrusion COI identification, vapor intrusion screening values from Table 2c of the USEPA (2002a) Vapor Guidance

Any constituent with an applicable Tapwater RSL and MCL will be evaulated against the Tapwater RSL.

TABLES

Table 1
List of Previous Facility Lead Corrective Action (FLCA) Reports
Hercules - Aqualon
Hopewell, Virginia

Submittal Date	Title	USEPA Approval Date
October 2001	Facility Lead Corrective Action Agreement Workplan	29 November 2001
June 2002	Hydrogeologic Evaluation	N/A
September 2004	Environmental Indicators	30 September 2004
September 2005	Phase I/II RCRA Facility Investigation (RFI) Report	14 December 2009
November 2007	Phase III Site Investigation Summary Report (SISR)	14 December 2009
December 2009	Interim Tentatively Identified Compound (TIC) Submittal	N/A
July 2010	Supplemental Interim TIC Submittal	28 July 2010
November 2011	Final RFI Summary Report	27 March 2012

Notes:
1. The November 2007 Phase III SISR included Hercules' response to USEPA comments on the September 2005 Phase I/II RFI Report; therefore, the approval letter for the Phase III SISR applied to both reports.
2. The November 2011 Final RFI Summary Report was appended by the Human Health Risk Assessment (HHRA) and Baseline Ecological Risk Assessment (BERA) report; therefore, the approval letter for the Final RFI Summary Report applied to the risk assessments as well.

Table 2
Summary of Solid Waste Management Units (SWMUs) Current Status
Hercules - Aqualon
Hopewell, Virginia

SOLID / HAZARDOUS WASTE MANAGEMENT UNITS (SWMUs)	Unit ID	Unit Name	Brief Description	Status	Notes
Main Holding Basin (MHB)	SWMU-1	Main Holding Basin	The Main Holding Basin (MHB) was a five-acre, unlined surface impoundment constructed in 1962 for pretreatment of the plant's industrial waste streams. Closure certified 1993 (clean soil) to RCRA standards. GW constituents downgradient demonstrated not exceeding background 3/97. VVRP Cert. of Satisfactory Completion signed by VADEQ 10/99. Note that the Neutralization Basin that required no further action was removed as part of the MHB closure project.	Retained for Further Evaluation in the 2011 human health and ecological risk assessments	No unacceptable risks/hazards to human or ecological receptors
Sandbox	SWMU-2	Sandbox	Waste pile. Lined.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Eastern Whitewater Lagoon	SWMU-3	Eastern Whitewater Lagoon	Two Lagoons lie adjacent to one another, and are joined by a pipe at their southern ends. Lagoons were used primarily for disposal of whitewater, a waste stream from the Chemical Cotton Process. Starting in approximately 1976, the Eastern Whitewater Lagoon also received waste-activated sludge from the facility's Bioplant.	Retained for Further Evaluation in the 2011 human health and ecological risk assessments	No unacceptable risks/hazards to human or ecological receptors
Western Whitewater Lagoon	SWMU-4	Western Whitewater Lagoon	See above.	Retained for Further Evaluation in the 2011 human health and ecological risk assessments	No unacceptable risks/hazards to human or ecological receptors
Landfill and Old Landfill #156	SWMU-5	Landfill and Old Landfill #156	Landfill #156 was a permitted solid waste landfill which was operational from 1972 to 1988. The Old Landfill is the adjacent area which was used for waste disposal dating back to the 1930's. The VADEQ agreed in 1989 that Landfill #156 had been properly closed.	Retained for Further Evaluation in the 2011 human health and ecological risk assessments	No unacceptable risks/hazards to human or ecological receptors
Landfill #477 (inert fill)	SWMU-6	Landfill #477 (inert fill)	Located at the east end of the main plant area, the 4 acre area was permitted by the VDEQ as an inert waste landfill. Since 1985, it has received inert construction and demolition debris. VADEQ agreed that inert disposal sites do not need a landfill permit and, in November 1988, revoked Permit 477.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Natrosol Lagoon	SWMU-7	Natrosol Lagoon	An unlined impoundment that received cellulose derivatives manufacturing waste from 1962 through 1988. A Closure Report was submitted to the VADEQ in May 1995 documenting closure of the lagoon by dredging, excavation, and off-site disposal of sludge as solid waste. The lagoon was covered with a layer of top soil and vegetated to stabilize the soil. It was allowed to fill with surface and ground water to become a wildlife habitat pond which has supported a growing population of bass, catfish, and brim, since their introduction in October 1996.	Retained for Further Evaluation in the 2011 human health and ecological risk assessments	No unacceptable risks/hazards to human or ecological receptors
Reten/Aqualon/Anoxic Basin	SWMU-8 & 29	Reten/Aqualon/ Anoxic Basin	The Reten/Aqualon Basin (RAB) was originally constructed in 1976 to treat nonhazardous wastewaters from acrylamide polymer manufacturing and absorbent fiber areas. The original basin was constructed with gunnite wall and an asphalt bottom. In early 1989, the RAB was enlarged deeper and laterally, and was fitted with a 40-mil plastic liner. The enhanced unit (called the Anoxic Basin) was used for treatment of all neutralized wastewater from June 1989 until late December 1989, when it was removed from service due to liner tears in the north end.	Retained for Further Evaluation in the 2011 human health and ecological risk assessments	No unacceptable risks/hazards to human or ecological receptors
Main Lift Station	SWMU-9	Main Lift Station	An in-ground concrete tank constructed in 1978 to pump EC area, CMC, and laboratory wastewater to the Neutralization Basin. Backup to SWMU-30.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Neutralization Basin	SWMU-10	Neutralization Basin	A separate unit located in the upgradient bank of the Main Holding Basin (MHB) and discharged through an approximately 20-foot acid–brick lined flume into the MHB. It served as an elementary neutralization tank for plant wastewater. It was removed as part of the MHB Closure Project.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan

Table 2
Summary of Solid Waste Management Units (SWMUs) Current Status
Hercules - Aqualon
Hopewell, Virginia

SOLID / HAZARDOUS WASTE MANAGEMENT UNITS (SWMUs)	Unit ID	Unit Name	Brief Description	Status	Notes
Belt Press Facility	SWMU-11	Belt Press Facility	The sludge dewatering Belt Press was located in an enclosed metal building together with ancillary mixing tanks and dissolved air flotation equipment. The Belt Press Facility was used to dewater sludge pumped from the Bioplant Clarifier, and it also processed fibrous solids from the Chemical Cotton Plant. It operated until the Bioplant was removed from service in 1989.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Aeration Basin	SWMU-12	Aeration Basin	The Aeration Basin was a rectangular concrete-lined basin of approximately 128 by 237 by 19 feet and a holding capacity of 2,000,000 gallons. The Basin was part of the Bioplant that was placed into service in 1962. The unit was equipped with aeration equipment. Prior to 1989, the unit treated nonhazardous effluent from the Main Holding Basin.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Clarifier	SWMU-13	Clarifier	The Clarifier is a circular in-ground tank 80 feet across by 12 feet deep, which received effluent from the Aeration Basin. The Clarifier was constructed of concrete in 1962. It received nonhazardous Aeration Basin effluent and produced waste activated sludge and low-BOD clarified wastewater. The Clarifier was removed from wastewater treatment service in December 1989. It since collects rainwater and is pumped down about once a year. This unit now supports a thriving bullfrog population.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Sludge Drying Beds	SWMU-14	Sludge Drying Beds	The Sludge Drying Beds (SDB) consisted of three unlined rectangular beds probably constructed in late 1970 to replace the Vacuum Filter Press. Sludge from the Bioplant was pumped to the beds to dry, and was then periodically removed and landfilled. In approximately 1976, the Facility began pumping the sludge to the Eastern Whitewater Lagoon, and ceased use of the SDB.	Retained for Further Evaluation in the 2011 human health and ecological risk assessments	No unacceptable risks/hazards to human or ecological receptors
Vacuum Filter Sludge Pile	SWMU-15	Vacuum Filter Sludge Pile	The Vacuum Filter Sludge Pile (VFSP) was a 50-foot wide surface impoundment used for temporary storage of sludge generated by a vacuum filter press during the 1960's and 1970's. The sludge was transported to the VFSP via conveyor belt, and the resulting filtrate was piped to the Facility's Aeration Basin for treatment. The solid cake sludge in the VFSP was then periodically removed and landfilled.	Retained for Further Evaluation in the 2011 human health and ecological risk assessments	No unacceptable risks/hazards to human or ecological receptors
Solid Waste Incinerator	SWMU-16	Solid Waste Incinerator	The Solid Waste Incinerator was constructed in 1972 in the Old Landfill Area (but probably not on top of the fill as suggested in the RFA). The Incinerator was used to burn up to 16,500 tons per year of the plant's nonhazardous trash. The incinerator structure and the ash residue were removed and disposed at BFI Landfill during July 1988. The concrete foundation remains.	No Further Action	No Further Action status granted following submittal of 2007 Phase III SISR
Boilers No. 5 and No. 6	SWMU-17 & 18	Boilers No. 5 and No. 6	Boilers No. 5 and No 6. were constructed in late 1930's and were outfitted to burn Low Wine in 1984 as a supplemental fuel. In 1984 they had a 6 million-pound per year capacity (for Low Wine) and were rated at 189 million btu per hour. The boilers were shut down in 1990 when the neighboring co-generation facility came on line to supply plant steam.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Low Wine Storage Tanks	SWMU-19, 20, 21	Low Wine Storage Tanks	The Low Wine Storage Tanks are three above ground steel tanks in the ethylcellulose (EC) process area with capacities of 15,666 gallons for T-22; 24,889 gallons for T-24; and 21,100 for T-27. These tanks were formally certified (in 1989) for hazardous waste service based on design, pre-existing certifications, waste material characteristics, ultrasonic thickness testing, and existing corrosion protection. Tank T-24 was removed from service in 1991 because it no longer met the optional high-pressure standards that the Hopewell plant imposes for Low Wine storage. Tanks T-22 and T-27 continue as Low Wine storage and continue to be certified as pressure vessel.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Sludge Thickener	SWMU-22	Sludge Thickener	The Sludge Thickener is a 34-foot diameter by 17-foot deep in-ground concrete tank, which received the waste-activated sludge stream from the Clarifier. The Thickener was constructed in 1962 along with other components of the Bioplant. This unit was taken out-of-service when the Belt Press Facility (SWMU-11) was started in 1981.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Sludge Pump House	SWMU-23	Sludge Pump House	The Sludge Pump House is a 10-foot by 10-foot concrete block building which was constructed in 1962. The building houses two centrifugal pumps with a total capacity of 240 gpm that conveyed activated sludge from the thickener (1962-1981) or from the Clarifier (1981-1989). The building also contained ancillary piping, valves, and electrical equipment for the pumps.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan

Table 2
Summary of Solid Waste Management Units (SWMUs) Current Status
Hercules - Aqualon
Hopewell, Virginia

SOLID / HAZARDOUS WASTE MANAGEMENT UNITS (SWMUs)	Unit ID	Unit Name	Brief Description	Status	Notes
Salt Pile	SWMU-24	Salt Pile	The Salt Pile consisted of approximately 1000 cubic yards of by-product sodium chloride salt from the caustic recovery part of the ethylcellulose manufacturing process. The Salt Pile was used from about 1939 Until 1983. It was removed in 1988 prior to the VSI for the RFA.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Drum Storage Area (Container Storage Area)	SWMU-25	Drum Storage Area (Container Storage Area)	The Container Storage Area (CSA) was two sections of a larger concrete pad at least 4 in. thick. These sections were used to accumulate hazardous waste managed in sealed drums. After the Sand Box removal in 1985, the CSA was used to accumulate hazardous waste managed in sealed drums. In 1989 the Waste Accumulation Building (#32) was completed and placed in service, and waste was removed from the CSA.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Drum Crusher	SWMU-26	Drum Crusher	The Drum Crusher is located within the Old Landfill Area. The Drum Crusher consists of a hydraulic ram on a concrete base located within a 10 ft. x 17-ft. structure having two sides and a roof of corrugated fiberglass. The unit was constructed in 1975 and is still used to crush decontaminated steel and plastic drums.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Asbestos Staging Shed	SWMU-27	Asbestos Staging Shed	The Shed was a 10 ft. x 10 ft. corrugated fiberglass building constructed in 1983 which served as a staging area for bagged asbestos removed during the course of demolition and maintenance activities at the plant site. The Shed's use was discontinued prior to the RFA VSI.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Brine Slurry Tank	SWMU-28	Brine Slurry Tank	The tank was an in-ground concrete-lined salt slurry pit located within the northwest corner of the concrete pad containing the Salt Pile (SWMU-24). This tank was used to slurry the by-product salt in water and then pump the slurry to the Caustic-Chlorine Plant where it was purified and used in caustic-chlorine manufacture. It was taken out of service in 1983.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
New Main Lift Station (CDLNS)	SWMU-30	New Main Lift Station (CDLNS)	The CDLNS is an in-ground 90,000-gallon concrete tank that consists of four chambers. Placed into operation in 1989, three of the chambers are used for a three-step pH adjustment process of the plant's wastewater and the fourth is for containment of overflows occurring during heavy rain events.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Hazardous Waste Accumulation Tank T-70	SWMU-31	Hazardous Waste Accumulation Tank T-70	Starting during the mid-1980's, the aboveground steel tank, was used as a less than 90-day accumulation tank for spent solvent generated in the plant's Technical Facility. The tank was cleaned and removed in 1994 after a leak resembling a drop of dew was observed.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Waste Accumulation Building	SWMU-32	Waste Accumulation Building	The Building is used primarily to accumulate filled satellite drums of solvent wastes and any other containerized hazardous waste occasionally generated on site. The building was placed into service in 1989 and is still in use.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Satellite Accumulation	SWMU-33	Satellite Accumulation	Ongoing satellite accumulation currently is done in containers at five locations on the plant site. As each container is filled, it is moved to the Waste Accumulation Building (SWMU-32) that day and replaced with an empty container.	No Further Action	No Further Action status granted following submittal of October 2001 Facility Lead Corrective Action Agreement Workplan
Teepee Incinerator	SWMU-34	Teepee Incinerator	The Teepee Incinerator was an oil-fired conical refuse burner. The unit was probably installed in late 1961 and operated until about 1980, when it became obsolete by new air regulations. Aerial photographs indicate that the unit had been removed by late 1988.	No Further Action	No Further Action status granted following submittal of 2007 Phase III SISR

Table 3
Well Construction Table
Hercules - Aqualon
Hopewell, Virginia

Well ID	Unit Completed	Easting X	Northing Y	Total Depth (feet)	Screened Interval	Top of Ground Surface	Top of PVC Casing	Depth to Water	Groundwater Elevation
WWL-1	LPUS	11838358.46	3628729.75	43.5	33.5 - 43.5	32.76	32.30	23.75	8.55
WWL-2	US	11838710.56	3628703.00	40.4	30.4 - 40.4	32.2	31.80	31.85	-0.05
WWL-3L	LPUS	11838999.12	3629033.44	42	38 - 42	37.94	40.20	31.37	8.83
WWL-3U	UPUS	11839000.80	3629029.19	33	21 - 33	37.94	40.22	32.10	8.12
LF-1	LS	11838427.84	3628449.91	40	30 - 40	13.04	16.19	8.75	7.44
LF-2	LS	11838137.41	3628309.21	39	29 - 39	13.79	16.36	9.85	6.51
LF-3	LPUS	11837758.39	3628306.25	28	18 - 28	23.24	25.50	17.32	8.18
LF-4	LS	11837644.03	3628718.96	57	47 - 57	33.79	36.81	27.70	9.11
LF-5	LPUS	11838064.73	3629073.60	57	47 - 57	38.71	41.57	32.50	9.07
NAT-1	US	11840118.37	3630275.00	48	25 - 45	40.95	43.05	29.05	14.0
NAT-2	US	11839979.32	3629898.97	44	20 - 40	33.39	35.33	21.75	13.58
NAT-3	US	11840047.31	3629806.26	30	8 - 28	28.89	31.46	18.08	13.38
NAT-4	US	11840182.11	3629899.23	36	15 - 35	29.76	31.06	14.08	16.98
RAB-MW1	NDA	3416.4372	3761.65	Well Abandoned					
RAB-MW1R	NDA	11840142.72	3629673.71	35	25 - 35	26.62	28.64	18.09	NM
RAB-MW2	NDA	11840113.77	3629546.26	25.15*	Unknown	23.49	25.60	11.76	13.84
RAB-MW3	NDA	11840305.64	3629644.44	22.39*	Unknown	27.23	29.76	16.23	13.53
RAB-MW4	NDA	11840230.70	3629502.74	25.65*	Unknown	24.31	26.76	13.26	13.5
SDB-MW1	UPUS	11839878.58	3628756.32	35	25 - 35	29.34	32.03	22.39	9.64
SDB-MW2	UPUS	11839816.95	3628494.38	32	22 - 32	25.5	28.37	19.85	8.52
SDB-MW3	UPUS	11839663.09	3628307.77	35	25 - 35	25.94	28.50	19.75	8.75
VFSP-MW1	UPUS	11839182.97	3628331.06	36	26 - 36	9.39	12.32	4.78	7.54
MW-1	US	11839032.72	3629778.26	47	17 - 47	41.84	43.28	34.15	9.13
MW-2	LPUS	11838730.68	3629410.60	53	33 - 53	40.45	42.46	33.25	9.21
MW-3	LPUS	11839387.23	3629459.23	53	33 - 53	33.13	34.82	26.00	8.82
MW-4	LPUS	11839465.38	3629268.54	52	32 - 52	32.38	33.67	25.03	8.64
MW-4U	LPUS	11839459.97	3629261.80	36	21 - 36	32.08	32.61	24.22	8.39
MW-5	US	11839332.96	3629071.49	52	27 - 52	29.44	31.28	22.40	8.88
MW-5U	UPUS	11839340.96	3629065.35	26	16 - 26	29.34	30.32	21.55	8.77
MW-5D	LS	11839343.98	3629077.99	72	62 - 72	29.3	32.36	NM	NM
MW-6	US	11839532.47	3629015.38	32	12 - 32	15.18	16.24	8.51	7.73
MW-7L	LS	11838629.56	3629920.20	82	60 - 82	42.76	44.54	34.14	10.4
MW-7U	LS	11838624.62	3629924.87	59	39 - 59	42.73	44.51	34.21	10.3
MW-8D	LS	11839593.03	3628966.19	51	41 - 51	17.97	20.01	11.15	8.86
MW-8L	LPUS	3116.9818	2822.57	Well Abandoned					
MW-8L-R	LPUS	11839513.96	3628909.11	32	22 - 32	17.81	20.98	13.17	NM
MW-8U	UPUS	11839602.64	3628959.52	23	8 - 23	18.03	17.95	10.87	7.08
MW-9	US	11839048.25	3629103.73	48	28 - 48	39.57	41.22	32.36	8.86
MW-10	US	11839663.82	3629413.80	35	15 - 35	19.74	21.48	12.30	9.18

Notes:
Depth to water measurements collected during the August 2012 site-wide groundwater sampling event
NM = Not measured
* Total depths measured in field during Phase III investigation conducted in May/June 2007
US = upper sand (screened across >75% of unit)
LS = lower sand
LPUS = lower portion of upper sand
UPUS = upper portion of upper sand
NDA = no data available

Table 4
2012 Groundwater Sample Collection Matrix
August 2012 Site-Wide Groundwater Sampling Event
Hercules - Aqualon
Hopewell, Virginia

Well ID	Sample Date	Sample Time	VOCs[1]	SVOCs[2]	Metals[3]	Methanol & Ethanol[4]	Chloride[5]	Sulfate[6]	Ferrous Iron[7]	Nitrite/ Nitrate[8]	TKN[9]	TOC[10]	Methane[11]
WWL-1	8/24/2012	10:35	1	--	1	1	1	1	1	1	1	1	1
WWL-2	8/24/2012	12:20	1	--	1	1	1	1	1	1	1	1	1
WWL-3U	8/23/2012	12:45	1	1	1	1	1	1	1	1	1	1	1
WWL-3L	8/23/2012	12:05	1	1	1	1	1	1	1	1	1	1	1
LF-1	8/23/2012	13:40	1	1	1	1	1	1	1	1	1	1	1
LF-2	8/23/2012	12:40	1	--	1	1	1	1	1	1	1	1	1
LF-3	8/23/2012	14:45	1	1	1	1	1	1	1	1	1	1	1
LF-4	8/23/2012	9:35	1	1	1	1	1	1	1	1	1	1	1
LF-5	8/23/2012	11:10	1	1	1	1	1	1	1	1	1	1	1
NAT-1	8/21/2012	12:25	1	--	1	1	1	1	1	1	1	1	1
NAT-2	8/21/2012	11:50	1	1	1	1	1	1	1	1	1	1	1
NAT-3	8/21/2012	9:25	1	1	1	1	1	1	1	1	1	1	1
NAT-4	8/23/2012	16:30	1	--	1	1	1	1	1	1	1	1	1
RAB-MW1R	8/20/2012	13:10	1	--	1	1	1	1	1	1	1	1	1
RAB-MW2	8/24/2012	14:30	1	--	1	1	1	1	1	1	1	1	1
RAB-MW3	8/20/2012	12:45	1	--	1	1	1	1	1	1	1	1	1
RAB-MW4	8/20/2012	14:35	1	--	1	1	1	1	1	1	1	1	1
SDB-MW-1	8/22/2012	12:45	1	1	1	1	1	1	1	1	1	1	1
SDB-MW-2	8/22/2012	10:40	1	1	1	1	1	1	1	1	1	1	1
SDB-MW-3	8/22/2012	9:20	1	1	1	1	1	1	1	1	1	1	1
VFSP-MW1	8/24/2012	14:20	1	1	1	1	1	1	1	1	1	1	1
MW-1	8/21/2012	14:10	1	1	1	1	1	1	1	1	1	1	1
MW-2	8/24/2012	12:50	1	1	1	1	1	1	1	1	1	1	1
MW-3	8/23/2012	10:25	1	1	1	1	1	1	1	1	1	1	1
MW-4	8/22/2012	14:45	1	1	1	1	1	1	1	1	1	1	1
MW-4U	8/23/2012	9:15	1	1	1	1	1	1	1	1	1	1	1
MW-5	8/22/2012	15:55	1	1	1	1	1	1	1	1	1	1	1
MW-5U	8/22/2012	14:50	1	1	1	1	1	1	1	1	1	1	1
MW-5D			Not Sampled										
MW-6	8/22/2012	13:15	1	1	1	1	1	1	1	1	1	1	1
MW-7U	8/24/2012	9:30	1	1	1	1	1	1	1	1	1	1	1
MW-7L	8/24/2012	11:15	1	1	1	1	1	1	1	1	1	1	1
MW-8U	8/22/2012	12:20	1	1	1	1	1	1	1	1	1	1	1
MW-8L-R	8/22/2012	10:45	1	1	1	1	1	1	1	1	1	1	1
MW-8D	8/22/2012	9:40	1	1	1	1	1	1	1	1	1	1	1
MW-9	8/23/2012	14:40	1	1	1	1	1	1	1	1	1	1	1
MW-10	8/21/2012	10:40	1	1	1	1	1	1	1	1	1	1	1
QA/QC Samples													
Equipment Blank 1	8/23/2012	10:05	1	1	1	1	--	--	--	--	--	--	--
Equipment Blank 2	8/21/2012	12:05	1	1	1	1	--	--	--	--	--	--	--
Trip Blank	8/20/2012	---	1	---	---	---	--	--	--	--	--	--	--
Trip Blank	8/21/2012	---	1	---	---	---	--	--	--	--	--	--	--
Trip Blank	8/22/2012	---	1	---	---	---	--	--	--	--	--	--	--
Trip Blank	8/23/2012	---	1	---	---	---	--	--	--	--	--	--	--
Trip Blank	8/24/2012	---	1	---	---	---	--	--	--	--	--	--	--
Field Blank 1 (MW-10)	8/21/2012	10:10	1	1	1	1	--	--	--	--	--	--	--
Field Blank 2 (MW-8D)	8/22/2012	8:45	1	1	1	1	--	--	--	--	--	--	--
Field Dup 1 (MW-10)	8/21/2012	10:55	1	1	1	1	--	--	--	--	--	--	--
Field Dup 2 (NAT-3)	8/21/2012	9:45	1	1	1	1	--	--	--	--	--	--	--
MS 1 (LF-4)	8/23/2012	9:40	1	1	1	1	--	--	--	--	--	--	--
MSD 1 (LF-4)	8/23/2012	9:40	1	1	1	1	--	--	--	--	--	--	--
MS 2 (SDB-MW2)	8/22/2012	10:50	1	1	1	1	--	--	--	--	--	--	--
MSD 2 (SDB-MW2)	8/22/2012	10:50	1	1	1	1	--	--	--	--	--	--	--
Total count			**30**	**25**	**25**	**25**	**15**	**15**	**15**	**15**	**15**	**15**	**15**

Notes:

[1] Select volatile Organic Coumpounds (VOCs) (i.e., 1,1,2,2-tetrachloroethane, 1,1-dichloroethane, 1,2-dichloroethane, chloroform, diethyl ether, t-Butanol, tetrachloroethene, and trichlorethene) were analyzed via US EPA SW846 method 8260B

[2] Select semi-volatile Organic Coumpounds (SVOCs) (i.e., 1,4-dioxane, bis(2-ethylhexyl)phthalate, bis(2-chloroethyl)ether and naphthalene) were analyzed via US EPA SW846 method 8270D

[3] Select metals (i.e., aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium and vanadium) were analyzed via US EPA SW846 method 6020A

[4] Methanol and Ethanol were analyzed by US EPA SW846 method 8015C

[5] Chloride was analyzed via US EPA MCAWW method 325.2

[6] Sulfate was analyzed via US EPA MCAAWW method 375.4

[7] Ferrous iron was analyzed via US EPA method SM 3500 FE D

[8] Nitrates and Nitrites were analyzed via US EPA MCAWW method 353.2

[9] Total Kjeldahl Nitrogen (TKN) was analyzed via US EPA MCAWW method 351.2

[10] Total Organic Carbon (TOC) was analyzed via US EPA SW846 method 9060

[11] Methane was analyzed via US EPA method RSK-175

Table 5
2012 Water Quality Field Parameters Summary
August 2012 Site-Wide Groundwater Sampling Event
Hercules - Aqualon
Hopewell, Virginia

Well ID	Sample Date	Sample Time	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation Reduction Potential (mV)	Turbidity (NTUs)
WWL-1	8/24/12	13:34	6.89	3.400	1.74	19.66	-81.6	10.20
WWL-2	8/24/12	12:12	6.25	14.510	0.93	19.98	36.8	9.82
WWL-3U	8/23/12	12:39	6.01	2.590	0.83	20.90	-58.2	10.10
WWL-3L	8/23/12	12:00	4.77	4.055	0.59	20.15	27.7	7.60
LF-1	8/23/12	13:37	6.40	1.250	1.21	17.95	40.8	5.98
LF-2	8/23/12	12:33	5.99	1.038	0.62	19.32	45.1	9.84
LF-3	8/23/12	14:43	6.31	0.933	1.00	18.24	64.9	8.12
LF-4	8/23/12	9:32	6.78	0.293	0.59	18.74	5.6	7.91
LF-5	8/23/12	11:07	6.34	1.143	0.65	20.13	40.8	4.60
NAT-1	8/21/12	12:22	5.98	2.178	1.17	24.09	94.1	6.11
NAT-2	8/21/12	11:46	6.23	1.850	0.32	20.75	-83.9	8.70
NAT-3	8/21/12	9:21	6.99	4.238	0.44	19.47	-106.1	8.60
NAT-4	8/23/12	16:20	5.24	0.501	0.67	21.11	-6.7	8.00
RAB-MW1	Well Abandoned							
RAB-MW1R	8/20/12	13:08	6.47	1.47	2.18	21.48	-29.7	9.89
RAB-MW2	8/24/12	14:21	6.06	3.733	2.91	22.18	78.1	18.00
RAB-MW3	8/20/12	12:38	5.91	1.951	0.27	21.09	-35.1	5.80
RAB-MW4	8/20/12	14:30	5.80	4.350	0.87	19.14	221.3	8.20
SDB-MW1	8/22/12	11:50	6.11	1.165	1.89	19.84	-29.4	8.21
SDB-MW2	8/22/12	10:32	6.13	2.883	2.00	19.09	150.8	7.29
SDB-MW3	8/22/12	9:18	8.46	2.830	3.00	18.91	89.4	8.17
VFSP-MW1	8/24/12	14:17	5.78	0.660	0.81	16.21	12.1	8.50
MW-1	8/21/12	14:01	5.98	2.178	1.17	24.09	94.1	6.11
MW-2	8/24/12	12:49	5.25	3.610	0.62	21.57	19.0	7.60
MW-3	8/23/12	10:15	6.20	0.608	0.61	19.04	-83.6	9.80
MW-4	8/22/12	14:42	4.37	5.580	0.36	19.60	-34.0	8.60
MW-4U	8/23/12	9:12	6.07	3.276	0.33	20.22	-62.4	8.70
MW-5	8/22/12	15:53	6.59	3.987	0.90	21.84	-110.3	9.09
MW-5U	8/22/12	14:42	7.04	9.441	0.41	23.18	-104.2	1.08
MW-5D	NS							
MW-6	8/22/12	13:07	5.41	3.548	0.38	19.13	-37.8	8.60
MW-7U	8/24/12	9:25	5.22	5.988	0.56	20.61	102.3	5.60
MW-7L	8/24/12	11:12	5.92	0.540	0.49	21.06	18.6	8.60
MW-8U	8/22/12	12:15	6.13	3.138	0.31	22.57	-117.8	9.80
MW-8L	Well Abandoned							
MW-8L-R	8/22/12	10:37	6.67	4.25	0.30	22.71	-144.2	8.7
MW-8D	8/22/12	9:38	6.61	0.242	0.35	20.70	-11.0	9.36
MW-9	8/23/12	14:36	4.91	3.112	0.48	19.60	-51.2	10.10
MW-10	8/21/12	10:45	4.90	1.695	0.55	18.50	204.6	8.90

Notes:
NM, not measured; NS, not sampled; ºC, degrees Celsius;
SC, specific conductance; µS/cm, microsiemens per centimeter;
DO, dissolved oxygen; mg/L; milligrams per liter;
ORP, oxidation-reduction potential; mV, millivolts;
NTU, Nephelometric turbidity units

Table 6
2012 Site-Wide Groundwater Sampling Event Full Analytical Results
Hercules - Aqualon
Hopewell, VA

	CAS Number	[1]C or N	WWL-1			WWL-2			WWL-3L			WWL-3U			LF-1			LF-2			LF-3			LF-4		
			8/24/2012			8/24/2012			8/23/2012			8/23/2012			8/23/2012			8/23/2012			8/23/2012			8/23/2012		
			RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual
Volatile Organic Compounds (ug/L)																										
1,1,2,2-Tetrachloroethane	79-34-5	C	5	0.9	5 U	1	0.18	1 U	100	18	100 U	100	18	100 U	1	0.18	1 U	1	0.18	1 U	1	0.18	1 U	1	0.18	1 U
1,1-Dichloroethane	75-34-3	C	5	1.3	5 U	1	0.25	1 U	100	25	100 U	100	25	100 U	1	0.25	**2.7**	1	0.25	**1.7**	1	0.25	1 U	1	0.25	1 U
1,2-Dichloroethane	107-06-2	C	5	0.5	5 U	1	0.1	1 U	100	10	100 U	100	10	100 U	1	0.1	1 U	1	0.1	1 U	1	0.1	1 U	1	0.1	1 U
Chloroform	67-66-3	C	5	0.7	5 U	1	0.14	1 U	100	14	100 U	100	14	100 U	1	0.14	1 U	1	0.14	1 U	1	0.14	1 U	1	0.14	1 U
Diethyl ether	60-29-7	N	50	5	**110**	10	1	10 U	1000	100	**7,700**	1000	100	**7,400**	10	1	**66**	10	1	**98**	10	1	**7.0 J**	10	1	10 U
t-Butanol[3]	75-65-0	--	25	13	**250**	10	5.2	**78 D**	500	260	500 U	500	260	500 U	5	2.6	**37**	5	2.6	**35**	25	13	**180 D**	5	2.6	5 U
Tetrachloroethene	127-18-4	C**	5	0.75	5 U	1	0.15	1 U	100	15	100 U	100	15	100 U	1	0.15	**0.26 J**	1	0.15	1 U	1	0.15	1 U	1	0.15	1 U
Trichloroethylene	79-01-6	C**	5	0.65	5 U	1	0.13	1 U	100	13	100 U	100	13	100 U	1	0.13	**0.97 J**	1	0.13	**0.58 J**	1	0.13	1 U	1	0.13	1 U
Semivolatile Organic Compounds (ug/L)																										
1,4-Dioxane	123-91-1	C	--	--	--	--	--	--	10	3.4	**19**	10	3.5	**19**	9.5	3.2	**4.2 J**	--	--	--	9.5	3.2	**21**	9.4	3.2	9.4 U
Bis(2-chloroethyl)ether	111-44-4	C	--	--	--	--	--	--	10	1.1	10 U	10	1.1	10 U	9.5	1	9.5 U	--	--	--	9.5	1	9.5 U	9.4	1	9.4 U
Bis(2-ethylhexyl) phthalate	117-81-7	C*	--	--	--	--	--	--	10	1.6	10 U	10	1.6	10 U	9.5	1.5	9.5 U	--	--	--	9.5	1.5	9.5 U	9.4	1.5	9.4 U
Naphthalene	91-20-3	C*	--	--	--	--	--	--	10	0.7	10 U	10	0.72	10 U	9.5	0.67	9.5 U	--	--	--	9.5	0.66	9.5 U	9.4	0.66	9.4 U
Alcohols and Glycols (mg/L)																										
Ethanol[3]	64-17-5	--	5	0.33	5 U	5	0.33	5 U	5	0.33	**6.5**	5	0.33	**5.8**	5	0.33	5 U	5	0.33	5 U	5	0.33	5 U	5	0.33	5 U
Methanol	67-56-1	N	5	1	5 U	5	1	**2.5 J**	5	1	**1.4 J**	5	1	**1.9 J**	5	1	**1.5 J**	5	1	**1.4 J**	5	1	**1.4 J**	5	1	5 U
Metals (ug/L)																										
Aluminum	7429-90-5	N	100	50	**440**	100	50	**180**	100	50	**110**	100	50	**64 J**	100	50	**140**	100	50	**360**	100	50	**650**	100	50	**150**
Antimony	7440-36-0	N	5	2	**2.4 J**	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U
Arsenic	7440-38-2	C	2.5	1.3	**1.4 J**	2.5	1.3	**2.5**	2.5	1.3	**1.5 J**	2.5	1.3	**1.5 J**	2.5	1.3	2.5 U	2.5	1.3	2.5 U	2.5	1.3	2.5 U	2.5	1.3	2.5 U
Barium	7440-39-3	N	5	1.4	**770**	5	1.4	**2,500**	5	1.4	**34**	5	1.4	**33**	5	1.4	**120**	5	1.4	**110**	5	1.4	**130**	5	1.4	**68**
Beryllium	7440-41-7	N	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U
Cadmium	7440-43-9	N	0.5	0.13	**0.18 J**	0.5	0.13	**0.13 J**	0.5	0.13	0.5 U	0.5	0.13	0.5 U	0.5	0.13	0.5 U	0.5	0.13	0.5 U	0.5	0.13	0.5 U	0.5	0.13	0.5 U
Chromium	7440-47-3	--	5	2.5	5 U	5	2.5	5 U	5	2.5	**3.8 J**	5	2.5	**3.6 J**	5	2.5	5 U	5	2.5	5 U	5	2.5	**4.5 J**	5	2.5	5 U
Cobalt	7440-48-4	N	0.5	0.12	**1.7**	0.5	0.12	**120**	0.5	0.12	**72**	0.5	0.12	**71**	0.5	0.12	**0.22 J**	0.5	0.12	**0.98**	0.5	0.12	**4.6**	0.5	0.12	**0.2 J**
Copper	7440-50-8	N	5	1.1	**3.1 J**	5	1.1	**3.3 J**	5	1.1	**3 J**	5	1.1	**3.3 J**	5	1.1	5 U	5	1.1	**1.4 J**	5	1.1	**1.5 J**	5	1.1	5 U
Iron	7439-89-6	N	100	44	**110,000**	100	44	**11,000**	100	44	**170,000**	100	44	**170,000**	100	44	**9,100**	100	44	**6,200**	100	44	**2,900**	100	44	**920**
Lead	7439-92-1	--	1.5	0.5	1.5 U	1.5	0.5	1.5 U	1.5	0.5	1.5 U	1.5	0.5	1.5 U	1.5	0.5	1.5 U	1.5	0.5	**1.2 J**	1.5	0.5	1.5 U	1.5	0.5	1.5 U
Manganese	7439-96-5	N	5	2	**2,900**	20	8	**37,000**	5	2	**12,000**	5	2	**11,000**	5	2	**1,800**	5	2	**1,100**	5	2	**2,500**	5	2	**260**
Mercury	7439-97-6	N	0.8	0.4	0.8 U	1.6	0.8	1.6 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U
Nickel	7440-02-0	N	5	2	**2.8 J**	5	2	**27**	5	2	**14**	5	2	**14**	5	2	5 U	5	2	**2.6 J**	5	2	**9.8**	5	2	5 U
Selenium	7782-49-2	N	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	**1.3 J**	2.5	1.1	2.5 U
Vanadium	7440-62-2	--	10	3.2	10 U	10	3.2	10 U	10	3.2	10 U	10	3.2	10 U	10	3.2	10 U	10	3.2	10 U	10	3.2	**3.4 J**	10	3.2	10 U
Inorganics, Other (mg/L)																										
Chloride	16887-00-6	--	10	1.8	**640**	100	18	**6,200**	50	9	**1,200**	50	9	**1,200**	2	0.36	**140**	2	0.36	**130**	1	0.18	**91**	1	0.18	**11**
Total Kjeldahl Nitrogen	--	--	0.2	0.15	**1.6**	0.2	0.15	**1.4**	0.2	0.15	**1.5**	0.2	0.15	**1.7**	0.2	0.15	**0.51**	0.2	0.15	**0.44**	0.2	0.15	**1.5**	0.2	0.15	**0.25**
Nitrite as N	14797-65-0	N	0.05	0.01	**0.035 J**	0.05	0.01	0.05 U	0.05	0.01	**0.011 J**	0.05	0.01	**0.01 J**	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	0.05 U
Nitrate as N	14797-55-8	N	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	**0.37**	0.05	0.01	**0.21**	0.05	0.01	0.05 U	0.05	0.01	**0.014 J**	0.05	0.01	**0.076**	0.05	0.01	0.05 U
Sulfate	14808-79-8	--	100	50	**370**	10	5	**68**	100	50	**430**	100	50	**430**	50	25	**310**	50	25	**250**	25	13	**140**	5	2.5	**21**
Total Organic Carbon	7440-44-0	--	5	2.5	**270**	1	0.5	**69**	1	0.5	**4.4**	1	0.5	**4.3**	1	0.5	**0.95 J**	1	0.5	**0.74 J**	1	0.5	**3.0**	1	0.5	1 U
Methane (ug/L)	74-82-8	--	0.58	0.29	**0.38 J**	0.58	0.29	**2,000**	0.58	0.29	**24**	0.58	0.29	**32**	0.58	0.29	**4.6**	0.58	0.29	**3.9**	0.58	0.29	**1.6**	0.58	0.29	**3.1**
Ferrous Iron	15438-31-0	--	2	0.5	**87 HF B**	0.5	0.13	**11 HF B**	5	1.3	**130 HF**	5	1.3	**140 HF**	0.2	0.05	**7.7 HF**	0.2	0.05	**4.9 HF**	0.1	0.025	**3.1 HF**	0.1	0.03	**0.35 HF**

Table 6
2012 Site-Wide Groundwater Sampling Event Full Analytical Results
Hercules - Aqualon
Hopewell, VA

	CAS Number	[1]C or N	LF-5 8/23/2012			NAT-1 8/21/2012			NAT-2 8/21/2012			NAT-3 8/21/2012			NAT-3 (DUP) 8/21/2012			NAT-4 8/23/2012			RAB-MW1R 8/20/2012		
			RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual
Volatile Organic Compounds (ug/L)																							
1,1,2,2-Tetrachloroethane	79-34-5	C	1	0.18	1 U	1	0.18	1 U	250	45	250 U	2,000	360	2,000 U	2,000	360	2,000 U	5	0.9	5 U	250	45	250 U
1,1-Dichloroethane	75-34-3	C	1	0.25	**3.1**	1	0.25	1 U	250	63	250 U	2,000	500	2,000 U	2,000	500	2,000 U	5	1.3	5 U	250	63	250 U
1,2-Dichloroethane	107-06-2	C	1	0.1	**0.24 J**	1	0.1	1 U	250	25	250 U	2,000	200	2,000 U	2,000	200	2,000 U	5	0.5	5 U	250	25	250 U
Chloroform	67-66-3	C	1	0.14	1 U	1	0.14	1 U	250	35	250 U	2,000	280	2,000 U	2,000	280	2,000 U	5	0.7	5 U	250	35	250 U
Diethyl ether	60-29-7	N	10	1	**51**	10	1	10 U	2,500	250	2500 U	20,000	2,000	20,000 U	20,000	2,000	20,000 U	50	5	50 U	2500	250	2,500 U
t-Butanol[3]	75-65-0	--	5	2.6	**16**	5	2.6	**66**	1,300	650	**11,000**	10,000	5,200	**69,000**	10,000	5,200	**63,000**	25	13	**310**	1300	650	**19,000**
Tetrachloroethene	127-18-4	C**	1	0.15	1 U	1	0.15	1 U	250	38	250 U	2,000	300	2,000 U	2,000	300	2,000 U	5	0.75	5 U	250	38	250 U
Trichloroethylene	79-01-6	C**	1	0.13	**0.7 J**	1	0.13	**37**	250	33	250 U	2,000	260	2,000 U	2,000	260	2,000 U	5	0.65	5 U	250	33	250 U
Semivolatile Organic Compounds (ug/L)																							
1,4-Dioxane	123-91-1	C	9.6	3.3	**7 J**	--	--	--	9.5	3.2	9.5 U	9.4	3.2	**12**	9.5	3.2	**12**	--	--	--	--	--	--
Bis(2-chloroethyl)ether	111-44-4	C	9.6	1.1	9.6 U	--	--	--	9.5	1	9.5 U	9.4	1	9.4 U	9.5	1	9.5 U	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	C*	9.6	1.5	9.6 U	--	--	--	9.5	1.5	9.5 U	9.4	1.5	9.4 U	9.5	1.5	9.5 U	--	--	--	--	--	--
Naphthalene	91-20-3	C*	9.6	0.67	9.6 U	--	--	--	9.5	0.66	9.5 U	9.4	0.66	9.4 U	9.5	0.66	9.5 U	--	--	--	--	--	--
Alcohols and Glycols (mg/L)																							
Ethanol[3]	64-17-5	--	5	0.33	5 U	5	0.33	5 U	5	0.33	5 U	5	0.33	5 U	5	0.33	5 U	5	0.33	5 U	5	0.33	5 U
Methanol	67-56-1	N	5	1	**1.1 J**	5	1	5 U	5	1	5 U	5	1	5 U	5	1	5 U	5	1	**1.5 J**	5	1	5 U
Metals (ug/L)																							
Aluminum	7429-90-5	N	100	50	**170**	100	50	**400**	100	50	**1,500**	100	50	**390**	100	50	**780**	100	50	**1,100**	100	50	**940**
Antimony	7440-36-0	N	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U
Arsenic	7440-38-2	C	2.5	1.3	2.5 U	2.5	1.3	2.5 U	2.5	1.3	**3.6**	2.5	1.3	**6.1**	2.5	1.3	**6.6**	2.5	1.3	**3.1**	2.5	1.3	**2.2 J**
Barium	7440-39-3	N	5	1.4	**120**	5	1.4	**36**	5	1.4	**70**	5	1.4	**90**	5	1.4	**90**	5	1.4	**41**	5	1.4	**260**
Beryllium	7440-41-7	N	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U
Cadmium	7440-43-9	N	0.5	0.13	0.5 U	0.5	0.13	**0.36 J**	0.5	0.13	0.5 U	0.5	0.13	0.5 U	0.5	0.13	0.5 U	0.5	0.13	**0.42 J**	0.5	0.13	**0.15 J**
Chromium	7440-47-3	--	5	2.5	**7.2**	5	2.5	5 U	5	2.5	**11**	5	2.5	**13**	5	2.5	**31**	5	2.5	**5.8**	5	2.5	**27**
Cobalt	7440-48-4	N	0.5	0.12	**0.28 J**	0.5	0.12	**22**	0.5	0.12	**4.7**	0.5	0.12	**15**	0.5	0.12	**15**	0.5	0.12	**0.77**	0.5	0.12	**68**
Copper	7440-50-8	N	5	1.1	**1.6 J**	5	1.1	**2.4 J**	5	1.1	**2.1 J**	5	1.1	**1.3 J**	5	1.1	**2.6 J**	5	1.1	**7.8**	5	1.1	**5.3**
Iron	7439-89-6	N	100	44	**6,800**	100	44	**370**	100	44	**9,400**	100	44	**2,900**	100	44	**3,200**	100	44	**6,100**	100	44	**89,000**
Lead	7439-92-1	--	1.5	0.5	1.5 U	1.5	0.5	**1.2 J**	1.5	0.5	**1.6 B**	1.5	0.5	**0.91 J**	1.5	0.5	**1.4 J**	1.5	0.5	**1.6**	1.5	0.5	**1.6 B**
Manganese	7439-96-5	N	5	2	**1,100**	5	2	**1,200**	5	2	**200**	5	2	**1,300**	5	2	**1,200**	5	2	**220**	5	2	**6,100**
Mercury	7439-97-6	N	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U
Nickel	7440-02-0	N	5	2	**6.2**	5	2	**11**	5	2	**9.8**	5	2	**25**	5	2	**35**	5	2	**4.7 J**	5	2	**28**
Selenium	7782-49-2	N	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U
Vanadium	7440-62-2	--	10	3.2	10 U	10	3.2	10 U	10	3.2	**4.8 J**	10	3.2	**4.3 J**	10	3.2	**5.3 J**	10	3.2	**4.9 J**	10	3.2	10 U
Inorganics, Other (mg/L)																							
Chloride	16887-00-6	--	2	0.36	**150**	1	0.18	**72**	2	0.36	**100**	5	0.9	**240**	--	--	--	1	0.18	**9.2**	2	0.36	**170**
Total Kjeldahl Nitrogen	--	--	0.2	0.15	**0.53**	0.2	0.15	**0.38**	0.2	0.15	**1.9**	0.2	0.15	**2.1**	--	--	--	0.2	0.15	**3.6**	0.2	0.15	**4.1**
Nitrite as N	14797-65-0	N	0.05	0.01	0.05 U	0.5	0.1	0.5 U	0.05	0.01	0.05 U	0.05	0.01	0.05 U	--	--	--	0.05	0.01	**0.011 J**	0.05	0.01	**0.013 J**
Nitrate as N	14797-55-8	N	0.05	0.01	0.05 U	0.5	0.1	**12**	0.05	0.01	**0.019 J**	0.05	0.01	0.05 U	--	--	--	0.05	0.01	**0.74**	0.05	0.01	**0.01 J**
Sulfate	14808-79-8	--	50	25	**280**	100	50	**350**	50	25	**150**	5	2.5	**3.4 J**	--	--	--	10	5	**35**	100	50	**350**
Total Organic Carbon	7440-44-0	--	1	0.5	**0.91 J**	1	0.5	**1.6**	1	0.5	**18**	1	0.5	**86**	--	--	--	1	0.5	**12**	1	0.5	**22**
Methane (ug/L)	74-82-8	--	0.58	0.29	**2.7**	0.58	0.29	**15**	0.58	0.29	**380**	0.58	0.29	**150**	--	--	--	0.58	0.29	**680**	0.58	0.29	**620 ***
Ferrous Iron	15438-31-0	--	0.2	0.05	**6.1 HF**	0.1	0.025	0.1 U HF	0.1	0.025	**0.12 HF**	0.1	0.025	**0.065 J HF**	--	--	--	0.1	0.025	**0.35 HF**	2	0.5	**45 HF**

Table 6
2012 Site-Wide Groundwater Sampling Event Full Analytical Results
Hercules - Aqualon
Hopewell, VA

	CAS Number	[1]C or N	RAB-MW2			RAB-MW2 (filtered)			RAB-MW3			RAB-MW4			SDB-MW-1			SDB-MW-2			SDB-MW-3			VFSP-MW-1		
			8/24/2012			8/24/2012			8/20/2012			8/20/2012			8/22/2012			8/22/2012			8/22/2012			8/24/2012		
			RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual
Volatile Organic Compounds (ug/L)																										
1,1,2,2-Tetrachloroethane	79-34-5	C	1	0.18	1 U	--	--	--	1	0.18	1 U	1	0.18	1 U	1	0.18	1 U	1	0.18	1 U	1	0.18	1 U	1	0.18	1 U
1,1-Dichloroethane	75-34-3	C	1	0.25	1 U	--	--	--	1	0.25	1 U	1	0.25	1 U	1	0.25	1 U	1	0.25	1 U	1	0.25	1 U	1	0.25	1 U
1,2-Dichloroethane	107-06-2	C	1	0.1	1 U	--	--	--	1	0.1	1 U	1	0.1	1 U	1	0.1	1 U	1	0.1	1 U	1	0.1	1 U	1	0.1	1 U
Chloroform	67-66-3	C	1	0.14	1 U	--	--	--	1	0.14	1 U	1	0.14	1 U	1	0.14	1 U	1	0.14	1 U	1	0.14	1 U	1	0.14	1 U
Diethyl ether	60-29-7	N	10	1	**12**	--	--	--	10	1	**1.7 J**	10	1	**9.1 J**	10	1	10 U	10	1	10 U	10	1	10 U	10	1	**67**
t-Butanol[3]	75-65-0	--	25	13	**150 D**	--	--	--	25	13	**150 D**	5	2.6	5 U	5	2.6	5 U	5	2.6	5 U	5	2.6	5 U	5	2.6	**9.4**
Tetrachloroethene	127-18-4	C**	1	0.15	1 U	--	--	--	1	0.15	1 U	1	0.15	1 U	1	0.15	1 U	1	0.15	1 U	1	0.15	1 U	1	0.15	1 U
Trichloroethylene	79-01-6	C**	1	0.13	1 U	--	--	--	1	0.13	1 U	1	0.13	1 U	1	0.13	1 U	1	0.13	1 U	1	0.13	1 U	1	0.13	1 U
Semivolatile Organic Compounds (ug/L)																										
1,4-Dioxane	123-91-1	C	--	--	--	--	--	--	--	--	--	--	--	--	9.5	3.2	9.5 U	9.4	3.2	9.4 U	9.5	3.2	9.5 U	9.9	3.4	9.9 U
Bis(2-chloroethyl)ether	111-44-4	C	--	--	--	--	--	--	--	--	--	--	--	--	9.5	1	9.5 U	9.4	1	9.4 U	9.5	1	9.5 U	9.9	1.1	9.9 U
Bis(2-ethylhexyl) phthalate	117-81-7	C*	--	--	--	--	--	--	--	--	--	--	--	--	9.5	1.5	9.5 U	9.4	1.5	9.4 U	9.5	1.5	9.5 U	9.9	1.6	9.9 U
Naphthalene	91-20-3	C*	--	--	--	--	--	--	--	--	--	--	--	--	9.5	0.66	9.5 U	9.4	0.66	9.4 U	9.5	0.66	9.5 U	9.9	0.69	9.9 U
Alcohols and Glycols (mg/L)																										
Ethanol[3]	64-17-5	--	5	0.33	5 U	--	--	--	5	0.33	5 U	5	0.33	5 U	5	0.33	5 U	5	0.33	5 U	5	0.33	5 U	5	0.33	5 U
Methanol	67-56-1	N	5	1	**1.1 J**	--	--	--	5	1	5 U	5	1	5 U	5	1	5 U	5	1	5 U	5	1	5 U	5	1	5 U
Metals (ug/L)																										
Aluminum	7429-90-5	N	100	50	**7,900 J**	50	23	**83**	100	50	**410**	100	50	**1,300**	100	50	**200**	100	50	**110**	100	50	**180**	100	50	**100**
Antimony	7440-36-0	N	5	2	5 U	5	2.3	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U
Arsenic	7440-38-2	C	2.5	1.3	**7.2**	2.5	1.3	**1.6 J**	2.5	1.3	**4.6**	2.5	1.3	2.5 U	2.5	1.3	**6.1**	2.5	1.3	2.5 U	2.5	1.3	2.5 U	2.5	1.3	2.5 U
Barium	7440-39-3	N	5	1.4	**92**	5	1.3	**34**	5	1.4	**240**	5	1.4	**15**	5	1.4	**350**	5	1.4	**11**	5	1.4	**11**	5	1.4	**190**
Beryllium	7440-41-7	N	0.5	0.15	**0.54**	0.5	0.25	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U
Cadmium	7440-43-9	N	0.5	0.13	**0.99**	0.5	0.095	**0.32 J**	0.5	0.13	0.5 U	0.5	0.13	**0.51**	0.5	0.13	0.5 U	0.5	0.13	**0.14 J**	0.5	0.13	**0.24 J**	0.5	0.13	0.5 U
Chromium	7440-47-3	--	5	2.5	**57**	5	2.5	**4.1 J**	5	2.5	**10**	5	2.5	**13**	5	2.5	**4.5 J**	5	2.5	**4.3 J**	5	2.5	**5.3**	5	2.5	5 U
Cobalt	7440-48-4	N	0.5	0.12	**170**	0.5	0.15	**140**	0.5	0.12	**5.9**	0.5	0.12	**0.92**	0.5	0.12	**3.0**	0.5	0.12	**2.7**	0.5	0.12	**4.7**	0.5	0.12	**2.7**
Copper	7440-50-8	N	5	1.1	**17**	5	1.1	**1.8 J**	5	1.1	**4.4 J**	5	1.1	**2.4 J**	5	1.1	5 U	5	1.1	1.8 J	5	1.1	**9.8**	5	1.1	5 U
Iron	7439-89-6	N	100	44	**80,000**	100	33	**54,000**	100	44	**170,000**	100	44	**1,400**	100	44	**170,000**	100	44	**510**	100	44	**610**	100	44	**4,300**
Lead	7439-92-1	--	1.5	0.5	**7.7**	1.5	0.2	1.5 U	1.5	0.5	**1.1 J B**	1.5	0.5	**1.4 J B**	1.5	0.5	1.5 U	1.5	0.5	1.5 U	1.5	0.5	1.5 U	1.5	0.5	1.5 U
Manganese	7439-96-5	N	5	2	**12,000**	5	1	**12,000**	5	2	**570**	5	2	**250**	5	2	**1,700**	5	2	**1,100**	5	2	**930**	5	2	**820**
Mercury	7439-97-6	N	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U
Nickel	7440-02-0	N	5	2	**120**	5	2	**100**	5	2	**13**	5	2	**39**	5	2	**3.2 J**	5	2	**26**	5	2	**33**	5	2	**2.2 J**
Selenium	7782-49-2	N	2.5	1.1	2.5 U	2.5	1	2.5 U	2.5	1.1	**1.3 J**	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	**9.2**	2.5	1.1	2.5 U
Vanadium	7440-62-2	--	10	3.2	**21**	10	3.8	10 U	10	3.2	**7.0 J**	10	3.2	**3.5 J**	10	3.2	10 U	10	3.2	10 U	10	3.2	10 U	10	3.2	10 U
Inorganics, Other (mg/L)																										
Chloride	16887-00-6	--	10	1.8	**580**	--	--	--	1	0.18	**67**	2	0.36	**190**	1	0.18	**44**	2	0.36	**120**	5	0.9	**280**	1	0.18	**56**
Total Kjeldahl Nitrogen	--	--	0.2	0.15	**1.8**	--	--	--	0.2	0.15	**4.9**	0.2	0.15	**0.37**	1	0.75	**14**	0.2	0.15	**0.46**	0.2	0.15	**0.69**	0.2	0.15	**0.43**
Nitrite as N	14797-65-0	N	0.05	0.01	**0.042 J**	--	--	--	0.05	0.01	**0.017 J**	0.05	0.01	0.05 U	0.05	0.01	**0.024 J**	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	0.05 U
Nitrate as N	14797-55-8	N	0.05	0.01	0.05 U	--	--	--	0.05	0.01	**0.56**	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	**0.26**	0.05	0.01	0.05 U
Sulfate	14808-79-8	--	250	130	**1,500**	--	--	--	5	2.5	**25**	250	130	**960**	5	2.5	5 U	250	130	**1,400**	250	130	**1,200**	25	13	**150**
Total Organic Carbon	7440-44-0	--	1	0.5	**13**	--	--	--	1	0.5	**40**	1	0.5	**1.9**	1	0.5	**50**	1	0.5	**5.2**	1	0.5	**4.4**	1	0.5	**0.57 J**
Methane (ug/L)	74-82-8	--	0.58	0.29	**0.32 J**	--	--	--	0.58	0.29	**87**	0.58	0.29	**3.1**	0.58	0.29	**3,100**	0.58	0.29	**0.48 J**	0.58	0.29	**1.2**	0.58	0.29	**3.2**
Ferrous Iron	15438-31-0	--	2	0.5	**56 HF B**	--	--	--	5	1.3	**110 HF**	0.1	0.025	**0.027 J HF**	5	1.3	**140 HF**	0.1	0.025	**0.19 HF**	0.1	0.025	**0.29 HF**	0.1	0.025	**3.6 HF B**

Table 6
2012 Site-Wide Groundwater Sampling Event Full Analytical Results
Hercules - Aqualon
Hopewell, VA

	CAS Number	[1]C or N	MW-1			MW-2			MW-3			MW-4			MW-4U			MW-5			MW-5U			MW-6		
			8/21/2012			8/24/2012			8/23/2012			8/22/2012			8/23/2012			8/22/2012			8/22/2012			8/22/2012		
			RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual
Volatile Organic Compounds (ug/L)																										
1,1,2,2-Tetrachloroethane	79-34-5	C	50	9	50 U	200	36	200 U	5	0.9	5 U	25	4.5	25 U	50	9	50 U	2	0.36	2 U	10	1.8	10 U	25	4.5	25 U
1,1-Dichloroethane	75-34-3	C	50	13	50 U	200	50	200 U	5	1.3	5 U	25	6.3	25 U	50	13	50 U	2	0.5	2 U	10	2.5	10 U	25	6.3	25 U
1,2-Dichloroethane	107-06-2	C	50	5	50 U	200	20	200 U	5	0.5	5 U	25	2.5	25 U	50	5	50 U	2	0.2	2 U	10	1	10 U	25	2.5	25 U
Chloroform	67-66-3	C	50	7	50 U	200	28	200 U	5	0.7	5 U	25	3.5	25 U	50	7	50 U	2	0.28	2 U	10	1.4	10 U	25	3.5	25 U
Diethyl ether	60-29-7	N	500	50	**2,100**	2000	200	**12,000**	50	5	**330**	250	25	**1,500**	500	50	**1,800**	20	2	**200**	100	10	**610**	250	25	**1,600**
t-Butanol[3]	75-65-0	--	250	130	250 U	1000	520	1000 U	25	13	**270**	130	65	**2,200**	250	130	**3,000**	10	5.2	**190**	50	26	50 U	130	65	**1,400**
Tetrachloroethene	127-18-4	C**	50	7.5	50 U	200	30	200 U	5	0.75	5 U	25	3.8	25 U	50	7.5	50 U	2	0.3	2 U	10	1.5	10 U	25	3.8	25 U
Trichloroethylene	79-01-6	C**	50	6.5	50 U	200	26	200 U	5	0.65	5 U	25	3.3	25 U	50	6.5	50 U	2	0.26	2 U	10	1.3	10 U	25	3.3	25 U
Semivolatile Organic Compounds (ug/L)																										
1,4-Dioxane	123-91-1	C	9.5	3.2	**18**	12	4.1	**23**	--	--	--	9.5	3.2	**5.1 J**	9.5	3.2	**6.9 J**	9.4	3.2	9.4 U	9.4	3.2	**3.3 J**	9.5	3.2	**4.6 J**
Bis(2-chloroethyl)ether	111-44-4	C	9.5	1	9.5 U	12	1.3	12 U	--	--	--	9.5	1	9.5 U	9.5	1	9.5 U	9.4	1	9.4 U	9.4	1	9.4 U	9.5	1	9.5 U
Bis(2-ethylhexyl) phthalate	117-81-7	C*	9.5	1.5	9.5 U	12	1.9	12 U	--	--	--	9.5	1.5	9.5 U	9.5	1.5	9.5 U	9.4	1.5	9.4 U	9.4	1.5	9.4 U	9.5	1.5	9.5 U
Naphthalene	91-20-3	C*	9.5	0.66	9.5 U	12	0.85	12 U	--	--	--	9.5	0.66	9.5 U	9.5	0.66	9.5 U	9.4	0.66	9.4 U	9.4	0.66	9.4 U	9.5	0.66	9.5 U
Alcohols and Glycols (mg/L)																										
Ethanol[3]	64-17-5	--	5	0.33	**2.0 J**	5	0.33	**7.8**	5	0.33	5 U	5	0.33	**1.1 J**	5	0.33	**1.4 J**	5	0.33	5 U	5	0.33	5 U	5	0.33	**0.94 J**
Methanol	67-56-1	N	5	1	5 U	5	1	**1.3 J**	5	1	**1.2 J**	5	1	5 U	5	1	**2.3 J**	5	1	5 U	5	1	5 U	5	1	5 U
Metals (ug/L)																										
Aluminum	7429-90-5	N	100	50	100 U	100	50	**710**	100	50	**180**	100	50	**1,200**	100	50	**950**	100	50	**740**	100	50	**100**	100	50	**520**
Antimony	7440-36-0	N	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U
Arsenic	7440-38-2	C	2.5	1.3	2.5 U	2.5	1.3	**3.5**	2.5	1.3	**1.6 J**	2.5	1.3	**3.7**	2.5	1.3	**5.7**	2.5	1.3	2.5 U	2.5	1.3	**8.4**	2.5	1.3	**2.1 J**
Barium	7440-39-3	N	5	1.4	**59**	5	1.4	**110**	5	1.4	**320**	5	1.4	**760**	5	1.4	**890**	5	1.4	**1,200**	5	1.4	**210**	5	1.4	**450**
Beryllium	7440-41-7	N	0.5	0.15	**0.15 J**	0.5	0.15	**0.35 J**	0.5	0.15	0.5 U	0.5	0.15	**0.19 J**	0.5	0.15	**0.48 J**	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U
Cadmium	7440-43-9	N	0.5	0.13	0.5 U	0.5	0.13	0.5 U	0.5	0.13	0.5 U	0.5	0.13	**0.26 J**	0.5	0.13	**0.3 J**	0.5	0.13	0.5 U	0.5	0.13	0.5 U	0.5	0.13	**1.9**
Chromium	7440-47-3	--	5	2.5	**3.0 J**	5	2.5	5 U	5	2.5	5 U	5	2.5	**6.6**	5	2.5	**6.2**	5	2.5	**7.8**	5	2.5	**7.6**	5	2.5	5 U
Cobalt	7440-48-4	N	0.5	0.12	**0.42 J**	0.5	0.12	**16**	0.5	0.12	**0.49 J**	0.5	0.12	**11**	0.5	0.12	**34**	0.5	0.12	**1.3**	0.5	0.12	**9.7**	0.5	0.12	**20**
Copper	7440-50-8	N	5	1.1	**5.7**	5	1.1	**8.9**	5	1.1	**1.5 J**	5	1.1	**5.8**	5	1.1	**9.4**	5	1.1	**3.6 J**	5	1.1	**6.0**	5	1.1	**2.4 J**
Iron	7439-89-6	N	100	44	**6,200**	100	44	**120,000**	100	44	**14,000**	100	44	**60,000**	100	44	**86,000**	100	44	**84,000**	100	44	**19,000**	100	44	**50,000**
Lead	7439-92-1	--	1.5	0.5	**0.82 J**	1.5	0.5	**0.62 J**	1.5	0.5	1.5 U	1.5	0.5	**0.96 J**	1.5	0.5	**1.1 J**	1.5	0.5	**0.62 J**	1.5	0.5	**0.57 J**	1.5	0.5	**0.62 J**
Manganese	7439-96-5	N	5	2	**2,800**	5	2	**7,900**	5	2	**520**	5	2	**2,600**	5	2	**1,800**	5	2	**3,900**	5	2	**2,300**	5	2	**4,600**
Mercury	7439-97-6	N	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U
Nickel	7440-02-0	N	5	2	**3.2 J**	5	2	**2.9 J**	5	2	**2.3 J**	5	2	**5.1**	5	2	**9.1**	5	2	**5.3**	5	2	**7.6**	5	2	**5.4**
Selenium	7782-49-2	N	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U
Vanadium	7440-62-2	--	10	3.2	10 U	10	3.2	10 U	10	3.2	10 U	10	3.2	**6.1 J**	10	3.2	**6.0 J**	10	3.2	**3.5 J**	10	3.2	**310**	10	3.2	**4.1 J**
Inorganics, Other (mg/L)																										
Chloride	16887-00-6	--	5	0.9	**220**	10	1.8	**940**	1	0.18	**67**	5	0.9	**500**	10	1.8	**660**	20	3.6	**1,300**	50	9	**2,600**	10	1.8	**720**
Total Kjeldahl Nitrogen	--	--	0.2	0.15	**0.25**	0.2	0.15	**1.2**	0.4	0.3	**3.7**	0.2	0.15	**4.7**	1	0.75	**11**	0.2	0.15	**3.7**	1	0.75	**3.5**	0.2	0.15	**4.6**
Nitrite as N	14797-65-0	N	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	**0.014 J**	0.05	0.01	**0.022 J**	0.05	0.01	0.05 U	0.05	0.01	0.05 U
Nitrate as N	14797-55-8	N	0.05	0.01	**0.011 J**	0.05	0.01	**0.71**	0.05	0.01	**0.29**	0.05	0.01	**0.25**	0.05	0.01	**0.56**	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	0.05 U
Sulfate	14808-79-8	--	250	130	**840**	100	50	**460**	5	2.5	**33**	5	2.5	5 U	5	2.5	5 U	50	25	**66**	100	50	**400**	25	13	**140**
Total Organic Carbon	7440-44-0	--	1	0.5	**3.5**	1	0.5	**5.3**	1	0.5	**5.9**	1	0.5	**34**	1	0.5	**27**	1	0.5	**17**	1	0.5	**27**	1	0.5	**20**
Methane (ug/L)	74-82-8	--	0.58	0.29	0.58 U	0.58	0.29	**8.4**	0.58	0.29	**3,600**	0.58	0.29	**74,00**	0.58	0.29	**6,800**	0.58	0.29	**160**	0.58	0.29	**97**	0.58	0.29	**120**
Ferrous Iron	15438-31-0	--	0.2	0.05	**6 HF**	4	1	**110 HF B**	0.1	0.025	**0.18 HF**	1	0.25	**36 HF**	1	0.25	**33 HF**	5	1.3	**72 HF**	0.1	0.03	**0.46 HF**	1	0.25	**16 HF**

Table 6
2012 Site-Wide Groundwater Sampling Event Full Analytical Results
Hercules - Aqualon
Hopewell, VA

	CAS Number	[1]C or N	MW-7L 8/24/2012			MW-7U 8/24/2012			MW-8D 8/22/2012			MW-8L-R 8/22/2012			MW-8U 8/22/2012			MW-9 8/23/2012			MW-10 8/21/2012			MW-10 (DUP) 8/21/2012		
			RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual	RL	MDL	Conc/Qual
Volatile Organic Compounds (ug/L)																										
1,1,2,2-Tetrachloroethane	79-34-5	C	1	0.18	1 U	1	0.18	1 U	1	0.18	1 U	50	9	50 U	25	4.5	25 U	50	9	50 U	1	0.18	**0.32 J**	1	0.18	**0.31 J**
1,1-Dichloroethane	75-34-3	C	1	0.25	1 U	1	0.25	1 U	1	0.25	1 U	50	13	50 U	25	6.3	25 U	50	13	50 U	1	0.25	**1.1**	1	0.25	**1.1**
1,2-Dichloroethane	107-06-2	C	1	0.1	1 U	1	0.1	**0.14 J**	1	0.1	1 U	50	5	50 U	25	2.5	25 U	50	5	50 U	1	0.1	1 U	1	0.1	1 U
Chloroform	67-66-3	C	1	0.14	1 U	1	0.14	1 U	1	0.14	1 U	50	7	50 U	25	3.5	25 U	50	7	50 U	1	0.14	**0.79 J**	1	0.14	**0.9 J**
Diethyl ether	60-29-7	N	10	1	10 U	20	2	**110 D**	10	1	10 U	500	50	**3,400**	250	25	**2,200**	500	50	**3,800**	10	1	**34**	10	1	**37**
t-Butanol[3]	75-65-0	--	5	2.6	5 U	5	2.6	**6.5**	5	2.6	5 U	250	130	**4,300**	130	65	**590**	250	130	250 U	5	2.6	**29**	5	2.6	**14**
Tetrachloroethene	127-18-4	C**	1	0.15	1 U	1	0.15	1 U	1	0.15	1 U	50	7.5	50 U	25	3.8	25 U	50	7.5	50 U	1	0.15	**8.9**	1	0.15	**9.2**
Trichloroethylene	79-01-6	C**	1	0.13	1 U	1	0.13	**0.52 J**	1	0.13	1 U	50	6.5	50 U	25	3.3	25 U	50	6.5	50 U	1	0.13	**1.4**	1	0.13	**1.5**
Semivolatile Organic Compounds (ug/L)																										
1,4-Dioxane	123-91-1	C	9.7	3.3	9.7 U	12	4	12 U	9.6	3.3	9.6 U	9.5	3.2	**18**	9.5	3.2	**14**	10	3.5	**9.7 J**	9.4	3.2	**19**	9.4	3.2	**24**
Bis(2-chloroethyl)ether	111-44-4	C	9.7	1.1	9.7 U	12	1.3	12 U	9.6	1.1	9.6 U	9.5	1	9.5 U	9.5	1	9.5 U	10	1.1	10 U	9.4	1	9.4 U	9.4	1	9.4 U
Bis(2-ethylhexyl) phthalate	117-81-7	C*	9.7	1.5	9.7 U	12	1.9	12 U	9.6	1.5	9.6 U	9.5	1.5	9.5 U	9.5	1.5	9.5 U	10	1.6	10 U	9.4	1.5	9.4 U	9.4	1.5	9.4 U
Naphthalene	91-20-3	C*	9.7	0.68	9.7 U	12	0.83	12 U	9.6	0.67	9.6 U	9.5	0.66	9.5 U	9.5	0.66	9.5 U	10	0.71	10 U	9.4	0.66	9.4 U	9.4	0.66	9.4 U
Alcohols and Glycols (mg/L)																										
Ethanol[3]	64-17-5	--	5	0.33	5 U	5	0.33	5 U	5	0.33	5 U	5	0.33	**2.6 J**	5	0.33	**1.6 J**	5	0.33	**3.2 J**	5	0.33	5 U	5	0.33	5 U
Methanol	67-56-1	N	5	1	**1.5 J**	5	1	**1.3 J**	5	1	5 U	5	1	5 U	5	1	5 U	5	1	**1.6 J**	5	1	5 U	5	1	5 U
Metals (ug/L)																										
Aluminum	7429-90-5	N	100	50	**200**	100	50	**1,100**	100	50	**430**	100	50	**600**	100	50	**410**	100	50	**380**	100	50	**290**	100	50	**380**
Antimony	7440-36-0	N	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U	5	2	5 U
Arsenic	7440-38-2	C	2.5	1.3	2.5 U	2.5	1.3	2.5 U	2.5	1.3	2.5 U	2.5	1.3	**29**	2.5	1.3	**8.7**			**3.1**	2.5	1.3	2.5 U	2.5	1.3	2.5 U
Barium	7440-39-3	N	5	1.4	**110**	5	1.4	**45**	5	1.4	**70**	5	1.4	**570**	5	1.4	**250**	5	1.4	**89**	5	1.4	**15**	5	1.4	**15**
Beryllium	7440-41-7	N	0.5	0.15	0.5 U	0.5	0.15	**2.6**	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	0.5 U	0.5	0.15	**0.22 J**	0.5	0.15	**0.23 J**
Cadmium	7440-43-9	N	0.5	0.13	0.5 U	0.5	0.13	**20**	0.5	0.13	**0.58**	0.5	0.13	**0.35 J**	0.5	0.13	**0.18 J**	0.5	0.13	**0.35 J**	0.5	0.13	**3.8**	0.5	0.13	**3.7**
Chromium	7440-47-3	--	5	2.5	5 U	5	2.5	5 U	5	2.5	5 U	5	2.5	**4.2 J**	5	2.5	5 U	5	2.5	**7.7**	5	2.5	5 U	5	2.5	**4 J**
Cobalt	7440-48-4	N	0.5	0.12	**0.6**	0.5	0.12	**350**	0.5	0.12	**0.2 J**	0.5	0.12	**2.8**	0.5	0.12	**2.9**	0.5	0.12	**2.2**	0.5	0.12	**75**	0.5	0.12	**75**
Copper	7440-50-8	N	5	1.1	5 U	5	1.1	**170**	5	1.1	**3 J**	5	1.1	**3.7 J**	5	1.1	**13**	5	1.1	**3.2 J**	5	1.1	**5.4**	5	1.1	**4.9 J**
Iron	7439-89-6	N	100	44	**1,600**	100	44	**42,000**	100	44	**910**	100	44	**36,000**	100	44	**25,000**	100	44	**95,000**	100	44	**220**	100	44	**270**
Lead	7439-92-1	--	1.5	0.5	1.5 U	1.5	0.5	**2.3**	1.5	0.5	**0.7 J**	1.5	0.5	**0.73 J**	1.5	0.5	1.5 U	1.5	0.5	**0.57 J**	1.5	0.5	**0.98 J**	1.5	0.5	**0.9 J**
Manganese	7439-96-5	N	5	2	**480**	0.8	0.4	**38,000**	5	2	**220**	5	2	**2,100**	5	2	**790**	5	2	**2,400**	5	2	**3,700**	5	2	**3,800**
Mercury	7439-97-6	N	0.8	0.4	0.8 U	5	2	**4.2**	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U	0.8	0.4	0.8 U
Nickel	7440-02-0	N	5	2	5 U	2.5	1.1	**110**	5	2	5 U	5	2	**3.6 J**	5	2	**2.1 J**	5	2	**5.1**	5	2	**61**	5	2	**62**
Selenium	7782-49-2	N	2.5	1.1	2.5 U	10	3.2	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U	2.5	1.1	2.5 U
Vanadium	7440-62-2	--	10	3.2	10 U	20	8	**3.3 J**	10	3.2	10 U	10	3.2	**8.6 J**	10	3.2	10 U	10	3.2	10 U	10	3.2	10 U	10	3.2	10 U
Inorganics, Other (mg/L)																										
Chloride	16887-00-6	--	1	0.18	**49**	50	9	**2,100**	1	0.18	**3.9**	10	1.8	**720**	5	0.9	**450**	10	1.8	**580**	5	0.9	**230**	--	--	--
Total Kjeldahl Nitrogen	--	--	0.2	0.15	**0.29**	0.2	0.15	**0.86**	0.2	0.15	**0.49**	1	0.75	**22**	1	0.75	**12**	0.2	0.15	**1.7**	0.2	0.15	**0.28**	--	--	--
Nitrite as N	14797-65-0	N	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.25	0.05	0.25 U	--	--	--
Nitrate as N	14797-55-8	N	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	**0.1**	0.05	0.01	0.05 U	0.05	0.01	0.05 U	0.05	0.01	**0.97**	0.25	0.05	**4.3**	--	--	--
Sulfate	14808-79-8	--	5	2.5	**32**	100	50	**540**	5	2.5	**6.2**	100	50	**360**	100	50	**510**	100	50	**600**	100	50	**520**	--	--	--
Total Organic Carbon	7440-44-0	--	1	0.5	1 U	1	0.5	**2.1**	1	0.5	1 U	1	0.5	**24**	1	0.5	**11**	1	0.5	**8.2**	1	0.5	**1.7**	--	--	--
Methane (ug/L)	74-82-8	--	0.58	0.29	**1.6**	0.58	0.29	**130**	0.58	0.29	**0.77**	0.58	0.29	**160**	0.58	0.29	**50**	0.58	0.29	**36**	0.58	0.29	**0.41 J**	--	--	--
Ferrous Iron	15438-31-0	--	0.1	0.025	**0.16 HF B**	2	0.5	**41 HF B**	0.1	0.025	**0.25 HF**	1	0.25	**13 HF**	1	0.25	**36 HF**	4	1	**48 HF**	0.1	0.03	0.1 U HF	--	--	--

Notes:

ug/L = micrograms per liter; RL = Reporting limit; MDL = Method detection limit

[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA

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

B = Compound was found in the blank sample

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

HF = Field parameter with a holding time of 15 minutes

* = RPD of the LCS and LCSD exceeds the control limits

Table 7
2012 Groundwater Constituent of Interest (COI) Identification Table
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	Maximum Detected Groundwater Concentration (ug/L)	Sample with Maximum Detect	[2] USEPA Tapwater RSL (ug/L)	[3] USEPA Vapor Intrusion Screening Value (ug/L)	Constituent of Interest?	Comment
Volatile Organic Compounds (ug/L)								
1,1,2,2-Tetrachloroethane	79-34-5	C	0.32 J	MW-10	0.066	3.0	**YES**	Maximum detect exceeds Tapwater RSL
1,1-Dichloroethane	75-34-3	C	3.1	LF-5	2.4	2200	**YES**	Maximum detect exceeds Tapwater RSL
1,2-Dichloroethane	107-06-2	C	0.24 J	LF-5	0.15	5.0	**YES**	Maximum detect exceeds Tapwater RSL
Chloroform	67-66-3	C	0.9 J	MW-10 (dup)	0.19	80	**YES**	Maximum detect exceeds screening value
Diethyl ether	60-29-7	N	12000	MW-2	310	520	**YES**	Maximum detect exceeds Tapwater RSL and VI Screening Value
t-Butanol[3]	75-65-0	--	69000	NAT-3	150	NV	**YES**	Maximum detect exceeds Tapwater RSL
Tetrachloroethene	127-18-4	C**	9.2	MW-10 (dup)	3.5	5.0	**YES**	Maximum detect exceeds Tapwater RSL and VI Screening Value
Trichloroethylene	79-01-6	C**	37	NAT-1	0.26	5.0	**YES**	Maximum detect exceeds Tapwater RSL and VI Screening Value
Semivolatile Organic Compounds (ug/L)								
1,4-Dioxane	123-91-1	C	24	MW-10 (dup)	0.67	NV	**YES**	Maximum detect exceeds Tapwater RSL
Alcohols and Glycols (mg/L)								
Ethanol[4]	64-17-5	--	7.8	MW-2	0.15	NV	**YES**	Maximum detect exceeds Tapwater RSL
Methanol	67-56-1	N	2.5 J	WWL-2	3.1	NV	No	Maximum detect below screening value
Metals (ug/L)								
Aluminum	7429-90-5	N	7900 J	RAB-MW2	1,600	NV	**YES**	Maximum detect exceeds Tapwater RSL
Antimony	7440-36-0	N	2.4 J	WWL-1	0.6	NV	**YES**	Maximum detect exceeds Tapwater RSL
Arsenic	7440-38-2	C	29	MW-8L-R	0.045	NV	**YES**	Maximum detect exceeds Tapwater RSL
Barium	7440-39-3	N	2500	WWL-2	290	NV	**YES**	Maximum detect exceeds Tapwater RSL
Beryllium	7440-41-7	N	2.6	MW-7U	1.6	NV	**YES**	Maximum detect exceeds Tapwater RSL
Cadmium	7440-43-9	N	20	MW-7U	0.69	NV	**YES**	Maximum detect exceeds Tapwater RSL
Chromium[5]	7440-47-3	--	57	RAB-MW2	100	NV	No	Maximum detect exceeds Tapwater RSL
Cobalt	7440-48-4	N	350	MW-7U	0.47	NV	**YES**	Maximum detect exceeds Tapwater RSL
Copper	7440-50-8	N	170	MW-7U	62	NV	**YES**	Maximum detect exceeds Tapwater RSL
Iron	7439-89-6	N	170000	WWL-3U, WWL-3L, RAB-MW3,SDB-MW1	1,100	NV	**YES**	Maximum detect exceeds Tapwater RSL
Lead[5]	7439-92-1	--	7.7	RAB-MW2	15	NV	No	Maximum detect below screening value
Manganese	7439-96-5	N	38,000	MW-7U	32	NV	**YES**	Maximum detect exceeds Tapwater RSL
Mercury	7439-97-6	N	4.2	MW-7U	0.063	0.28	**YES**	Maximum detect exceeds Tapwater RSL and VI Screening Value
Nickel	7440-02-0	N	120	RAB-MW2	30	NV	**YES**	Maximum detect exceeds Tapwater RSL
Selenium	7782-49-2	N	9.2	SDB-MW3	7.8	NV	**YES**	Maximum detect exceeds Tapwater RSL
Vanadium	7440-62-2	--	310	MW-5U	6.3	NV	**YES**	Maximum detect exceeds Tapwater RSL
Inorganics, Other (mg/L)								
Chloride	16887-00-6	--	6200	WWL-2	--	NV	No	Common inorganic/low inherent toxicity
Total Kjeldahl Nitrogen	--	--	22	MW-8L-R	--	NV	No	Physical property
Nitrite as N	14797-65-0	N	0.035 J	WWL-1	0.16	NV	No	Maximum detect below screening value
Nitrate as N	14797-55-8	N	12	NAT-1	2.5	NV	No	Common inorganic/low inherent toxicity
Sulfate	14808-79-8	--	1500	RAB-MW2	--	NV	No	Common inorganic/low inherent toxicity
Total Organic Carbon	7440-44-0	--	270	WWL-1	--	NV	No	Physical property
Methane (ug/L)	74-82-8	--	7400	MW-4	--	NV	No	Common inorganic/low inherent toxicity
Ferrous Iron	15438-31-0	--	140 HF	WWL-3U, SDB-MW1	--	NV	No	Common inorganic/low inherent toxicity

Notes:

ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level
NV - Constituent is not sufficiently volatile and/or toxic via the inhalation route

[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA

[2] Screening levels are the November 2013 USEPA Tapwater Regional Screening Levels. Non-cancer based screening levels are adjusted to reflect a hazard quotient of 0.1

[3] Vapor intrusion from groundwater screening values are from Table 2c of the USEPA (2002a) Vapor Guidance and are based on a target risk of 10^{-6}.

[4] Surrogate compounds selected as detailed in Table 3-1 of the 2011 Human Health Risk Assessment. Screening criteria for the selected surrogates have been incorporated into this table.

[5] The screening levels for chromium and lead are based on the USEPA Maximum Contaminant Levels (MCLs) based on the lack of Tapwater RSLs

Table 8
Summary of 2012 Detected Groundwater Constituents, Whitewater Lagoons
August 2012 Groundwater Sampling Event
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	[2]EPC	[3]Tapwater	MCL	WWL-1 8/24/2012 Conc/Qual	WWL-2 8/24/2012 Conc/Qual	WWL-3U 8/23/2012 Conc/Qual	WWL-3L 8/23/2012 Conc/Qual
Volatile Organic Compounds (ug/L)									
Diethyl ether	60-29-7	N	8,200	310	--	110		7,400	7,700
t-Butanol[4]	75-65-0	--	190	150	--	**250**	78 D		
Semivolatile Organic Compounds (ug/L)									
1,4-Dioxane	123-91-1	C	33	0.67	--			19	19
Alcohols and Glycols (mg/L)									
Ethanol[4]	64-17-5	--	9.7	0.15	--			5.8	6.5
Methanol	67-56-1	N	1.9	3.1	--		**2.5 J**	**1.9 J**	1.4 J
Metals (ug/L)									
Aluminum	7429-90-5	N	490	1,600	--	440	180	64 J	110
Antimony	7440-36-0	N	--	0.6	6	**2.4 J**			
Arsenic	7440-38-2	C	4.8	0.045	10	1.4 J	2.5	1.5 J	1.5 J
Barium	7440-39-3	N	1,600	290	2,000	770	**2,500**	33	34
Cadmium	7440-43-9	N	0.14	0.69	5	0.18 J	0.13 J		
Chromium	7440-47-3	--	12	--	100			3.6 J	3.8 J
Cobalt	7440-48-4	N	79	0.47	--	1.7	**120**	71	72
Copper	7440-50-8	N	--	62	1,300	3.1 J	3.3 J	3.3 J	3 J
Iron	7439-89-6	N	180,000	1,100	--	110,000	11,000	170,000	170,000
Manganese	7439-96-5	N	16,000	32	--	2,900	**37,000**	11,000	12,000
Nickel	7440-02-0	N	22	30	--	2.8 J	**27**	14	14
Inorganics, Other (mg/L)									
Chloride	16887-00-6	--	--	--	--	640	6,200	1,200	1,200
Total Kjeldahl Nitrogen	--	--	--	--	--	1.6	1.4	1.7	1.5
Nitrite as N	14797-65-0	N	--	0.16	1	0.035 J		0.01 J	0.011 J
Nitrate as N	14797-55-8	N	--	2.5	10			0.21	0.37
Sulfate	14808-79-8	--	--	--	--	370	68	430	430
Total Organic Carbon	7440-44-0	--	--	--	--	270	69	4.3	4.4
Methane (ug/L)	74-82-8	--	--	--	--	0.38 J	2,000	32	24
Ferrous Iron	15438-31-0	--	--	--	--	87 HF B	11 HF B	140 HF	130 HF

Notes:
Constituents highlighted in grey were not identified as constituents of interest (COI) in the initial COI identification step and did not have EPCs calculated in HHRA

ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level
November 2013 Regional Screening Table developed by Oakridge National Laboratory under an Interagency Agreement with the EPA

[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA

[2] Exposure Point Concentrations (EPC) calculated from the 2011 Human Health Risk Assessment (Attachment A to the Final RFI Report

[3] Factor of 0.1 multiplied by the Noncarcinogenic Screening Values (Screening Levels Only

[4] Surrogate compounds selected as detailed in Table 3-1 of the 2011 Human Health Risk Assessment. Screening criteria for the selected surrogates have been incorporated into this table.
J = The positive result for this analyte is a quantitative estimate
D = Surrogate or matrix spike recoveries were no obtaining because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D
HF = Field parameter with a holding time of 15 minutes
B = Compound was found in the blank and sample

Table 9
Summary of 2012 Groundwater Constituents, Old Landfill and Landfill #156
August 2012 Groundwater Sampling Event
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	[2]EPC	[3]Tapwater	MCL	LF-1 8/23/2012 Conc/Qual	LF-2 8/23/2012 Conc/Qual	LF-3 8/23/2012 Conc/Qual	LF-4 8/23/2012 Conc/Qual	LF-5 8/23/2012 Conc/Qual
Volatile Organic Compounds (ug/L)										
1,1-Dichloroethane	75-34-3	C	1.1	2.4	--	**2.7**	**1.7**			**3.1**
1,2-Dichloroethane	107-06-2	C	--	0.15	5					**0.24 J**
Diethyl ether	60-29-7	N	200	310	--	66	98	7.0 J		51
t-Butanol[4]	75-65-0	--	680	150	--	37	35	180 D		16
Tetrachloroethene	127-18-4	C**	ND	3.5	5	0.26 J				
Trichloroethylene	79-01-6	C**	ND	0.26	5	**0.97 J**	**0.58 J**			**0.7 J**
Semivolatile Organic Compounds (ug/L)										
1,4-Dioxane	123-91-1	C	24	0.67	--	4.2 J		21		7 J
Alcohols and Glycols (mg/L)										
Methanol	67-56-1	N	ND	3.1	--	1.5 J	1.4 J	1.4 J		1.1 J
Metals (ug/L)										
Aluminum	7429-90-5	N	340	1,600	--	140	**360**	**650**	150	170
Barium	7440-39-3	N	150	290	2,000	120	110	130	68	120
Chromium	7440-47-3	--	4.2	--	100			**4.5 J**		**7.2**
Cobalt	7440-48-4	N	5.9	0.47	--	0.22 J	0.98	4.6	0.2 J	0.28 J
Copper	7440-50-8	N	--	62	1,300		1.4 J	1.5 J		1.6 J
Iron	7439-89-6	N	10,000	1,100	--	9,100	6,200	2,900	920	6,800
Lead	7439-92-1	--	0.78	--	15		**1.2 J**			
Manganese	7439-96-5	N	3,000	32	--	1,800	1,100	2,500	260	1,100
Nickel	7440-02-0	N	7.7	30	--		2.6 J	**9.8**		6.2
Selenium	7782-49-2	N	--	7.8	50			1.3 J		
Vanadium	7440-62-2	--	3.2	6.3	--			**3.4 J**		
Inorganics, Other (mg/L)										
Chloride	16887-00-6	--		--	--	140	130	91	11	150
Total Kjeldahl Nitrogen	--	--		--	--	0.51	0.44	1.5	0.25	0.53
Nitrate as N	14797-55-8	N		2.5	10		0.014 J	0.076		
Sulfate	14808-79-8	--		--	--	310	250	140	21	280
Total Organic Carbon	7440-44-0	--		--	--	0.95 J	0.74 J	3.0		0.91 J
Methane (ug/L)	74-82-8	--		--	--	4.6	3.9	1.6	3.1	2.7
Ferrous Iron	15438-31-0	--		--	--	7.7 HF	4.9 HF	3.1 HF	0.35 HF	6.1 HF

Notes:
Constituents highlighted in grey were not identified as constituents of interest (COI) in the initial COI identification step and did not have EPCs calculated in the HHRA
ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level
November 2013 Regional Screening Table developed by Oakridge National Laboratory under an Interagency Agreement with the EP.
[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA
[2] Exposure Point Concentrations (EPC) calculated from the 2011 Human Health Risk Assessment (Attachment A to the Final RFI Report)
[3] Factor of 0.1 multiplied by the Noncarcinogenic Screening Values (Screening Levels Only)
[4] Surrogate compounds selected as detailed in Table 3-1 of the 2011 Human Health Risk Assessment. Screening criteria for the selected surrogates have been incorporated into this table.
J = The positive result for this analyte is a quantitative estimate
HF = Field parameter with a holding time of 15 minutes
** = where n SL < 10X c SL;

Table 10
Summary of Detected Groundwater Constituents, Natrosol Lagoon
August 2012 Groundwater Sampling Event
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	[2]EPC	[3]Tapwater	MCL	NAT-1 8/21/2012 Conc/Qual	NAT-2 8/21/2012 Conc/Qual	NAT-3 8/21/2012 Conc/Qual	NAT-3 (DUP) 8/21/2012 Conc/Qual	NAT-4 8/23/2012 Conc/Qual
Volatile Organic Compounds (ug/L)										
t-Butanol[4]	75-65-0	--	92,000	150	--	66	11,000	69,000	63,000	310
Trichloroethylene	79-01-6	C**	8.4	0.26	5	**37**				
Semivolatile Organic Compounds (ug/L)										
1,4-Dioxane	123-91-1	C	13	0.67	--			12	12	
Alcohols and Glycols (mg/L)										
Methanol	67-56-1	N	ND	3.1	--					1.5 J
Metals (ug/L)										
Aluminum	7429-90-5	N	3,200	1,600	--	400	1,500	390	780	1,100
Arsenic	7440-38-2	C	7	0.045	10		3.6	6.1	6.6	3.1
Barium	7440-39-3	N	125	290	2,000	36	70	90	90	41
Cadmium	7440-43-9	N	0.29	0.69	5	**0.36 J**				**0.42 J**
Chromium	7440-47-3	--	19	--	100		11	13	**31**	5.8
Cobalt	7440-48-4	N	27	0.47	--	22	4.7	15	15	0.77
Copper	7440-50-8	N	--	62	1,300	2.4 J	2.1 J	1.3 J	2.6 J	7.8
Iron	7439-89-6	N	9,600	1,100	--	370	9,400	2,900	3,200	6,100
Lead	7439-92-1	--	1	--	15	**1.2 J**	**1.6 B**	0.91 J	**1.4 J**	**1.6**
Manganese	7439-96-5	N	2,750	32	--	1,200	200	1,300	1,200	220
Nickel	7440-02-0	N	34.5	30	--	11	9.8	25	**35**	4.7 J
Vanadium	7440-62-2	--	14	6.3	--		4.8 J	4.3 J	5.3 J	4.9 J
Inorganics, Other (mg/L)										
Chloride	16887-00-6	--		--	--	72	100	240		9.2
Total Kjeldahl Nitrogen	--	--		--	--	0.38	1.9	2.1		3.6
Nitrite as N	14797-65-0	N		0.16	1					0.011 J
Nitrate as N	14797-55-8	N		2.5	10	**12**	0.019 J			0.74
Sulfate	14808-79-8	--		--	--	350	150	3.4 J		35
Total Organic Carbon	7440-44-0	--		--	--	1.6	18	86		12
Methane (ug/L)	74-82-8	--		--	--	15	380	150		680
Ferrous Iron	15438-31-0	--		--	--		0.12 HF	0.065 J HF		0.35 HF

Notes:
Constituents highlighted in grey were not identified as constituents of interest (COI) in the initial COI identification step and did not have EPCs calculated in the HHRA
ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level
November 2013 Regional Screening Table developed by Oakridge National Laboratory under an Interagency Agreement with the EPA
[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA
[2] Exposure Point Concentrations (EPC) calculated from the 2011 Human Health Risk Assessment (Attachment A to the Final RFI Report)
[3] Factor of 0.1 multiplied by the Noncarcinogenic Screening Values (Screening Levels Only)
[4] Surrogate compounds selected as detailed in Table 3-1 of the 2011 Human Health Risk Assessment. Screening criteria for the selected surrogates have been incorporated into this table.
J = The positive result for this analyte is a quantitative estimate
HF = Field parameter with a holding time of 15 minutes
** = where n SL < 10X c SL;

Table 11
Summary of 2012 Detected Groundwater Constituents, Reten Aqualon Basin
August 2012 Groundwater Sampling Event
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	[2]EPC	[2]EPC (Dissolved)	[2]Tapwater	MCL	RAB-MW1R 8/20/2012 Conc/Qual	RAB-MW2 8/24/2012 Conc/Qual	RAB-MW2 (filtered) 8/24/2012 Conc/Qual	RAB-MW3 8/20/2012 Conc/Qual	RAB-MW4 8/20/2012 Conc/Qual
Volatile Organic Compounds (ug/L)											
Diethyl ether	60-29-7	N	11	--	310	--	--	**12**	--	1.7 J	9.1 J
t-Butanol[4]	75-65-0	--	560	--	150	--	**19,000**	150 D	--	150 D	--
Alcohols and Glycols (mg/L)											
Methanol	67-56-1	N	1.1	--	3.1	--	--	**1.1 J**	--	--	--
Metals (ug/L)											
Aluminum	7429-90-5	N	24,000	--	1,600	--	940	7,900 J	83	410	1,300
Arsenic	7440-38-2	C	9.3	3.5	0.045	10	2.2 J	7.2	1.6 J	4.6	
Barium	7440-39-3	N	200	--	290	2,000	**260**	92	34	**240**	15
Beryllium	7440-41-7	N	--	--	1.6	4		0.54 J			
Cadmium	7440-43-9	N	0.47	--	0.69	5	0.15 J	**0.99**	0.32 J		**0.51**
Chromium	7440-47-3	--	79	2.4	--	100	27	57	4.1 J	10	13
Cobalt	7440-48-4	N	150	120	0.47	--	**68**	**170**	**140**	**5.9**	**0.92**
Copper	7440-50-8	N	--	--	62	1,300	5.3	17	1.8 J	4.4 J	2.4 J
Iron	7439-89-6	N	150,000	110,000	1,100	--	89,000	80,000	54,000	**170,000**	**1,400**
Lead	7439-92-1	--	11.9	--	--	15	1.6 B	7.7		1.1 J B	1.4 J B
Manganese	7439-96-5	N	12,000	11,000	32	--	**6,100**	**12,000**	**12,000**	570	250
Nickel	7440-02-0	N	100	--	30	--	28	**120**	**100**	13	39
Selenium	7782-49-2	N	--	--	7.8	50				1.3 J	
Vanadium	7440-62-2	--	95	--	6.3	--		21		7.0 J	3.5 J
Inorganics, Other (mg/L)											
Chloride	16887-00-6	--	--	--	--	--	170	580		67	190
Total Kjeldahl Nitrogen	--	--	--	--	--	--	4.1	1.8		4.9	0.37
Nitrite as N	14797-65-0	N	--	--	0.16	1	0.013 J	0.042 J		0.017 J	
Nitrate as N	14797-55-8	N	--	--	2.5	10	0.01 J			0.56	
Sulfate	14808-79-8	--	--	--	--	--	350	1,500		25	960
Total Organic Carbon	7440-44-0	--	--	--	--	--	22	13		40	1.9
Methane (ug/L)	74-82-8	--	--	--	--	--	620 *	0.32 J		87	3.1
Ferrous Iron	15438-31-0	--	--	--	--	--	45 HF	56 HF B		110 HF	0.027 J HF

Notes:
Constituents highlighted in grey were not identified as constituents of interest (COI) in the initial COI identification step and did not have EPCs calculated in the HHRA
ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level
November 2013 Regional Screening Table developed by Oakridge National Laboratory under an Interagency Agreement with the EPA
[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA
[2] Exposure Point Concentrations (EPC) calculated from the 2011 Human Health Risk Assessment (Attachment A to the Final RFI Report)
[3] Factor of 0.1 multiplied by the Noncarcinogenic Screening Values (Screening Levels Only)
[4] Surrogate compounds selected as detailed in Table 3-1 of the 2011 Human Health Risk Assessment. Screening criteria for the selected surrogates have been incorporated into this table.
J = The positive result for this analyte is a quantitative estimate
D = Surrogate or matrix spike recoveries were no obtaining because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D
HF = Field parameter with a holding time of 15 minutes
B = Compound was found in the blank and sample

Table 12
Summary of 2012 Detected Groundwater Constituents, Sludge Drying Beds
August 2012 Groundwater Sampling Event
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	[2]EPC	[3]Tapwater	MCL	SDB-MW-1 8/22/2012 Conc/Qual	SDB-MW-2 8/22/2012 Conc/Qual	SDB-MW-3 8/22/2012 Conc/Qual
Metals (ug/L)								
Aluminum	7429-90-5	N	9,800	1,600	--	200	110	180
Arsenic	7440-38-2	C	7.3	0.045	10	6.1	--	--
Barium	7440-39-3	N	540	290	2,000	350	11	11
Cadmium	7440-43-9	N	0.38	0.69	5	--	0.14 J	0.24 J
Chromium	7440-47-3	--	22	--	100	4.5 J	4.3 J	5.3
Cobalt	7440-48-4	N	14	0.47	--	3.0	2.7	4.7
Copper	7440-50-8	N	--	62	1,300		1.8 J	9.8
Iron	7439-89-6	N	190,000	1,100	--	170,000	510	610
Manganese	7439-96-5	N	2,300	32	--	1,700	1,100	930
Nickel	7440-02-0	N	31	30	--	3.2 J	26	**33**
Selenium	7782-49-2	N	--	7.8	50	--	--	**9.2**
Inorganics, Other (mg/L)								
Chloride	16887-00-6	--	--	--	--	44	120	280
Total Kjeldahl Nitrogen	--	--	--	--	--	14	0.46	0.69
Nitrite as N	14797-65-0	N	--	0.16	1	0.024 J	--	--
Nitrate as N	14797-55-8	N	--	2.5	10	--	--	0.26
Sulfate	14808-79-8	--	--	--	--	--	1,400	1,200
Total Organic Carbon	7440-44-0	--	--	--	--	50	5.2	4.4
Methane (ug/L)	74-82-8	--	--	--	--	3,100	0.48 J	1.2
Ferrous Iron	15438-31-0	--	--	--	--	140 HF	0.19 HF	0.29 HF

Notes:
Constituents highlighted in grey were not identified as constituents of interest (COI) in the initial COI identification step and did not have EPCs calculated in the HHRA

ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level
November 2013 Regional Screening Table developed by Oakridge National Laboratory under an Interagency Agreement with the EPA

[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA

[2] Exposure Point Concentrations (EPC) calculated from the 2011 Human Health Risk Assessment (Attachment A to the Final RFI Report)

[3] Factor of 0.1 multiplied by the Noncarcinogenic Screening Values (Screening Levels Only)

J = The positive result for this analyte is a quantitative estimate
HF = Field parameter with a holding time of 15 minutes

Table 13
Summary of 2012 Detected Groundwater Constituents, Vacuum Filter Sludge Pile
August 2012 Groundwater Sampling Event
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	EPC	[2]Tapwater	MCL	VFSP-MW-1 8/24/2012 Conc/Qual
Volatile Organic Compounds (ug/L)						
Diethyl ether	60-29-7	N	76	310	--	67
t-Butanol	75-65-0	--	ND	150	--	9.4
Metals (ug/L)						
Aluminum	7429-90-5	N	270	1,600	--	100
Barium	7440-39-3	N	140	290	2,000	**190**
Cobalt	7440-48-4	N	2.5	0.47	--	**2.7**
Iron	7439-89-6	N	4,300	1,100	--	**4,300**
Manganese	7439-96-5	N	750	32	--	**820**
Nickel	7440-02-0	N	2.1	30	--	**2.2 J**
Inorganics, Other (mg/L)						
Chloride	16887-00-6	--		--	--	56
Total Kjeldahl Nitrogen	--	--		--	--	0.43
Sulfate	14808-79-8	--		--	--	150
Total Organic Carbon	7440-44-0	--		--	--	0.57 J
Methane (ug/L)	74-82-8	--		--	--	3.2
Ferrous Iron	15438-31-0	--		--	--	3.6 HF B

Notes:
Constituents highlighted in grey were not identified as constituents of interest (COI) in the initial COI identification step and did not have EPCs calculated in the HHRA

ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level

November 2013 Regional Screening Table developed by Oakridge National Laboratory under an Interagency Agreement with the EPA

[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA

[2] Exposure Point Concentrations (EPC) calculated from the 2011 Human Health Risk Assessment (Attachment A to the Final RFI Report)

[3] Factor of 0.1 multiplied by the Noncarcinogenic Screening Values (Screening Levels Only)

[4] Surrogate compounds selected as detailed in Table 3-1 of the 2011 Human Health Risk Assessment. Screening criteria for the selected surrogates have been incorporated into this table.

J = The positive result for this analyte is a quantitative estimate
HF = Field parameter with a holding time of 15 minutes
B = Compound was found in the blank and sample

Table 14
Summary of 2012 Detected Groundwater Constituents, Main Holding Basin
August 2012 Groundwater Sampling Event
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	[2]EPC	[3]Tapwater	MCL	MW-1 8/21/2012 Conc/Qual	MW-2 8/24/2012 Conc/Qual	MW-3 8/23/2012 Conc/Qual	MW-4 8/22/2012 Conc/Qual	MW-4U 8/23/2012 Conc/Qual	MW-5 8/22/2012 Conc/Qual	MW-5U 8/22/2012 Conc/Qual	MW-6 8/22/2012 Conc/Qual	MW-7L 8/24/2012 Conc/Qual	MW-7U 8/24/2012 Conc/Qual	MW-8D 8/22/2012 Conc/Qual	MW-8L-R 8/22/2012 Conc/Qual	MW-8U 8/22/2012 Conc/Qual	MW-9 8/23/2012 Conc/Qual	MW-10 8/21/2012 Conc/Qual	MW-10 (DUP) 8/21/2012 Conc/Qual
Volatile Organic Compounds (ug/L)																					
1,1,2,2-Tetrachloroethane	79-34-5	C	0.96	0.066	--															0.32 J	0.31 J
1,1-Dichloroethane	75-34-3	C	2.5	2.4	--															1.1	1.1
1,2-Dichloroethane	107-06-2	C	--	0.15	5										0.14 J						
Chloroform	67-66-3	C	0.65	0.19	80															**0.79 J**	**0.9 J**
Diethyl ether	60-29-7	N	4,734	310	--	2,100	**12,000**	330	1,500	1,800	200	610	1,600		110 D		3,400	2,200	3,800	34	37
t-Butanol[4]	75-65-0	--	1,652	150	--			270	**2,200**	**3,000**	190		1,400		6.5		**4,300**	590		29	14
Tetrachloroethene	127-18-4	C**	22	3.5	5															8.9	9.2
Trichloroethylene	79-01-6	C**	3.2	0.26	5										0.52 J					1.4	1.5
Semivolatile Organic Compounds (ug/L)																					
1,4-Dioxane	123-91-1	C	15.4	0.67	--	**18**	**23**		5.1 J	6.9 J		3.3 J	4.6 J				**18**	14	9.7 J	**19**	**24**
Alcohols and Glycols (mg/L)																					
Ethanol[4]	64-17-5	--	3.267	0.15	--	2.0 J	**7.8**		1.1 J	1.4 J			0.94 J				2.6 J	1.6 J	3.2 J		
Methanol	67-56-1	N	1.775	3.1	--		1.3 J	1.2 J		**2.3 J**				1.5 J	1.3 J				1.6 J		
Metals (ug/L)																					
Aluminum	7429-90-5	N	574	1,600	--		**710**	180	**1,200**	**950**	**740**	100	520	200	**1,100**	430	**600**	410	380	290	380
Arsenic	7440-38-2	C	21.4	0.045	10		3.5	1.6 J	3.7	5.7		8.4	2.1 J				**29**	8.7	3.1		
Barium	7440-39-3	N	628	290	2,000	59	110	320	**760**	**890**	**1,200**	210	450	110	45	70	570	250	89	15	15
Beryllium	7440-41-7	N	--	1.6	4	0.15 J	0.35 J		0.19 J	0.48 J					**2.6**					0.22 J	0.23 J
Cadmium	7440-43-9	N	2.5	0.69	5				0.26 J	0.3 J			1.9		**20**	0.58	0.35 J	0.18 J	0.35 J	**3.8**	**3.7**
Chromium	7440-47-3	--	12.5	--	100	3.0 J			6.6	6.2	7.8	7.6					4.2 J		7.7		4 J
Cobalt	7440-48-4	N	104	0.47	--	0.42 J	16	0.49 J	11	34	1.3	9.7	20	0.6	**350**	0.2 J	2.8	2.9	2.2	75	75
Copper	7440-50-8	N	--	62	1,300	5.7	8.9	1.5 J	5.8	9.4	3.6 J	6.0	2.4 J		**170**	3 J	3.7 J	13	3.2 J	5.4	4.9 J
Iron	7439-89-6	N	75,872	1,100	--	6,200	**120,000**	14,000	60,000	**86,000**	**84,000**	19,000	50,000	1,600	42,000	910	36,000	25,000	**95,000**	220	270
Lead	7439-92-1	--	0.77	--	15	**0.82 J**	0.62 J		**0.96 J**	**1.1 J**	0.62 J	0.57 J	0.62 J		**2.3**	0.7 J	0.73 J		0.57 J	**0.98 J**	**0.9 J**
Manganese	7439-96-5	N	9,071	32	--	2,800	7,900	520	2,600	1,800	3,900	2,300	4,600	480	**38,000**	220	2,100	790	2,400	3,700	3,800
Mercury	7439-97-6	N	0.8	0.063	2										**4.2**						
Nickel	7440-02-0	N	47.3	30	--	3.2 J	2.9 J	2.3 J	5.1	9.1	5.3	7.6	5.4		**110**		3.6 J	2.1 J	5.1	**61**	**62**
Vanadium	7440-62-2	--	1,279	6.3	--				6.1 J	6.0 J	3.5 J	310	4.1 J		3.3 J		8.6 J				
Inorganics, Other (mg/L)																					
Chloride	16887-00-6	--		--	--	220	940	67	500	660	1,300	2,600	720	49	2,100	3.9	720	450	580	230	
Total Kjeldahl Nitrogen	--	--		--	--	0.25	1.2	3.7	4.7	11	3.7	3.5	4.6	0.29	0.86	0.49	22	12	1.7	0.28	
Nitrite as N	14797-65-0	N		0.16	1					0.014 J	0.022 J										
Nitrate as N	14797-55-8	N		2.5	10	0.011 J	0.71	0.29	0.25	0.56						0.098			0.97	**4.3**	
Sulfate	14808-79-8	--		--	--	840	460	33			66	400	140	32	540	6.2	360	510	600	520	
Total Organic Carbon	7440-44-0	--		--	--	3.5	5.3	5.9	34	27	17	27	20		2.1		24	11	8.2	1.7	
Methane (ug/L)	74-82-8	--		--	--		8.4	3,600	74,00	6,800	160	97	120	1.6	130	0.77	160	50	36	0.41 J	
Ferrous Iron	15438-31-0	--		--	--	6 HF	110 HF B	0.18 HF	36 HF	33 HF	72 HF	0.46 HF	16 HF	0.16 HF B	41 HF B	0.25 HF	13 HF	36 HF	48 HF		

Notes:
Constituents highlighted in grey were not identified as constituents of interest (COI) in the initial COI identification step and did not have EPCs calculated in the HHRA
ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level
November 2013 Regional Screening Table developed by Oakridge National Laboratory under an Interagency Agreement with the EPA
[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA
[2] Exposure Point Concentrations (EPC) calculated from the 2011 Human Health Risk Assessment (Attachment A to the Final RFI Report
[3] Factor of 0.1 multiplied by the Noncarcinogenic Screening Values (Screening Levels Only
[4] Surrogate compounds selected as detailed in Table 3-1 of the 2011 Human Health Risk Assessment. Screening criteria for the selected surrogates have been incorporated into this table
J = The positive result for this analyte is a quantitative estimate
D = Surrogate or matrix spike recoveries were no obtaining because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D
HF = Field parameter with a holding time of 15 minutes
B = Compound was found in the blank and sample
* = where: n SL < 100X c SL
** = where n SL < 10X c SL;

Table 15
Summary of Constituents of Interest (COI) in Soil in the Human Health Risk Assessment
Hercules - Aqualon
Hopewell, Virginia

Area	Pathway	Constituents of Interest	
Landfill Areas (SWMU 5)	Direct Contact	28-Norolean-17-en-3-one 2,2-dimethoxy-propane Arsenic	Chromium Thallium
Sludge Drying Beds (SWMU 14)	Direct Contact	Arsenic	Chromium
Vacuum Filter Sludge Pile (SWMU 15)	Direct Contact	Arsenic Chromium	Iron

Table 16
Summary of Constituents of Potential Ecological Concern (CPEC) in All Areas
Hercules - Aqualon
Hopewell, Virginia

Area	Medium	Constituents of Potential Ceological Concern		Known TICs	Unknown TICs
Landfill Areas (SWMU 5)	Soil	Chloroform	Lead	28-Norolean-17-en-3-one*	Unknown; phenol
		Antimony	Manganese	4,5-Dimethylthiazole S-oxide*	Unknown; Chemical class: fluorinated VOC
		Arsenic	Mercury	1-methyl-4-(1-methylethyl)-benzene	Unknown; Chemical class: dichlorobenzene
		Chromium	Selenium	2-(2-propenyl)-phenol	Unknown; Chemical class: alkane
		Cobalt	Vanadium	2,2-dimethozy-propane	
		Copper	Zinc		
		Iron			
Eastern Whitewater Lagoon (SWMU 3)	Sediment	2-Butanone	Chromium	None	Unknown; carbon disulfide
		2-Methyl-1-propanol	Copper		Unknown; Chemical class: alkene
		Acetone	Iron		Uknown; Chemical class: PAH
		t-Butanol	Lead		Unknown; acetaldehyde
		Methanol	Nickel		
		Aluminum	Silver		
		Antimony	Thallium*		
		Barium	Vanadium		
		Beryllium*	Zinc		
		Cadmium			
	Surface Water	Benzo(a)pyrene	Barium	None	Unknown; Chemical class: alkane
		Aluminum			
Western Whitewater Lagoon (SWMU 4)	Sediment	Acetone	Chromium	1-Decene	Unknown; carbon disulfide
		Carbon disulfide	Copper	Cyclododecane	Unknown; Chemical class: alkene
		Diethyl ether	Iron	nonyl-Cyclopropane	Unknown; acetaldehyde
		t-Butanol	Lead		Unknown; methoxy ethane
		Methanol	Nickel		Unknown; Chemical class: alkyl ether
		Aluminum	Silver		Unknown; Chemical class: alkyl ring
		Antimony	Thallium*		
		Barium	Vanadium		
		Beryllium*	Zinc		
		Cadmium			
	Surface Water	Aluminum	Iron	None	None
		Barium	Lead		
Natrosol Lagoon (SWMU 7)	Sediment	Acetone	Beryllium*		Unknown; carbon disulfide
		t-Butanol	Iron		Unknown; Chemical class: alkene
		Methanol	Thallium*		Unknown; acetaldehyde
		Aluminum	Vanadium		Unknown; Chemical class: amide
		Barium			
	Surface Water	Aluminum	Iron	None	None
		Barium			

Table 16
Summary of Constituents of Potential Ecological Concern (CPEC) in All Areas
Hercules - Aqualon
Hopewell, Virginia

Area	Medium	Constituents of Potential Ceological Concern		Known TICs	Unknown TICs
Sludge Drying Beds (SWMU 14)	Sediment	2-Butanone	Barium	C10H16	None
		4-Methyl-2-pentanone	Beryllium*	Hexanal	
		Acetone	Chromium	Hexane	
		Benzo[a]anthracene	Iron	Pentanal	
		Benzo[b]fluoranthene	Lead	Nonadecane	
		Bis(2-ethylhexyl) phthalate	Vanadium		
		Chrysene	Zinc		
		Aluminum			
	Surface Water	Benzon(a)pyrene	Barium	None	None
		Dibenz(a,h)anthracene	Iron		
		Triphenylphosphine oxide	Manganese		
		Aluminum			
Vacuum Filter Sludge Pile (SWMU 15)	Sediment	2-Butanone	Copper	1,3,5-Trimethylbenzene	Unknown; Chemical class: alkyl aromatic
		Acetone	Iron	1-Docosanethiol	
		Carbon disulfide	Lead	1-Dotriacontanol	
		Bis(2-ethylhexyl) phthalate	Manganese	2,4,6,7,8,8a-hexahydro-5(iH)-azulenone	
		Aluminum	Mercury	Benzo[b]naphtho[2,3-d]furan	
		Antimony	Nickel	Cyclooctacosane	
		Baruium	Selenium	Pentacosane	
		Beryllium*	Vanadium	Pentatriacontane	
		Cadmium	Zinc		
		Chromium			
	Surface Water	Benzon(a)pyrene	Barium	None	None
		Benzo(k)fluoranthene	Iron		
		Dibenz(a,h)anthracene	Lead		
		Aluminum			
East Bear Creek	Sediment	Acetone	Cadmium	None	Unknown; acetaldehyde
		Carbon disulfide	Chromium		Unknown: Chemical class: alcohol
		t-Butanol	Copper		
		Methanol	Iron		
		PCB-1254	Lead		
		PCB-1260	Mercury		
		Aluminum	Thallium*		
		Arsenic	Vanadium		
		Barium	Zinc		
		Beryllium*			

Table 16
Summary of Constituents of Potential Ecological Concern (CPEC) in All Areas
Hercules - Aqualon
Hopewell, Virginia

Area	Medium	Constituents of Potential Ceological Concern		Known TICs	Unknown TICs
East Bear Creek	Surface Water	Aluminum	Iron	None	None
		Barium	Lead		
		Beryllium	Manganese		
		Cadmium	Thalliuim		
		Chromium	Vanadium		
		Copper	Zinc		
West Bear Creel	Sediment	2-Butanon	Beryllium*	2,2',4,4',5-pentachloro-1,1'-biphenyl	Unknown; Chemical class: alkene
		Acetone	Cadmium	2,2',4,5,5'-pentachloro-1,1'-biphenyl	Unknown; Chemical class: PAH
		Carbon disulfide	Copper	2,3,3',4,4',5-hexachloro-1,1'-biphenyl	Unknown; acetaldehyde
		Diethyl ether	Iron	2,3',4,4',6-Pentachloror-1,1'-biphenyl	Unknown; Chemical class: alcohol
		t-Butanol	Lead	Eicosane	Unknown; Chemical class: ketone
		PCB-1254	Manganese	Hexacosane	
		PCB-1260	Mercury		
		hexachloro-1,1'-biphenyl	Nickel		
		Pentachlorobiphenyl	Thallium*		
		Aluminum	Vanadium		
		Barium	Zinc		
	Surface Water	Aluminum	Lead	None	None
		Barium	Manganese		
		Iron	Vanadium		
Unnamed Tributary	Sediment	Acetone	Barium	2,3',4,4',6-Pentachloror-1,1'-biphenyl	Unknown; carbon disulfide
		Carbon disulfide	Beryllium*	pentaxhloro-1,1'-biphenyl	Unknown; Chemical class: alkene
		t-Butanol	Cadmium	17-Pentatriacontene	Unknown; Chemical class: PAH
		Benzo(b)fluoranthene	Chromium		Unknown; acetaldehyde
		Indeno(1,2,3-cd)pyrene	Copper		Unknown; Chemical class: alcohol
		Methanol	Iron		Unknown; Chemical class: alkane
		PCB-1254	Lead		
		PCB-1260	Manganese		
		hexachloro-1,1'-biphenyl	Mercury		
		Pentachlorobiphenyl	Nickel		
		Aluminum	Thallium*		
		Antimony	Vanadium		
		Arsenic	Zinc		
	Surface Water	Aluminum	Lead	None	None
		Barium	Manganese		
		Cadmium	Vanadium		
		Copper	Zinc		
		Iron			

Table 16
Summary of Constituents of Potential Ecological Concern (CPEC) in All Areas
Hercules - Aqualon
Hopewell, Virginia

Area	Medium	Constituents of Potential Ceological Concern		Known TICs	Unknown TICs
Cattail Creek	Sediment	2-Butanone	Beryllium*	1-Naphthalenepropanol, .alpha.-ethenyle	Unknown; carbon disulfide
		Acetone	Copper	nonyl-Cyclopropane	Unknown; Chemical class: alkene
		Carbon disulfide	Iron	Eicosane	Unknown; Chemical class: PAH
		t-Butanol	Lead	Heptacosane	Unknown; acetaldehyde
		Aluminum	Mercury	2,6,10,15-tetramethyl-heptadecane	Unknown; Chemical class: alcohol
		Antimony	Thallium*	Hexadecane	Unknown; Chemical class: ketone
		Arsenic	Vanadium	Pentacosane	Unknown; Chemical class: alkane
		Barium	Zinc		Unknown; Chemical class: cycloalkane
	Surface Water	Aluminum	Iron	None	None
		Barium	Lead		
		Copper	Manganese		
Bailey Creek	Sediment	2-Butanone	Barium	1-Dotriacontanol	Unknown; Chemical class: alkene
		Acetone	Beryllium*	2,4,6,7,8,8a-hexahydro-5(iH)-azulenone	Unknown; acetaldehyde
		Carbon disulfide	Thallium*	Heptadecane	Unknown; Chemical class: alcohol
		Aluminum		9-octyl-heptadecane	Unknown; Chemical class: cycloalkane
	Surface Water	Aluminum	Iron	None	None
		Barium	Manganese		

Notes:
* - This constituent is identified as a CPEC because it lacks a screening value. It is retained for qualitative evaluation

Table 17
Summary of Constituents of Interest (COI) in Groundwater in the Human Health Risk Assessment
Hercules - Aqualon
Hopewell, Virginia

Area	Pathway	Constituents of Interest	
Site-wide	Direct Contact	1,1,2,2-Tetrachloroethane	Arsenic (Total & Dissolved)
		1,1-Dichloroethane	Barium (Total)
		Chloroform	Cadmium (Total)
		Diethyl ether	Chromium (Total & Dissolved)
		t-Butanol	Cobalt (Total & Dissolved)
		Tetrachloroethene	Iron (Total & Dissolved)
		Trichloroethene	Lead (Total)
		1,4-Dioxane	Manganese (Total & Dissolved)
		1,1,2-Trichloro-1-propene	Mercury (Total)
		1,2,3 -Trichloro -1-propene	Nickel (Total)
		1-1'-Oxybis[2-ethoxy-]ethane	Vanadium (Total)
		Ethanol	Unknown; Chemical Class: glycol ether derivative
		Methanol	Unknown; Chemical Class: chlorinated VOC
		Aluminum (Total)	Unknown; Chemical Class: alcohol
	Vapor Intrusion	Diethyl ether	Mercury
		Tetrachloroethene	Unknown; Chemical Class: chlorinated VOC
		Trichloroethene	Unknown; Chemical Class: alkene
		1,1,2-Trichloro-1-propene	Unknown; Chemical Class: 2-methyl-1-propene
		1,2,3 -Trichloro -1-propene	

Table 18
Summary of Constituents of Interest (COI) in Sediment and Surface Water in the Human Health Risk Assessment
Hercules - Aqualon
Hopewell, Virginia

Area	Medium	Constituents of Interest
Eastern and Western Whitewater Lagoons (SWMUs 3 and 4)	Sediment	Arsenic Chromium Thallium Unknown; Chemical Class: PAH
	Surface Water	Benzo(a)pyrene Benzo(b)fluoranthene Indeno(1,2,3-cd)pyrene Arsenic Chromium
Natrosol Lagoon (SWMU 7)	Sediment	Arsenic Chromium Thallium
	Surface Water	Arsenic Chromium
Sludge Drying Beds (SWMU 14)	Surface Water	Benzo(a)pyrene Dibenz(a,h)anthracene Indeno(1,2,3-cd)pyrene Arsenic Chromium Cobalt Iron Manganese

Table 18
Summary of Constituents of Interest (COI) in Sediment and Surface Water in the Human Health Risk Assessment
Hercules - Aqualon
Hopewell, Virginia

Area	Medium	Constituents of Interest
Vacuum Filter Sludge Pile (SWMU 15)	Surface Water	Benzo(a)pyrene Benzo(k)fluoranthene Dibenz(a,h)anthracene Indeno(1,2,3-cd)pyrene Arsenic Chromium Cobalt Iron
East Bear Creek	Sediment	Arsenic Chromium Thallium
	Surface Water	Aluminum Arsenic Chromium Cobalt Iron Lead Manganese Mercury Thallium Vanadium

Table 18
Summary of Constituents of Interest (COI) in Sediment and Surface Water in the Human Health Risk Assessment
Hercules - Aqualon
Hopewell, Virginia

Area	Medium	Constituents of Interest
West Bear Creek	Sediment	2,3,3',4,4',5-Hexachloro-1,1'-biphenyl PCB-1254 Pentachlorobiphenyl Arsenic Chromium Thallium Unknown; Chemical Class: PAH
	Surface Water	Aluminum Arsenic Chromium Cobalt Iron Manganese Vanadium
Unnamed Tributary	Sediment	PCB-1254 Pentachlorobiphenyl Arsenic Chromium Thallium Unknown; Chemical Class: PAH
	Surface Water	Aluminum Arsenic Chromium Cobalt Iron Lead Manganese Vanadium

Table 18
Summary of Constituents of Interest (COI) in Sediment and Surface Water in the Human Health Risk Assessment
Hercules - Aqualon
Hopewell, Virginia

Area	Medium	Constituents of Interest
Cattail Creek	Sediment	Hexadecane Arsenic Chromium Thallium Unknown; Chemical Class: PAH
	Surface Water	Arsenic Chromium Cobalt Iron Manganese
Bailey Creek	Sediment	Arsenic Chromium Thallium
	Surface Water	Arsenic Iron Manganese

Table 19
2011/2012 Groundwater Data Screening Table, Whitewater Lagoons
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	[2]EPC	[3]Tapwater	MCL	WWL-1		WWL-2		WWL-3L		WWL-3U	
						4/27/2011	8/24/2012	4/27/2011	8/24/2012	4/27/2011	8/23/2012	4/27/2011	8/23/2012
						Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual
Volatile Organic Compounds (ug/L)													
Diethyl ether	60-29-7	N	8,200	310	--	100	110			8,100	7,700	810	7,400
t-Butanol[4]	75-65-0	--	190	150	--	**330**	**250**	73	78 D			30 J	
Semivolatile Organic Compounds (ug/L)													
1,4-Dichlorobenzene	106-46-7	C	--	0.42	75					0.12 B		0.11 B	
1,4-Dioxane	123-91-1	C	33	0.67	--					18	19	3.2	19
Alcohols and Glycols (mg/L)													
Ethanol[4]	64-17-5	--	9.7	0.15	--						6.5		5.8
Methanol	67-56-1	N	1.9	3.1	--				**2.5 J**		1.4 J		**1.9 J**
Metals (ug/L)													
Aluminum	7429-90-5	N	490	1,600	--	**530**	440	**1,900**	180	**740**	110	**810**	64 J
Antimony	7440-36-0	N	--	0.6	6	**2.2 J**	**2.4 J**						
Arsenic	7440-38-2	C	4.8	0.045	10	1.8 J	1.4 J	**5**	2.5	2 J	1.5 J	1.8 J	1.5 J
Barium	7440-39-3	N	1,600	290	2,000	520	770	**2,100**	**2,500**	33	34	35	33
Beryllium	7440-41-7	N	--	1.6	4			0.16 J					
Cadmium	7440-43-9	N	0.14	0.69	5	0.29 J	**0.18 J**	**0.28 J**	0.13 J	**0.39 J**		**0.4 J**	
Calcium	7440-70-2	--	--	--	--	210,000		1,400,000		280,000		270,000	
Chromium	7440-47-3	--	12	--	100	4.9 J		7.1		2.6 J	3.8 J	5.2	3.6 J
Cobalt	7440-48-4	N	79	0.47	--	2.1	1.7	**110**	**120**	65	72	48	71
Copper	7440-50-8	N	--	62	1,300	1.6 J	3.1 J	6.8	3.3 J	2.6 J	3 J	1.9 J	3.3 J
Iron	7439-89-6	N	180,000	1,100	--	110,000	110,000	13,000	11,000	170,000	170,000	72,000	170,000
Lead	7439-92-1	--	ND	--	15	0.66 J		2		0.73 J		0.91 J	
Magnesium	7439-95-4	--	--	--	--	48,000		560,000		83,000		82,000	
Manganese	7439-96-5	N	16,000	32	--	3,200	2,900	**31,000**	**37,000**	13,000	12,000	8,800	11,000
Nickel	7440-02-0	N	22	30	--	5.5	2.8 J	**27**	**27**	12	14	7	14
Potassium	7440-09-7	--	--	--	--	6,300		1,100		6,500		7,900	
Sodium	7440-23-5	--	--	--	--	460,000		790,000		330,000		170,000	
Vanadium	7440-62-2	N	ND	6.3	--			4.4 J				3.5 J	
Zinc	7440-66-6	N	---	470	--	14 J		26		22		31	
Inorganics, Other (mg/L)													
Chloride	16887-00-6	--	--	--	--	600	640	5000	6,200	1,100	1,200	720	1,200
Total Kjeldahl Nitrogen	--	--	--	--	--	1.4	1.6	1.1	1.4	1.3	1.5	0.51	1.7
Nitrate as N	14797-55-8	N	--	2.5	10					0.041 J	0.37		0.21
Nitrite as N	14797-65-0	N	--	0.16	1	0.022 J	0.035 J				0.011 J		0.01 J
Sulfate	14808-79-8	--	--	--	--	340	370	63	68	440	430	330	430
Total Organic Carbon	7440-44-0	--	--	--	--	280	270	67	69	5.1	4.4	3.7	4.3
Methane (ug/L)	74-82-8	--	--	--	--		0.38 J		2,000		24		32
Ferrous Iron	15438-31-0	--	--	--	--		87 HF B		11 HF B		130 HF		140 HF

Notes:
Constituents highlighted in grey were not identified as constituents of interest (COI) in the initial COI identification step
ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level
November 2013 Regional Screening Table developed by Oakridge National Laboratory under an Interagency Agreement with the EPA
[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA
[2] Exposure Point Concentrations (EPC) identified in the 2011 Human Health Risk Assessment (Attachment A to the Final RFI Report)
[3] Factor of 0.1 multiplied by the Noncarcinogenic Screening Values (Screening Levels Only)
[4] Surrogate compounds selected as detailed in Table 3-1 of the 2011 Human Health Risk Assessment. Screening criteria for the selected surrogates have been incorporated into this table.
J = The positive result for this analyte is a quantitative estimate
D = Surrogate or matrix spike recoveries were no obtaining because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D
HF = Field parameter with a holding time of 15 minutes
B = Compound was found in the blank and sample

Table 20
2011/2012 Groundwater Data Screening Table, Old Landfill and Landfill #156
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	[2]EPC	[3]Tapwater	MCL	LF-1		LF-2		LF-3		LF-4		LF-5	
						4/27/2011	8/23/2012	4/27/2011	8/23/2012	4/27/2011	8/23/2012	4/27/2011	8/23/2012	4/27/2011	8/23/2012
						Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual
Volatile Organic Compounds (ug/L)															
1,1-Dichloroethane	75-34-3	C	1.1	2.4	--	**2.4**	**2.7**	0.28 J	**1.7**					0.3 J	**3.1**
1,1-Dichloroethene	75-35-4	N	--	26	7	2.5								0.12 J	
1,2-Dichloroethane	107-06-2	C	--	0.15	5										**0.24 J**
cis-1,2-Dichloroethene	156-59-2	N	--	2.8	70	0.16 J				0.2 J					
Diethyl ether	60-29-7	N	200	310	--	78	66	30	98	5.9 J	7.0 J			35	51
t-Butanol[4]	75-65-0	--	680	150	--	44	37	30	35	300	180 D			12	16
Tetrachloroethene	127-18-4	C**	ND	3.5	5		0.26 J								
Trichloroethylene	79-01-6	C**	ND	0.26	5	**0.62 J**	**0.97 J**		**0.58 J**						**0.7 J**
Semivolatile Organic Compounds (ug/L)															
1,4-Dichlorobenzene	106-46-7	C	--	0.42	75	0.16 B				0.12 B		0.11 B		0.28 B	
1,4-Dioxane	123-91-1	C	24	0.67	--	2.3	4.2 J			14	21			0.83 J	7 J
Acetophenone	98-86-2	N	--	150	--									0.25 B	
Bis(2-ethylhexyl) phthalate	117-81-7	C	--	4.8	6									1.2 J	
Butyl benzyl phthalate	85-68-7	C	--	14	--									0.17 J	
Alcohols and Glycols (mg/L)															
Methanol	67-56-1	N	ND	3.1	--		1.5 J	2.6	1.4 J	1.7	1.4 J				1.1 J
Metals (ug/L)															
Aluminum	7429-90-5	N	340	1,600	--	**590**	140	150	**360**	**840**	**650**	130	150	83 J	170
Barium	7440-39-3	N	150	290	2,000	120	120	91	110	**190**	130	76	68	140	120
Beryllium	7440-41-7	N	--	1.6	4	0.26 J		0.17 J							
Cadmium	7440-43-9	N	ND	0.69	5	**0.91**		**6.4**		0.55					
Calcium	7440-70-2	---	--	--	--	140,000		100,000		92,000		46,000		150,000	
Chromium	7440-47-3	--	4.2	--	100	2.6 J				3 J	**4.5 J**				**7.2**
Cobalt	7440-48-4	N	5.9	0.47	--	0.37 J	0.22 J	0.55	0.98	**12**	4.6	0.16 J	0.2 J	0.36 J	0.28 J
Copper	7440-50-8	N	--	62	1,300	1.6 J		1.2 J	1.4 J	2.7 J	1.5 J			1.1 J	1.6 J
Iron	7439-89-6	N	10,000	1,100	--	8,200	9,100	6,000	6,200	4,400	2,900	2,300	920	4,200	6,800
Lead	7439-92-1	--	0.78	--	15				**1.2 J**						
Magnesium	7439-95-4	---	--	--	--	14,000		8,900		28,000		2,800		11,000	
Manganese	7439-96-5	N	3,000	32	--	1,700	1,800	970	1,100	**6,100**	2,500	290	260	980	1,100
Nickel	7440-02-0	N	7.7	30	--	2.4 J		4 J	2.6 J	**16**	**9.8**			2.5 J	6.2
Potassium	7440-09-7	---	--	--	--	8,200		7,300		6,800		4,000		6,300	
Selenium	7782-49-2	N	--	7.8	50					1.4 J	1.3 J				
Sodium	7440-23-5	---	--	--	--	88,000		54,000		280,000		12,000		49,000	
Vanadium	7440-62-2	--	3.2	6.3	--					**3.9 J**	**3.4 J**				
Zinc	7440-66-6	N	--	470		14 J		19 J		62		31			
Inorganics, Other (mg/L)															
Chloride	16887-00-6	--	--	--	--	120	140	94	130	180	91	8.1	11	130000	150
Total Kjeldahl Nitrogen	--	--	--	--	--	0.5	0.51	0.34	0.44	1.8	1.5	0.21	0.25	340	0.53
Nitrate as N	14797-55-8	N	--	2.5	10	0.059		0.1	0.014 J	0.096	0.076				
Sulfate	14808-79-8	--	--	--	--	330	310	170	250	350	140	18	21	180000	280
Total Organic Carbon	7440-44-0	--	--	--	--	1.4	0.95 J	1.2	0.74 J	3.6	3.0	0.9 J		1300	0.91 J
Methane (ug/L)	74-82-8	--	--	--	--		4.6		3.9		1.6		3.1		2.7
Ferrous Iron	15438-31-0	--	--	--	--		7.7 HF		4.9 HF		3.1 HF		0.35 HF		6.1 HF

Notes:
Constituents highlighted in grey were not identified as constituents of interest (COI) in the initial COI identification step
ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level
November 2013 Regional Screening Table developed by Oakridge National Laboratory under an Interagency Agreement with the EPA
[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA
[2] Exposure Point Concentrations (EPC) identified in the 2011 Human Health Risk Assessment (Attachment A to the Final RFI Report)
[3] Factor of 0.1 multiplied by the Noncarcinogenic Screening Values (Screening Levels Only)
[4] Surrogate compounds selected as detailed in Table 3-1 of the 2011 Human Health Risk Assessment. Screening criteria for the selected surrogates have been incorporated into this table.
J = The positive result for this analyte is a quantitative estimate
HF = Field parameter with a holding time of 15 minutes
** = where n SL < 10X c SL;

Table 21
2011/2012 Groundwater Data Screening Table, Natrosol Lagoon
Hercules - Aqualon
Hopewell, Virginia

		[1]C or N	[2]EPC	[3]Tapwater	MCL	NAT-1		NAT-2		NAT-3				NAT-4		
						4/28/2011	8/21/2012	4/28/2011	8/21/2012	4/28/2011	4/28/2011 (DUP)	8/21/2012	8/21/2012 (DUP)	5/2/2011	5/2/2011 (Dissolved)	8/23/2012
	CAS Number					Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual
Volatile Organic Compounds (ug/L)																
Acetone	67-64-1	N	--	1,200	--			35		34	30			6.1 J		
cis-1,2-Dichloroethene	156-59-2	N	--	2.8	70			1.1			0.2 J					
Diethyl ether	60-29-7	N	0.50	310	--									**1.4 J**		
Methyl tert-butyl ether	1634-04-4	C	--	12	--			2.6 J								
t-Butanol[4]	75-65-0	--	92,000	150	--		66	18,000	11,000	83,000	**94,000**	69,000	63,000	370		310
Tetrachloroethene	127-18-4	C	ND	3.5	5					0.3 J	1.3					
Trichloroethylene	79-01-6	C**	8.4	0.26	5	**28**	**37**	3.2								
Semivolatile Organic Compounds (ug/L)																
1,4-Dichlorobenzene	106-46-7	C	--	0.42	75			0.13 B		0.15 B	0.1 B					
1,4-Dioxane	123-91-1	C	13	0.67	--			1.5 J		6.8	7.6	12	12			
Alcohols and Glycols (mg/L)																
Methanol	67-56-1	N	ND	3.1	--			**4,400 L**								1.5 J
Metals (ug/L)																
Aluminum	7429-90-5	N	3,200	1,600	--	680	400	1,200	1,500	340	100	390	780	**44,000**	170	1,100
Arsenic	7440-38-2	C	7	0.045	10			3.9	3.6	6.1	5.7	6.1	6.6	**15**	2.6	3.1
Barium	7440-39-3	N	125	290	2,000	55	36	53	70	94	81	90	90	**230**	39	41
Beryllium	7440-41-7	N	--	1.6	4									**2.2**		
Cadmium	7440-43-9	N	0.29	0.69	5	**0.63**	**0.36 J**	0.27 J		**0.36 J**				0.2 J		**0.42 J**
Calcium	7440-70-2	--	--	--	--	91,000		20,000		40,000	38,000			7,900	24,000	
Chromium	7440-47-3	--	19	--	100			3.5 J	11	2.5 J		13	**31**	**78**		5.8
Cobalt	7440-48-4	N	27	0.47	--	**41 J**	22	3.8 J	4.7	16 J	14 J	15	15	14	0.73	0.77
Copper	7440-50-8	N	--	62	1,300	3.8 J	2.4 J	1.6 J	2.1 J	1.2 J		1.3 J	2.6 J	60		7.8
Iron	7439-89-6	N	9,600	1,100	--	680	370	6,800	9,400	3,200	2,800	2,900	3,200	**54,000**	4,200	6,100
Lead	7439-92-1	--	1	--	15	**1.3 J**	**1.2 J**	0.74 J	**1.6 B**			0.91 J	**1.4 J**	**34**	0.26 J	**1.6**
Magnesium	7439-95-4	--	--	--	--	31,000		11,000		18,000	17,000			6,000	8,900	
Manganese	7439-96-5	N	2,750	32	--	2,300	1,200	160	200	1,800	1,700	1,300	1,200	370	520	220
Nickel	7440-02-0	N	34.5	30	--	14	11	4.4 J	9.8	22	19	25	**35**	27	5.2	4.7 J
Potassium	7440-09-7	--	--	--	--	3,900		1,700		1,300	1,100			2,100	1,000	
Selenium	7782-49-2	N	--	7.8	50									1.2 J		
Sodium	7440-23-5	--	--	--	--	120,000		440,000		1,200,000	1,100,000			120,000	140,000	
Vanadium	7440-62-2	--	14	6.3	--	3.7 J		4.6 J	4.8 J	5 J	4 J	4.3 J	5.3 J	**130**	5 J	4.9 J
Zinc	7440-66-6	N	--	470	--	18 J		17 J		20				61	14 J	
Inorganics, Other (mg/L)																
Chloride	16887-00-6	--	--	--	--	78	72	110	100	250	250	240		8.7		9.2
Total Kjeldahl Nitrogen	--	--	--	--	--	0.35	0.38	1.9	1.9	2.9	2.4	2.1		5.5		3.6
Nitrate as N	14797-55-8	N	--	2.5	10	**13**	**12**	0.53	0.019 J	0.4				1.1		0.74
Nitrite as N	14797-65-0	N	--	0.16	1						4.3			0.08		0.011 J
Sulfate	14808-79-8	--	--	--	--	340	350	150	150			3.4 J		51		35
Total Organic Carbon	7440-44-0	--	--	--	--	1.5	1.6	16	18	73	73	86		9.5		12
Methane (ug/L)	74-82-8	--	--	--	--		15		380			150				680
Ferrous Iron	15438-31-0	--	--	--	--				0.12 HF			0.065 J HF				0.35 HF

Notes:
Constituents highlighted in grey were not identified as constituents of interest (COI) in the initial COI identification step
ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level
November 2013 Regional Screening Table developed by Oakridge National Laboratory under an Interagency Agreement with the EPA
[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA
[2] Exposure Point Concentrations (EPC) identified in the 2011 Human Health Risk Assessment (Attachment A to the Final RFI Report
[3] Factor of 0.1 multiplied by the Noncarcinogenic Screening Values (Screening Levels Only
[4] Surrogate compounds selected as detailed in Table 3-1 of the 2011 Human Health Risk Assessment. Screening criteria for the selected surrogates have been incorporated into this table.
J = The positive result for this analyte is a quantitative estimate
HF = Field parameter with a holding time of 15 minutes
** = where n SL < 10X c SL;

Table 22
2011/2012 Groundwater Data Screening Table, Reten Aqualon Basin
Hercules - Aqualon
Hopewell, Virginia

						RAB-MW1R	RAB-MW2			RAB-MW3		RAB-MW4	
						8/20/2012	4/28/2011	8/24/2012	8/24/2012 (Dissolved)	4/28/2011	8/20/2012	4/28/2011	8/20/2012
	CAS Number	[1]C or N	[2]EPC	[3]Tapwater	MCL	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual
Volatile Organic Compounds (ug/L)													
Acetone	67-64-1	N	--	1,200	--		6.5 J						
Diethyl ether	60-29-7	N	11	310	--		10	**12**		1.8 J	1.7 J	4.3 J	9.1 J
Methyl tert-butyl ether	1634-04-4	C	--	12	--		0.68 J						
t-Butanol[4]	75-65-0	--	560	150	--	**19,000**	160	150 D		270	150 D		
Alcohols and Glycols (mg/L)													
Methanol	67-56-1	N	1.1	3.1	--			**1.1 J**					
Metals (ug/L)													
Aluminum	7429-90-5	N	24,000	1,600	--	940	470	7,900 J	83	8,000	410	2,600	1,300
Arsenic	7440-38-2	C	9.3	0.045	10	2.2 J	5.6	7.2	1.6 J	6.6	4.6	1.3 J	
Barium	7440-39-3	N	200	290	2,000	**260**	46	92	34	**210**	**240**	18	15
Beryllium	7440-41-7	N	--	1.6	4		0.22 J	0.54 J		0.54		0.19 J	
Cadmium	7440-43-9	N	0.47	0.69	5	0.15 J	0.23 J	**0.99**	0.32 J			**0.5**	**0.51**
Calcium	7440-70-2	--	--	--	--		85,000			12,000		250,000	
Chromium	7440-47-3	--	79	--	100	27	6.7	57	4.1 J	16	10	8.3	13
Cobalt	7440-48-4	N	150	0.47	--	68	120 J	**170**	**140**	9.5 J	5.9	2.5 J	0.92
Copper	7440-50-8	N	--	62	1,300	5.3	6.2	17	1.8 J	7	4.4 J	4.9 J	2.4 J
Iron	7439-89-6	N	150,000	1,100	--	89,000	96,000	80,000	54,000	130,000	**170,000**	3,000	1,400
Lead	7439-92-1	--	11.9	--	15	1.6 B	0.68 J	7.7		10	1.1 J B	1.5	1.4 J B
Magnesium	7439-95-4	--	--	--	--		160,000			25,000		220,000	
Manganese	7439-96-5	N	12,000	32	--	6,100	**12,000**	**12,000**	**12,000**	420	570	610	250
Nickel	7440-02-0	N	100	30	--	28	68	**120**	**100**	13	13	51	39
Potassium	7440-09-7	--	--	--	--		2,200			1,100		5,100	
Selenium	7782-49-2	N	--	7.8	50					1.2 J	1.3 J		
Silver	7440-22-4	N	--	7.1	--		0.19 J						
Sodium	7440-23-5	--	--	--	--		490,000			58,000		360,000	
Vanadium	7440-62-2	--	95	6.3	--		3.9 J	21		26	7.0 J	7.4 J	3.5 J
Zinc	7440-66-6	N	--	470	--		25			22		22	
Inorganics, Other (mg/L)													
Chloride	16887-00-6	--	--	--	--	170	530	580		59	67	350	190
Total Kjeldahl Nitrogen	--	--	--	--	--	4.1	1.5	1.8		3.9	4.9	0.25	0.37
Nitrate as N	14797-55-8	N	--	2.5	10	0.01 J	0.39				0.56		
Nitrite as N	14797-65-0	N	--	0.16	1	0.013 J		0.042 J		0.011 J	0.017 J		
Sulfate	14808-79-8	--	--	--	--	350	1,200	1,500		21	25	1,600	960
Total Organic Carbon	7440-44-0	--	--	--	--	22	12	13		28	40	2.6	1.9
Methane (ug/L)	74-82-8	--	--	--	--	620 *		0.32 J			87		3.1
Ferrous Iron	15438-31-0	--	--	--	--	45 HF		56 HF B			110 HF		0.027 J HF

Notes:
Constituents highlighted in grey were not identified as constituents of interest (COI) in the initial COI identification step
ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level
November 2013 Regional Screening Table developed by Oakridge National Laboratory under an Interagency Agreement with the EPA
[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA
[2] Exposure Point Concentrations (EPC) identified in the 2011 Human Health Risk Assessment (Attachment A to the Final RFI Report)
[3] Factor of 0.1 multiplied by the Noncarcinogenic Screening Values (Screening Levels Only)
[4] Surrogate compounds selected as detailed in Table 3-1 of the 2011 Human Health Risk Assessment. Screening criteria for the selected surrogates have been incorporated into this table.
J = The positive result for this analyte is a quantitative estimate
D = Surrogate or matrix spike recoveries were no obtaining because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with
HF = Field parameter with a holding time of 15 minutes
B = Compound was found in the blank and sample

Table 23
2011/2012 Groundwater Data Screening Table, Sludge Drying Beds
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	[2]EPC	[3]Tapwater	MCL	SDB-MW-1		SDB-MW-2		SDB-MW-3	
						4/26/2011	8/22/2012	4/26/2011	8/22/2012	4/26/2011	8/22/2012
						Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual
Volatile Organic Compounds (ug/L)											
Acetone	67-64-1	N	--	1,200	--	6.9 J					
Diethyl ether	60-29-7	N	0.54	310	--					**440**	
t-Butanol[4]	75-65-0	--	3.0	150	--	**3.1 J**				**790**	
Metals (ug/L)											
Aluminum	7429-90-5	N	9,800	1,600	--	**13,000**	200	130	110	1,300	180
Arsenic	7440-38-2	C	7.3	0.045	10	**7.7**	6.1		--		--
Barium	7440-39-3	N	540	290	2,000	490	350	15	11	22	11
Beryllium	7440-41-7	N	--	1.6	4	0.66					
Cadmium	7440-43-9	N	0.38	0.69	5		--	0.34 J	0.14 J	**0.7**	0.24 J
Calcium	7440-70-2	--	--	--	--	82,000		490,000		380,000	
Chromium	7440-47-3	--	22	--	100	**160**	4.5 J	3.4 J	4.3 J	19	5.3
Cobalt	7440-48-4	N	14	0.47	--	9	3.0	5.8	2.7	8.4	4.7
Copper	7440-50-8	N	--	62	1,300	37		8.5	1.8 J	15	9.8
Iron	7439-89-6	N	190,000	1,100	--	**230,000**	170,000	810	510	1,700	610
Lead	7439-92-1	--	9.17	--	15	**9.8**				0.91 J	
Magnesium	7439-95-4	--	--	--	--	22,000		100,000		100,000	
Manganese	7439-96-5	N	2,300	32	--	**2,300**	1,700	1,800	1,100	1,500	930
Nickel	7440-02-0	N	31	30	--	**95**	3.2 J	29	26	**46**	**33**
Potassium	7440-09-7	--	--	--	--	15,000		1,800		2,300	
Selenium	7782-49-2	N	--	7.8	50	2.5	--		--	**12**	**9.2**
Sodium	7440-23-5	--	--	--	--	77,000		300,000		300,000	
Vanadium	7440-62-2	N	45.0	6.3	--	27				4 J	
Zinc	7440-66-6	N	--	470	--	78		49 B		29 B	
Inorganics, Other (mg/L)											
Chloride	16887-00-6	--	--	--	--	45	44	130	120	280	280
Total Kjeldahl Nitrogen	--	--	--	--	--	14	14	0.4	0.46	0.39	0.69
Nitrate as N	14797-55-8	N	--	2.5	10	0.031 L	--		--	0.29 L	0.26
Nitrite as N	14797-65-0	N	--	0.16	1	0.01 L	0.024 J		--		--
Sulfate	14808-79-8	--	--	--	--		--	1,200	1,400	1,100	1,200
Total Organic Carbon	7440-44-0	--	--	--	--	51	50	6.3	5.2	5.6	4.4
Methane (ug/L)	74-82-8	--	--	--	--		3,100		0.48 J		1.2
Ferrous Iron	15438-31-0	--	--	--	--		140 HF		0.19 HF		0.29 HF

Notes:
Constituents highlighted in grey were not identified as constituents of interest (COI) in the initial COI identification step
ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level
November 2013 Regional Screening Table developed by Oakridge National Laboratory under an Interagency Agreement with the EPA
[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA
[2] Exposure Point Concentrations (EPC) identified in the 2011 Human Health Risk Assessment (Attachment A to the Final RFI Report)
[3] Factor of 0.1 multiplied by the Noncarcinogenic Screening Values (Screening Levels Only)
[4] Surrogate compounds selected as detailed in Table 3-1 of the 2011 Human Health Risk Assessment. Screening criteria for the selected surrogates have been incorporated into this table.
J = The positive result for this analyte is a quantitative estimate
HF = Field parameter with a holding time of 15 minutes

Table 24
2011/2012 Groundwater Data Screening Table, Vacuum Filter Sludge Pile
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	[2]EPC	[3]Tapwater	MCL	VFSP-MW-1 4/29/2011 Conc/Qual	VFSP-MW-1 8/24/2012 Conc/Qual
Volatile Organic Compounds (ug/L)							
Diethyl ether	60-29-7	N	76	310	--	69	67
t-Butanol[4]	75-65-0	--	ND	150	--	6.3	9.4
Metals (ug/L)							
Aluminum	7429-90-5	N	270	1,600	--	73 J	100
Barium	7440-39-3	N	140	290	2,000	**180**	**190**
Calcium	7440-70-2	--	--	--	--	86,000	
Cobalt	7440-48-4	N	2.5	0.47	--	2.2	**2.7**
Copper	7440-50-8	N	--	62	1,300	1.1 J	
Iron	7439-89-6	N	4,300	1,100	--	3,900	**4,300**
Magnesium	7439-95-4	--	--	--	--	8,300	
Manganese	7439-96-5	N	750	32	--	**760**	**820**
Nickel	7440-02-0	N	2.1	30	--	**2.4 B**	**2.2 J**
Potassium	7440-09-7	--	--	--	--	6,600	
Sodium	7440-23-5	--	--	--	--	35,000	
Inorganics, Other (mg/L)							
Chloride	16887-00-6	--	--	--	--	51	56
Total Kjeldahl Nitrogen	--	--	--	--	--	0.37	0.43
Sulfate	14808-79-8	--	--	--	--	130	150
Total Organic Carbon	7440-44-0	--	--	--	--	0.68 J	0.57 J
Methane (ug/L)	74-82-8	--	--	--	--		3.2
Ferrous Iron	15438-31-0	--	--	--	--		3.6 HF B

Notes:
Constituents highlighted in grey were not identified as constituents of interest (COI) in the initial COI identification step
ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level
November 2013 Regional Screening Table developed by Oakridge National Laboratory under an Interagency Agreement with the EPA
[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA
[2] Exposure Point Concentrations (EPC) identified in the 2011 Human Health Risk Assessment (Attachment A to the Final RFI Report)
[3] Factor of 0.1 multiplied by the Noncarcinogenic Screening Values (Screening Levels Only)
[4] Surrogate compounds selected as detailed in Table 3-1 of the 2011 Human Health Risk Assessment. Screening criteria for the selected surrogates have been incorporated into this table.
J = The positive result for this analyte is a quantitative estimate
HF = Field parameter with a holding time of 15 minutes
B = Compound was found in the blank and sample

Table 25
2011/2012 Groundwater Data Screening Table, Main Holding Basin
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	[2]EPC	[3]Tapwater	MCL	MW-1		MW-2		MW-3		MW-4		MW-4U		MW-5			MW-5U	
						5/2/2011	8/21/2012	4/29/2011	8/24/2012	4/26/2011	8/23/2012	4/29/2011	8/22/2012	4/29/2011	8/23/2012	4/29/2011	4/29/2011 (DUP)	8/22/2012	4/29/2011	8/22/2012
						Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual
Volatile Organic Compounds (ug/L)																				
1,1,2,2-Tetrachloroethane	79-34-5	C	0.96	0.066	--															
1,1-Dichloroethane	75-34-3	C	2.5	2.4	--	0.95 J														
1,1-Dichloroethene	75-35-4	N	--	26	7	0.39 J														
1,2-Dichloroethane	107-06-2	C	--	0.15	5															
Acetone	67-64-1	N	--	1,200										13 J						
Chloroform	67-66-3	C	0.65	0.19	80															
cis-1,2-Dichloroethene	156-59-2	N	--	2.8	70			0.99 J												
Diethyl ether	60-29-7	N	4,734	310	--	1700	2,100	**10,000**	**12,000**		330	1,400	1,500	1,700	1,800	200	220	200	650	610
t-Butanol[4]	75-65-0	--	1,652	150	--						270	**2,800**	**2,200**	**3,400**	**3,000**	150	180	190		
Tetrachloroethene	127-18-4	C**	22	3.5	5															
trans-1,2-Dichloroethene	156-60-5	N	--	8.6	100															
Trichloroethylene	79-01-6	C**	3.2	0.26	5	0.15 J														
Semivolatile Organic Compounds (ug/L)																				
1,4-Dichlorobenzene	106-46-7	C	--	0.42	75	0.37 B		0.29 B		0.15 B		0.41 B		0.4 B		0.31 B	0.39 B		**0.67 B**	
1,4-Dioxane	123-91-1	C	15.4	0.67	--	9.6	**18**	**21**	**23**	2.1		4	5.1 J	5.1	6.9 J	1.3 J			2.7	3.3 J
2-Methylnaphthalene	91-57-6	N	--	2.7	--															
Acenaphthene	83-32-9	N	--	40	--															
Acetophenone	98-86-2	N	--	150	--							0.13 B					0.1 B			
Bis(2-chloroethyl)ether	111-44-4	C	--	0.012	--			**0.22 J**												
Bis(2-ethylhexyl) phthalate	117-81-7	C*	--	4.8	6															
Hexachlorobutadiene	87-68-3	C	--	0.26	--															
Naphthalene	91-20-3	C*	--	0.14	--															
Alcohols and Glycols (mg/L)																				
Ethanol[4]	64-17-5	--	3.267	0.15	--	1.7 L	2.0 J		**7.8**				1.1 J		1.4 J					
Methanol	67-56-1	N	1.775	3.1	--			**120**	1.3 J		1.2 J	**5.1**			**2.3 J**				**160**	

Table 25
2011/2012 Groundwater Data Screening Table, Main Holding Basin
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	[2]EPC	[3]Tapwater	MCL	MW-1		MW-2		MW-3		MW-4		MW-4U		MW-5			MW-5U	
						5/2/2011	8/21/2012	4/29/2011	8/24/2012	4/26/2011	8/23/2012	4/29/2011	8/22/2012	4/29/2011	8/23/2012	4/29/2011	4/29/2011 (DUP)	8/22/2012	4/29/2011	8/22/2012
						Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual
Metals (ug/L)																				
Aluminum	7429-90-5	N	574	1,600	--	60 J		**840**	**710**	250	180	120	**1,200**	**800**	**950**	**670**	**610**	**740**	88 J	100
Arsenic	7440-38-2	C	21.4	0.045	10			4	3.5	2.4 J	1.6 J	3.8	3.7	4.7	5.7	1.6 J	1.7 J		5.7	8.4
Barium	7440-39-3	N	628	290	2,000	65	59	180	110	460	320	**760**	**760**	**810**	**890**	**790**	**780**	**1,200**	140	210
Beryllium	7440-41-7	N	--	1.6	4	0.16 J	0.15 J	0.63	0.35 J				0.19 J	0.56	0.48 J					
Cadmium	7440-43-9	N	2.5	0.69	5			0.16 J		0.23 J			0.26 J		0.3 J					
Calcium	7440-70-2	--	--	--	--	180,000		260,000		72,000		110,000		100,000		190,000	180,000		120,000	
Chromium	7440-47-3	--	12.5	--	100	**14**	3.0 J	3.4 J		3.4 J		4.1 J	6.6	11	6.2			7.8	4.8 J	7.6
Cobalt	7440-48-4	N	104	0.47	--	1.1	0.42 J	33	16	1	0.49 J	9.5	11	31	34	1.6	1.5	1.3	9.6	9.7
Copper	7440-50-8	N	--	62	1,300	10	5.7	12	8.9	1.5 J	1.5 J	3.7 J	5.8	6.1	9.4	1.7 J	1.9 J	3.6 J	2.7 J	6.0
Iron	7439-89-6	N	75,872	1,100	--	8,600	6,200	**150,000**	**120,000**	19,000	14,000	61,000	60,000	**96,000**	**86,000**	53,000	51,000	**84,000**	13,000	19,000
Lead	7439-92-1	--	0.77	--	15		**0.82 J**	0.6 J	0.62 J	0.54 J			**0.96 J**	**0.86 J**	**1.1 J**			0.62 J		0.57 J
Magnesium	7439-95-4	--	--	--	--	50,000		88,000		9,900		36,000		43,000		41,000	39,000		31,000	
Manganese	7439-96-5	N	9,071	32	--	3,000	2,800	**9,600**	7,900	830	520	2,300	2,600	1900	1,800	3,000	2,900	3,900	2,100	2,300
Mercury	7439-97-6	N	0.8	0.063	2									0.58 J						
Nickel	7440-02-0	N	47.3	30	--	9.5	3.2 J	7.5	2.9 J	3.7 J	2.3 J	4.3 B	5.1	12	9.1	2.7 B	2.3 B	5.3	8.9 B	7.6
Potassium	7440-09-7	--	--	--	--	4,400		5000		9,400		6,300		10,000		6,700	6,800		6,600	
Selenium	7782-49-2	N	--	7.8	50															
Silver	7440-22-4	N	--	7.1	--	0.36 J								0.48 J						
Sodium	7440-23-5	---	--	--	--	260,000		380,000		200,000		470,000		510,000		760,000	710,000		1,900,000	
Vanadium	7440-62-2	--	1,279	6.3	--			3.8 J				4.3 J	6.1 J	6.2 J	6.0 J	5 J	4.9 J	3.5 J	240	310
Zinc	7440-66-6	N	--	470	--	31		31		23 B		9.4 J		23			12 J		10 J	
Inorganics, Other (mg/L)																				
Chloride	16887-00-6	--	--	--	--	220	220	1,000	940	110	67	540	500	650	660	1,200	1,100	1,300	2,000	2,600
Total Kjeldahl Nitrogen	--	--	--	--	--	0.28	0.25	0.99	1.2	4.9	3.7	7.5	4.7	19	11	3.0	3.3	3.7	2.4	3.5
Nitrate as N	14797-55-8	N	--	2.5	10	0.019 J	0.011 J	0.15	0.71	0.31 L	0.29		0.25		0.56	1.0	0.35		0.028 B	
Nitrite as N	14797-65-0	N	--	0.16	1							0.012 J		0.022 J	0.014 J			0.022 J		
Sulfate	14808-79-8	--	--	--	--	710	840	420	460	37	33					150	130	66	390	400
Total Organic Carbon	7440-44-0	--	--	--	--	3.7	3.5	4.8	5.3	9.0	5.9	32	34	36	27	14	15	17	26	27
Methane (ug/L)	74-82-8	--	--	--	--				8.4		3,600		74,00		6,800			160		97
Ferrous Iron	15438-31-0	--	--	--	--		6 HF		110 HF B		0.18 HF		36 HF		33 HF			72 HF		0.46 HF

Table 25
2011/2012 Groundwater Data Screening Table, Main Holding Basin
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	[2]EPC	[3]Tapwater	MCL	MW-6		MW-7L		MW-7U		MW-8D		MW-8L-R	MW-8U		MW-9		MW-10		
						4/26/2011	8/22/2012	4/28/2011	8/24/2012	4/28/2011	8/24/2012	4/26/2011	8/22/2012	8/22/2012	4/26/2011	8/22/2012	4/29/2011	8/23/2012	4/28/2011	8/21/2012	8/21/2012 (DUP)
						Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual
Volatile Organic Compounds (ug/L)																					
1,1,2,2-Tetrachloroethane	79-34-5	C	0.96	0.066	--														0.5 J	0.32 J	0.31 J
1,1-Dichloroethane	75-34-3	C	2.5	2.4	--												0.83 J		1.4	1.1	1.1
1,1-Dichloroethene	75-35-4	N	--	26	7												0.65 J		1.8		
1,2-Dichloroethane	107-06-2	C	--	0.15	5						0.14 J								**0.21 J**		
Acetone	67-64-1	N	--	1,200																	
Chloroform	67-66-3	C	0.65	0.19	80														**0.94 J**	**0.79 J**	**0.9 J**
cis-1,2-Dichloroethene	156-59-2	N	--	2.8	70												0.21 J		0.36 J		
Diethyl ether	60-29-7	N	4,734	310	--	1,300	1,600			93	110 D			3,400	1,800	2,200	3,300	3,800	20	34	37
t-Butanol[4]	75-65-0	--	1,652	150	--	1,600	1,400			6.1	6.5			**4,300**	**1,800**	590	130 J			29	14
Tetrachloroethene	127-18-4	C**	22	3.5	5														13	8.9	9.2
trans-1,2-Dichloroethene	156-60-5	N	--	8.6	100														1.1		
Trichloroethylene	79-01-6	C**	3.2	0.26	5					0.54 J	0.52 J								2.1	1.4	1.5
Semivolatile Organic Compounds (ug/L)																					
1,4-Dichlorobenzene	106-46-7	C	--	0.42	75	0.13 B		0.17 B		0.12 B		0.15 B			0.12 B		0.3 B		0.14 B		
1,4-Dioxane	123-91-1	C	15.4	0.67	--	2.7	4.6 J			1.2 J				**18**	8.6	14	9.8	9.7 J	**24**	**19**	**24**
2-Methylnaphthalene	91-57-6	N	--	2.7	--					0.25											
Acenaphthene	83-32-9	N	--	40	--					0.17 J											
Acetophenone	98-86-2	N	--	150	--							0.11 B									
Bis(2-chloroethyl)ether	111-44-4	C	--	0.012	--																
Bis(2-ethylhexyl) phthalate	117-81-7	C*	--	4.8	6																
Hexachlorobutadiene	87-68-3	C	--	0.26	--														0.12 J		
Naphthalene	91-20-3	C*	--	0.14	--					**0.18 J**											
Alcohols and Glycols (mg/L)																					
Ethanol[4]	64-17-5	--	3.267	0.15	--	1.3	0.94 J							2.6 J	1.4	1.6 J		3.2 J			
Methanol	67-56-1	N	1.775	3.1	--			**2.2**	1.5 J		1.3 J							1.6 J			

Table 25
2011/2012 Groundwater Data Screening Table, Main Holding Basin
Hercules - Aqualon
Hopewell, Virginia

	CAS Number	[1]C or N	[2]EPC	[3]Tapwater	MCL	MW-6		MW-7L		MW-7U		MW-8D		MW-8L-R	MW-8U		MW-9		MW-10		
						4/26/2011	8/22/2012	4/28/2011	8/24/2012	4/28/2011	8/24/2012	4/26/2011	8/22/2012	8/22/2012	4/26/2011	8/22/2012	4/29/2011	8/23/2012	4/28/2011	8/21/2012	8/21/2012 (DUP)
						Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual	Conc/Qual
Metals (ug/L)																					
Aluminum	7429-90-5	N	574	1,600	--	**820**	520	**3,400**	200	460	**1,100**	**700**	430	**600**	**4,700**	410	**1,500**	380	**680**	290	380
Arsenic	7440-38-2	C	21.4	0.045	10	2.1 J	2.1 J	1.5 J		1.4 J				**29**	15	8.7	4	3.1			
Barium	7440-39-3	N	628	290	2,000	480	450	160	110	56	45	77	70	570	340	250	92	89	15	15	15
Beryllium	7440-41-7	N	--	1.6	4	0.34 J		0.73		**3**	**2.6**	0.18 J			0.23 J				0.25 J	0.22 J	0.23 J
Cadmium	7440-43-9	N	2.5	0.69	5	0.44 J	1.9	0.16 J		**11**	**20**	**2.9**	0.58	0.35 J	0.28 J	0.18 J		0.35 J	**4.5**	**3.8**	**3.7**
Calcium	7440-70-2	--	--	--	--	230,000		94,000		560,000		38,000			190,000		230,000		130,000		
Chromium	7440-47-3	--	12.5	--	100	4.8 J		**13**				3.3 J		4.2 J	**29**		8.9	7.7			4 J
Cobalt	7440-48-4	N	104	0.47	--	32	20	6.1 J	0.6	**440 J**	**350**	0.29 J	0.2 J	2.8	20	2.9	2.6	2.2	91 J	75	75
Copper	7440-50-8	N	--	62	1,300	5.7	2.4 J	5.6		**88**	**170**	5.3	3 J	3.7 J	6.3	13	3.1 J	3.2 J	3 J	5.4	4.9 J
Iron	7439-89-6	N	75,872	1,100	--	56,000	50,000	7,900	1,600	43,000	42,000	1,100	910	36,000	36,000	25,000	**110,000**	**95,000**	550	220	270
Lead	7439-92-1	--	0.77	--	15	**1.7**	0.62 J	**2.5**		**1.7**	**2.3**	**0.9 J**	0.7 J	0.73 J	**2.2**		**1.1 J**	0.57 J	0.54 J	**0.98 J**	**0.9 J**
Magnesium	7439-95-4	--	--	--	--	42,000		7,800		320,000		3,300			45,000		62,000		38,000		
Manganese	7439-96-5	N	9,071	32	--	5,900	4,600	810	480	**48,000**	**38,000**	250	220	2,100	2,400	790	2,800	2,400	4,700	3,700	3,800
Mercury	7439-97-6	N	0.8	0.063	2					**1.6**	**4.2**										
Nickel	7440-02-0	N	47.3	30	--	8.3	5.4	8.7		**130**	**110**	3.2 J		3.6 J	19	2.1 J	6.4 B	5.1	**73**	**61**	**62**
Potassium	7440-09-7	--	--	--	--	4,600		5,600		3,800		5,300			24,000		7,600		4,900		
Selenium	7782-49-2	N	--	7.8	50	1.3 J									1.5 J						
Silver	7440-22-4	N	--	7.1	--			0.49 J		2.1							0.42 J				
Sodium	7440-23-5	---	--	--	--	540,000		20,000		280,000		14,000			530,000		340,000		210,000		
Vanadium	7440-62-2	--	1,279	6.3	--	5.4 J	4.1 J	11			3.3 J			8.6 J	14		5.7 J		3.3 J		
Zinc	7440-66-6	N	--	470	--	22 B		14 J		110		23 B			27 B		14 J		37		
Inorganics, Other (mg/L)																					
Chloride	16887-00-6	--	--	--	--	610	720	55	49	2,100	2,100	3.6	3.9	720	480	450	570	580	250	230	
Total Kjeldahl Nitrogen	--	--	--	--	--	4.8	4.6	0.25	0.29	0.75	0.86	0.22	0.49	22	11	12	1.6	1.7	0.28	0.28	
Nitrate as N	14797-55-8	N	--	2.5	10	0.03 L				0.018 J		0.097 L	0.098		0.018 L			0.97	5.7	**4.3**	
Nitrite as N	14797-65-0	N	--	0.16	1												0.012 J				
Sulfate	14808-79-8	--	--	--	--	140	140	32	32	520	540	4.8 J	6.2	360	340	510	650	600	530	520	
Total Organic Carbon	7440-44-0	--	--	--	--	22	20	0.69 J		2.4	2.1	0.61 J		24	11	11	6.9	8.2	1.4	1.7	
Methane (ug/L)	74-82-8	--	--	--	--		120		1.6		130		0.77	160		50		36		0.41 J	
Ferrous Iron	15438-31-0	--	--	--	--		16 HF		0.16 HF B		41 HF B		0.25 HF	13 HF		36 HF		48 HF			

Notes:
Constituents highlighted in grey were not identified as constituents of interest (COI) in the initial COI identification step
ug/L = micrograms per liter; mg/L = milligrams per liter; MCL = USEPA Maximum Contaminant Level
November 2013 Regional Screening Table developed by Oakridge National Laboratory under an Interagency Agreement with the EPA
[1] Carcinogen/NonCarcinogen (C or N) taken from Oakridge National Laboratory under an Interagency Agreement with EPA
[2] Exposure Point Concentrations (EPC) identified in the 2011 Human Health Risk Assessment (Attachment A to the Final RFI Report)
[3] Factor of 0.1 multiplied by the Noncarcinogenic Screening Values (Screening Levels Only)
[4] Surrogate compounds selected as detailed in Table 3-1 of the 2011 Human Health Risk Assessment. Screening criteria for the selected surrogates have been incorporated into this table.
J = The positive result for this analyte is a quantitative estimate
D = Surrogate or matrix spike recoveries were no obtaining because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D
HF = Field parameter with a holding time of 15 minutes
B = Compound was found in the blank and sample
* = where: n SL < 100X c SL
** = where n SL < 10X c SL;

Table 26
Proposed Groundwater Analyte List
Hercules - Aqualon
Hopewell, Virginia

Well ID	VOCs (8260B)	SVOCs (8270C)	Metals (6020)	Methanol & Ethanol (8015B)
WWL-1	TBA	--	aluminum, antimony, cadmium	--
WWL-2	--	--	aluminum, arsenic, barium, cadmium, cobalt, manganese, nickel	methanol
WWL-3U	--	--	aluminum, cadmium	methanol
WWL-3L	--	--	aluminum, cadmium	--
LF-1	1,1-DCA, TCE	--	aluminum, cadmium	methanol
LF-2	1,1-DCA, TCE	--	aluminum, cadmium, lead	methanol
LF-3	--	--	aluminum, barium, chromium, cobalt, manganese, nickel, vanadium	methanol
LF-4	--	--	--	--
LF-5	1,1-DCA, 1,2-DCA, TCE	--	chromium	methanol
NAT-1	TCE	--	cadmium, cobalt, lead	--
NAT-2	--	--	lead	methanol
NAT-3	TBA	--	cadmium, chromium, lead, nickel	--
NAT-4	diethyl ether	--	aluminum, arsenic, barium, beryllium, cadmium, chromium, iron, lead, vanadium	methanol
RAB-MW1R	full VOCs	full SVOCs	full metals	methanol, ethanol
RAB-MW2	diethyl ether	--	cadmium, cobalt, manganese, nickel	methanol
RAB-MW3	--	--	barium, iron	--
RAB-MW4	--	--	cadmium	--
SDB-MW-1	TBA	--	aluminum, arsenic, chromium, iron, lead, manganese, nickel	--
SDB-MW-2	--	--	--	--
SDB-MW-3	TBA, diethyl ether	--	cadmium, nickel, selenium	--
VFSP-MW1		--	barium, cobalt, iron, manganese, nickel	--
MW-1	--	1,4-dioxane	chromium, lead	--
MW-2	diethyl ether	1,4-dioxane, bis(2-chloroethyl)ether	aluminum, iron, manganese	methanol, ethanol
MW-3	--	full SVOC	--	--
MW-4	TBA	--	aluminum, barium, lead	methanol
MW-4U	TBA	--	aluminum, barium, iron, lead	methanol
MW-5	--	--	aluminum, barium, iron	--
MW-5U	--	1,4-dichlorobenzene	--	methanol
MW-6	--	--	aluminum, lead	--
MW-7U	--	naphthalene	aluminum, beryllium, cadmium, cobalt, copper, manganese, lead, mercury, nickel	--
MW-7L	--	--	aluminum, chromium,lead	methanol
MW-8U	TBA	--	aluminum, chromium, lead	--
MW-8L-R	TBA	1,4-dioxane	aluminum, arsenic	--
MW-8D	--	--	aluminum, cadmium, lead	--
MW-9	--	--	aluminum, iron, lead	--
MW-10	chloroform, 1,2-DCA	1,4-dioxane	aluminum, cadmium, lead, nickel	--
Total	**17**	**8**	**32**	**8**
QA/QC Samples				
Equipment Blank 1	1	1	1	1
Equipment Blank 2	--	--	1	--
Trip Blank 1	1	--	--	--
Trip Blank 2	1	--	--	--
Trip Blank 3	1	--	--	--
Field Blank 1	1	1	1	1
Field Blank 2	--	--	1	--
Field Dup 1	1	1	1	1
Field Dup 2	--	--	1	--
MS 1	1	1	1	1
MSD 1	1	1	1	1
MS 2	--	--	1	--
MSD 2	--	--	1	--
Total count	**25**	**13**	**42**	**13**

ATTACHMENTS

ATTACHMENT A

2012 SOIL BORING LOGS/WELL CONSTRUCTION

Soil Boring Log

Monitoring Well ID: RAB-MW1R

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Ashland - Hopewell**	DRILLER:	**Josh Ellingworth**
SITE LOCATION:	**Hopewell, Virginia**	BORING DEPTH:	**35 feet**
JOB NAME:	**1201764**	DRILLING CO.:	**Parratt-Wolff**
LOGGED BY:	**Kate Hall**	RIG TYPE:	**CME55 - truck mounted hollow stem rig**
PROJECT MANAGER:	**Erin Wright**	METHOD OF DRILLING:	**4.25'' Hollow-Stem Auger**
DATES DRILLED:	**08/16/2012**	SAMPLING METHODS:	**4' Macro-Core**
WELL ID	**RAB-MW1R**	HAMMER:	**Automatic**

▼ Observed Water Level

NA = Not Applicable
bgs = below ground surface

VERTICAL DEPTH	SOIL/ROCK SYMBOLS	SOIL DESCRIPTION	PID (ppm)	WELL CONSTRUCTION	NOTES
0		Brown grey, FILL, tight, dry.	0.0		
-5		Tan/grey, silty CLAY, mottled, dry, fine grained, slightly plastic, dense.	0.0		
			0.0		
-10		Grey to blue silty CLAY, dry, fine grained, no plasticity, loose.	0.0		
			0.0		
		Brown to grey with blue mottling SILT and CLAY, fine grained, moist.	0.0		
-15		Grey to brown CLAY, fine grained, moist, slightly plastic.	0.0		
			0.2		
-20		Grey to tan silty SAND, medium to fine grained, saturated, no plasticity.	0.0		Water encountered.
		Grey silty SAND, very fine grained, saturated, no plasticity.	0.6		
-25			0.1		
		Grey to blue silty SAND, saturated, no plasticity.	0.0		
		Grey to blue silty SAND, very fine grained, saturated, no plasticity.	0.0		
-30		Grey to blue clayey SAND, mottled medium grained, slight plasticity, loose.	0.0		
			0.0		
		Grey to blue silty SAND, very fine grained, no plasticity, loose.	0.0		Well completed to 35' bgs with 10' screen.
-35		Grey silty SAND, moist, slight plastcity, dense.			

Soil Boring Log

Monitoring Well ID: MW-8L-R

PROJECT INFORMATION

PROJECT:	**Ashland - Hopewell**
SITE LOCATION:	**Hopewell, Virginia**
JOB NAME:	**1201764**
LOGGED BY:	**Kate Hall**
PROJECT MANAGER:	**Erin Wright**
DATES DRILLED:	**08/15/2012**
WELL ID	**MW-8L-R**

DRILLING INFORMATION

DRILLER:	**Josh Ellingworth**
BORING DEPTH:	**32 feet**
DRILLING CO.:	**Parratt-Wolff**
RIG TYPE:	**CME55 - truck mounted hollow stem rig**
METHOD OF DRILLING:	**4.25'' Hollow-Stem Auger**
SAMPLING METHODS:	**4' Macro-Core**
HAMMER:	**Automatic**

Observed Water Level

NA = Not Applicable
bgs = below ground surface

VERTICAL DEPTH	SOIL/ROCK SYMBOLS	SOIL DESCRIPTION	PID (ppm)	WELL CONSTRUCTION	NOTES
0		Brown, FILL, and dry.	0.4		
		Tan/grey, silty CLAY, mottled, dry, fine grained, slightly plastic, dense.			
-5		Tan/grey, silty CLAY, mottled, some orange streaks, dry, fine grained, slightly plastic, dense.	0.0		
			0.0		
-10		Grey to tan, orange, silty CLAY, mottled, slightly moist.	0.0		
		No recovery	0.0		
-15		Tan to orange silty CLAY, fine grained, saturated,slightly plastic, loose.	0.0		Water Encountered.
		Grey to blue silty SAND, very fine grained, saturated, no plasticity.	0.5		
		Grey to blue silty SAND, very fine grained, saturated, no plasticity.	0.8		
-20		Grey to blue silty SAND, very fine grained, saturated, no plasticity, course grained @ 22 feet.	0.0		
		Grey to blue silty SAND, very fine grained, saturated, no plasticity.	7.1		
-25		Grey to blue SAND, meduim grained, saturated, no plasticity.	4.7		
		Grey to blue SAND, meduim grained, saturated, no plasticity.	5.0		
		Dark grey Clay, moist, plastic.	0.0		Well completed to 32' bgs. with 10' screen.
-30		Dark grey Clay, saturated, plastic.	0.0		
			0.0		

ATTACHMENT B

2012 WASTE CHARACTERIZATION LABORATORY ANALYTICAL DATA (ON CD)

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: 680-82121-1
Client Project/Site: Ashland Aqualon Waste Characterization

For:
Ashland Inc.
Ashland Hercules Research Center
500 Hercules Rd Bldg 8139
Wilmington, Delaware 19808

Attn: Steve Spence

Authorized for release by:
9/4/2012 10:23:27 AM
Michele Kersey
Project Manager I
michele.kersey@testamericainc.com

Designee for

Lidya Gulizia
Project Manager II
lidya.gulizia@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: 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.

Sample Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-82121-1	RAB-drums	Solid	08/16/12 15:30	08/17/12 09:30
680-82121-2	MW-8 drums	Solid	08/16/12 17:00	08/17/12 09:30

Method Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
6010B	Metals (ICP)	SW846	TAL SAV
7470A	Mercury (CVAA)	SW846	TAL SAV
1030	Ignitability, Solids	SW846	TAL SAV
9012A	Cyanide, Total and/or Amenable	SW846	TAL SAV
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
9045C	pH	SW846	TAL SAV
Moisture	Percent Moisture	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

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.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

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)

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Client Sample ID: RAB-drums

Lab Sample ID: 680-82121-1

Date Collected: 08/16/12 15:30
Date Received: 08/17/12 09:30

Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.020		0.020		mg/L			08/31/12 15:08	20
1,2-Dichloroethane	<0.020		0.020		mg/L			08/31/12 15:08	20
Chlorobenzene	<0.020		0.020		mg/L			08/31/12 15:08	20
Tetrachloroethene	<0.020		0.020		mg/L			08/31/12 15:08	20
Carbon tetrachloride	<0.020		0.020		mg/L			08/31/12 15:08	20
Chloroform	<0.020		0.020		mg/L			08/31/12 15:08	20
Benzene	<0.020		0.020		mg/L			08/31/12 15:08	20
Vinyl chloride	<0.020		0.020		mg/L			08/31/12 15:08	20
1,1-Dichloroethene	<0.020		0.020		mg/L			08/31/12 15:08	20
2-Butanone	<0.20		0.20		mg/L			08/31/12 15:08	20
Trichloroethene	<0.020		0.020		mg/L			08/31/12 15:08	20
Hexachlorobutadiene	<0.020		0.020		mg/L			08/31/12 15:08	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*70 - 130*		*08/31/12 15:08*	*20*
Dibromofluoromethane	*98*		*70 - 130*		*08/31/12 15:08*	*20*
Toluene-d8 (Surr)	*104*		*70 - 130*		*08/31/12 15:08*	*20*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
Pyridine	<0.25		0.25		mg/L		08/23/12 16:24	08/27/12 20:54	1
Hexachlorobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
2,4-Dinitrotoluene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
Cresols	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 20:54	1
Hexachloroethane	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
Hexachlorobutadiene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
Pentachlorophenol	<0.25		0.25		mg/L		08/23/12 16:24	08/27/12 20:54	1
2,4,6-Trichlorophenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
2,4,5-Trichlorophenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
Nitrobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
2-Methylphenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
3 & 4 Methylphenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*60*		*38 - 130*	*08/23/12 16:24*	*08/27/12 20:54*	*1*
2-Fluorophenol	*59*		*25 - 130*	*08/23/12 16:24*	*08/27/12 20:54*	*1*
Nitrobenzene-d5	*66*		*39 - 130*	*08/23/12 16:24*	*08/27/12 20:54*	*1*
Phenol-d5	*64*		*25 - 130*	*08/23/12 16:24*	*08/27/12 20:54*	*1*
Terphenyl-d14	*69*		*10 - 143*	*08/23/12 16:24*	*08/27/12 20:54*	*1*
2,4,6-Tribromophenol	*71*		*31 - 141*	*08/23/12 16:24*	*08/27/12 20:54*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 20:46	1
Silver	<0.10		0.10		mg/L		08/22/12 07:48	08/22/12 20:46	1
Arsenic	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 20:46	1
Barium	<1.0		1.0		mg/L		08/22/12 07:48	08/22/12 20:46	1
Cadmium	<0.10		0.10		mg/L		08/22/12 07:48	08/22/12 20:46	1
Chromium	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 20:46	1
Selenium	<0.50		0.50		mg/L		08/22/12 07:48	08/22/12 20:46	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Client Sample ID: RAB-drums

Lab Sample ID: 680-82121-1
Matrix: Solid
Date Collected: 08/16/12 15:30
Date Received: 08/17/12 09:30

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.020		0.020		mg/L		08/21/12 17:20	08/22/12 15:32	1

General Chemistry

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability	**NB**				mm/sec			08/28/12 11:14	1
pH	**4.78**				SU			08/21/12 18:57	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.60		0.60		mg/Kg	☼	08/23/12 07:00	08/23/12 13:22	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<74		74		mg/Kg	☼	08/22/12 04:46	08/22/12 04:54	1

Client Sample ID: MW-8 drums

Lab Sample ID: 680-82121-2
Matrix: Solid
Date Collected: 08/16/12 17:00
Date Received: 08/17/12 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.020		0.020		mg/L			08/31/12 15:37	20
1,2-Dichloroethane	<0.020		0.020		mg/L			08/31/12 15:37	20
Chlorobenzene	<0.020		0.020		mg/L			08/31/12 15:37	20
Tetrachloroethene	<0.020		0.020		mg/L			08/31/12 15:37	20
Carbon tetrachloride	<0.020		0.020		mg/L			08/31/12 15:37	20
Chloroform	<0.020		0.020		mg/L			08/31/12 15:37	20
Benzene	<0.020		0.020		mg/L			08/31/12 15:37	20
Vinyl chloride	<0.020		0.020		mg/L			08/31/12 15:37	20
1,1-Dichloroethene	<0.020		0.020		mg/L			08/31/12 15:37	20
2-Butanone	<0.20		0.20		mg/L			08/31/12 15:37	20
Trichloroethene	<0.020		0.020		mg/L			08/31/12 15:37	20
Hexachlorobutadiene	<0.020		0.020		mg/L			08/31/12 15:37	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*70 - 130*		*08/31/12 15:37*	*20*
Dibromofluoromethane	*100*		*70 - 130*		*08/31/12 15:37*	*20*
Toluene-d8 (Surr)	*103*		*70 - 130*		*08/31/12 15:37*	*20*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
Pyridine	<0.50		0.50		mg/L		08/23/12 16:24	08/27/12 21:21	1
Hexachlorobenzene	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
2,4-Dinitrotoluene	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
Cresols	<0.20		0.20		mg/L		08/23/12 16:24	08/27/12 21:21	1
Hexachloroethane	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
Hexachlorobutadiene	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
Pentachlorophenol	<0.50		0.50		mg/L		08/23/12 16:24	08/27/12 21:21	1
2,4,6-Trichlorophenol	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
2,4,5-Trichlorophenol	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
Nitrobenzene	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
2-Methylphenol	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
3 & 4 Methylphenol	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Client Sample ID: MW-8 drums

Date Collected: 08/16/12 17:00
Date Received: 08/17/12 09:30

Lab Sample ID: 680-82121-2

Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*64*		*38 - 130*	*08/23/12 16:24*	*08/27/12 21:21*	*1*
2-Fluorophenol	*66*		*25 - 130*	*08/23/12 16:24*	*08/27/12 21:21*	*1*
Nitrobenzene-d5	*70*		*39 - 130*	*08/23/12 16:24*	*08/27/12 21:21*	*1*
Phenol-d5	*69*		*25 - 130*	*08/23/12 16:24*	*08/27/12 21:21*	*1*
Terphenyl-d14	*71*		*10 - 143*	*08/23/12 16:24*	*08/27/12 21:21*	*1*
2,4,6-Tribromophenol	*73*		*31 - 141*	*08/23/12 16:24*	*08/27/12 21:21*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 20:52	1
Silver	<0.10		0.10		mg/L		08/22/12 07:48	08/22/12 20:52	1
Arsenic	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 20:52	1
Barium	<1.0		1.0		mg/L		08/22/12 07:48	08/22/12 20:52	1
Cadmium	<0.10		0.10		mg/L		08/22/12 07:48	08/22/12 20:52	1
Chromium	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 20:52	1
Selenium	<0.50		0.50		mg/L		08/22/12 07:48	08/22/12 20:52	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.020		0.020		mg/L		08/21/12 17:20	08/22/12 15:43	1

General Chemistry

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability	**NB**				mm/sec			08/28/12 11:14	1
pH	**6.89**				SU			08/21/12 18:57	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.65		0.65		mg/Kg	☼	08/23/12 07:00	08/23/12 13:23	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<77		77		mg/Kg	☼	08/22/12 04:46	08/22/12 04:54	1

QC Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-248455/6
Matrix: Solid
Analysis Batch: 248455

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.0010		0.0010		mg/L			08/31/12 12:05	1
1,2-Dichloroethane	<0.0010		0.0010		mg/L			08/31/12 12:05	1
Chlorobenzene	<0.0010		0.0010		mg/L			08/31/12 12:05	1
Tetrachloroethene	<0.0010		0.0010		mg/L			08/31/12 12:05	1
Carbon tetrachloride	<0.0010		0.0010		mg/L			08/31/12 12:05	1
Chloroform	<0.0010		0.0010		mg/L			08/31/12 12:05	1
Benzene	<0.0010		0.0010		mg/L			08/31/12 12:05	1
Vinyl chloride	<0.0010		0.0010		mg/L			08/31/12 12:05	1
1,1-Dichloroethene	<0.0010		0.0010		mg/L			08/31/12 12:05	1
2-Butanone	<0.010		0.010		mg/L			08/31/12 12:05	1
Trichloroethene	<0.0010		0.0010		mg/L			08/31/12 12:05	1
Hexachlorobutadiene	<0.0010		0.0010		mg/L			08/31/12 12:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*70 - 130*		*08/31/12 12:05*	*1*
Dibromofluoromethane	*106*		*70 - 130*		*08/31/12 12:05*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*08/31/12 12:05*	*1*

Lab Sample ID: LCS 680-248455/4
Matrix: Solid
Analysis Batch: 248455

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	0.0500	0.0531		mg/L		106	70 - 130
1,2-Dichloroethane	0.0500	0.0517		mg/L		103	70 - 130
Chlorobenzene	0.0500	0.0527		mg/L		105	70 - 130
Tetrachloroethene	0.0500	0.0528		mg/L		106	70 - 130
Carbon tetrachloride	0.0500	0.0454		mg/L		91	70 - 130
Chloroform	0.0500	0.0549		mg/L		110	70 - 130
Benzene	0.0500	0.0548		mg/L		110	70 - 130
Vinyl chloride	0.0250	0.0231		mg/L		93	67 - 134
1,1-Dichloroethene	0.0500	0.0556		mg/L		111	66 - 131
2-Butanone	0.100	0.109		mg/L		109	49 - 172
Trichloroethene	0.0500	0.0529		mg/L		106	70 - 130
Hexachlorobutadiene	0.0500	0.0596		mg/L		119	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*110*		*70 - 130*
Dibromofluoromethane	*106*		*70 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 680-248455/5
Matrix: Solid
Analysis Batch: 248455

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
1,4-Dichlorobenzene	0.0500	0.0522		mg/L		104	70 - 130	2	30
1,2-Dichloroethane	0.0500	0.0488		mg/L		98	70 - 130	6	30
Chlorobenzene	0.0500	0.0512		mg/L		102	70 - 130	3	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-248455/5
Matrix: Solid
Analysis Batch: 248455

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
Tetrachloroethene	0.0500	0.0515		mg/L		103	70 - 130	2	30
Carbon tetrachloride	0.0500	0.0434		mg/L		87	70 - 130	4	30
Chloroform	0.0500	0.0525		mg/L		105	70 - 130	4	30
Benzene	0.0500	0.0526		mg/L		105	70 - 130	4	30
Vinyl chloride	0.0250	0.0219		mg/L		87	67 - 134	6	30
1,1-Dichloroethene	0.0500	0.0534		mg/L		107	66 - 131	4	30
2-Butanone	0.100	0.106		mg/L		106	49 - 172	3	30
Trichloroethene	0.0500	0.0511		mg/L		102	70 - 130	3	30
Hexachlorobutadiene	0.0500	0.0571		mg/L		114	70 - 130	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*109*		*70 - 130*
Dibromofluoromethane	*104*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: LB 680-247362/5-A LB
Matrix: Solid
Analysis Batch: 248455

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.020		0.020		mg/L			08/31/12 13:42	20
1,2-Dichloroethane	<0.020		0.020		mg/L			08/31/12 13:42	20
Chlorobenzene	<0.020		0.020		mg/L			08/31/12 13:42	20
Tetrachloroethene	<0.020		0.020		mg/L			08/31/12 13:42	20
Carbon tetrachloride	<0.020		0.020		mg/L			08/31/12 13:42	20
Chloroform	<0.020		0.020		mg/L			08/31/12 13:42	20
Benzene	<0.020		0.020		mg/L			08/31/12 13:42	20
Vinyl chloride	<0.020		0.020		mg/L			08/31/12 13:42	20
1,1-Dichloroethene	<0.020		0.020		mg/L			08/31/12 13:42	20
2-Butanone	<0.20		0.20		mg/L			08/31/12 13:42	20
Trichloroethene	<0.020		0.020		mg/L			08/31/12 13:42	20
Hexachlorobutadiene	<0.020		0.020		mg/L			08/31/12 13:42	20

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*70 - 130*		*08/31/12 13:42*	*20*
Dibromofluoromethane	*103*		*70 - 130*		*08/31/12 13:42*	*20*
Toluene-d8 (Surr)	*105*		*70 - 130*		*08/31/12 13:42*	*20*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-247582/7-A
Matrix: Solid
Analysis Batch: 248052

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247582

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
Pyridine	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 14:52	1
Hexachlorobenzene	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
2,4-Dinitrotoluene	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-247582/7-A
Matrix: Solid
Analysis Batch: 248052

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247582

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cresols	<0.020		0.020		mg/L		08/23/12 16:24	08/27/12 14:52	1
Hexachloroethane	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
Hexachlorobutadiene	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
Pentachlorophenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 14:52	1
2,4,6-Trichlorophenol	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
2,4,5-Trichlorophenol	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
Nitrobenzene	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
2-Methylphenol	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
3 & 4 Methylphenol	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*75*		*38 - 130*	*08/23/12 16:24*	*08/27/12 14:52*	*1*
2-Fluorophenol	*75*		*25 - 130*	*08/23/12 16:24*	*08/27/12 14:52*	*1*
Nitrobenzene-d5	*78*		*39 - 130*	*08/23/12 16:24*	*08/27/12 14:52*	*1*
Phenol-d5	*80*		*25 - 130*	*08/23/12 16:24*	*08/27/12 14:52*	*1*
Terphenyl-d14	*81*		*10 - 143*	*08/23/12 16:24*	*08/27/12 14:52*	*1*
2,4,6-Tribromophenol	*78*		*31 - 141*	*08/23/12 16:24*	*08/27/12 14:52*	*1*

Lab Sample ID: LCS 680-247582/8-A
Matrix: Solid
Analysis Batch: 248052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	0.100	0.0618		mg/L		62	43 - 130
Pyridine	0.100	0.0582		mg/L		58	10 - 130
Hexachlorobenzene	0.100	0.0770		mg/L		77	52 - 130
2,4-Dinitrotoluene	0.100	0.0769		mg/L		77	63 - 130
Cresols	0.200	0.148		mg/L		74	49 - 130
Hexachloroethane	0.100	0.0577		mg/L		58	39 - 130
Hexachlorobutadiene	0.100	0.0689		mg/L		69	36 - 130
Pentachlorophenol	0.100	0.0648		mg/L		65	42 - 138
2,4,6-Trichlorophenol	0.100	0.0781		mg/L		78	57 - 130
2,4,5-Trichlorophenol	0.100	0.0735		mg/L		74	61 - 130
Nitrobenzene	0.100	0.0763		mg/L		76	56 - 130
2-Methylphenol	0.100	0.0750		mg/L		75	55 - 130
3 & 4 Methylphenol	0.100	0.0726		mg/L		73	35 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*75*		*38 - 130*
2-Fluorophenol	*74*		*25 - 130*
Nitrobenzene-d5	*82*		*39 - 130*
Phenol-d5	*74*		*25 - 130*
Terphenyl-d14	*86*		*10 - 143*
2,4,6-Tribromophenol	*84*		*31 - 141*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB 680-247178/5-F LB
Matrix: Solid
Analysis Batch: 248052

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 247582

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
Pyridine	<0.25		0.25		mg/L		08/23/12 16:24	08/27/12 15:47	1
Hexachlorobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
2,4-Dinitrotoluene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
Cresols	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 15:47	1
Hexachloroethane	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
Hexachlorobutadiene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
Pentachlorophenol	<0.25		0.25		mg/L		08/23/12 16:24	08/27/12 15:47	1
2,4,6-Trichlorophenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
2,4,5-Trichlorophenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
Nitrobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
2-Methylphenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
3 & 4 Methylphenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*38 - 130*	*08/23/12 16:24*	*08/27/12 15:47*	*1*
2-Fluorophenol	*71*		*25 - 130*	*08/23/12 16:24*	*08/27/12 15:47*	*1*
Nitrobenzene-d5	*75*		*39 - 130*	*08/23/12 16:24*	*08/27/12 15:47*	*1*
Phenol-d5	*75*		*25 - 130*	*08/23/12 16:24*	*08/27/12 15:47*	*1*
Terphenyl-d14	*81*		*10 - 143*	*08/23/12 16:24*	*08/27/12 15:47*	*1*
2,4,6-Tribromophenol	*78*		*31 - 141*	*08/23/12 16:24*	*08/27/12 15:47*	*1*

Lab Sample ID: LB 680-247493/6-D LB
Matrix: Solid
Analysis Batch: 248052

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 247582

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
Pyridine	<0.25		0.25		mg/L		08/23/12 16:24	08/27/12 15:19	1
Hexachlorobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
2,4-Dinitrotoluene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
Cresols	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 15:19	1
Hexachloroethane	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
Hexachlorobutadiene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
Pentachlorophenol	<0.25		0.25		mg/L		08/23/12 16:24	08/27/12 15:19	1
2,4,6-Trichlorophenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
2,4,5-Trichlorophenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
Nitrobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
2-Methylphenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
3 & 4 Methylphenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*72*		*38 - 130*	*08/23/12 16:24*	*08/27/12 15:19*	*1*
2-Fluorophenol	*71*		*25 - 130*	*08/23/12 16:24*	*08/27/12 15:19*	*1*
Nitrobenzene-d5	*77*		*39 - 130*	*08/23/12 16:24*	*08/27/12 15:19*	*1*
Phenol-d5	*74*		*25 - 130*	*08/23/12 16:24*	*08/27/12 15:19*	*1*
Terphenyl-d14	*80*		*10 - 143*	*08/23/12 16:24*	*08/27/12 15:19*	*1*
2,4,6-Tribromophenol	*78*		*31 - 141*	*08/23/12 16:24*	*08/27/12 15:19*	*1*

QC Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Method: 6010B - Metals (ICP)

Lab Sample ID: LCS 680-247386/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247534 — **Prep Batch: 247386**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.00	0.967		mg/L		97	75 - 125
Silver	1.00	1.02		mg/L		102	75 - 125
Arsenic	2.00	2.04		mg/L		102	75 - 125
Barium	2.00	1.96		mg/L		98	75 - 125
Cadmium	1.00	0.986		mg/L		99	75 - 125
Chromium	2.00	2.00		mg/L		100	75 - 125
Selenium	2.00	2.05		mg/L		103	75 - 125

Lab Sample ID: LB 680-247178/5-E LB — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 247534 — **Prep Batch: 247386**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 19:49	1
Silver	<0.10		0.10		mg/L		08/22/12 07:48	08/22/12 19:49	1
Arsenic	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 19:49	1
Barium	<1.0		1.0		mg/L		08/22/12 07:48	08/22/12 19:49	1
Cadmium	<0.10		0.10		mg/L		08/22/12 07:48	08/22/12 19:49	1
Chromium	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 19:49	1
Selenium	<0.50		0.50		mg/L		08/22/12 07:48	08/22/12 19:49	1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LCS 680-247353/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247499 — **Prep Batch: 247353**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.250	0.261		mg/L		104	80 - 120

Lab Sample ID: LB 680-247178/5-D LB — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 247499 — **Prep Batch: 247353**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.020		0.020		mg/L		08/21/12 17:20	08/22/12 15:25	1

Lab Sample ID: 680-82121-1 MS — **Client Sample ID: RAB-drums**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 247499 — **Prep Batch: 247353**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.020		0.100	0.0951		mg/L		95	80 - 120

Lab Sample ID: 680-82121-1 MSD — **Client Sample ID: RAB-drums**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 247499 — **Prep Batch: 247353**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.020		0.100	0.0983		mg/L		98	80 - 120	3	20

QC Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Method: 1030 - Ignitability, Solids

Lab Sample ID: MB 680-247987/1 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247987

Analyte	MB Result	MB Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability	NB				mm/sec			08/28/12 11:14	1

Lab Sample ID: 680-82121-1 DU — **Client Sample ID: RAB-drums**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247987

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ignitability	NB			NB		mm/sec				NC	

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 680-247509/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247617 — **Prep Batch: 247509**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.50		0.50		mg/Kg		08/23/12 07:00	08/23/12 13:10	1

Lab Sample ID: LCS 680-247509/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247617 — **Prep Batch: 247509**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			5.00	4.73		mg/Kg		95	75 - 125		

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-247377/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247379 — **Prep Batch: 247377**

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<60		60		mg/Kg		08/22/12 04:46	08/22/12 04:54	1

Lab Sample ID: LCS 680-247377/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247379 — **Prep Batch: 247377**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide			2880	2390		mg/Kg		83	50 - 150		

Method: 9045C - pH

Lab Sample ID: LCS 680-247501/1 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247501

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.00	7.010		SU		100	79 - 126		

QC Association Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

GC/MS VOA

Leach Batch: 247362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	1311	
680-82121-2	MW-8 drums	TCLP	Solid	1311	
LB 680-247362/5-A LB	Method Blank	TCLP	Solid	1311	

Analysis Batch: 248455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	8260B	247362
680-82121-2	MW-8 drums	TCLP	Solid	8260B	247362
LB 680-247362/5-A LB	Method Blank	TCLP	Solid	8260B	247362
LCS 680-248455/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 680-248455/5	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 680-248455/6	Method Blank	Total/NA	Solid	8260B	

GC/MS Semi VOA

Leach Batch: 247178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	1311	
680-82121-2	MW-8 drums	TCLP	Solid	1311	
LB 680-247178/5-F LB	Method Blank	TCLP	Solid	1311	

Leach Batch: 247493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 680-247493/6-D LB	Method Blank	TCLP	Solid	1311	

Prep Batch: 247582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	3520C	247178
680-82121-2	MW-8 drums	TCLP	Solid	3520C	247178
LB 680-247178/5-F LB	Method Blank	TCLP	Solid	3520C	247178
LB 680-247493/6-D LB	Method Blank	TCLP	Solid	3520C	247493
LCS 680-247582/8-A	Lab Control Sample	Total/NA	Solid	3520C	
MB 680-247582/7-A	Method Blank	Total/NA	Solid	3520C	

Analysis Batch: 248052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	8270C	247582
680-82121-2	MW-8 drums	TCLP	Solid	8270C	247582
LB 680-247178/5-F LB	Method Blank	TCLP	Solid	8270C	247582
LB 680-247493/6-D LB	Method Blank	TCLP	Solid	8270C	247582
LCS 680-247582/8-A	Lab Control Sample	Total/NA	Solid	8270C	247582
MB 680-247582/7-A	Method Blank	Total/NA	Solid	8270C	247582

Metals

Leach Batch: 247178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	1311	
680-82121-1 MS	RAB-drums	TCLP	Solid	1311	
680-82121-1 MSD	RAB-drums	TCLP	Solid	1311	
680-82121-2	MW-8 drums	TCLP	Solid	1311	
LB 680-247178/5-D LB	Method Blank	TCLP	Solid	1311	

Metals (Continued)

Leach Batch: 247178 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 680-247178/5-E LB	Method Blank	TCLP	Solid	1311	

Prep Batch: 247353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	7470A	247178
680-82121-1 MS	RAB-drums	TCLP	Solid	7470A	247178
680-82121-1 MSD	RAB-drums	TCLP	Solid	7470A	247178
680-82121-2	MW-8 drums	TCLP	Solid	7470A	247178
LB 680-247178/5-D LB	Method Blank	TCLP	Solid	7470A	247178
LCS 680-247353/2-A	Lab Control Sample	Total/NA	Solid	7470A	

Prep Batch: 247386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	3010A	247178
680-82121-2	MW-8 drums	TCLP	Solid	3010A	247178
LB 680-247178/5-E LB	Method Blank	TCLP	Solid	3010A	247178
LCS 680-247386/2-A	Lab Control Sample	Total/NA	Solid	3010A	

Analysis Batch: 247499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	7470A	247353
680-82121-1 MS	RAB-drums	TCLP	Solid	7470A	247353
680-82121-1 MSD	RAB-drums	TCLP	Solid	7470A	247353
680-82121-2	MW-8 drums	TCLP	Solid	7470A	247353
LB 680-247178/5-D LB	Method Blank	TCLP	Solid	7470A	247353
LCS 680-247353/2-A	Lab Control Sample	Total/NA	Solid	7470A	247353

Analysis Batch: 247534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	6010B	247386
680-82121-2	MW-8 drums	TCLP	Solid	6010B	247386
LB 680-247178/5-E LB	Method Blank	TCLP	Solid	6010B	247386
LCS 680-247386/2-A	Lab Control Sample	Total/NA	Solid	6010B	247386

General Chemistry

Analysis Batch: 246996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	Total/NA	Solid	Moisture	
680-82121-2	MW-8 drums	Total/NA	Solid	Moisture	

Prep Batch: 247377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	Total/NA	Solid	9030B	
680-82121-2	MW-8 drums	Total/NA	Solid	9030B	
LCS 680-247377/2-A	Lab Control Sample	Total/NA	Solid	9030B	
MB 680-247377/1-A	Method Blank	Total/NA	Solid	9030B	

Analysis Batch: 247379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	Total/NA	Solid	9034	247377
680-82121-2	MW-8 drums	Total/NA	Solid	9034	247377

General Chemistry (Continued)

Analysis Batch: 247379 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-247377/2-A	Lab Control Sample	Total/NA	Solid	9034	247377
MB 680-247377/1-A	Method Blank	Total/NA	Solid	9034	247377

Analysis Batch: 247501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	Total/NA	Solid	9045C	
680-82121-2	MW-8 drums	Total/NA	Solid	9045C	
LCS 680-247501/1	Lab Control Sample	Total/NA	Solid	9045C	

Prep Batch: 247509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	Total/NA	Solid	9012A	
680-82121-2	MW-8 drums	Total/NA	Solid	9012A	
LCS 680-247509/2-A	Lab Control Sample	Total/NA	Solid	9012A	
MB 680-247509/1-A	Method Blank	Total/NA	Solid	9012A	

Analysis Batch: 247617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	Total/NA	Solid	9012A	247509
680-82121-2	MW-8 drums	Total/NA	Solid	9012A	247509
LCS 680-247509/2-A	Lab Control Sample	Total/NA	Solid	9012A	247509
MB 680-247509/1-A	Method Blank	Total/NA	Solid	9012A	247509

Analysis Batch: 247987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	Total/NA	Solid	1030	
680-82121-1 DU	RAB-drums	Total/NA	Solid	1030	
680-82121-2	MW-8 drums	Total/NA	Solid	1030	
MB 680-247987/1	Method Blank	Total/NA	Solid	1030	

Lab Chronicle

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Client Sample ID: RAB-drums

Lab Sample ID: 680-82121-1

Date Collected: 08/16/12 15:30
Matrix: Solid
Date Received: 08/17/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			20.13 g	1.0 mL	247362	08/21/12 16:15	JS	TAL SAV
TCLP	Analysis	8260B		20	5 mL	5 mL	248455	08/31/12 15:08	JD	TAL SAV
TCLP	Leach	1311			100.24 g	1.0 mL	247178	08/20/12 14:15	JS	TAL SAV
TCLP	Prep	3520C			100 mL	0.5 mL	247582	08/23/12 16:24	RBS	TAL SAV
TCLP	Analysis	8270C		1			248052	08/27/12 20:54	MJC	TAL SAV
TCLP	Leach	1311			100.24 g	1.0 mL	247178	08/20/12 14:15	JS	TAL SAV
TCLP	Prep	7470A			0.5 mL	50 mL	247353	08/21/12 17:20	UU	TAL SAV
TCLP	Analysis	7470A		1			247499	08/22/12 15:32	UU	TAL SAV
TCLP	Prep	3010A			5 mL	50 mL	247386	08/22/12 07:48	VHB	TAL SAV
TCLP	Analysis	6010B		1			247534	08/22/12 20:46	BCB	TAL SAV
Total/NA	Analysis	Moisture		1			246996	08/17/12 12:52	FS	TAL SAV
Total/NA	Prep	9030B			1.02 g	6 mL	247377	08/22/12 04:46	DAM	TAL SAV
Total/NA	Analysis	9034		1			247379	08/22/12 04:54	DAM	TAL SAV
Total/NA	Analysis	9045C		1	20 g	20 mL	247501	08/21/12 18:57	PMC	TAL SAV
Total/NA	Prep	9012A			1.05 g	50 mL	247509	08/23/12 07:00	DAM	TAL SAV
Total/NA	Analysis	9012A		1			247617	08/23/12 13:22	DAM	TAL SAV
Total/NA	Analysis	1030		1			247987	08/28/12 11:14	MAP	TAL SAV

Client Sample ID: MW-8 drums

Lab Sample ID: 680-82121-2

Date Collected: 08/16/12 17:00
Matrix: Solid
Date Received: 08/17/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			20.41 g	1.0 mL	247362	08/21/12 16:15	JS	TAL SAV
TCLP	Analysis	8260B		20	5 mL	5 mL	248455	08/31/12 15:37	JD	TAL SAV
TCLP	Leach	1311			100.11 g	1.0 mL	247178	08/20/12 14:15	JS	TAL SAV
TCLP	Prep	3520C			50 mL	0.5 mL	247582	08/23/12 16:24	RBS	TAL SAV
TCLP	Analysis	8270C		1			248052	08/27/12 21:21	MJC	TAL SAV
TCLP	Leach	1311			100.11 g	1.0 mL	247178	08/20/12 14:15	JS	TAL SAV
TCLP	Prep	7470A			0.5 mL	50 mL	247353	08/21/12 17:20	UU	TAL SAV
TCLP	Analysis	7470A		1			247499	08/22/12 15:43	UU	TAL SAV
TCLP	Prep	3010A			5 mL	50 mL	247386	08/22/12 07:48	VHB	TAL SAV
TCLP	Analysis	6010B		1			247534	08/22/12 20:52	BCB	TAL SAV
Total/NA	Analysis	Moisture		1			246996	08/17/12 12:52	FS	TAL SAV
Total/NA	Prep	9030B			1.02 g	6 mL	247377	08/22/12 04:46	DAM	TAL SAV
Total/NA	Analysis	9034		1			247379	08/22/12 04:54	DAM	TAL SAV
Total/NA	Analysis	9045C		1	20 g	20 mL	247501	08/21/12 18:57	PMC	TAL SAV
Total/NA	Prep	9012A			1.00 g	50 mL	247509	08/23/12 07:00	DAM	TAL SAV
Total/NA	Analysis	9012A		1			247617	08/23/12 13:23	DAM	TAL SAV
Total/NA	Analysis	1030		1			247987	08/28/12 11:14	MAP	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number 55970

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Waste Characterization

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: Ashland-Aqualon	PROJECT NO.: 1201764	PROJECT LOCATION (STATE): VA
TAL (LAB) PROJECT MANAGER: Lidya Gulizia	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Erin Wright	CLIENT PHONE: 866-222-7786	CLIENT FAX:
CLIENT NAME: GES	CLIENT E-MAIL: ewright@geronline.com	
CLIENT ADDRESS: 235 S. 13th St. Suite 103 Richmond, VA		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	TCLP VOCs 8260B	TCLP SVOCs 8270C	TCLP metals 6010B	TCLP mercury 7470A	Total cyanide 9012A	Sulfide 9034	Ignitability 1030	Corrosivity	Reactivity	pH 9045C	REMARKS
								← PRESERVATIVE NONE →										
								NUMBER OF CONTAINERS SUBMITTED										
8/16/12	1530	RAB-drums	C		X			X	X	X	X	X	X	X	X	X	X	
↓	1700	MW-8 drums						X	X	X	X	X	X	X	X	X	X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
Kate Hall	8/16/12	1700						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[illegible]	8/17/12	0930	YES ○ NO ○		680-82121	2.8°C

TAL 8240-680 (1008)

Serial Number 55970

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Waste Characterization

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: Ashland - Aqualon	PROJECT NO.: 1201764	PROJECT LOCATION (STATE): VA
TAL (LAB) PROJECT MANAGER: Lidya Gulizia	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Erin Wright	CLIENT PHONE: 866-222-7786	CLIENT FAX:
CLIENT NAME: GES	CLIENT E-MAIL: ewright@geronline.com	
CLIENT ADDRESS: 235 13th St. Suite 103 Richmond, VA		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ◯
DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ◯
DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	TCLP VOCs 8260B	TCLP SVOCs 8270D	TCLP metals 6010B	TCLP mercury 7470A	Total cyanide 9012A	Sulfide 9034	Ignitability 1030	Corrosivity	Reactivity	pH 9045C	REMARKS
								PRESERVATIVE → NONE										
8/16/12	1530	RAB-drums	C		X			X	X	X	X	X	X	X	X	X	X	
↓	1700	MW-8 drums						X	X	X	X	X	X	X	X	X	X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
Kate Hall	8/16/12	1700						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[illegible]	8/17/12	0930	YES ◯ NO ◯		680-92121	2.8°C

TAL 8240-680 (1008)

Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-82121-1

Login Number: 82121
List Number: 1
Creator: Conner, Keaton

List Source: TestAmerica Savannah

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	2.8 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	
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.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

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
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
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	06-30-13
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	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	06-30-13
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	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	08-31-13
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	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

ATTACHMENT C

2012 GROUNDWATER SAMPLING EVENT LABORATORY ANALYTICAL DATA (ON CD)

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: 680-82121-1
Client Project/Site: Ashland Aqualon Waste Characterization

For:
Ashland Inc.
Ashland Hercules Research Center
500 Hercules Rd Bldg 8139
Wilmington, Delaware 19808

Attn: Steve Spence

Authorized for release by:
9/4/2012 10:23:27 AM
Michele Kersey
Project Manager I
michele.kersey@testamericainc.com

Designee for

Lidya Gulizia
Project Manager II
lidya.gulizia@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: 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.

Sample Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-82121-1	RAB-drums	Solid	08/16/12 15:30	08/17/12 09:30
680-82121-2	MW-8 drums	Solid	08/16/12 17:00	08/17/12 09:30

Method Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
6010B	Metals (ICP)	SW846	TAL SAV
7470A	Mercury (CVAA)	SW846	TAL SAV
1030	Ignitability, Solids	SW846	TAL SAV
9012A	Cyanide, Total and/or Amenable	SW846	TAL SAV
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
9045C	pH	SW846	TAL SAV
Moisture	Percent Moisture	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

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.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

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)

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Client Sample ID: RAB-drums

Lab Sample ID: 680-82121-1

Date Collected: 08/16/12 15:30
Date Received: 08/17/12 09:30

Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.020		0.020		mg/L			08/31/12 15:08	20
1,2-Dichloroethane	<0.020		0.020		mg/L			08/31/12 15:08	20
Chlorobenzene	<0.020		0.020		mg/L			08/31/12 15:08	20
Tetrachloroethene	<0.020		0.020		mg/L			08/31/12 15:08	20
Carbon tetrachloride	<0.020		0.020		mg/L			08/31/12 15:08	20
Chloroform	<0.020		0.020		mg/L			08/31/12 15:08	20
Benzene	<0.020		0.020		mg/L			08/31/12 15:08	20
Vinyl chloride	<0.020		0.020		mg/L			08/31/12 15:08	20
1,1-Dichloroethene	<0.020		0.020		mg/L			08/31/12 15:08	20
2-Butanone	<0.20		0.20		mg/L			08/31/12 15:08	20
Trichloroethene	<0.020		0.020		mg/L			08/31/12 15:08	20
Hexachlorobutadiene	<0.020		0.020		mg/L			08/31/12 15:08	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*70 - 130*		*08/31/12 15:08*	*20*
Dibromofluoromethane	*98*		*70 - 130*		*08/31/12 15:08*	*20*
Toluene-d8 (Surr)	*104*		*70 - 130*		*08/31/12 15:08*	*20*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
Pyridine	<0.25		0.25		mg/L		08/23/12 16:24	08/27/12 20:54	1
Hexachlorobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
2,4-Dinitrotoluene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
Cresols	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 20:54	1
Hexachloroethane	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
Hexachlorobutadiene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
Pentachlorophenol	<0.25		0.25		mg/L		08/23/12 16:24	08/27/12 20:54	1
2,4,6-Trichlorophenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
2,4,5-Trichlorophenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
Nitrobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
2-Methylphenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1
3 & 4 Methylphenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*60*		*38 - 130*	*08/23/12 16:24*	*08/27/12 20:54*	*1*
2-Fluorophenol	*59*		*25 - 130*	*08/23/12 16:24*	*08/27/12 20:54*	*1*
Nitrobenzene-d5	*66*		*39 - 130*	*08/23/12 16:24*	*08/27/12 20:54*	*1*
Phenol-d5	*64*		*25 - 130*	*08/23/12 16:24*	*08/27/12 20:54*	*1*
Terphenyl-d14	*69*		*10 - 143*	*08/23/12 16:24*	*08/27/12 20:54*	*1*
2,4,6-Tribromophenol	*71*		*31 - 141*	*08/23/12 16:24*	*08/27/12 20:54*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 20:46	1
Silver	<0.10		0.10		mg/L		08/22/12 07:48	08/22/12 20:46	1
Arsenic	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 20:46	1
Barium	<1.0		1.0		mg/L		08/22/12 07:48	08/22/12 20:46	1
Cadmium	<0.10		0.10		mg/L		08/22/12 07:48	08/22/12 20:46	1
Chromium	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 20:46	1
Selenium	<0.50		0.50		mg/L		08/22/12 07:48	08/22/12 20:46	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Client Sample ID: RAB-drums

Lab Sample ID: 680-82121-1
Matrix: Solid
Date Collected: 08/16/12 15:30
Date Received: 08/17/12 09:30

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.020		0.020		mg/L		08/21/12 17:20	08/22/12 15:32	1

General Chemistry

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability	**NB**				mm/sec			08/28/12 11:14	1
pH	**4.78**				SU			08/21/12 18:57	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.60		0.60		mg/Kg	☼	08/23/12 07:00	08/23/12 13:22	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<74		74		mg/Kg	☼	08/22/12 04:46	08/22/12 04:54	1

Client Sample ID: MW-8 drums

Lab Sample ID: 680-82121-2
Matrix: Solid
Date Collected: 08/16/12 17:00
Date Received: 08/17/12 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.020		0.020		mg/L			08/31/12 15:37	20
1,2-Dichloroethane	<0.020		0.020		mg/L			08/31/12 15:37	20
Chlorobenzene	<0.020		0.020		mg/L			08/31/12 15:37	20
Tetrachloroethene	<0.020		0.020		mg/L			08/31/12 15:37	20
Carbon tetrachloride	<0.020		0.020		mg/L			08/31/12 15:37	20
Chloroform	<0.020		0.020		mg/L			08/31/12 15:37	20
Benzene	<0.020		0.020		mg/L			08/31/12 15:37	20
Vinyl chloride	<0.020		0.020		mg/L			08/31/12 15:37	20
1,1-Dichloroethene	<0.020		0.020		mg/L			08/31/12 15:37	20
2-Butanone	<0.20		0.20		mg/L			08/31/12 15:37	20
Trichloroethene	<0.020		0.020		mg/L			08/31/12 15:37	20
Hexachlorobutadiene	<0.020		0.020		mg/L			08/31/12 15:37	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*70 - 130*		*08/31/12 15:37*	*20*
Dibromofluoromethane	*100*		*70 - 130*		*08/31/12 15:37*	*20*
Toluene-d8 (Surr)	*103*		*70 - 130*		*08/31/12 15:37*	*20*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
Pyridine	<0.50		0.50		mg/L		08/23/12 16:24	08/27/12 21:21	1
Hexachlorobenzene	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
2,4-Dinitrotoluene	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
Cresols	<0.20		0.20		mg/L		08/23/12 16:24	08/27/12 21:21	1
Hexachloroethane	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
Hexachlorobutadiene	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
Pentachlorophenol	<0.50		0.50		mg/L		08/23/12 16:24	08/27/12 21:21	1
2,4,6-Trichlorophenol	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
2,4,5-Trichlorophenol	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
Nitrobenzene	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
2-Methylphenol	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1
3 & 4 Methylphenol	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 21:21	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Client Sample ID: MW-8 drums

Date Collected: 08/16/12 17:00
Date Received: 08/17/12 09:30

Lab Sample ID: 680-82121-2

Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*64*		*38 - 130*	*08/23/12 16:24*	*08/27/12 21:21*	*1*
2-Fluorophenol	*66*		*25 - 130*	*08/23/12 16:24*	*08/27/12 21:21*	*1*
Nitrobenzene-d5	*70*		*39 - 130*	*08/23/12 16:24*	*08/27/12 21:21*	*1*
Phenol-d5	*69*		*25 - 130*	*08/23/12 16:24*	*08/27/12 21:21*	*1*
Terphenyl-d14	*71*		*10 - 143*	*08/23/12 16:24*	*08/27/12 21:21*	*1*
2,4,6-Tribromophenol	*73*		*31 - 141*	*08/23/12 16:24*	*08/27/12 21:21*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 20:52	1
Silver	<0.10		0.10		mg/L		08/22/12 07:48	08/22/12 20:52	1
Arsenic	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 20:52	1
Barium	<1.0		1.0		mg/L		08/22/12 07:48	08/22/12 20:52	1
Cadmium	<0.10		0.10		mg/L		08/22/12 07:48	08/22/12 20:52	1
Chromium	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 20:52	1
Selenium	<0.50		0.50		mg/L		08/22/12 07:48	08/22/12 20:52	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.020		0.020		mg/L		08/21/12 17:20	08/22/12 15:43	1

General Chemistry

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability	**NB**				mm/sec			08/28/12 11:14	1
pH	**6.89**				SU			08/21/12 18:57	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.65		0.65		mg/Kg	☼	08/23/12 07:00	08/23/12 13:23	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<77		77		mg/Kg	☼	08/22/12 04:46	08/22/12 04:54	1

QC Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-248455/6
Matrix: Solid
Analysis Batch: 248455

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.0010		0.0010		mg/L			08/31/12 12:05	1
1,2-Dichloroethane	<0.0010		0.0010		mg/L			08/31/12 12:05	1
Chlorobenzene	<0.0010		0.0010		mg/L			08/31/12 12:05	1
Tetrachloroethene	<0.0010		0.0010		mg/L			08/31/12 12:05	1
Carbon tetrachloride	<0.0010		0.0010		mg/L			08/31/12 12:05	1
Chloroform	<0.0010		0.0010		mg/L			08/31/12 12:05	1
Benzene	<0.0010		0.0010		mg/L			08/31/12 12:05	1
Vinyl chloride	<0.0010		0.0010		mg/L			08/31/12 12:05	1
1,1-Dichloroethene	<0.0010		0.0010		mg/L			08/31/12 12:05	1
2-Butanone	<0.010		0.010		mg/L			08/31/12 12:05	1
Trichloroethene	<0.0010		0.0010		mg/L			08/31/12 12:05	1
Hexachlorobutadiene	<0.0010		0.0010		mg/L			08/31/12 12:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*70 - 130*		*08/31/12 12:05*	*1*
Dibromofluoromethane	*106*		*70 - 130*		*08/31/12 12:05*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*08/31/12 12:05*	*1*

Lab Sample ID: LCS 680-248455/4
Matrix: Solid
Analysis Batch: 248455

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	0.0500	0.0531		mg/L		106	70 - 130
1,2-Dichloroethane	0.0500	0.0517		mg/L		103	70 - 130
Chlorobenzene	0.0500	0.0527		mg/L		105	70 - 130
Tetrachloroethene	0.0500	0.0528		mg/L		106	70 - 130
Carbon tetrachloride	0.0500	0.0454		mg/L		91	70 - 130
Chloroform	0.0500	0.0549		mg/L		110	70 - 130
Benzene	0.0500	0.0548		mg/L		110	70 - 130
Vinyl chloride	0.0250	0.0231		mg/L		93	67 - 134
1,1-Dichloroethene	0.0500	0.0556		mg/L		111	66 - 131
2-Butanone	0.100	0.109		mg/L		109	49 - 172
Trichloroethene	0.0500	0.0529		mg/L		106	70 - 130
Hexachlorobutadiene	0.0500	0.0596		mg/L		119	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*110*		*70 - 130*
Dibromofluoromethane	*106*		*70 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 680-248455/5
Matrix: Solid
Analysis Batch: 248455

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
1,4-Dichlorobenzene	0.0500	0.0522		mg/L		104	70 - 130	2	30
1,2-Dichloroethane	0.0500	0.0488		mg/L		98	70 - 130	6	30
Chlorobenzene	0.0500	0.0512		mg/L		102	70 - 130	3	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-248455/5
Matrix: Solid
Analysis Batch: 248455

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
Tetrachloroethene	0.0500	0.0515		mg/L		103	70 - 130	2	30
Carbon tetrachloride	0.0500	0.0434		mg/L		87	70 - 130	4	30
Chloroform	0.0500	0.0525		mg/L		105	70 - 130	4	30
Benzene	0.0500	0.0526		mg/L		105	70 - 130	4	30
Vinyl chloride	0.0250	0.0219		mg/L		87	67 - 134	6	30
1,1-Dichloroethene	0.0500	0.0534		mg/L		107	66 - 131	4	30
2-Butanone	0.100	0.106		mg/L		106	49 - 172	3	30
Trichloroethene	0.0500	0.0511		mg/L		102	70 - 130	3	30
Hexachlorobutadiene	0.0500	0.0571		mg/L		114	70 - 130	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*109*		*70 - 130*
Dibromofluoromethane	*104*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: LB 680-247362/5-A LB
Matrix: Solid
Analysis Batch: 248455

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.020		0.020		mg/L			08/31/12 13:42	20
1,2-Dichloroethane	<0.020		0.020		mg/L			08/31/12 13:42	20
Chlorobenzene	<0.020		0.020		mg/L			08/31/12 13:42	20
Tetrachloroethene	<0.020		0.020		mg/L			08/31/12 13:42	20
Carbon tetrachloride	<0.020		0.020		mg/L			08/31/12 13:42	20
Chloroform	<0.020		0.020		mg/L			08/31/12 13:42	20
Benzene	<0.020		0.020		mg/L			08/31/12 13:42	20
Vinyl chloride	<0.020		0.020		mg/L			08/31/12 13:42	20
1,1-Dichloroethene	<0.020		0.020		mg/L			08/31/12 13:42	20
2-Butanone	<0.20		0.20		mg/L			08/31/12 13:42	20
Trichloroethene	<0.020		0.020		mg/L			08/31/12 13:42	20
Hexachlorobutadiene	<0.020		0.020		mg/L			08/31/12 13:42	20

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*70 - 130*		*08/31/12 13:42*	*20*
Dibromofluoromethane	*103*		*70 - 130*		*08/31/12 13:42*	*20*
Toluene-d8 (Surr)	*105*		*70 - 130*		*08/31/12 13:42*	*20*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-247582/7-A
Matrix: Solid
Analysis Batch: 248052

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247582

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
Pyridine	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 14:52	1
Hexachlorobenzene	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
2,4-Dinitrotoluene	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-247582/7-A
Matrix: Solid
Analysis Batch: 248052

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247582

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cresols	<0.020		0.020		mg/L		08/23/12 16:24	08/27/12 14:52	1
Hexachloroethane	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
Hexachlorobutadiene	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
Pentachlorophenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 14:52	1
2,4,6-Trichlorophenol	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
2,4,5-Trichlorophenol	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
Nitrobenzene	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
2-Methylphenol	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1
3 & 4 Methylphenol	<0.010		0.010		mg/L		08/23/12 16:24	08/27/12 14:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*75*		*38 - 130*	*08/23/12 16:24*	*08/27/12 14:52*	*1*
2-Fluorophenol	*75*		*25 - 130*	*08/23/12 16:24*	*08/27/12 14:52*	*1*
Nitrobenzene-d5	*78*		*39 - 130*	*08/23/12 16:24*	*08/27/12 14:52*	*1*
Phenol-d5	*80*		*25 - 130*	*08/23/12 16:24*	*08/27/12 14:52*	*1*
Terphenyl-d14	*81*		*10 - 143*	*08/23/12 16:24*	*08/27/12 14:52*	*1*
2,4,6-Tribromophenol	*78*		*31 - 141*	*08/23/12 16:24*	*08/27/12 14:52*	*1*

Lab Sample ID: LCS 680-247582/8-A
Matrix: Solid
Analysis Batch: 248052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	0.100	0.0618		mg/L		62	43 - 130
Pyridine	0.100	0.0582		mg/L		58	10 - 130
Hexachlorobenzene	0.100	0.0770		mg/L		77	52 - 130
2,4-Dinitrotoluene	0.100	0.0769		mg/L		77	63 - 130
Cresols	0.200	0.148		mg/L		74	49 - 130
Hexachloroethane	0.100	0.0577		mg/L		58	39 - 130
Hexachlorobutadiene	0.100	0.0689		mg/L		69	36 - 130
Pentachlorophenol	0.100	0.0648		mg/L		65	42 - 138
2,4,6-Trichlorophenol	0.100	0.0781		mg/L		78	57 - 130
2,4,5-Trichlorophenol	0.100	0.0735		mg/L		74	61 - 130
Nitrobenzene	0.100	0.0763		mg/L		76	56 - 130
2-Methylphenol	0.100	0.0750		mg/L		75	55 - 130
3 & 4 Methylphenol	0.100	0.0726		mg/L		73	35 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*75*		*38 - 130*
2-Fluorophenol	*74*		*25 - 130*
Nitrobenzene-d5	*82*		*39 - 130*
Phenol-d5	*74*		*25 - 130*
Terphenyl-d14	*86*		*10 - 143*
2,4,6-Tribromophenol	*84*		*31 - 141*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB 680-247178/5-F LB
Matrix: Solid
Analysis Batch: 248052

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 247582

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
Pyridine	<0.25		0.25		mg/L		08/23/12 16:24	08/27/12 15:47	1
Hexachlorobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
2,4-Dinitrotoluene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
Cresols	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 15:47	1
Hexachloroethane	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
Hexachlorobutadiene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
Pentachlorophenol	<0.25		0.25		mg/L		08/23/12 16:24	08/27/12 15:47	1
2,4,6-Trichlorophenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
2,4,5-Trichlorophenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
Nitrobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
2-Methylphenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1
3 & 4 Methylphenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:47	1

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*38 - 130*	*08/23/12 16:24*	*08/27/12 15:47*	*1*
2-Fluorophenol	*71*		*25 - 130*	*08/23/12 16:24*	*08/27/12 15:47*	*1*
Nitrobenzene-d5	*75*		*39 - 130*	*08/23/12 16:24*	*08/27/12 15:47*	*1*
Phenol-d5	*75*		*25 - 130*	*08/23/12 16:24*	*08/27/12 15:47*	*1*
Terphenyl-d14	*81*		*10 - 143*	*08/23/12 16:24*	*08/27/12 15:47*	*1*
2,4,6-Tribromophenol	*78*		*31 - 141*	*08/23/12 16:24*	*08/27/12 15:47*	*1*

Lab Sample ID: LB 680-247493/6-D LB
Matrix: Solid
Analysis Batch: 248052

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 247582

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
Pyridine	<0.25		0.25		mg/L		08/23/12 16:24	08/27/12 15:19	1
Hexachlorobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
2,4-Dinitrotoluene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
Cresols	<0.10		0.10		mg/L		08/23/12 16:24	08/27/12 15:19	1
Hexachloroethane	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
Hexachlorobutadiene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
Pentachlorophenol	<0.25		0.25		mg/L		08/23/12 16:24	08/27/12 15:19	1
2,4,6-Trichlorophenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
2,4,5-Trichlorophenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
Nitrobenzene	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
2-Methylphenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1
3 & 4 Methylphenol	<0.050		0.050		mg/L		08/23/12 16:24	08/27/12 15:19	1

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*72*		*38 - 130*	*08/23/12 16:24*	*08/27/12 15:19*	*1*
2-Fluorophenol	*71*		*25 - 130*	*08/23/12 16:24*	*08/27/12 15:19*	*1*
Nitrobenzene-d5	*77*		*39 - 130*	*08/23/12 16:24*	*08/27/12 15:19*	*1*
Phenol-d5	*74*		*25 - 130*	*08/23/12 16:24*	*08/27/12 15:19*	*1*
Terphenyl-d14	*80*		*10 - 143*	*08/23/12 16:24*	*08/27/12 15:19*	*1*
2,4,6-Tribromophenol	*78*		*31 - 141*	*08/23/12 16:24*	*08/27/12 15:19*	*1*

QC Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Method: 6010B - Metals (ICP)

Lab Sample ID: LCS 680-247386/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247534 — **Prep Batch: 247386**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.00	0.967		mg/L		97	75 - 125
Silver	1.00	1.02		mg/L		102	75 - 125
Arsenic	2.00	2.04		mg/L		102	75 - 125
Barium	2.00	1.96		mg/L		98	75 - 125
Cadmium	1.00	0.986		mg/L		99	75 - 125
Chromium	2.00	2.00		mg/L		100	75 - 125
Selenium	2.00	2.05		mg/L		103	75 - 125

Lab Sample ID: LB 680-247178/5-E LB — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 247534 — **Prep Batch: 247386**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 19:49	1
Silver	<0.10		0.10		mg/L		08/22/12 07:48	08/22/12 19:49	1
Arsenic	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 19:49	1
Barium	<1.0		1.0		mg/L		08/22/12 07:48	08/22/12 19:49	1
Cadmium	<0.10		0.10		mg/L		08/22/12 07:48	08/22/12 19:49	1
Chromium	<0.20		0.20		mg/L		08/22/12 07:48	08/22/12 19:49	1
Selenium	<0.50		0.50		mg/L		08/22/12 07:48	08/22/12 19:49	1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LCS 680-247353/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247499 — **Prep Batch: 247353**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.250	0.261		mg/L		104	80 - 120

Lab Sample ID: LB 680-247178/5-D LB — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 247499 — **Prep Batch: 247353**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.020		0.020		mg/L		08/21/12 17:20	08/22/12 15:25	1

Lab Sample ID: 680-82121-1 MS — **Client Sample ID: RAB-drums**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 247499 — **Prep Batch: 247353**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.020		0.100	0.0951		mg/L		95	80 - 120

Lab Sample ID: 680-82121-1 MSD — **Client Sample ID: RAB-drums**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 247499 — **Prep Batch: 247353**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.020		0.100	0.0983		mg/L		98	80 - 120	3	20

QC Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Method: 1030 - Ignitability, Solids

Lab Sample ID: MB 680-247987/1 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247987

Analyte	MB Result	MB Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability	NB				mm/sec			08/28/12 11:14	1

Lab Sample ID: 680-82121-1 DU — **Client Sample ID: RAB-drums**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247987

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ignitability	NB			NB		mm/sec				NC	

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 680-247509/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247617 — **Prep Batch: 247509**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.50		0.50		mg/Kg		08/23/12 07:00	08/23/12 13:10	1

Lab Sample ID: LCS 680-247509/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247617 — **Prep Batch: 247509**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			5.00	4.73		mg/Kg		95	75 - 125		

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-247377/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247379 — **Prep Batch: 247377**

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<60		60		mg/Kg		08/22/12 04:46	08/22/12 04:54	1

Lab Sample ID: LCS 680-247377/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247379 — **Prep Batch: 247377**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide			2880	2390		mg/Kg		83	50 - 150		

Method: 9045C - pH

Lab Sample ID: LCS 680-247501/1 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 247501

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.00	7.010		SU		100	79 - 126		

QC Association Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

GC/MS VOA

Leach Batch: 247362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	1311	
680-82121-2	MW-8 drums	TCLP	Solid	1311	
LB 680-247362/5-A LB	Method Blank	TCLP	Solid	1311	

Analysis Batch: 248455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	8260B	247362
680-82121-2	MW-8 drums	TCLP	Solid	8260B	247362
LB 680-247362/5-A LB	Method Blank	TCLP	Solid	8260B	247362
LCS 680-248455/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 680-248455/5	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 680-248455/6	Method Blank	Total/NA	Solid	8260B	

GC/MS Semi VOA

Leach Batch: 247178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	1311	
680-82121-2	MW-8 drums	TCLP	Solid	1311	
LB 680-247178/5-F LB	Method Blank	TCLP	Solid	1311	

Leach Batch: 247493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 680-247493/6-D LB	Method Blank	TCLP	Solid	1311	

Prep Batch: 247582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	3520C	247178
680-82121-2	MW-8 drums	TCLP	Solid	3520C	247178
LB 680-247178/5-F LB	Method Blank	TCLP	Solid	3520C	247178
LB 680-247493/6-D LB	Method Blank	TCLP	Solid	3520C	247493
LCS 680-247582/8-A	Lab Control Sample	Total/NA	Solid	3520C	
MB 680-247582/7-A	Method Blank	Total/NA	Solid	3520C	

Analysis Batch: 248052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	8270C	247582
680-82121-2	MW-8 drums	TCLP	Solid	8270C	247582
LB 680-247178/5-F LB	Method Blank	TCLP	Solid	8270C	247582
LB 680-247493/6-D LB	Method Blank	TCLP	Solid	8270C	247582
LCS 680-247582/8-A	Lab Control Sample	Total/NA	Solid	8270C	247582
MB 680-247582/7-A	Method Blank	Total/NA	Solid	8270C	247582

Metals

Leach Batch: 247178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	1311	
680-82121-1 MS	RAB-drums	TCLP	Solid	1311	
680-82121-1 MSD	RAB-drums	TCLP	Solid	1311	
680-82121-2	MW-8 drums	TCLP	Solid	1311	
LB 680-247178/5-D LB	Method Blank	TCLP	Solid	1311	

Metals (Continued)

Leach Batch: 247178 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 680-247178/5-E LB	Method Blank	TCLP	Solid	1311	

Prep Batch: 247353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	7470A	247178
680-82121-1 MS	RAB-drums	TCLP	Solid	7470A	247178
680-82121-1 MSD	RAB-drums	TCLP	Solid	7470A	247178
680-82121-2	MW-8 drums	TCLP	Solid	7470A	247178
LB 680-247178/5-D LB	Method Blank	TCLP	Solid	7470A	247178
LCS 680-247353/2-A	Lab Control Sample	Total/NA	Solid	7470A	

Prep Batch: 247386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	3010A	247178
680-82121-2	MW-8 drums	TCLP	Solid	3010A	247178
LB 680-247178/5-E LB	Method Blank	TCLP	Solid	3010A	247178
LCS 680-247386/2-A	Lab Control Sample	Total/NA	Solid	3010A	

Analysis Batch: 247499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	7470A	247353
680-82121-1 MS	RAB-drums	TCLP	Solid	7470A	247353
680-82121-1 MSD	RAB-drums	TCLP	Solid	7470A	247353
680-82121-2	MW-8 drums	TCLP	Solid	7470A	247353
LB 680-247178/5-D LB	Method Blank	TCLP	Solid	7470A	247353
LCS 680-247353/2-A	Lab Control Sample	Total/NA	Solid	7470A	247353

Analysis Batch: 247534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	TCLP	Solid	6010B	247386
680-82121-2	MW-8 drums	TCLP	Solid	6010B	247386
LB 680-247178/5-E LB	Method Blank	TCLP	Solid	6010B	247386
LCS 680-247386/2-A	Lab Control Sample	Total/NA	Solid	6010B	247386

General Chemistry

Analysis Batch: 246996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	Total/NA	Solid	Moisture	
680-82121-2	MW-8 drums	Total/NA	Solid	Moisture	

Prep Batch: 247377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	Total/NA	Solid	9030B	
680-82121-2	MW-8 drums	Total/NA	Solid	9030B	
LCS 680-247377/2-A	Lab Control Sample	Total/NA	Solid	9030B	
MB 680-247377/1-A	Method Blank	Total/NA	Solid	9030B	

Analysis Batch: 247379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	Total/NA	Solid	9034	247377
680-82121-2	MW-8 drums	Total/NA	Solid	9034	247377

General Chemistry (Continued)

Analysis Batch: 247379 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-247377/2-A	Lab Control Sample	Total/NA	Solid	9034	247377
MB 680-247377/1-A	Method Blank	Total/NA	Solid	9034	247377

Analysis Batch: 247501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	Total/NA	Solid	9045C	
680-82121-2	MW-8 drums	Total/NA	Solid	9045C	
LCS 680-247501/1	Lab Control Sample	Total/NA	Solid	9045C	

Prep Batch: 247509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	Total/NA	Solid	9012A	
680-82121-2	MW-8 drums	Total/NA	Solid	9012A	
LCS 680-247509/2-A	Lab Control Sample	Total/NA	Solid	9012A	
MB 680-247509/1-A	Method Blank	Total/NA	Solid	9012A	

Analysis Batch: 247617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	Total/NA	Solid	9012A	247509
680-82121-2	MW-8 drums	Total/NA	Solid	9012A	247509
LCS 680-247509/2-A	Lab Control Sample	Total/NA	Solid	9012A	247509
MB 680-247509/1-A	Method Blank	Total/NA	Solid	9012A	247509

Analysis Batch: 247987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82121-1	RAB-drums	Total/NA	Solid	1030	
680-82121-1 DU	RAB-drums	Total/NA	Solid	1030	
680-82121-2	MW-8 drums	Total/NA	Solid	1030	
MB 680-247987/1	Method Blank	Total/NA	Solid	1030	

Lab Chronicle

Client: Ashland Inc.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

Client Sample ID: RAB-drums

Lab Sample ID: 680-82121-1

Date Collected: 08/16/12 15:30
Matrix: Solid
Date Received: 08/17/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			20.13 g	1.0 mL	247362	08/21/12 16:15	JS	TAL SAV
TCLP	Analysis	8260B		20	5 mL	5 mL	248455	08/31/12 15:08	JD	TAL SAV
TCLP	Leach	1311			100.24 g	1.0 mL	247178	08/20/12 14:15	JS	TAL SAV
TCLP	Prep	3520C			100 mL	0.5 mL	247582	08/23/12 16:24	RBS	TAL SAV
TCLP	Analysis	8270C		1			248052	08/27/12 20:54	MJC	TAL SAV
TCLP	Leach	1311			100.24 g	1.0 mL	247178	08/20/12 14:15	JS	TAL SAV
TCLP	Prep	7470A			0.5 mL	50 mL	247353	08/21/12 17:20	UU	TAL SAV
TCLP	Analysis	7470A		1			247499	08/22/12 15:32	UU	TAL SAV
TCLP	Prep	3010A			5 mL	50 mL	247386	08/22/12 07:48	VHB	TAL SAV
TCLP	Analysis	6010B		1			247534	08/22/12 20:46	BCB	TAL SAV
Total/NA	Analysis	Moisture		1			246996	08/17/12 12:52	FS	TAL SAV
Total/NA	Prep	9030B			1.02 g	6 mL	247377	08/22/12 04:46	DAM	TAL SAV
Total/NA	Analysis	9034		1			247379	08/22/12 04:54	DAM	TAL SAV
Total/NA	Analysis	9045C		1	20 g	20 mL	247501	08/21/12 18:57	PMC	TAL SAV
Total/NA	Prep	9012A			1.05 g	50 mL	247509	08/23/12 07:00	DAM	TAL SAV
Total/NA	Analysis	9012A		1			247617	08/23/12 13:22	DAM	TAL SAV
Total/NA	Analysis	1030		1			247987	08/28/12 11:14	MAP	TAL SAV

Client Sample ID: MW-8 drums

Lab Sample ID: 680-82121-2

Date Collected: 08/16/12 17:00
Matrix: Solid
Date Received: 08/17/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			20.41 g	1.0 mL	247362	08/21/12 16:15	JS	TAL SAV
TCLP	Analysis	8260B		20	5 mL	5 mL	248455	08/31/12 15:37	JD	TAL SAV
TCLP	Leach	1311			100.11 g	1.0 mL	247178	08/20/12 14:15	JS	TAL SAV
TCLP	Prep	3520C			50 mL	0.5 mL	247582	08/23/12 16:24	RBS	TAL SAV
TCLP	Analysis	8270C		1			248052	08/27/12 21:21	MJC	TAL SAV
TCLP	Leach	1311			100.11 g	1.0 mL	247178	08/20/12 14:15	JS	TAL SAV
TCLP	Prep	7470A			0.5 mL	50 mL	247353	08/21/12 17:20	UU	TAL SAV
TCLP	Analysis	7470A		1			247499	08/22/12 15:43	UU	TAL SAV
TCLP	Prep	3010A			5 mL	50 mL	247386	08/22/12 07:48	VHB	TAL SAV
TCLP	Analysis	6010B		1			247534	08/22/12 20:52	BCB	TAL SAV
Total/NA	Analysis	Moisture		1			246996	08/17/12 12:52	FS	TAL SAV
Total/NA	Prep	9030B			1.02 g	6 mL	247377	08/22/12 04:46	DAM	TAL SAV
Total/NA	Analysis	9034		1			247379	08/22/12 04:54	DAM	TAL SAV
Total/NA	Analysis	9045C		1	20 g	20 mL	247501	08/21/12 18:57	PMC	TAL SAV
Total/NA	Prep	9012A			1.00 g	50 mL	247509	08/23/12 07:00	DAM	TAL SAV
Total/NA	Analysis	9012A		1			247617	08/23/12 13:23	DAM	TAL SAV
Total/NA	Analysis	1030		1			247987	08/28/12 11:14	MAP	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number 55970

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Waste Characterization

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: Ashland-Aqualon	PROJECT NO.: 1201764	PROJECT LOCATION (STATE): VA
TAL (LAB) PROJECT MANAGER: Lidya Gulizia	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Erin Wright	CLIENT PHONE: 866-222-7786	CLIENT FAX:
CLIENT NAME: GES	CLIENT E-MAIL: ewright@geronline.com	
CLIENT ADDRESS: 235 S. 13th St. Suite 103 Richmond, VA		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	TCLP VOCs 8260B	TCLP SVOCs 8270C	TCLP metals 6010B	TCLP mercury 7470A	Total cyanide 9012A	Sulfide 9034	Ignitability 1030	Corrosivity	Reactivity	pH 9045C	REMARKS
								← PRESERVATIVE NONE →										
								NUMBER OF CONTAINERS SUBMITTED										
8/16/12	1530	RAB-drums	C		X			X	X	X	X	X	X	X	X	X	X	
↓	1700	MW-8 drums						X	X	X	X	X	X	X	X	X	X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
Kate Hall	8/16/12	1700						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[illegible]	8/17/12	0930	YES ○ NO ○		680-82121	2.8°C

TAL 8240-680 (1008)

Serial Number 55970

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Waste Characterization

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: Ashland - Aqualon	PROJECT NO.: 1201764	PROJECT LOCATION (STATE): VA
TAL (LAB) PROJECT MANAGER: Lidya Gulizia	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Erin Wright	CLIENT PHONE: 866-222-7786	CLIENT FAX:
CLIENT NAME: GES	CLIENT E-MAIL: ewright@geronline.com	
CLIENT ADDRESS: 235 13th St. Suite 103 Richmond, VA		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ◯
DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ◯
DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	TCLP VOCs 8260B	TCLP SVOCs 8270D	TCLP metals 6010B	TCLP mercury 7470A	Total cyanide 9012A	Sulfide 9034	Ignitability 1030	Corrosivity	Reactivity	pH 9045C	REMARKS
								PRESERVATIVE → NONE										
8/16/12	1530	RAB-drums	C		X			X	X	X	X	X	X	X	X	X	X	
↓	1700	MW-8 drums						X	X	X	X	X	X	X	X	X	X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
Kate Hall	8/16/12	1700						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[illegible]	8/17/12	0930	YES ◯ NO ◯		680-92121	2.8°C

TAL 8240-680 (1008)

Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-82121-1

Login Number: 82121
List Number: 1
Creator: Conner, Keaton

List Source: TestAmerica Savannah

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	2.8 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	
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.
Project/Site: Ashland Aqualon Waste Characterization

TestAmerica Job ID: 680-82121-1

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
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
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	06-30-13
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	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	06-30-13
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	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	08-31-13
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	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

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: 680-82186-1
TestAmerica Sample Delivery Group: HAQ037
Client Project/Site: Ashland Aqualon GW August 2012
Revision: 2

For:
Ashland Inc.
Ashland Hercules Research Center
500 Hercules Rd Bldg 8139
Wilmington, Delaware 19808

Attn: Steve Spence

Authorized for release by:
2/20/2013 5:51:06 PM

Lidya Gulizia
Project Manager II
lidya.gulizia@testamericainc.com

LINKS

Review your project results through TotalAccess

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Visit us at: 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.

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Receipt Checklists 126
Certification Summary 129

Job ID: 680-82186-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Ashland Inc.

Project: Ashland Aqualon GW August 2012

Report Number: 680-82186-1 Revised

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.

The sample report was revised on October 23, 2012 in order to report estimated results (J) down to the method detection limits (MDL).

The sample report was revised further on February 20, 2013 in order to report Arsenic in the metals scan.

RECEIPT

The samples were received on 08/21/2012, 08/22/2012 and 08/23/2012. With the exception of the issues noted below, the samples arrived in good condition, properly preserved and on ice. The temperatures of the 11 coolers at receipt time were 2.2º C, 3.3º C, 3.6º C, 3.8º C, 4.0º C, 4.1º C, 4.6º C, 5.0º C, 5.0º C, 5.2º C and 5.8º C.

The following sample(s) was received with headspace in the sample vial: Equipment Blank 2 (680-82233-4), Field Duplicate 2 (680-82233-2), NAT-3 (680-82233-1). Three of three vials contain headspace for -1 and -2 (all HCl) and two of three for -4 (unpreserved).

The following sample(s) was received with headspace in the sample vial: MW-4 (680-82284-11), MW-5U (680-82284-4), MW-8U (680-82284-9), SDB-MW-1 (680-82284-3). The following HCl vials contain headspace in three of three vials: -3, -4 and -11. Two of three vials contain headspace for -9.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples NAT-3 (680-82186-1)[2000X], RAB-MW1R (680-82186-1)[250X], Field Duplicate 2 (680-82186-2)[2000X], RAB-MW3 (680-82186-2)[5X], NAT-2 (680-82186-3)[250X], MW-5U (680-82186-4)[10X], MW-5 (680-82186-5)[2X], MW-8L-R (680-82186-8)[50X], MW-8U (680-82186-9)[25X], MW-1 (680-82186-9)[50X], MW-6 (680-82186-10)[25X] and MW-4 (680-82186-11)[25X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The equipment blank associated with the following sample contained a detection for 2-methyl-2-propanol above the reporting limit (RL).

No difficulties were encountered during the volatiles analyses.

All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (AQUEOUS)

Surrogate recovery for the following sample(s) was outside control limits: NAT-2 (680-82233-3). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results.

No other difficulties were encountered during the semivolatiles analyses.

Job ID: 680-82186-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

All other quality control parameters were within the acceptance limits.

ORGANICS BY DIRECT AQUEOUS INJECTION (DAI)

The matrix spike / matrix spike duplicate (MS/MSD) precision for batch 247601 was outside control limits for Methanol. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision met acceptance criteria.

No difficulties were encountered during the organics by direct aqueous injection (DAI) analyses.

All quality control parameters were within the acceptance limits.

DISSOLVED GASES

Manual integration was performed on the following sample: SDB-MW-2 (680-82284-2) and SDB-MW-3 (680-82284-1).

The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 248598 exceeded control limits for the following analyte: methane.

No other difficulties were encountered during the dissolved gases analyses.

All other quality control parameters were within the acceptance limits.

METALS (ICPMS)

Due to the high concentration of iron and manganese, the matrix spike / matrix spike duplicate (MS/MSD) for batch 680-247405 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for batch 680-247700 were outside control limits for aluminum. The associated laboratory control sample (LCS) recovery met acceptance criteria.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Lead was detected in the method blank associated with prep batch 247405 and lead results for associated samples were qualified accordingly with a B qualifier if detected.

No other difficulties were encountered during the metals analyses.

All other quality control parameters were within the acceptance limits.

CHLORIDE

Due to the high concentration of chloride, the matrix spike / matrix spike duplicate (MS/MSD) for batch 248808 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 249208 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Samples RAB-MW1R (680-82186-1)[2X], NAT-3 (680-82186-1)[5X], SDB-MW-3 (680-82186-1)[5X], SDB-MW-2 (680-82186-2)[2X], RAB-MW4 (680-82186-3)[2X], NAT-2 (680-82186-3)[2X], MW-5U (680-82186-4)[50X], MW-5 (680-82186-5)[20X], MW-10 (680-82186-6)[5X], MW-8L-R (680-82186-8)[10X], MW-1 (680-82186-9)[5X], MW-8U (680-82186-9)[5X], MW-6 (680-82186-10)[10X] and MW-4 (680-82186-11)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Chloride analyses.

All other quality control parameters were within the acceptance limits.

FERROUS IRON

This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. This sample(s) was performed in

Job ID: 680-82186-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

the laboratory outside the 15 minute timeframe. This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. This sample(s) was performed in the laboratory outside the 15 minute timeframe. This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. This sample(s) was performed in the laboratory outside the 15 minute timeframe.

Samples RAB-MW1R (680-82186-1)[20X], RAB-MW3 (680-82186-2)[50X], SDB-MW-1 (680-82186-3)[50X], MW-5 (680-82186-5)[50X], MW-8L-R (680-82186-8)[10X], MW-8U (680-82186-9)[10X], MW-1 (680-82186-9)[2X], MW-6 (680-82186-10)[10X] and MW-4 (680-82186-11)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the ferrous iron analyses.

All quality control parameters were within the acceptance limits.

TOTAL KJELDAHL NITROGEN

The matrix duplicate %RPD for TKN associated with batch 248188 was outside the control limits due to non homogeneity of the sample.

Samples SDB-MW-1 (680-82284-3)[5X] and MW-8U (680-82284-9)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the TKN analyses.

All other quality control parameters were within the acceptance limits.

NITRATE-NITRITE AS NITROGEN

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 247536 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Samples MW-10 (680-82186-6)[5X] and NAT-1 (680-82186-8)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the nitrate-nitrite analyses.

All other quality control parameters were within the acceptance limits.

SULFATE

Due to the high concentration of sulfate, the matrix spike / matrix spike duplicate (MS/MSD) for batch 248910 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 248911 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Samples RAB-MW1R (680-82186-1)[20X], SDB-MW-3 (680-82186-1)[50X], SDB-MW-2 (680-82186-2)[50X], NAT-2 (680-82186-3)[10X], RAB-MW4 (680-82186-3)[50X], MW-5U (680-82186-4)[20X], MW-5 (680-82186-5)[10X], MW-10 (680-82186-6)[20X], NAT-1 (680-82186-8) [20X], MW-8L-R (680-82186-8)[20X], MW-8U (680-82186-9)[20X], MW-1 (680-82186-9)[50X] and MW-6 (680-82186-10)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the sulfate analyses.

All other quality control parameters were within the acceptance limits.

TOTAL ORGANIC CARBON

No difficulties were encountered during the TOC analyses.

All quality control parameters were within the acceptance limits.

Method Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
8015C	Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)	SW846	TAL SAV
RSK-175	Dissolved Gases (GC)	RSK	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
325.2	Chloride	MCAWW	TAL SAV
351.2	Nitrogen, Total Kjeldahl	MCAWW	TAL SAV
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL SAV
375.4	Sulfate	MCAWW	TAL SAV
9060	Organic Carbon, Total (TOC)	SW846	TAL SAV
SM 3500 FE D	Iron, Ferrous	SM	TAL SAV

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater",

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.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-82186-1	RAB-MW1R	Water	08/20/12 13:10	08/21/12 09:33
680-82186-2	RAB-MW3	Water	08/20/12 12:45	08/21/12 09:33
680-82186-3	RAB-MW4	Water	08/20/12 14:35	08/21/12 09:33
680-82186-4	Trip Blank	Water	08/20/12 00:00	08/21/12 09:33
680-82233-1	NAT-3	Water	08/21/12 09:25	08/22/12 10:00
680-82233-2	Field Duplicate 2	Water	08/21/12 09:45	08/22/12 10:00
680-82233-3	NAT-2	Water	08/21/12 11:50	08/22/12 10:00
680-82233-4	Equipment Blank 2	Water	08/21/12 12:05	08/22/12 10:00
680-82233-5	Field Blank 1	Water	08/21/12 10:10	08/22/12 10:00
680-82233-6	MW-10	Water	08/21/12 10:50	08/22/12 10:00
680-82233-7	Field Duplicate 1	Water	08/21/12 10:55	08/22/12 10:00
680-82233-8	NAT-1	Water	08/21/12 12:25	08/22/12 10:00
680-82233-9	MW-1	Water	08/21/12 14:10	08/22/12 10:00
680-82233-10	Trip Blank	Water	08/21/12 00:00	08/22/12 10:00
680-82284-1	SDB-MW-3	Water	08/22/12 09:20	08/23/12 09:53
680-82284-2	SDB-MW-2	Water	08/22/12 10:40	08/23/12 09:53
680-82284-3	SDB-MW-1	Water	08/22/12 12:45	08/23/12 09:53
680-82284-4	MW-5U	Water	08/22/12 14:50	08/23/12 09:53
680-82284-5	MW-5	Water	08/22/12 15:55	08/23/12 09:53
680-82284-6	MW-8D	Water	08/22/12 09:40	08/23/12 09:53
680-82284-7	Field Blank 2 (@ MW-8 Wells)	Water	08/22/12 08:45	08/23/12 09:53
680-82284-8	MW-8L-R	Water	08/22/12 10:45	08/23/12 09:53
680-82284-9	MW-8U	Water	08/22/12 12:20	08/23/12 09:53
680-82284-10	MW-6	Water	08/22/12 13:15	08/23/12 09:53
680-82284-11	MW-4	Water	08/22/12 14:45	08/23/12 09:53
680-82284-12	Trip Blank	Water	08/22/12 00:00	08/23/12 09:53

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.
E	Result exceeded calibration range.
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/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits
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.

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	RPD of the LCS and LCSD exceeds the control limits
F	RPD of the MS and 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.

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.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
F	MS or MSD exceeds the control limits
F	RPD of the MS and MSD exceeds the control limits

General Chemistry

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.
HF	Field parameter with a holding time of 15 minutes
U	Indicates the analyte was analyzed for but not detected.
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
F	Duplicate RPD exceeds the control limit

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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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 Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: RAB-MW1R — Lab Sample ID: 680-82186-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
t-Butanol	19000		1300	650	ug/L	250		8260B	Total/NA
Methane	620	*	0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	940		100	50	ug/L	1		6020A	Total/NA
Arsenic	2.2	J	2.5	1.3	ug/L	1		6020A	Total/NA
Barium	260		5.0	1.4	ug/L	1		6020A	Total/NA
Cadmium	0.15	J	0.50	0.13	ug/L	1		6020A	Total/NA
Chromium	27		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	68		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	5.3		5.0	1.1	ug/L	1		6020A	Total/NA
Iron	89000		100	44	ug/L	1		6020A	Total/NA
Lead	1.6	B	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	6100		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	28		5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	170		2.0	0.36	mg/L	2		325.2	Total/NA
Total Kjeldahl Nitrogen	4.1		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	0.010	J	0.050	0.010	mg/L	1		353.2	Total/NA
Nitrite as N	0.013	J	0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	350		100	50	mg/L	20		375.4	Total/NA
Total Organic Carbon	22		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	45	HF	2.0	0.50	mg/L	20		SM 3500 FE D	Total/NA

Client Sample ID: RAB-MW3 — Lab Sample ID: 680-82186-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	1.7	J	10	1.0	ug/L	1		8260B	Total/NA
t-Butanol	140	E	5.0	2.6	ug/L	1		8260B	Total/NA
t-Butanol - DL	150	D	25	13	ug/L	5		8260B	Total/NA
Methane	87		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	410		100	50	ug/L	1		6020A	Total/NA
Arsenic	4.6		2.5	1.3	ug/L	1		6020A	Total/NA
Barium	240		5.0	1.4	ug/L	1		6020A	Total/NA
Chromium	10		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	5.9		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	4.4	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	170000		100	44	ug/L	1		6020A	Total/NA
Lead	1.1	J B	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	570		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	13		5.0	2.0	ug/L	1		6020A	Total/NA
Selenium	1.3	J	2.5	1.1	ug/L	1		6020A	Total/NA
Vanadium	7.0	J	10	3.2	ug/L	1		6020A	Total/NA
Chloride	67		1.0	0.18	mg/L	1		325.2	Total/NA
Total Kjeldahl Nitrogen	4.9		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	0.56		0.050	0.010	mg/L	1		353.2	Total/NA
Nitrite as N	0.017	J	0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	25		5.0	2.5	mg/L	1		375.4	Total/NA
Total Organic Carbon	40		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	110	HF	5.0	1.3	mg/L	50		SM 3500 FE D	Total/NA

Client Sample ID: RAB-MW4 — Lab Sample ID: 680-82186-3

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: RAB-MW4 (Continued) — Lab Sample ID: 680-82186-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	9.1	J	10	1.0	ug/L	1		8260B	Total/NA
Methane	3.1		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	1300		100	50	ug/L	1		6020A	Total/NA
Barium	15		5.0	1.4	ug/L	1		6020A	Total/NA
Cadmium	0.51		0.50	0.13	ug/L	1		6020A	Total/NA
Chromium	13		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	0.92		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	2.4	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	1400		100	44	ug/L	1		6020A	Total/NA
Lead	1.4	J B	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	250		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	39		5.0	2.0	ug/L	1		6020A	Total/NA
Vanadium	3.5	J	10	3.2	ug/L	1		6020A	Total/NA
Chloride	190		2.0	0.36	mg/L	2		325.2	Total/NA
Total Kjeldahl Nitrogen	0.37		0.20	0.15	mg/L	1		351.2	Total/NA
Sulfate	960		250	130	mg/L	50		375.4	Total/NA
Total Organic Carbon	1.9		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	0.027	J HF	0.10	0.025	mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 680-82186-4

No Detections

Client Sample ID: NAT-3 — Lab Sample ID: 680-82233-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
t-Butanol	69000		10000	5200	ug/L	2000		8260B	Total/NA
1,4-Dioxane	12		9.4	3.2	ug/L	1		8270D	Total/NA
Methane	150		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	390		100	50	ug/L	1		6020A	Total/NA
Arsenic	6.1		2.5	1.3	ug/L	1		6020A	Total/NA
Barium	90		5.0	1.4	ug/L	1		6020A	Total/NA
Chromium	13		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	15		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	1.3	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	2900		100	44	ug/L	1		6020A	Total/NA
Lead	0.91	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	1300		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	25		5.0	2.0	ug/L	1		6020A	Total/NA
Vanadium	4.3	J	10	3.2	ug/L	1		6020A	Total/NA
Chloride	240		5.0	0.90	mg/L	5		325.2	Total/NA
Total Kjeldahl Nitrogen	2.1		0.20	0.15	mg/L	1		351.2	Total/NA
Sulfate	3.4	J	5.0	2.5	mg/L	1		375.4	Total/NA
Total Organic Carbon	86		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	0.065	J HF	0.10	0.025	mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: Field Duplicate 2 — Lab Sample ID: 680-82233-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
t-Butanol	63000		10000	5200	ug/L	2000		8260B	Total/NA
1,4-Dioxane	12		9.5	3.2	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Field Duplicate 2 (Continued) — Lab Sample ID: 680-82233-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	780		100	50	ug/L	1		6020A	Total/NA
Arsenic	6.6		2.5	1.3	ug/L	1		6020A	Total/NA
Barium	90		5.0	1.4	ug/L	1		6020A	Total/NA
Chromium	31		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	15		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	2.6	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	3200		100	44	ug/L	1		6020A	Total/NA
Lead	1.4	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	1200		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	35		5.0	2.0	ug/L	1		6020A	Total/NA
Vanadium	5.3	J	10	3.2	ug/L	1		6020A	Total/NA

Client Sample ID: NAT-2 — Lab Sample ID: 680-82233-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
t-Butanol	11000		1300	650	ug/L	250		8260B	Total/NA
Methane	380		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	1500		100	50	ug/L	1		6020A	Total/NA
Arsenic	3.6		2.5	1.3	ug/L	1		6020A	Total/NA
Barium	70		5.0	1.4	ug/L	1		6020A	Total/NA
Chromium	11		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	4.7		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	2.1	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	9400		100	44	ug/L	1		6020A	Total/NA
Lead	1.6		1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	200		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	9.8		5.0	2.0	ug/L	1		6020A	Total/NA
Vanadium	4.8	J	10	3.2	ug/L	1		6020A	Total/NA
Chloride	100		2.0	0.36	mg/L	2		325.2	Total/NA
Total Kjeldahl Nitrogen	1.9		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	0.019	J	0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	150		50	25	mg/L	10		375.4	Total/NA
Total Organic Carbon	18		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	0.12	HF	0.10	0.025	mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: Equipment Blank 2 — Lab Sample ID: 680-82233-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
t-Butanol	48		5.0	2.6	ug/L	1		8260B	Total/NA
Lead	0.73	J	1.5	0.50	ug/L	1		6020A	Total/NA

Client Sample ID: Field Blank 1 — Lab Sample ID: 680-82233-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.61	J	1.5	0.50	ug/L	1		6020A	Total/NA

Client Sample ID: MW-10 — Lab Sample ID: 680-82233-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.79	J	1.0	0.14	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-10 (Continued) — Lab Sample ID: 680-82233-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.1		1.0	0.25	ug/L	1		8260B	Total/NA
Diethyl ether	34		10	1.0	ug/L	1		8260B	Total/NA
t-Butanol	29		5.0	2.6	ug/L	1		8260B	Total/NA
1,1,2,2-Tetrachloroethane	0.32	J	1.0	0.18	ug/L	1		8260B	Total/NA
Tetrachloroethene	8.9		1.0	0.15	ug/L	1		8260B	Total/NA
Trichloroethene	1.4		1.0	0.13	ug/L	1		8260B	Total/NA
1,4-Dioxane	19		9.4	3.2	ug/L	1		8270D	Total/NA
Methane	0.41	J	0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	290		100	50	ug/L	1		6020A	Total/NA
Barium	15		5.0	1.4	ug/L	1		6020A	Total/NA
Beryllium	0.22	J	0.50	0.15	ug/L	1		6020A	Total/NA
Cadmium	3.8		0.50	0.13	ug/L	1		6020A	Total/NA
Cobalt	75		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	5.4		5.0	1.1	ug/L	1		6020A	Total/NA
Iron	220		100	44	ug/L	1		6020A	Total/NA
Lead	0.98	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	3700		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	61		5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	230		5.0	0.90	mg/L	5		325.2	Total/NA
Total Kjeldahl Nitrogen	0.28		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	4.3		0.25	0.050	mg/L	5		353.2	Total/NA
Sulfate	520		100	50	mg/L	20		375.4	Total/NA
Total Organic Carbon	1.7		1.0	0.50	mg/L	1		9060	Total/NA

Client Sample ID: Field Duplicate 1 — Lab Sample ID: 680-82233-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.90	J	1.0	0.14	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	1.1		1.0	0.25	ug/L	1		8260B	Total/NA
Diethyl ether	37		10	1.0	ug/L	1		8260B	Total/NA
t-Butanol	14		5.0	2.6	ug/L	1		8260B	Total/NA
1,1,2,2-Tetrachloroethane	0.31	J	1.0	0.18	ug/L	1		8260B	Total/NA
Tetrachloroethene	9.2		1.0	0.15	ug/L	1		8260B	Total/NA
Trichloroethene	1.5		1.0	0.13	ug/L	1		8260B	Total/NA
1,4-Dioxane	24		9.4	3.2	ug/L	1		8270D	Total/NA
Aluminum	380		100	50	ug/L	1		6020A	Total/NA
Barium	15		5.0	1.4	ug/L	1		6020A	Total/NA
Beryllium	0.23	J	0.50	0.15	ug/L	1		6020A	Total/NA
Cadmium	3.7		0.50	0.13	ug/L	1		6020A	Total/NA
Chromium	4.0	J	5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	75		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	4.9	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	270		100	44	ug/L	1		6020A	Total/NA
Lead	0.90	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	3800		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	62		5.0	2.0	ug/L	1		6020A	Total/NA

Client Sample ID: NAT-1 — Lab Sample ID: 680-82233-8

This Detection Summary does not include radiochemical test results.

Client Sample ID: NAT-1 (Continued) — Lab Sample ID: 680-82233-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
t-Butanol	66		5.0	2.6	ug/L	1		8260B	Total/NA
Trichloroethene	37		1.0	0.13	ug/L	1		8260B	Total/NA
Methane	15		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	400		100	50	ug/L	1		6020A	Total/NA
Barium	36		5.0	1.4	ug/L	1		6020A	Total/NA
Cadmium	0.36	J	0.50	0.13	ug/L	1		6020A	Total/NA
Cobalt	22		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	2.4	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	370		100	44	ug/L	1		6020A	Total/NA
Lead	1.2	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	1200		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	11		5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	72		1.0	0.18	mg/L	1		325.2	Total/NA
Total Kjeldahl Nitrogen	0.38		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	12		0.50	0.10	mg/L	10		353.2	Total/NA
Sulfate	350		100	50	mg/L	20		375.4	Total/NA
Total Organic Carbon	1.6		1.0	0.50	mg/L	1		9060	Total/NA

Client Sample ID: MW-1 — Lab Sample ID: 680-82233-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	2100		500	50	ug/L	50		8260B	Total/NA
1,4-Dioxane	18		9.5	3.2	ug/L	1		8270D	Total/NA
Ethanol	2.0	J	5.0	0.33	mg/L	1		8015C	Total/NA
Barium	59		5.0	1.4	ug/L	1		6020A	Total/NA
Beryllium	0.15	J	0.50	0.15	ug/L	1		6020A	Total/NA
Chromium	3.0	J	5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	0.42	J	0.50	0.12	ug/L	1		6020A	Total/NA
Copper	5.7		5.0	1.1	ug/L	1		6020A	Total/NA
Iron	6200		100	44	ug/L	1		6020A	Total/NA
Lead	0.82	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	2800		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	3.2	J	5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	220		5.0	0.90	mg/L	5		325.2	Total/NA
Total Kjeldahl Nitrogen	0.25		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	0.011	J	0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	840		250	130	mg/L	50		375.4	Total/NA
Total Organic Carbon	3.5		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	6.0	HF	0.20	0.050	mg/L	2		SM 3500 FE D	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 680-82233-10

No Detections

Client Sample ID: SDB-MW-3 — Lab Sample ID: 680-82284-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	1.2		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	180		100	50	ug/L	1		6020A	Total/NA
Barium	11		5.0	1.4	ug/L	1		6020A	Total/NA
Cadmium	0.24	J	0.50	0.13	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: SDB-MW-3 (Continued) — Lab Sample ID: 680-82284-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	5.3		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	4.7		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	9.8		5.0	1.1	ug/L	1		6020A	Total/NA
Iron	610		100	44	ug/L	1		6020A	Total/NA
Manganese	930		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	33		5.0	2.0	ug/L	1		6020A	Total/NA
Selenium	9.2		2.5	1.1	ug/L	1		6020A	Total/NA
Chloride	280		5.0	0.90	mg/L	5		325.2	Total/NA
Total Kjeldahl Nitrogen	0.69		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	0.26		0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	1200		250	130	mg/L	50		375.4	Total/NA
Total Organic Carbon	4.4		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	0.29	HF	0.10	0.025	mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: SDB-MW-2 — Lab Sample ID: 680-82284-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	0.48	J	0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	110		100	50	ug/L	1		6020A	Total/NA
Barium	11		5.0	1.4	ug/L	1		6020A	Total/NA
Cadmium	0.14	J	0.50	0.13	ug/L	1		6020A	Total/NA
Chromium	4.3	J	5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	2.7		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	1.8	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	510		100	44	ug/L	1		6020A	Total/NA
Manganese	1100		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	26		5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	120		2.0	0.36	mg/L	2		325.2	Total/NA
Total Kjeldahl Nitrogen	0.46		0.20	0.15	mg/L	1		351.2	Total/NA
Sulfate	1400		250	130	mg/L	50		375.4	Total/NA
Total Organic Carbon	5.2		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	0.19	HF	0.10	0.025	mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: SDB-MW-1 — Lab Sample ID: 680-82284-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	3100		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	200		100	50	ug/L	1		6020A	Total/NA
Arsenic	6.1		2.5	1.3	ug/L	1		6020A	Total/NA
Barium	350		5.0	1.4	ug/L	1		6020A	Total/NA
Chromium	4.5	J	5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	3.0		0.50	0.12	ug/L	1		6020A	Total/NA
Iron	170000		100	44	ug/L	1		6020A	Total/NA
Manganese	1700		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	3.2	J	5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	44		1.0	0.18	mg/L	1		325.2	Total/NA
Total Kjeldahl Nitrogen	14		1.0	0.75	mg/L	5		351.2	Total/NA
Nitrite as N	0.024	J	0.050	0.010	mg/L	1		353.2	Total/NA
Total Organic Carbon	50		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	140	HF	5.0	1.3	mg/L	50		SM 3500 FE D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-5U — Lab Sample ID: 680-82284-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	610		100	10	ug/L	10		8260B	Total/NA
1,4-Dioxane	3.3	J	9.4	3.2	ug/L	1		8270D	Total/NA
Methane	97		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	100		100	50	ug/L	1		6020A	Total/NA
Arsenic	8.4		2.5	1.3	ug/L	1		6020A	Total/NA
Barium	210		5.0	1.4	ug/L	1		6020A	Total/NA
Chromium	7.6		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	9.7		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	6.0		5.0	1.1	ug/L	1		6020A	Total/NA
Iron	19000		100	44	ug/L	1		6020A	Total/NA
Lead	0.57	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	2300		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	7.6		5.0	2.0	ug/L	1		6020A	Total/NA
Vanadium	310		10	3.2	ug/L	1		6020A	Total/NA
Chloride	2600		50	9.0	mg/L	50		325.2	Total/NA
Total Kjeldahl Nitrogen	3.5		1.0	0.75	mg/L	1		351.2	Total/NA
Sulfate	400		100	50	mg/L	20		375.4	Total/NA
Total Organic Carbon	27		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	0.46	HF	0.10	0.025	mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 680-82284-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	200		20	2.0	ug/L	2		8260B	Total/NA
t-Butanol	190		10	5.2	ug/L	2		8260B	Total/NA
Methane	160		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	740		100	50	ug/L	1		6020A	Total/NA
Barium	1200		5.0	1.4	ug/L	1		6020A	Total/NA
Chromium	7.8		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	1.3		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	3.6	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	84000		100	44	ug/L	1		6020A	Total/NA
Lead	0.62	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	3900		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	5.3		5.0	2.0	ug/L	1		6020A	Total/NA
Vanadium	3.5	J	10	3.2	ug/L	1		6020A	Total/NA
Chloride	1300		20	3.6	mg/L	20		325.2	Total/NA
Total Kjeldahl Nitrogen	3.7		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrite as N	0.022	J	0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	66		50	25	mg/L	10		375.4	Total/NA
Total Organic Carbon	17		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	72	HF	5.0	1.3	mg/L	50		SM 3500 FE D	Total/NA

Client Sample ID: MW-8D — Lab Sample ID: 680-82284-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	0.77		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	430		100	50	ug/L	1		6020A	Total/NA
Barium	70		5.0	1.4	ug/L	1		6020A	Total/NA
Cadmium	0.58		0.50	0.13	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-8D (Continued) — Lab Sample ID: 680-82284-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.20	J	0.50	0.12	ug/L	1		6020A	Total/NA
Copper	3.0	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	910		100	44	ug/L	1		6020A	Total/NA
Lead	0.70	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	220		5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	3.9		1.0	0.18	mg/L	1		325.2	Total/NA
Total Kjeldahl Nitrogen	0.49		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	0.098		0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	6.2		5.0	2.5	mg/L	1		375.4	Total/NA
Ferrous Iron	0.25	HF	0.10	0.025	mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: Field Blank 2 (@ MW-8 Wells) — Lab Sample ID: 680-82284-7

No Detections

Client Sample ID: MW-8L-R — Lab Sample ID: 680-82284-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	3400		500	50	ug/L	50		8260B	Total/NA
t-Butanol	4300		250	130	ug/L	50		8260B	Total/NA
1,4-Dioxane	18		9.5	3.2	ug/L	1		8270D	Total/NA
Ethanol	2.6	J	5.0	0.33	mg/L	1		8015C	Total/NA
Methane	160		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	600		100	50	ug/L	1		6020A	Total/NA
Arsenic	29		2.5	1.3	ug/L	1		6020A	Total/NA
Barium	570		5.0	1.4	ug/L	1		6020A	Total/NA
Cadmium	0.35	J	0.50	0.13	ug/L	1		6020A	Total/NA
Chromium	4.2	J	5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	2.8		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	3.7	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	36000		100	44	ug/L	1		6020A	Total/NA
Lead	0.73	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	2100		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	3.6	J	5.0	2.0	ug/L	1		6020A	Total/NA
Vanadium	8.6	J	10	3.2	ug/L	1		6020A	Total/NA
Chloride	720		10	1.8	mg/L	10		325.2	Total/NA
Total Kjeldahl Nitrogen	22		1.0	0.75	mg/L	1		351.2	Total/NA
Sulfate	360		100	50	mg/L	20		375.4	Total/NA
Total Organic Carbon	24		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	13	HF	1.0	0.25	mg/L	10		SM 3500 FE D	Total/NA

Client Sample ID: MW-8U — Lab Sample ID: 680-82284-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	2200		250	25	ug/L	25		8260B	Total/NA
t-Butanol	590		130	65	ug/L	25		8260B	Total/NA
1,4-Dioxane	14		9.5	3.2	ug/L	1		8270D	Total/NA
Ethanol	1.6	J	5.0	0.33	mg/L	1		8015C	Total/NA
Methane	50		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	410		100	50	ug/L	1		6020A	Total/NA
Arsenic	8.7		2.5	1.3	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-8U (Continued) — Lab Sample ID: 680-82284-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	250		5.0	1.4	ug/L	1		6020A	Total/NA
Cadmium	0.18	J	0.50	0.13	ug/L	1		6020A	Total/NA
Cobalt	2.9		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	13		5.0	1.1	ug/L	1		6020A	Total/NA
Iron	25000		100	44	ug/L	1		6020A	Total/NA
Manganese	790		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	2.1	J	5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	450		5.0	0.90	mg/L	5		325.2	Total/NA
Total Kjeldahl Nitrogen	12		1.0	0.75	mg/L	5		351.2	Total/NA
Sulfate	510		100	50	mg/L	20		375.4	Total/NA
Total Organic Carbon	11		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	36	HF	1.0	0.25	mg/L	10		SM 3500 FE D	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 680-82284-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	1600		250	25	ug/L	25		8260B	Total/NA
t-Butanol	1400		130	65	ug/L	25		8260B	Total/NA
1,4-Dioxane	4.6	J	9.5	3.2	ug/L	1		8270D	Total/NA
Ethanol	0.94	J	5.0	0.33	mg/L	1		8015C	Total/NA
Methane	120		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	520		100	50	ug/L	1		6020A	Total/NA
Arsenic	2.1	J	2.5	1.3	ug/L	1		6020A	Total/NA
Barium	450		5.0	1.4	ug/L	1		6020A	Total/NA
Cadmium	1.9		0.50	0.13	ug/L	1		6020A	Total/NA
Cobalt	20		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	2.4	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	50000		100	44	ug/L	1		6020A	Total/NA
Lead	0.62	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	4600		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	5.4		5.0	2.0	ug/L	1		6020A	Total/NA
Vanadium	4.1	J	10	3.2	ug/L	1		6020A	Total/NA
Chloride	720		10	1.8	mg/L	10		325.2	Total/NA
Total Kjeldahl Nitrogen	4.6		0.20	0.15	mg/L	1		351.2	Total/NA
Sulfate	140		25	13	mg/L	5		375.4	Total/NA
Total Organic Carbon	20		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	16	HF	1.0	0.25	mg/L	10		SM 3500 FE D	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 680-82284-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	1500		250	25	ug/L	25		8260B	Total/NA
t-Butanol	2200		130	65	ug/L	25		8260B	Total/NA
1,4-Dioxane	5.1	J	9.5	3.2	ug/L	1		8270D	Total/NA
Ethanol	1.1	J	5.0	0.33	mg/L	1		8015C	Total/NA
Methane	7400		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	1200		100	50	ug/L	1		6020A	Total/NA
Arsenic	3.7		2.5	1.3	ug/L	1		6020A	Total/NA
Barium	760		5.0	1.4	ug/L	1		6020A	Total/NA
Beryllium	0.19	J	0.50	0.15	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-4 (Continued) — Lab Sample ID: 680-82284-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.26	J	0.50	0.13	ug/L	1		6020A	Total/NA
Chromium	6.6		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	11		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	5.8		5.0	1.1	ug/L	1		6020A	Total/NA
Iron	60000		100	44	ug/L	1		6020A	Total/NA
Lead	0.96	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	2600		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	5.1		5.0	2.0	ug/L	1		6020A	Total/NA
Vanadium	6.1	J	10	3.2	ug/L	1		6020A	Total/NA
Chloride	500		5.0	0.90	mg/L	5		325.2	Total/NA
Total Kjeldahl Nitrogen	4.7		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	0.25		0.050	0.010	mg/L	1		353.2	Total/NA
Total Organic Carbon	34		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	36	HF	1.0	0.25	mg/L	10		SM 3500 FE D	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 680-82284-12

No Detections

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: RAB-MW1R

Date Collected: 08/20/12 13:10
Date Received: 08/21/12 09:33

Lab Sample ID: 680-82186-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	250	U	250	35	ug/L			08/29/12 22:19	250
1,1-Dichloroethane	250	U	250	63	ug/L			08/29/12 22:19	250
1,2-Dichloroethane	250	U	250	25	ug/L			08/29/12 22:19	250
Diethyl ether	2500	U	2500	250	ug/L			08/29/12 22:19	250
t-Butanol	**19000**		1300	650	ug/L			08/29/12 22:19	250
1,1,2,2-Tetrachloroethane	250	U	250	45	ug/L			08/29/12 22:19	250
Tetrachloroethene	250	U	250	38	ug/L			08/29/12 22:19	250
Trichloroethene	250	U	250	33	ug/L			08/29/12 22:19	250

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*08/29/12 22:19*	*250*
Dibromofluoromethane	*94*		*70 - 130*		*08/29/12 22:19*	*250*
Toluene-d8 (Surr)	*96*		*70 - 130*		*08/29/12 22:19*	*250*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/23/12 13:01	1
Methanol	5.0	U	5.0	1.0	mg/L			08/23/12 13:01	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**620**	*	0.58	0.29	ug/L			09/03/12 19:49	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**940**		100	50	ug/L		08/22/12 09:06	08/24/12 18:47	1
Antimony	5.0	U	5.0	2.0	ug/L		08/22/12 09:06	08/24/12 18:47	1
Arsenic	**2.2**	**J**	2.5	1.3	ug/L		08/22/12 09:06	08/24/12 18:47	1
Barium	**260**		5.0	1.4	ug/L		08/22/12 09:06	08/24/12 18:47	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/22/12 09:06	08/24/12 18:47	1
Cadmium	**0.15**	**J**	0.50	0.13	ug/L		08/22/12 09:06	08/24/12 18:47	1
Chromium	**27**		5.0	2.5	ug/L		08/22/12 09:06	08/24/12 18:47	1
Cobalt	**68**		0.50	0.12	ug/L		08/22/12 09:06	08/24/12 18:47	1
Copper	**5.3**		5.0	1.1	ug/L		08/22/12 09:06	08/24/12 18:47	1
Iron	**89000**		100	44	ug/L		08/22/12 09:06	08/24/12 18:47	1
Lead	**1.6**	**B**	1.5	0.50	ug/L		08/22/12 09:06	08/24/12 18:47	1
Manganese	**6100**		5.0	2.0	ug/L		08/22/12 09:06	08/24/12 18:47	1
Mercury	0.80	U	0.80	0.40	ug/L		08/22/12 09:06	08/24/12 18:47	1
Nickel	**28**		5.0	2.0	ug/L		08/22/12 09:06	08/24/12 18:47	1
Selenium	2.5	U	2.5	1.1	ug/L		08/22/12 09:06	08/24/12 18:47	1
Vanadium	10	U	10	3.2	ug/L		08/22/12 09:06	08/24/12 18:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**170**		2.0	0.36	mg/L			09/05/12 11:27	2
Total Kjeldahl Nitrogen	**4.1**		0.20	0.15	mg/L		08/29/12 08:46	08/30/12 17:37	1
Nitrate as N	**0.010**	**J**	0.050	0.010	mg/L			08/21/12 18:37	1
Nitrite as N	**0.013**	**J**	0.050	0.010	mg/L			08/21/12 18:37	1
Sulfate	**350**		100	50	mg/L			09/06/12 11:09	20
Total Organic Carbon	**22**		1.0	0.50	mg/L			08/24/12 02:00	1

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: RAB-MW1R
Date Collected: 08/20/12 13:10
Date Received: 08/21/12 09:33

Lab Sample ID: 680-82186-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ferrous Iron	45	HF	2.0	0.50	mg/L			08/22/12 09:51	20

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: RAB-MW3

Date Collected: 08/20/12 12:45
Date Received: 08/21/12 09:33

Lab Sample ID: 680-82186-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			08/28/12 18:37	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/28/12 18:37	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			08/28/12 18:37	1
Diethyl ether	**1.7**	**J**	10	1.0	ug/L			08/28/12 18:37	1
t-Butanol	**140**	**E**	5.0	2.6	ug/L			08/28/12 18:37	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			08/28/12 18:37	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			08/28/12 18:37	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			08/28/12 18:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*70 - 130*		*08/28/12 18:37*	*1*
Dibromofluoromethane	*95*		*70 - 130*		*08/28/12 18:37*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*08/28/12 18:37*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	5.0	U	5.0	0.70	ug/L			08/29/12 22:48	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			08/29/12 22:48	5
1,2-Dichloroethane	5.0	U	5.0	0.50	ug/L			08/29/12 22:48	5
Diethyl ether	50	U	50	5.0	ug/L			08/29/12 22:48	5
t-Butanol	**150**	**D**	25	13	ug/L			08/29/12 22:48	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.90	ug/L			08/29/12 22:48	5
Tetrachloroethene	5.0	U	5.0	0.75	ug/L			08/29/12 22:48	5
Trichloroethene	5.0	U	5.0	0.65	ug/L			08/29/12 22:48	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*08/29/12 22:48*	*5*
Dibromofluoromethane	*91*		*70 - 130*		*08/29/12 22:48*	*5*
Toluene-d8 (Surr)	*96*		*70 - 130*		*08/29/12 22:48*	*5*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/23/12 14:12	1
Methanol	5.0	U	5.0	1.0	mg/L			08/23/12 14:12	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**87**		0.58	0.29	ug/L			08/25/12 23:21	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**410**		100	50	ug/L		08/22/12 09:06	08/24/12 19:23	1
Antimony	5.0	U	5.0	2.0	ug/L		08/22/12 09:06	08/24/12 19:23	1
Arsenic	**4.6**		2.5	1.3	ug/L		08/22/12 09:06	08/24/12 19:23	1
Barium	**240**		5.0	1.4	ug/L		08/22/12 09:06	08/24/12 19:23	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/22/12 09:06	08/24/12 19:23	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/22/12 09:06	08/24/12 19:23	1
Chromium	**10**		5.0	2.5	ug/L		08/22/12 09:06	08/24/12 19:23	1
Cobalt	**5.9**		0.50	0.12	ug/L		08/22/12 09:06	08/24/12 19:23	1
Copper	**4.4**	**J**	5.0	1.1	ug/L		08/22/12 09:06	08/24/12 19:23	1
Iron	**170000**		100	44	ug/L		08/22/12 09:06	08/24/12 19:23	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: RAB-MW3

Date Collected: 08/20/12 12:45
Date Received: 08/21/12 09:33

Lab Sample ID: 680-82186-2

Matrix: Water

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1.1	J B	1.5	0.50	ug/L		08/22/12 09:06	08/24/12 19:23	1
Manganese	570		5.0	2.0	ug/L		08/22/12 09:06	08/24/12 19:23	1
Mercury	0.80	U	0.80	0.40	ug/L		08/22/12 09:06	08/24/12 19:23	1
Nickel	13		5.0	2.0	ug/L		08/22/12 09:06	08/24/12 19:23	1
Selenium	1.3	J	2.5	1.1	ug/L		08/22/12 09:06	08/24/12 19:23	1
Vanadium	7.0	J	10	3.2	ug/L		08/22/12 09:06	08/24/12 19:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	67		1.0	0.18	mg/L			09/05/12 10:54	1
Total Kjeldahl Nitrogen	4.9		0.20	0.15	mg/L		08/29/12 08:46	08/30/12 17:37	1
Nitrate as N	0.56		0.050	0.010	mg/L			08/21/12 18:38	1
Nitrite as N	0.017	J	0.050	0.010	mg/L			08/21/12 18:38	1
Sulfate	25		5.0	2.5	mg/L			09/06/12 10:30	1
Total Organic Carbon	40		1.0	0.50	mg/L			08/24/12 02:17	1
Ferrous Iron	110	HF	5.0	1.3	mg/L			08/22/12 10:40	50

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: RAB-MW4

Lab Sample ID: 680-82186-3

Date Collected: 08/20/12 14:35
Date Received: 08/21/12 09:33

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			08/28/12 01:11	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/28/12 01:11	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			08/28/12 01:11	1
Diethyl ether	**9.1**	**J**	10	1.0	ug/L			08/28/12 01:11	1
t-Butanol	5.0	U	5.0	2.6	ug/L			08/28/12 01:11	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			08/28/12 01:11	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			08/28/12 01:11	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			08/28/12 01:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*70 - 130*		*08/28/12 01:11*	*1*
Dibromofluoromethane	*99*		*70 - 130*		*08/28/12 01:11*	*1*
Toluene-d8 (Surr)	*91*		*70 - 130*		*08/28/12 01:11*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/23/12 14:36	1
Methanol	5.0	U	5.0	1.0	mg/L			08/23/12 14:36	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**3.1**		0.58	0.29	ug/L			08/25/12 23:09	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**1300**		100	50	ug/L		08/22/12 09:06	08/24/12 19:31	1
Antimony	5.0	U	5.0	2.0	ug/L		08/22/12 09:06	08/24/12 19:31	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/22/12 09:06	08/24/12 19:31	1
Barium	**15**		5.0	1.4	ug/L		08/22/12 09:06	08/24/12 19:31	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/22/12 09:06	08/24/12 19:31	1
Cadmium	**0.51**		0.50	0.13	ug/L		08/22/12 09:06	08/24/12 19:31	1
Chromium	**13**		5.0	2.5	ug/L		08/22/12 09:06	08/24/12 19:31	1
Cobalt	**0.92**		0.50	0.12	ug/L		08/22/12 09:06	08/24/12 19:31	1
Copper	**2.4**	**J**	5.0	1.1	ug/L		08/22/12 09:06	08/24/12 19:31	1
Iron	**1400**		100	44	ug/L		08/22/12 09:06	08/24/12 19:31	1
Lead	**1.4**	**J B**	1.5	0.50	ug/L		08/22/12 09:06	08/24/12 19:31	1
Manganese	**250**		5.0	2.0	ug/L		08/22/12 09:06	08/24/12 19:31	1
Mercury	0.80	U	0.80	0.40	ug/L		08/22/12 09:06	08/24/12 19:31	1
Nickel	**39**		5.0	2.0	ug/L		08/22/12 09:06	08/24/12 19:31	1
Selenium	2.5	U	2.5	1.1	ug/L		08/22/12 09:06	08/24/12 19:31	1
Vanadium	**3.5**	**J**	10	3.2	ug/L		08/22/12 09:06	08/24/12 19:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**190**		2.0	0.36	mg/L			09/05/12 11:27	2
Total Kjeldahl Nitrogen	**0.37**		0.20	0.15	mg/L		08/29/12 08:46	08/30/12 17:37	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/21/12 18:22	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/21/12 18:22	1
Sulfate	**960**		250	130	mg/L			09/06/12 11:28	50
Total Organic Carbon	**1.9**		1.0	0.50	mg/L			08/24/12 02:35	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: RAB-MW4

Lab Sample ID: 680-82186-3

Date Collected: 08/20/12 14:35
Matrix: Water
Date Received: 08/21/12 09:33

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ferrous Iron	0.027	J HF	0.10	0.025	mg/L			08/22/12 09:35	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Trip Blank

Lab Sample ID: 680-82186-4

Date Collected: 08/20/12 00:00

Matrix: Water

Date Received: 08/21/12 09:33

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			08/27/12 21:14	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/27/12 21:14	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			08/27/12 21:14	1
Diethyl ether	10	U	10	1.0	ug/L			08/27/12 21:14	1
t-Butanol	5.0	U	5.0	2.6	ug/L			08/27/12 21:14	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			08/27/12 21:14	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			08/27/12 21:14	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			08/27/12 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*70 - 130*		*08/27/12 21:14*	*1*
Dibromofluoromethane	*102*		*70 - 130*		*08/27/12 21:14*	*1*
Toluene-d8 (Surr)	*91*		*70 - 130*		*08/27/12 21:14*	*1*

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: NAT-3

Date Collected: 08/21/12 09:25
Date Received: 08/22/12 10:00

Lab Sample ID: 680-82233-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	2000	U	2000	280	ug/L			08/29/12 20:08	2000
1,1-Dichloroethane	2000	U	2000	500	ug/L			08/29/12 20:08	2000
1,2-Dichloroethane	2000	U	2000	200	ug/L			08/29/12 20:08	2000
Diethyl ether	20000	U	20000	2000	ug/L			08/29/12 20:08	2000
t-Butanol	**69000**		10000	5200	ug/L			08/29/12 20:08	2000
1,1,2,2-Tetrachloroethane	2000	U	2000	360	ug/L			08/29/12 20:08	2000
Tetrachloroethene	2000	U	2000	300	ug/L			08/29/12 20:08	2000
Trichloroethene	2000	U	2000	260	ug/L			08/29/12 20:08	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*70 - 130*		*08/29/12 20:08*	*2000*
Dibromofluoromethane	*104*		*70 - 130*		*08/29/12 20:08*	*2000*
Toluene-d8 (Surr)	*102*		*70 - 130*		*08/29/12 20:08*	*2000*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.4	U	9.4	1.0	ug/L		08/24/12 16:11	08/29/12 14:23	1
Bis(2-ethylhexyl) phthalate	9.4	U	9.4	1.5	ug/L		08/24/12 16:11	08/29/12 14:23	1
1,4-Dioxane	**12**		9.4	3.2	ug/L		08/24/12 16:11	08/29/12 14:23	1
Naphthalene	9.4	U	9.4	0.66	ug/L		08/24/12 16:11	08/29/12 14:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*38 - 130*	*08/24/12 16:11*	*08/29/12 14:23*	*1*
2-Fluorophenol (Surr)	*71*		*25 - 130*	*08/24/12 16:11*	*08/29/12 14:23*	*1*
Nitrobenzene-d5 (Surr)	*70*		*39 - 130*	*08/24/12 16:11*	*08/29/12 14:23*	*1*
Phenol-d5 (Surr)	*71*		*25 - 130*	*08/24/12 16:11*	*08/29/12 14:23*	*1*
Terphenyl-d14 (Surr)	*27*		*10 - 143*	*08/24/12 16:11*	*08/29/12 14:23*	*1*
2,4,6-Tribromophenol (Surr)	*97*		*31 - 141*	*08/24/12 16:11*	*08/29/12 14:23*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/23/12 15:00	1
Methanol	5.0	U	5.0	1.0	mg/L			08/23/12 15:00	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**150**		0.58	0.29	ug/L			08/25/12 22:56	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**390**		100	50	ug/L		08/23/12 08:17	08/25/12 02:35	1
Antimony	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:35	1
Arsenic	**6.1**		2.5	1.3	ug/L		08/23/12 08:17	08/25/12 02:35	1
Barium	**90**		5.0	1.4	ug/L		08/23/12 08:17	08/25/12 02:35	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/23/12 08:17	08/25/12 02:35	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/23/12 08:17	08/25/12 02:35	1
Chromium	**13**		5.0	2.5	ug/L		08/23/12 08:17	08/25/12 02:35	1
Cobalt	**15**		0.50	0.12	ug/L		08/23/12 08:17	08/25/12 02:35	1
Copper	**1.3**	**J**	5.0	1.1	ug/L		08/23/12 08:17	08/25/12 02:35	1
Iron	**2900**		100	44	ug/L		08/23/12 08:17	08/25/12 02:35	1
Lead	**0.91**	**J**	1.5	0.50	ug/L		08/23/12 08:17	08/25/12 02:35	1

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: NAT-3

Lab Sample ID: 680-82233-1

Date Collected: 08/21/12 09:25
Matrix: Water
Date Received: 08/22/12 10:00

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**1300**		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:35	1
Mercury	0.80	U	0.80	0.40	ug/L		08/23/12 08:17	08/25/12 02:35	1
Nickel	**25**		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:35	1
Selenium	2.5	U	2.5	1.1	ug/L		08/23/12 08:17	08/25/12 02:35	1
Vanadium	**4.3**	**J**	10	3.2	ug/L		08/23/12 08:17	08/25/12 02:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**240**		5.0	0.90	mg/L			09/10/12 14:22	5
Total Kjeldahl Nitrogen	**2.1**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 09:22	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/22/12 16:28	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/22/12 16:28	1
Sulfate	**3.4**	**J**	5.0	2.5	mg/L			09/06/12 10:37	1
Total Organic Carbon	**86**		1.0	0.50	mg/L			09/02/12 15:05	1
Ferrous Iron	**0.065**	**J HF**	0.10	0.025	mg/L			08/22/12 16:43	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Field Duplicate 2

Lab Sample ID: 680-82233-2

Date Collected: 08/21/12 09:45
Date Received: 08/22/12 10:00

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	2000	U	2000	280	ug/L			08/29/12 20:37	2000
1,1-Dichloroethane	2000	U	2000	500	ug/L			08/29/12 20:37	2000
1,2-Dichloroethane	2000	U	2000	200	ug/L			08/29/12 20:37	2000
Diethyl ether	20000	U	20000	2000	ug/L			08/29/12 20:37	2000
t-Butanol	**63000**		10000	5200	ug/L			08/29/12 20:37	2000
1,1,2,2-Tetrachloroethane	2000	U	2000	360	ug/L			08/29/12 20:37	2000
Tetrachloroethene	2000	U	2000	300	ug/L			08/29/12 20:37	2000
Trichloroethene	2000	U	2000	260	ug/L			08/29/12 20:37	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*70 - 130*		*08/29/12 20:37*	*2000*
Dibromofluoromethane	*104*		*70 - 130*		*08/29/12 20:37*	*2000*
Toluene-d8 (Surr)	*103*		*70 - 130*		*08/29/12 20:37*	*2000*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/24/12 16:11	08/29/12 14:50	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/24/12 16:11	08/29/12 14:50	1
1,4-Dioxane	**12**		9.5	3.2	ug/L		08/24/12 16:11	08/29/12 14:50	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/24/12 16:11	08/29/12 14:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*38 - 130*	*08/24/12 16:11*	*08/29/12 14:50*	*1*
2-Fluorophenol (Surr)	*71*		*25 - 130*	*08/24/12 16:11*	*08/29/12 14:50*	*1*
Nitrobenzene-d5 (Surr)	*71*		*39 - 130*	*08/24/12 16:11*	*08/29/12 14:50*	*1*
Phenol-d5 (Surr)	*69*		*25 - 130*	*08/24/12 16:11*	*08/29/12 14:50*	*1*
Terphenyl-d14 (Surr)	*24*		*10 - 143*	*08/24/12 16:11*	*08/29/12 14:50*	*1*
2,4,6-Tribromophenol (Surr)	*94*		*31 - 141*	*08/24/12 16:11*	*08/29/12 14:50*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/23/12 15:24	1
Methanol	5.0	U	5.0	1.0	mg/L			08/23/12 15:24	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**780**		100	50	ug/L		08/23/12 08:17	08/25/12 02:43	1
Antimony	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:43	1
Arsenic	**6.6**		2.5	1.3	ug/L		08/23/12 08:17	08/25/12 02:43	1
Barium	**90**		5.0	1.4	ug/L		08/23/12 08:17	08/25/12 02:43	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/23/12 08:17	08/25/12 02:43	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/23/12 08:17	08/25/12 02:43	1
Chromium	**31**		5.0	2.5	ug/L		08/23/12 08:17	08/25/12 02:43	1
Cobalt	**15**		0.50	0.12	ug/L		08/23/12 08:17	08/25/12 02:43	1
Copper	**2.6**	**J**	5.0	1.1	ug/L		08/23/12 08:17	08/25/12 02:43	1
Iron	**3200**		100	44	ug/L		08/23/12 08:17	08/25/12 02:43	1
Lead	**1.4**	**J**	1.5	0.50	ug/L		08/23/12 08:17	08/25/12 02:43	1
Manganese	**1200**		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:43	1
Mercury	0.80	U	0.80	0.40	ug/L		08/23/12 08:17	08/25/12 02:43	1
Nickel	**35**		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:43	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Field Duplicate 2

Lab Sample ID: 680-82233-2

Date Collected: 08/21/12 09:45
Matrix: Water
Date Received: 08/22/12 10:00

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	2.5	U	2.5	1.1	ug/L		08/23/12 08:17	08/25/12 02:43	1
Vanadium	**5.3**	**J**	10	3.2	ug/L		08/23/12 08:17	08/25/12 02:43	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: NAT-2

Date Collected: 08/21/12 11:50
Date Received: 08/22/12 10:00

Lab Sample ID: 680-82233-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	250	U	250	35	ug/L			08/30/12 14:24	250
1,1-Dichloroethane	250	U	250	63	ug/L			08/30/12 14:24	250
1,2-Dichloroethane	250	U	250	25	ug/L			08/30/12 14:24	250
Diethyl ether	2500	U	2500	250	ug/L			08/30/12 14:24	250
t-Butanol	**11000**		1300	650	ug/L			08/30/12 14:24	250
1,1,2,2-Tetrachloroethane	250	U	250	45	ug/L			08/30/12 14:24	250
Tetrachloroethene	250	U	250	38	ug/L			08/30/12 14:24	250
Trichloroethene	250	U	250	33	ug/L			08/30/12 14:24	250

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*08/30/12 14:24*	*250*
Dibromofluoromethane	*102*		*70 - 130*		*08/30/12 14:24*	*250*
Toluene-d8 (Surr)	*104*		*70 - 130*		*08/30/12 14:24*	*250*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/24/12 16:11	08/29/12 15:18	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/24/12 16:11	08/29/12 15:18	1
1,4-Dioxane	9.5	U	9.5	3.2	ug/L		08/24/12 16:11	08/29/12 15:18	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/24/12 16:11	08/29/12 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*15*	*X*	*38 - 130*	*08/24/12 16:11*	*08/29/12 15:18*	*1*
2-Fluorophenol (Surr)	*4*	*X*	*25 - 130*	*08/24/12 16:11*	*08/29/12 15:18*	*1*
Nitrobenzene-d5 (Surr)	*7*	*X*	*39 - 130*	*08/24/12 16:11*	*08/29/12 15:18*	*1*
Phenol-d5 (Surr)	*5*	*X*	*25 - 130*	*08/24/12 16:11*	*08/29/12 15:18*	*1*
Terphenyl-d14 (Surr)	*21*		*10 - 143*	*08/24/12 16:11*	*08/29/12 15:18*	*1*
2,4,6-Tribromophenol (Surr)	*52*		*31 - 141*	*08/24/12 16:11*	*08/29/12 15:18*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U H	9.5	1.0	ug/L		09/04/12 15:31	09/06/12 13:24	1
Bis(2-ethylhexyl) phthalate	9.5	U H	9.5	1.5	ug/L		09/04/12 15:31	09/06/12 13:24	1
1,4-Dioxane	9.5	U H	9.5	3.2	ug/L		09/04/12 15:31	09/06/12 13:24	1
Naphthalene	9.5	U H	9.5	0.67	ug/L		09/04/12 15:31	09/06/12 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*69*		*38 - 130*	*09/04/12 15:31*	*09/06/12 13:24*	*1*
2-Fluorophenol (Surr)	*74*		*25 - 130*	*09/04/12 15:31*	*09/06/12 13:24*	*1*
Nitrobenzene-d5 (Surr)	*69*		*39 - 130*	*09/04/12 15:31*	*09/06/12 13:24*	*1*
Phenol-d5 (Surr)	*72*		*25 - 130*	*09/04/12 15:31*	*09/06/12 13:24*	*1*
Terphenyl-d14 (Surr)	*22*		*10 - 143*	*09/04/12 15:31*	*09/06/12 13:24*	*1*
2,4,6-Tribromophenol (Surr)	*96*		*31 - 141*	*09/04/12 15:31*	*09/06/12 13:24*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/23/12 15:47	1
Methanol	5.0	U	5.0	1.0	mg/L			08/23/12 15:47	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: NAT-2

Date Collected: 08/21/12 11:50
Date Received: 08/22/12 10:00

Lab Sample ID: 680-82233-3

Matrix: Water

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	380		0.58	0.29	ug/L			08/27/12 21:47	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1500		100	50	ug/L		08/23/12 08:17	08/25/12 02:50	1
Antimony	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:50	1
Arsenic	3.6		2.5	1.3	ug/L		08/23/12 08:17	08/25/12 02:50	1
Barium	70		5.0	1.4	ug/L		08/23/12 08:17	08/25/12 02:50	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/23/12 08:17	08/25/12 02:50	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/23/12 08:17	08/25/12 02:50	1
Chromium	11		5.0	2.5	ug/L		08/23/12 08:17	08/25/12 02:50	1
Cobalt	4.7		0.50	0.12	ug/L		08/23/12 08:17	08/25/12 02:50	1
Copper	2.1	J	5.0	1.1	ug/L		08/23/12 08:17	08/25/12 02:50	1
Iron	9400		100	44	ug/L		08/23/12 08:17	08/25/12 02:50	1
Lead	1.6		1.5	0.50	ug/L		08/23/12 08:17	08/25/12 02:50	1
Manganese	200		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:50	1
Mercury	0.80	U	0.80	0.40	ug/L		08/23/12 08:17	08/25/12 02:50	1
Nickel	9.8		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:50	1
Selenium	2.5	U	2.5	1.1	ug/L		08/23/12 08:17	08/25/12 02:50	1
Vanadium	4.8	J	10	3.2	ug/L		08/23/12 08:17	08/25/12 02:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	100		2.0	0.36	mg/L			09/10/12 14:15	2
Total Kjeldahl Nitrogen	1.9		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 09:22	1
Nitrate as N	0.019	J	0.050	0.010	mg/L			08/22/12 16:30	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/22/12 16:30	1
Sulfate	150		50	25	mg/L			09/06/12 11:09	10
Total Organic Carbon	18		1.0	0.50	mg/L			09/02/12 15:21	1
Ferrous Iron	0.12	HF	0.10	0.025	mg/L			08/22/12 16:43	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Equipment Blank 2

Lab Sample ID: 680-82233-4

Date Collected: 08/21/12 12:05
Date Received: 08/22/12 10:00

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			08/29/12 13:53	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/29/12 13:53	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			08/29/12 13:53	1
Diethyl ether	10	U	10	1.0	ug/L			08/29/12 13:53	1
t-Butanol	**48**		5.0	2.6	ug/L			08/29/12 13:53	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			08/29/12 13:53	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			08/29/12 13:53	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			08/29/12 13:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*70 - 130*		*08/29/12 13:53*	*1*
Dibromofluoromethane	*106*		*70 - 130*		*08/29/12 13:53*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*08/29/12 13:53*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	11	U	11	1.2	ug/L		08/24/12 16:11	08/29/12 15:45	1
Bis(2-ethylhexyl) phthalate	11	U	11	1.7	ug/L		08/24/12 16:11	08/29/12 15:45	1
1,4-Dioxane	11	U	11	3.6	ug/L		08/24/12 16:11	08/29/12 15:45	1
Naphthalene	11	U	11	0.74	ug/L		08/24/12 16:11	08/29/12 15:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*72*		*38 - 130*	*08/24/12 16:11*	*08/29/12 15:45*	*1*
2-Fluorophenol (Surr)	*68*		*25 - 130*	*08/24/12 16:11*	*08/29/12 15:45*	*1*
Nitrobenzene-d5 (Surr)	*69*		*39 - 130*	*08/24/12 16:11*	*08/29/12 15:45*	*1*
Phenol-d5 (Surr)	*64*		*25 - 130*	*08/24/12 16:11*	*08/29/12 15:45*	*1*
Terphenyl-d14 (Surr)	*24*		*10 - 143*	*08/24/12 16:11*	*08/29/12 15:45*	*1*
2,4,6-Tribromophenol (Surr)	*99*		*31 - 141*	*08/24/12 16:11*	*08/29/12 15:45*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/23/12 16:11	1
Methanol	5.0	U	5.0	1.0	mg/L			08/23/12 16:11	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	100	U	100	50	ug/L		08/23/12 08:17	08/25/12 02:57	1
Antimony	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:57	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/23/12 08:17	08/25/12 02:57	1
Barium	5.0	U	5.0	1.4	ug/L		08/23/12 08:17	08/25/12 02:57	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/23/12 08:17	08/25/12 02:57	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/23/12 08:17	08/25/12 02:57	1
Chromium	5.0	U	5.0	2.5	ug/L		08/23/12 08:17	08/25/12 02:57	1
Cobalt	0.50	U	0.50	0.12	ug/L		08/23/12 08:17	08/25/12 02:57	1
Copper	5.0	U	5.0	1.1	ug/L		08/23/12 08:17	08/25/12 02:57	1
Iron	100	U	100	44	ug/L		08/23/12 08:17	08/25/12 02:57	1
Lead	**0.73**	**J**	1.5	0.50	ug/L		08/23/12 08:17	08/25/12 02:57	1
Manganese	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:57	1
Mercury	0.80	U	0.80	0.40	ug/L		08/23/12 08:17	08/25/12 02:57	1
Nickel	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:57	1

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Equipment Blank 2
Date Collected: 08/21/12 12:05
Date Received: 08/22/12 10:00

Lab Sample ID: 680-82233-4
Matrix: Water

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	2.5	U	2.5	1.1	ug/L		08/23/12 08:17	08/25/12 02:57	1
Vanadium	10	U	10	3.2	ug/L		08/23/12 08:17	08/25/12 02:57	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Field Blank 1

Lab Sample ID: 680-82233-5

Date Collected: 08/21/12 10:10
Date Received: 08/22/12 10:00

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			08/29/12 14:22	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/29/12 14:22	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			08/29/12 14:22	1
Diethyl ether	10	U	10	1.0	ug/L			08/29/12 14:22	1
t-Butanol	5.0	U	5.0	2.6	ug/L			08/29/12 14:22	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			08/29/12 14:22	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			08/29/12 14:22	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			08/29/12 14:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*08/29/12 14:22*	*1*
Dibromofluoromethane	*107*		*70 - 130*		*08/29/12 14:22*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*08/29/12 14:22*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/24/12 16:11	08/29/12 16:13	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/24/12 16:11	08/29/12 16:13	1
1,4-Dioxane	9.5	U	9.5	3.2	ug/L		08/24/12 16:11	08/29/12 16:13	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/24/12 16:11	08/29/12 16:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*62*		*38 - 130*	*08/24/12 16:11*	*08/29/12 16:13*	*1*
2-Fluorophenol (Surr)	*54*		*25 - 130*	*08/24/12 16:11*	*08/29/12 16:13*	*1*
Nitrobenzene-d5 (Surr)	*57*		*39 - 130*	*08/24/12 16:11*	*08/29/12 16:13*	*1*
Phenol-d5 (Surr)	*53*		*25 - 130*	*08/24/12 16:11*	*08/29/12 16:13*	*1*
Terphenyl-d14 (Surr)	*72*		*10 - 143*	*08/24/12 16:11*	*08/29/12 16:13*	*1*
2,4,6-Tribromophenol (Surr)	*90*		*31 - 141*	*08/24/12 16:11*	*08/29/12 16:13*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/23/12 16:35	1
Methanol	5.0	U	5.0	1.0	mg/L			08/23/12 16:35	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	100	U	100	50	ug/L		08/23/12 08:17	08/25/12 03:05	1
Antimony	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:05	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/23/12 08:17	08/25/12 03:05	1
Barium	5.0	U	5.0	1.4	ug/L		08/23/12 08:17	08/25/12 03:05	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/23/12 08:17	08/25/12 03:05	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/23/12 08:17	08/25/12 03:05	1
Chromium	5.0	U	5.0	2.5	ug/L		08/23/12 08:17	08/25/12 03:05	1
Cobalt	0.50	U	0.50	0.12	ug/L		08/23/12 08:17	08/25/12 03:05	1
Copper	5.0	U	5.0	1.1	ug/L		08/23/12 08:17	08/25/12 03:05	1
Iron	100	U	100	44	ug/L		08/23/12 08:17	08/25/12 03:05	1
Lead	**0.61**	**J**	1.5	0.50	ug/L		08/23/12 08:17	08/25/12 03:05	1
Manganese	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:05	1
Mercury	0.80	U	0.80	0.40	ug/L		08/23/12 08:17	08/25/12 03:05	1
Nickel	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:05	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Field Blank 1

Lab Sample ID: 680-82233-5

Date Collected: 08/21/12 10:10
Matrix: Water
Date Received: 08/22/12 10:00

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	2.5	U	2.5	1.1	ug/L		08/23/12 08:17	08/25/12 03:05	1
Vanadium	10	U	10	3.2	ug/L		08/23/12 08:17	08/25/12 03:05	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-10

Date Collected: 08/21/12 10:50
Date Received: 08/22/12 10:00

Lab Sample ID: 680-82233-6

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	**0.79**	**J**	1.0	0.14	ug/L			08/29/12 18:13	1
1,1-Dichloroethane	**1.1**		1.0	0.25	ug/L			08/29/12 18:13	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			08/29/12 18:13	1
Diethyl ether	**34**		10	1.0	ug/L			08/29/12 18:13	1
t-Butanol	**29**		5.0	2.6	ug/L			08/29/12 18:13	1
1,1,2,2-Tetrachloroethane	**0.32**	**J**	1.0	0.18	ug/L			08/29/12 18:13	1
Tetrachloroethene	**8.9**		1.0	0.15	ug/L			08/29/12 18:13	1
Trichloroethene	**1.4**		1.0	0.13	ug/L			08/29/12 18:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*08/29/12 18:13*	*1*
Dibromofluoromethane	*106*		*70 - 130*		*08/29/12 18:13*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*08/29/12 18:13*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.4	U	9.4	1.0	ug/L		08/24/12 16:11	08/29/12 16:40	1
Bis(2-ethylhexyl) phthalate	9.4	U	9.4	1.5	ug/L		08/24/12 16:11	08/29/12 16:40	1
1,4-Dioxane	**19**		9.4	3.2	ug/L		08/24/12 16:11	08/29/12 16:40	1
Naphthalene	9.4	U	9.4	0.66	ug/L		08/24/12 16:11	08/29/12 16:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*67*		*38 - 130*	*08/24/12 16:11*	*08/29/12 16:40*	*1*
2-Fluorophenol (Surr)	*59*		*25 - 130*	*08/24/12 16:11*	*08/29/12 16:40*	*1*
Nitrobenzene-d5 (Surr)	*61*		*39 - 130*	*08/24/12 16:11*	*08/29/12 16:40*	*1*
Phenol-d5 (Surr)	*59*		*25 - 130*	*08/24/12 16:11*	*08/29/12 16:40*	*1*
Terphenyl-d14 (Surr)	*73*		*10 - 143*	*08/24/12 16:11*	*08/29/12 16:40*	*1*
2,4,6-Tribromophenol (Surr)	*100*		*31 - 141*	*08/24/12 16:11*	*08/29/12 16:40*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/23/12 16:59	1
Methanol	5.0	U	5.0	1.0	mg/L			08/23/12 16:59	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**0.41**	**J**	0.58	0.29	ug/L			09/04/12 14:30	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**290**		100	50	ug/L		08/23/12 08:17	08/25/12 03:12	1
Antimony	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:12	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/23/12 08:17	08/25/12 03:12	1
Barium	**15**		5.0	1.4	ug/L		08/23/12 08:17	08/25/12 03:12	1
Beryllium	**0.22**	**J**	0.50	0.15	ug/L		08/23/12 08:17	08/25/12 03:12	1
Cadmium	**3.8**		0.50	0.13	ug/L		08/23/12 08:17	08/25/12 03:12	1
Chromium	5.0	U	5.0	2.5	ug/L		08/23/12 08:17	08/25/12 03:12	1
Cobalt	**75**		0.50	0.12	ug/L		08/23/12 08:17	08/25/12 03:12	1
Copper	**5.4**		5.0	1.1	ug/L		08/23/12 08:17	08/25/12 03:12	1
Iron	**220**		100	44	ug/L		08/23/12 08:17	08/25/12 03:12	1
Lead	**0.98**	**J**	1.5	0.50	ug/L		08/23/12 08:17	08/25/12 03:12	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-10

Date Collected: 08/21/12 10:50
Date Received: 08/22/12 10:00

Lab Sample ID: 680-82233-6

Matrix: Water

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**3700**		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:12	1
Mercury	0.80	U	0.80	0.40	ug/L		08/23/12 08:17	08/25/12 03:12	1
Nickel	**61**		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:12	1
Selenium	2.5	U	2.5	1.1	ug/L		08/23/12 08:17	08/25/12 03:12	1
Vanadium	10	U	10	3.2	ug/L		08/23/12 08:17	08/25/12 03:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**230**		5.0	0.90	mg/L			09/10/12 14:22	5
Total Kjeldahl Nitrogen	**0.28**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 09:22	1
Nitrate as N	**4.3**		0.25	0.050	mg/L			08/22/12 16:44	5
Nitrite as N	0.25	U	0.25	0.050	mg/L			08/22/12 16:44	5
Sulfate	**520**		100	50	mg/L			09/06/12 10:53	20
Total Organic Carbon	**1.7**		1.0	0.50	mg/L			09/02/12 15:40	1
Ferrous Iron	0.10	U HF	0.10	0.025	mg/L			08/22/12 16:43	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Field Duplicate 1

Lab Sample ID: 680-82233-7

Date Collected: 08/21/12 10:55
Date Received: 08/22/12 10:00

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	**0.90**	**J**	1.0	0.14	ug/L			08/29/12 18:42	1
1,1-Dichloroethane	**1.1**		1.0	0.25	ug/L			08/29/12 18:42	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			08/29/12 18:42	1
Diethyl ether	**37**		10	1.0	ug/L			08/29/12 18:42	1
t-Butanol	**14**		5.0	2.6	ug/L			08/29/12 18:42	1
1,1,2,2-Tetrachloroethane	**0.31**	**J**	1.0	0.18	ug/L			08/29/12 18:42	1
Tetrachloroethene	**9.2**		1.0	0.15	ug/L			08/29/12 18:42	1
Trichloroethene	**1.5**		1.0	0.13	ug/L			08/29/12 18:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*70 - 130*		*08/29/12 18:42*	*1*
Dibromofluoromethane	*106*		*70 - 130*		*08/29/12 18:42*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*08/29/12 18:42*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.4	U	9.4	1.0	ug/L		08/24/12 16:11	08/29/12 17:08	1
Bis(2-ethylhexyl) phthalate	9.4	U	9.4	1.5	ug/L		08/24/12 16:11	08/29/12 17:08	1
1,4-Dioxane	**24**		9.4	3.2	ug/L		08/24/12 16:11	08/29/12 17:08	1
Naphthalene	9.4	U	9.4	0.66	ug/L		08/24/12 16:11	08/29/12 17:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*80*		*38 - 130*	*08/24/12 16:11*	*08/29/12 17:08*	*1*
2-Fluorophenol (Surr)	*72*		*25 - 130*	*08/24/12 16:11*	*08/29/12 17:08*	*1*
Nitrobenzene-d5 (Surr)	*72*		*39 - 130*	*08/24/12 16:11*	*08/29/12 17:08*	*1*
Phenol-d5 (Surr)	*72*		*25 - 130*	*08/24/12 16:11*	*08/29/12 17:08*	*1*
Terphenyl-d14 (Surr)	*75*		*10 - 143*	*08/24/12 16:11*	*08/29/12 17:08*	*1*
2,4,6-Tribromophenol (Surr)	*108*		*31 - 141*	*08/24/12 16:11*	*08/29/12 17:08*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/23/12 17:22	1
Methanol	5.0	U	5.0	1.0	mg/L			08/23/12 17:22	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**380**		100	50	ug/L		08/23/12 08:17	08/25/12 03:19	1
Antimony	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:19	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/23/12 08:17	08/25/12 03:19	1
Barium	**15**		5.0	1.4	ug/L		08/23/12 08:17	08/25/12 03:19	1
Beryllium	**0.23**	**J**	0.50	0.15	ug/L		08/23/12 08:17	08/25/12 03:19	1
Cadmium	**3.7**		0.50	0.13	ug/L		08/23/12 08:17	08/25/12 03:19	1
Chromium	**4.0**	**J**	5.0	2.5	ug/L		08/23/12 08:17	08/25/12 03:19	1
Cobalt	**75**		0.50	0.12	ug/L		08/23/12 08:17	08/25/12 03:19	1
Copper	**4.9**	**J**	5.0	1.1	ug/L		08/23/12 08:17	08/25/12 03:19	1
Iron	**270**		100	44	ug/L		08/23/12 08:17	08/25/12 03:19	1
Lead	**0.90**	**J**	1.5	0.50	ug/L		08/23/12 08:17	08/25/12 03:19	1
Manganese	**3800**		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:19	1
Mercury	0.80	U	0.80	0.40	ug/L		08/23/12 08:17	08/25/12 03:19	1
Nickel	**62**		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:19	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Field Duplicate 1

Lab Sample ID: 680-82233-7

Date Collected: 08/21/12 10:55
Matrix: Water
Date Received: 08/22/12 10:00

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	2.5	U	2.5	1.1	ug/L		08/23/12 08:17	08/25/12 03:19	1
Vanadium	10	U	10	3.2	ug/L		08/23/12 08:17	08/25/12 03:19	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: NAT-1

Date Collected: 08/21/12 12:25
Date Received: 08/22/12 10:00

Lab Sample ID: 680-82233-8

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			08/29/12 17:44	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/29/12 17:44	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			08/29/12 17:44	1
Diethyl ether	10	U	10	1.0	ug/L			08/29/12 17:44	1
t-Butanol	**66**		5.0	2.6	ug/L			08/29/12 17:44	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			08/29/12 17:44	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			08/29/12 17:44	1
Trichloroethene	**37**		1.0	0.13	ug/L			08/29/12 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*08/29/12 17:44*	*1*
Dibromofluoromethane	*107*		*70 - 130*		*08/29/12 17:44*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*08/29/12 17:44*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/23/12 17:46	1
Methanol	5.0	U	5.0	1.0	mg/L			08/23/12 17:46	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**15**		0.58	0.29	ug/L			08/25/12 22:17	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**400**		100	50	ug/L		08/23/12 08:17	08/25/12 03:27	1
Antimony	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:27	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/23/12 08:17	08/25/12 03:27	1
Barium	**36**		5.0	1.4	ug/L		08/23/12 08:17	08/25/12 03:27	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/23/12 08:17	08/25/12 03:27	1
Cadmium	**0.36**	**J**	0.50	0.13	ug/L		08/23/12 08:17	08/25/12 03:27	1
Chromium	5.0	U	5.0	2.5	ug/L		08/23/12 08:17	08/25/12 03:27	1
Cobalt	**22**		0.50	0.12	ug/L		08/23/12 08:17	08/25/12 03:27	1
Copper	**2.4**	**J**	5.0	1.1	ug/L		08/23/12 08:17	08/25/12 03:27	1
Iron	**370**		100	44	ug/L		08/23/12 08:17	08/25/12 03:27	1
Lead	**1.2**	**J**	1.5	0.50	ug/L		08/23/12 08:17	08/25/12 03:27	1
Manganese	**1200**		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:27	1
Mercury	0.80	U	0.80	0.40	ug/L		08/23/12 08:17	08/25/12 03:27	1
Nickel	**11**		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:27	1
Selenium	2.5	U	2.5	1.1	ug/L		08/23/12 08:17	08/25/12 03:27	1
Vanadium	10	U	10	3.2	ug/L		08/23/12 08:17	08/25/12 03:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**72**		1.0	0.18	mg/L			09/10/12 13:33	1
Total Kjeldahl Nitrogen	**0.38**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 09:22	1
Nitrate as N	**12**		0.50	0.10	mg/L			08/22/12 16:47	10
Nitrite as N	0.50	U	0.50	0.10	mg/L			08/22/12 16:47	10
Sulfate	**350**		100	50	mg/L			09/06/12 10:53	20
Total Organic Carbon	**1.6**		1.0	0.50	mg/L			09/02/12 16:00	1

Client Sample ID: NAT-1
Date Collected: 08/21/12 12:25
Date Received: 08/22/12 10:00

Lab Sample ID: 680-82233-8
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ferrous Iron	0.10	U HF	0.10	0.025	mg/L			08/22/12 16:43	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-1

Date Collected: 08/21/12 14:10
Date Received: 08/22/12 10:00

Lab Sample ID: 680-82233-9

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	50	U	50	7.0	ug/L			08/30/12 14:52	50
1,1-Dichloroethane	50	U	50	13	ug/L			08/30/12 14:52	50
1,2-Dichloroethane	50	U	50	5.0	ug/L			08/30/12 14:52	50
Diethyl ether	**2100**		500	50	ug/L			08/30/12 14:52	50
t-Butanol	250	U	250	130	ug/L			08/30/12 14:52	50
1,1,2,2-Tetrachloroethane	50	U	50	9.0	ug/L			08/30/12 14:52	50
Tetrachloroethene	50	U	50	7.5	ug/L			08/30/12 14:52	50
Trichloroethene	50	U	50	6.5	ug/L			08/30/12 14:52	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*08/30/12 14:52*	*50*
Dibromofluoromethane	*101*		*70 - 130*		*08/30/12 14:52*	*50*
Toluene-d8 (Surr)	*103*		*70 - 130*		*08/30/12 14:52*	*50*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/24/12 16:11	08/29/12 17:35	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/24/12 16:11	08/29/12 17:35	1
1,4-Dioxane	**18**		9.5	3.2	ug/L		08/24/12 16:11	08/29/12 17:35	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/24/12 16:11	08/29/12 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*78*		*38 - 130*	*08/24/12 16:11*	*08/29/12 17:35*	*1*
2-Fluorophenol (Surr)	*72*		*25 - 130*	*08/24/12 16:11*	*08/29/12 17:35*	*1*
Nitrobenzene-d5 (Surr)	*72*		*39 - 130*	*08/24/12 16:11*	*08/29/12 17:35*	*1*
Phenol-d5 (Surr)	*73*		*25 - 130*	*08/24/12 16:11*	*08/29/12 17:35*	*1*
Terphenyl-d14 (Surr)	*54*		*10 - 143*	*08/24/12 16:11*	*08/29/12 17:35*	*1*
2,4,6-Tribromophenol (Surr)	*107*		*31 - 141*	*08/24/12 16:11*	*08/29/12 17:35*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**2.0**	**J**	5.0	0.33	mg/L			08/23/12 18:10	1
Methanol	5.0	U	5.0	1.0	mg/L			08/23/12 18:10	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58	0.29	ug/L			09/04/12 14:43	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	100	U	100	50	ug/L		08/23/12 08:17	08/25/12 03:34	1
Antimony	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:34	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/23/12 08:17	08/25/12 03:34	1
Barium	**59**		5.0	1.4	ug/L		08/23/12 08:17	08/25/12 03:34	1
Beryllium	**0.15**	**J**	0.50	0.15	ug/L		08/23/12 08:17	08/25/12 03:34	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/23/12 08:17	08/25/12 03:34	1
Chromium	**3.0**	**J**	5.0	2.5	ug/L		08/23/12 08:17	08/25/12 03:34	1
Cobalt	**0.42**	**J**	0.50	0.12	ug/L		08/23/12 08:17	08/25/12 03:34	1
Copper	**5.7**		5.0	1.1	ug/L		08/23/12 08:17	08/25/12 03:34	1
Iron	**6200**		100	44	ug/L		08/23/12 08:17	08/25/12 03:34	1
Lead	**0.82**	**J**	1.5	0.50	ug/L		08/23/12 08:17	08/25/12 03:34	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-1

Lab Sample ID: 680-82233-9

Date Collected: 08/21/12 14:10
Matrix: Water
Date Received: 08/22/12 10:00

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**2800**		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:34	1
Mercury	0.80	U	0.80	0.40	ug/L		08/23/12 08:17	08/25/12 03:34	1
Nickel	**3.2**	**J**	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 03:34	1
Selenium	2.5	U	2.5	1.1	ug/L		08/23/12 08:17	08/25/12 03:34	1
Vanadium	10	U	10	3.2	ug/L		08/23/12 08:17	08/25/12 03:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**220**		5.0	0.90	mg/L			09/10/12 14:15	5
Total Kjeldahl Nitrogen	**0.25**		0.20	0.15	mg/L		08/29/12 08:46	08/30/12 17:20	1
Nitrate as N	**0.011**	**J**	0.050	0.010	mg/L			08/22/12 16:38	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/22/12 16:38	1
Sulfate	**840**		250	130	mg/L			09/06/12 11:27	50
Total Organic Carbon	**3.5**		1.0	0.50	mg/L			09/02/12 16:18	1
Ferrous Iron	**6.0**	**HF**	0.20	0.050	mg/L			08/22/12 19:09	2

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Trip Blank

Lab Sample ID: 680-82233-10

Date Collected: 08/21/12 00:00
Matrix: Water
Date Received: 08/22/12 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			08/29/12 13:25	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/29/12 13:25	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			08/29/12 13:25	1
Diethyl ether	10	U	10	1.0	ug/L			08/29/12 13:25	1
t-Butanol	5.0	U	5.0	2.6	ug/L			08/29/12 13:25	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			08/29/12 13:25	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			08/29/12 13:25	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			08/29/12 13:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*08/29/12 13:25*	*1*
Dibromofluoromethane	*105*		*70 - 130*		*08/29/12 13:25*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*08/29/12 13:25*	*1*

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: SDB-MW-3

Lab Sample ID: 680-82284-1

Date Collected: 08/22/12 09:20
Date Received: 08/23/12 09:53

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/04/12 17:47	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/04/12 17:47	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/04/12 17:47	1
Diethyl ether	10	U	10	1.0	ug/L			09/04/12 17:47	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/04/12 17:47	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/04/12 17:47	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/04/12 17:47	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/04/12 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*70 - 130*		*09/04/12 17:47*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*09/04/12 17:47*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*09/04/12 17:47*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/24/12 16:11	08/29/12 18:03	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/24/12 16:11	08/29/12 18:03	1
1,4-Dioxane	9.5	U	9.5	3.2	ug/L		08/24/12 16:11	08/29/12 18:03	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/24/12 16:11	08/29/12 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*80*		*38 - 130*	*08/24/12 16:11*	*08/29/12 18:03*	*1*
2-Fluorophenol (Surr)	*77*		*25 - 130*	*08/24/12 16:11*	*08/29/12 18:03*	*1*
Nitrobenzene-d5 (Surr)	*75*		*39 - 130*	*08/24/12 16:11*	*08/29/12 18:03*	*1*
Phenol-d5 (Surr)	*71*		*25 - 130*	*08/24/12 16:11*	*08/29/12 18:03*	*1*
Terphenyl-d14 (Surr)	*31*		*10 - 143*	*08/24/12 16:11*	*08/29/12 18:03*	*1*
2,4,6-Tribromophenol (Surr)	*100*		*31 - 141*	*08/24/12 16:11*	*08/29/12 18:03*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/24/12 14:06	1
Methanol	5.0	U	5.0	1.0	mg/L			08/24/12 14:06	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**1.2**		0.58	0.29	ug/L			08/27/12 21:21	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**180**		100	50	ug/L		08/24/12 14:18	08/27/12 23:28	1
Antimony	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/27/12 23:28	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/24/12 14:18	08/27/12 23:28	1
Barium	**11**		5.0	1.4	ug/L		08/24/12 14:18	08/27/12 23:28	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/24/12 14:18	08/27/12 23:28	1
Cadmium	**0.24**	**J**	0.50	0.13	ug/L		08/24/12 14:18	08/27/12 23:28	1
Chromium	**5.3**		5.0	2.5	ug/L		08/24/12 14:18	08/27/12 23:28	1
Cobalt	**4.7**		0.50	0.12	ug/L		08/24/12 14:18	08/27/12 23:28	1
Copper	**9.8**		5.0	1.1	ug/L		08/24/12 14:18	08/27/12 23:28	1
Iron	**610**		100	44	ug/L		08/24/12 14:18	08/27/12 23:28	1
Lead	1.5	U	1.5	0.50	ug/L		08/24/12 14:18	08/27/12 23:28	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: SDB-MW-3

Lab Sample ID: 680-82284-1

Date Collected: 08/22/12 09:20
Matrix: Water
Date Received: 08/23/12 09:53

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**930**		5.0	2.0	ug/L		08/24/12 14:18	08/27/12 23:28	1
Mercury	0.80	U	0.80	0.40	ug/L		08/24/12 14:18	08/27/12 23:28	1
Nickel	**33**		5.0	2.0	ug/L		08/24/12 14:18	08/27/12 23:28	1
Selenium	**9.2**		2.5	1.1	ug/L		08/24/12 14:18	08/27/12 23:28	1
Vanadium	10	U	10	3.2	ug/L		08/24/12 14:18	08/27/12 23:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**280**		5.0	0.90	mg/L			09/05/12 11:24	5
Total Kjeldahl Nitrogen	**0.69**		0.20	0.15	mg/L		08/29/12 08:46	08/30/12 16:44	1
Nitrate as N	**0.26**		0.050	0.010	mg/L			08/23/12 18:03	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/23/12 18:03	1
Sulfate	**1200**		250	130	mg/L			09/06/12 11:27	50
Total Organic Carbon	**4.4**		1.0	0.50	mg/L			09/02/12 19:20	1
Ferrous Iron	**0.29**	**HF**	0.10	0.025	mg/L			08/23/12 19:02	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: SDB-MW-2

Date Collected: 08/22/12 10:40
Date Received: 08/23/12 09:53

Lab Sample ID: 680-82284-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/04/12 12:59	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/04/12 12:59	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/04/12 12:59	1
Diethyl ether	10	U	10	1.0	ug/L			09/04/12 12:59	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/04/12 12:59	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/04/12 12:59	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/04/12 12:59	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/04/12 12:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*09/04/12 12:59*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*09/04/12 12:59*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*09/04/12 12:59*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.4	U	9.4	1.0	ug/L		08/24/12 16:11	08/29/12 13:55	1
Bis(2-ethylhexyl) phthalate	9.4	U	9.4	1.5	ug/L		08/24/12 16:11	08/29/12 13:55	1
1,4-Dioxane	9.4	U	9.4	3.2	ug/L		08/24/12 16:11	08/29/12 13:55	1
Naphthalene	9.4	U	9.4	0.66	ug/L		08/24/12 16:11	08/29/12 13:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*77*		*38 - 130*	*08/24/12 16:11*	*08/29/12 13:55*	*1*
2-Fluorophenol (Surr)	*71*		*25 - 130*	*08/24/12 16:11*	*08/29/12 13:55*	*1*
Nitrobenzene-d5 (Surr)	*71*		*39 - 130*	*08/24/12 16:11*	*08/29/12 13:55*	*1*
Phenol-d5 (Surr)	*68*		*25 - 130*	*08/24/12 16:11*	*08/29/12 13:55*	*1*
Terphenyl-d14 (Surr)	*29*		*10 - 143*	*08/24/12 16:11*	*08/29/12 13:55*	*1*
2,4,6-Tribromophenol (Surr)	*99*		*31 - 141*	*08/24/12 16:11*	*08/29/12 13:55*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/24/12 14:30	1
Methanol	5.0	U	5.0	1.0	mg/L			08/24/12 14:30	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**0.48**	**J**	0.58	0.29	ug/L			08/27/12 21:08	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**110**		100	50	ug/L		08/24/12 14:18	08/28/12 00:05	1
Antimony	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 00:05	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/24/12 14:18	08/28/12 00:05	1
Barium	**11**		5.0	1.4	ug/L		08/24/12 14:18	08/28/12 00:05	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/24/12 14:18	08/28/12 00:05	1
Cadmium	**0.14**	**J**	0.50	0.13	ug/L		08/24/12 14:18	08/28/12 00:05	1
Chromium	**4.3**	**J**	5.0	2.5	ug/L		08/24/12 14:18	08/28/12 00:05	1
Cobalt	**2.7**		0.50	0.12	ug/L		08/24/12 14:18	08/28/12 00:05	1
Copper	**1.8**	**J**	5.0	1.1	ug/L		08/24/12 14:18	08/28/12 00:05	1
Iron	**510**		100	44	ug/L		08/24/12 14:18	08/28/12 00:05	1
Lead	1.5	U	1.5	0.50	ug/L		08/24/12 14:18	08/28/12 00:05	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: SDB-MW-2

Lab Sample ID: 680-82284-2

Date Collected: 08/22/12 10:40
Matrix: Water
Date Received: 08/23/12 09:53

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**1100**		5.0	2.0	ug/L		08/24/12 14:18	08/28/12 00:05	1
Mercury	0.80	U	0.80	0.40	ug/L		08/24/12 14:18	08/28/12 00:05	1
Nickel	**26**		5.0	2.0	ug/L		08/24/12 14:18	08/28/12 00:05	1
Selenium	2.5	U	2.5	1.1	ug/L		08/24/12 14:18	08/28/12 00:05	1
Vanadium	10	U	10	3.2	ug/L		08/24/12 14:18	08/28/12 00:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**120**		2.0	0.36	mg/L			09/05/12 11:27	2
Total Kjeldahl Nitrogen	**0.46**		0.20	0.15	mg/L		08/29/12 08:46	08/30/12 16:44	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/23/12 18:07	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/23/12 18:07	1
Sulfate	**1400**		250	130	mg/L			09/06/12 11:28	50
Total Organic Carbon	**5.2**		1.0	0.50	mg/L			09/02/12 20:06	1
Ferrous Iron	**0.19**	**HF**	0.10	0.025	mg/L			08/23/12 19:02	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: SDB-MW-1

Date Collected: 08/22/12 12:45
Date Received: 08/23/12 09:53

Lab Sample ID: 680-82284-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/04/12 13:28	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/04/12 13:28	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/04/12 13:28	1
Diethyl ether	10	U	10	1.0	ug/L			09/04/12 13:28	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/04/12 13:28	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/04/12 13:28	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/04/12 13:28	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/04/12 13:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*09/04/12 13:28*	*1*
Dibromofluoromethane	*108*		*70 - 130*		*09/04/12 13:28*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/04/12 13:28*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/24/12 16:11	08/29/12 18:30	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/24/12 16:11	08/29/12 18:30	1
1,4-Dioxane	9.5	U	9.5	3.2	ug/L		08/24/12 16:11	08/29/12 18:30	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/24/12 16:11	08/29/12 18:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*77*		*38 - 130*	*08/24/12 16:11*	*08/29/12 18:30*	*1*
2-Fluorophenol (Surr)	*77*		*25 - 130*	*08/24/12 16:11*	*08/29/12 18:30*	*1*
Nitrobenzene-d5 (Surr)	*73*		*39 - 130*	*08/24/12 16:11*	*08/29/12 18:30*	*1*
Phenol-d5 (Surr)	*75*		*25 - 130*	*08/24/12 16:11*	*08/29/12 18:30*	*1*
Terphenyl-d14 (Surr)	*26*		*10 - 143*	*08/24/12 16:11*	*08/29/12 18:30*	*1*
2,4,6-Tribromophenol (Surr)	*112*		*31 - 141*	*08/24/12 16:11*	*08/29/12 18:30*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/24/12 14:54	1
Methanol	5.0	U	5.0	1.0	mg/L			08/24/12 14:54	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**3100**		0.58	0.29	ug/L			08/27/12 22:12	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**200**		100	50	ug/L		08/24/12 14:18	08/28/12 00:42	1
Antimony	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 00:42	1
Arsenic	**6.1**		2.5	1.3	ug/L		08/24/12 14:18	08/28/12 00:42	1
Barium	**350**		5.0	1.4	ug/L		08/24/12 14:18	08/28/12 00:42	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/24/12 14:18	08/28/12 00:42	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/24/12 14:18	08/28/12 00:42	1
Chromium	**4.5**	**J**	5.0	2.5	ug/L		08/24/12 14:18	08/28/12 00:42	1
Cobalt	**3.0**		0.50	0.12	ug/L		08/24/12 14:18	08/28/12 00:42	1
Copper	5.0	U	5.0	1.1	ug/L		08/24/12 14:18	08/28/12 00:42	1
Iron	**170000**		100	44	ug/L		08/24/12 14:18	08/28/12 00:42	1
Lead	1.5	U	1.5	0.50	ug/L		08/24/12 14:18	08/28/12 00:42	1

Client Sample ID: SDB-MW-1

Lab Sample ID: 680-82284-3

Date Collected: 08/22/12 12:45

Matrix: Water

Date Received: 08/23/12 09:53

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**1700**		5.0	2.0	ug/L		08/24/12 14:18	08/28/12 00:42	1
Mercury	0.80	U	0.80	0.40	ug/L		08/24/12 14:18	08/28/12 00:42	1
Nickel	**3.2**	**J**	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 00:42	1
Selenium	2.5	U	2.5	1.1	ug/L		08/24/12 14:18	08/28/12 00:42	1
Vanadium	10	U	10	3.2	ug/L		08/24/12 14:18	08/28/12 00:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**44**		1.0	0.18	mg/L			09/05/12 11:01	1
Total Kjeldahl Nitrogen	**14**		1.0	0.75	mg/L		08/29/12 08:46	08/30/12 18:14	5
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/23/12 18:08	1
Nitrite as N	**0.024**	**J**	0.050	0.010	mg/L			08/23/12 18:08	1
Sulfate	5.0	U	5.0	2.5	mg/L			09/06/12 10:21	1
Total Organic Carbon	**50**		1.0	0.50	mg/L			09/02/12 20:22	1
Ferrous Iron	**140**	**HF**	5.0	1.3	mg/L			08/24/12 09:09	50

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-5U

Date Collected: 08/22/12 14:50
Date Received: 08/23/12 09:53

Lab Sample ID: 680-82284-4

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	10	U	10	1.4	ug/L			09/04/12 18:16	10
1,1-Dichloroethane	10	U	10	2.5	ug/L			09/04/12 18:16	10
1,2-Dichloroethane	10	U	10	1.0	ug/L			09/04/12 18:16	10
Diethyl ether	**610**		100	10	ug/L			09/04/12 18:16	10
t-Butanol	50	U	50	26	ug/L			09/04/12 18:16	10
1,1,2,2-Tetrachloroethane	10	U	10	1.8	ug/L			09/04/12 18:16	10
Tetrachloroethene	10	U	10	1.5	ug/L			09/04/12 18:16	10
Trichloroethene	10	U	10	1.3	ug/L			09/04/12 18:16	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*70 - 130*		*09/04/12 18:16*	*10*
Dibromofluoromethane	*104*		*70 - 130*		*09/04/12 18:16*	*10*
Toluene-d8 (Surr)	*104*		*70 - 130*		*09/04/12 18:16*	*10*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.4	U	9.4	1.0	ug/L		08/24/12 16:11	08/31/12 16:34	1
Bis(2-ethylhexyl) phthalate	9.4	U	9.4	1.5	ug/L		08/24/12 16:11	08/31/12 16:34	1
1,4-Dioxane	**3.3**	**J**	9.4	3.2	ug/L		08/24/12 16:11	08/31/12 16:34	1
Naphthalene	9.4	U	9.4	0.66	ug/L		08/24/12 16:11	08/31/12 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*80*		*38 - 130*	*08/24/12 16:11*	*08/31/12 16:34*	*1*
2-Fluorophenol (Surr)	*81*		*25 - 130*	*08/24/12 16:11*	*08/31/12 16:34*	*1*
Nitrobenzene-d5 (Surr)	*73*		*39 - 130*	*08/24/12 16:11*	*08/31/12 16:34*	*1*
Phenol-d5 (Surr)	*81*		*25 - 130*	*08/24/12 16:11*	*08/31/12 16:34*	*1*
Terphenyl-d14 (Surr)	*13*		*10 - 143*	*08/24/12 16:11*	*08/31/12 16:34*	*1*
2,4,6-Tribromophenol (Surr)	*111*		*31 - 141*	*08/24/12 16:11*	*08/31/12 16:34*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/24/12 15:17	1
Methanol	5.0	U	5.0	1.0	mg/L			08/24/12 15:17	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**97**		0.58	0.29	ug/L			08/27/12 21:59	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**100**		100	50	ug/L		08/24/12 14:18	08/28/12 00:49	1
Antimony	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 00:49	1
Arsenic	**8.4**		2.5	1.3	ug/L		08/24/12 14:18	08/28/12 00:49	1
Barium	**210**		5.0	1.4	ug/L		08/24/12 14:18	08/28/12 00:49	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/24/12 14:18	08/28/12 00:49	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/24/12 14:18	08/28/12 00:49	1
Chromium	**7.6**		5.0	2.5	ug/L		08/24/12 14:18	08/28/12 00:49	1
Cobalt	**9.7**		0.50	0.12	ug/L		08/24/12 14:18	08/28/12 00:49	1
Copper	**6.0**		5.0	1.1	ug/L		08/24/12 14:18	08/28/12 00:49	1
Iron	**19000**		100	44	ug/L		08/24/12 14:18	08/28/12 00:49	1
Lead	**0.57**	**J**	1.5	0.50	ug/L		08/24/12 14:18	08/28/12 00:49	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-5U

Lab Sample ID: 680-82284-4

Date Collected: 08/22/12 14:50
Matrix: Water
Date Received: 08/23/12 09:53

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**2300**		5.0	2.0	ug/L		08/24/12 14:18	08/28/12 00:49	1
Mercury	0.80	U	0.80	0.40	ug/L		08/24/12 14:18	08/28/12 00:49	1
Nickel	**7.6**		5.0	2.0	ug/L		08/24/12 14:18	08/28/12 00:49	1
Selenium	2.5	U	2.5	1.1	ug/L		08/24/12 14:18	08/28/12 00:49	1
Vanadium	**310**		10	3.2	ug/L		08/24/12 14:18	08/28/12 00:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2600**		50	9.0	mg/L			09/05/12 11:50	50
Total Kjeldahl Nitrogen	**3.5**		1.0	0.75	mg/L		08/29/12 08:46	08/30/12 16:44	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/23/12 18:09	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/23/12 18:09	1
Sulfate	**400**		100	50	mg/L			09/06/12 10:57	20
Total Organic Carbon	**27**		1.0	0.50	mg/L			09/02/12 20:41	1
Ferrous Iron	**0.46**	**HF**	0.10	0.025	mg/L			08/23/12 19:02	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-5

Date Collected: 08/22/12 15:55
Date Received: 08/23/12 09:53

Lab Sample ID: 680-82284-5

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	2.0	U	2.0	0.28	ug/L			09/04/12 15:23	2
1,1-Dichloroethane	2.0	U	2.0	0.50	ug/L			09/04/12 15:23	2
1,2-Dichloroethane	2.0	U	2.0	0.20	ug/L			09/04/12 15:23	2
Diethyl ether	**200**		20	2.0	ug/L			09/04/12 15:23	2
t-Butanol	**190**		10	5.2	ug/L			09/04/12 15:23	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.36	ug/L			09/04/12 15:23	2
Tetrachloroethene	2.0	U	2.0	0.30	ug/L			09/04/12 15:23	2
Trichloroethene	2.0	U	2.0	0.26	ug/L			09/04/12 15:23	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*70 - 130*		*09/04/12 15:23*	*2*
Dibromofluoromethane	*98*		*70 - 130*		*09/04/12 15:23*	*2*
Toluene-d8 (Surr)	*104*		*70 - 130*		*09/04/12 15:23*	*2*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.4	U	9.4	1.0	ug/L		08/24/12 16:11	08/31/12 17:02	1
Bis(2-ethylhexyl) phthalate	9.4	U	9.4	1.5	ug/L		08/24/12 16:11	08/31/12 17:02	1
1,4-Dioxane	9.4	U	9.4	3.2	ug/L		08/24/12 16:11	08/31/12 17:02	1
Naphthalene	9.4	U	9.4	0.66	ug/L		08/24/12 16:11	08/31/12 17:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*72*		*38 - 130*	*08/24/12 16:11*	*08/31/12 17:02*	*1*
2-Fluorophenol (Surr)	*62*		*25 - 130*	*08/24/12 16:11*	*08/31/12 17:02*	*1*
Nitrobenzene-d5 (Surr)	*64*		*39 - 130*	*08/24/12 16:11*	*08/31/12 17:02*	*1*
Phenol-d5 (Surr)	*62*		*25 - 130*	*08/24/12 16:11*	*08/31/12 17:02*	*1*
Terphenyl-d14 (Surr)	*27*		*10 - 143*	*08/24/12 16:11*	*08/31/12 17:02*	*1*
2,4,6-Tribromophenol (Surr)	*103*		*31 - 141*	*08/24/12 16:11*	*08/31/12 17:02*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/24/12 15:41	1
Methanol	5.0	U	5.0	1.0	mg/L			08/24/12 15:41	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**160**		0.58	0.29	ug/L			08/27/12 23:29	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**740**		100	50	ug/L		08/24/12 14:18	08/28/12 00:57	1
Antimony	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 00:57	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/24/12 14:18	08/28/12 00:57	1
Barium	**1200**		5.0	1.4	ug/L		08/24/12 14:18	08/28/12 00:57	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/24/12 14:18	08/28/12 00:57	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/24/12 14:18	08/28/12 00:57	1
Chromium	**7.8**		5.0	2.5	ug/L		08/24/12 14:18	08/28/12 00:57	1
Cobalt	**1.3**		0.50	0.12	ug/L		08/24/12 14:18	08/28/12 00:57	1
Copper	**3.6**	**J**	5.0	1.1	ug/L		08/24/12 14:18	08/28/12 00:57	1
Iron	**84000**		100	44	ug/L		08/24/12 14:18	08/28/12 00:57	1
Lead	**0.62**	**J**	1.5	0.50	ug/L		08/24/12 14:18	08/28/12 00:57	1

Client Sample ID: MW-5

Lab Sample ID: 680-82284-5

Date Collected: 08/22/12 15:55

Matrix: Water

Date Received: 08/23/12 09:53

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**3900**		5.0	2.0	ug/L		08/24/12 14:18	08/28/12 00:57	1
Mercury	0.80	U	0.80	0.40	ug/L		08/24/12 14:18	08/28/12 00:57	1
Nickel	**5.3**		5.0	2.0	ug/L		08/24/12 14:18	08/28/12 00:57	1
Selenium	2.5	U	2.5	1.1	ug/L		08/24/12 14:18	08/28/12 00:57	1
Vanadium	**3.5**	**J**	10	3.2	ug/L		08/24/12 14:18	08/28/12 00:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1300**		20	3.6	mg/L			09/05/12 11:27	20
Total Kjeldahl Nitrogen	**3.7**		0.20	0.15	mg/L		08/29/12 08:46	08/30/12 16:44	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/23/12 18:11	1
Nitrite as N	**0.022**	**J**	0.050	0.010	mg/L			08/23/12 18:11	1
Sulfate	**66**		50	25	mg/L			09/06/12 11:03	10
Total Organic Carbon	**17**		1.0	0.50	mg/L			09/02/12 21:35	1
Ferrous Iron	**72**	**HF**	5.0	1.3	mg/L			08/24/12 09:09	50

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-8D

Date Collected: 08/22/12 09:40
Date Received: 08/23/12 09:53

Lab Sample ID: 680-82284-6

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/04/12 13:57	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/04/12 13:57	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/04/12 13:57	1
Diethyl ether	10	U	10	1.0	ug/L			09/04/12 13:57	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/04/12 13:57	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/04/12 13:57	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/04/12 13:57	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/04/12 13:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*70 - 130*		*09/04/12 13:57*	*1*
Dibromofluoromethane	*107*		*70 - 130*		*09/04/12 13:57*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*09/04/12 13:57*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.6	U	9.6	1.1	ug/L		08/24/12 16:11	08/31/12 17:29	1
Bis(2-ethylhexyl) phthalate	9.6	U	9.6	1.5	ug/L		08/24/12 16:11	08/31/12 17:29	1
1,4-Dioxane	9.6	U	9.6	3.3	ug/L		08/24/12 16:11	08/31/12 17:29	1
Naphthalene	9.6	U	9.6	0.67	ug/L		08/24/12 16:11	08/31/12 17:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*80*		*38 - 130*	*08/24/12 16:11*	*08/31/12 17:29*	*1*
2-Fluorophenol (Surr)	*77*		*25 - 130*	*08/24/12 16:11*	*08/31/12 17:29*	*1*
Nitrobenzene-d5 (Surr)	*74*		*39 - 130*	*08/24/12 16:11*	*08/31/12 17:29*	*1*
Phenol-d5 (Surr)	*73*		*25 - 130*	*08/24/12 16:11*	*08/31/12 17:29*	*1*
Terphenyl-d14 (Surr)	*55*		*10 - 143*	*08/24/12 16:11*	*08/31/12 17:29*	*1*
2,4,6-Tribromophenol (Surr)	*115*		*31 - 141*	*08/24/12 16:11*	*08/31/12 17:29*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/24/12 16:05	1
Methanol	5.0	U	5.0	1.0	mg/L			08/24/12 16:05	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**0.77**		0.58	0.29	ug/L			08/27/12 21:34	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**430**		100	50	ug/L		08/24/12 14:18	08/28/12 01:04	1
Antimony	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:04	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/24/12 14:18	08/28/12 01:04	1
Barium	**70**		5.0	1.4	ug/L		08/24/12 14:18	08/28/12 01:04	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/24/12 14:18	08/28/12 01:04	1
Cadmium	**0.58**		0.50	0.13	ug/L		08/24/12 14:18	08/28/12 01:04	1
Chromium	5.0	U	5.0	2.5	ug/L		08/24/12 14:18	08/28/12 01:04	1
Cobalt	**0.20**	**J**	0.50	0.12	ug/L		08/24/12 14:18	08/28/12 01:04	1
Copper	**3.0**	**J**	5.0	1.1	ug/L		08/24/12 14:18	08/28/12 01:04	1
Iron	**910**		100	44	ug/L		08/24/12 14:18	08/28/12 01:04	1
Lead	**0.70**	**J**	1.5	0.50	ug/L		08/24/12 14:18	08/28/12 01:04	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-8D

Lab Sample ID: 680-82284-6

Date Collected: 08/22/12 09:40
Matrix: Water
Date Received: 08/23/12 09:53

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**220**		5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:04	1
Mercury	0.80	U	0.80	0.40	ug/L		08/24/12 14:18	08/28/12 01:04	1
Nickel	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:04	1
Selenium	2.5	U	2.5	1.1	ug/L		08/24/12 14:18	08/28/12 01:04	1
Vanadium	10	U	10	3.2	ug/L		08/24/12 14:18	08/28/12 01:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3.9**		1.0	0.18	mg/L			09/05/12 11:32	1
Total Kjeldahl Nitrogen	**0.49**		0.20	0.15	mg/L		08/29/12 08:46	08/30/12 16:53	1
Nitrate as N	**0.098**		0.050	0.010	mg/L			08/23/12 18:12	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/23/12 18:12	1
Sulfate	**6.2**		5.0	2.5	mg/L			09/06/12 10:25	1
Total Organic Carbon	1.0	U	1.0	0.50	mg/L			09/02/12 21:51	1
Ferrous Iron	**0.25**	**HF**	0.10	0.025	mg/L			08/23/12 19:08	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Field Blank 2 (@ MW-8 Wells)

Lab Sample ID: 680-82284-7

Date Collected: 08/22/12 08:45
Matrix: Water
Date Received: 08/23/12 09:53

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/01/12 17:29	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/01/12 17:29	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/01/12 17:29	1
Diethyl ether	10	U	10	1.0	ug/L			09/01/12 17:29	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/01/12 17:29	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/01/12 17:29	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/01/12 17:29	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/01/12 17:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*09/01/12 17:29*	*1*
Dibromofluoromethane	*112*		*70 - 130*		*09/01/12 17:29*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/01/12 17:29*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.6	U	9.6	1.1	ug/L		08/24/12 16:11	08/31/12 17:57	1
Bis(2-ethylhexyl) phthalate	9.6	U	9.6	1.5	ug/L		08/24/12 16:11	08/31/12 17:57	1
1,4-Dioxane	9.6	U	9.6	3.3	ug/L		08/24/12 16:11	08/31/12 17:57	1
Naphthalene	9.6	U	9.6	0.67	ug/L		08/24/12 16:11	08/31/12 17:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*76*		*38 - 130*	*08/24/12 16:11*	*08/31/12 17:57*	*1*
2-Fluorophenol (Surr)	*71*		*25 - 130*	*08/24/12 16:11*	*08/31/12 17:57*	*1*
Nitrobenzene-d5 (Surr)	*71*		*39 - 130*	*08/24/12 16:11*	*08/31/12 17:57*	*1*
Phenol-d5 (Surr)	*68*		*25 - 130*	*08/24/12 16:11*	*08/31/12 17:57*	*1*
Terphenyl-d14 (Surr)	*77*		*10 - 143*	*08/24/12 16:11*	*08/31/12 17:57*	*1*
2,4,6-Tribromophenol (Surr)	*107*		*31 - 141*	*08/24/12 16:11*	*08/31/12 17:57*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/24/12 16:29	1
Methanol	5.0	U	5.0	1.0	mg/L			08/24/12 16:29	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	100	U	100	50	ug/L		08/24/12 14:18	08/28/12 01:11	1
Antimony	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:11	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/24/12 14:18	08/28/12 01:11	1
Barium	5.0	U	5.0	1.4	ug/L		08/24/12 14:18	08/28/12 01:11	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/24/12 14:18	08/28/12 01:11	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/24/12 14:18	08/28/12 01:11	1
Chromium	5.0	U	5.0	2.5	ug/L		08/24/12 14:18	08/28/12 01:11	1
Cobalt	0.50	U	0.50	0.12	ug/L		08/24/12 14:18	08/28/12 01:11	1
Copper	5.0	U	5.0	1.1	ug/L		08/24/12 14:18	08/28/12 01:11	1
Iron	100	U	100	44	ug/L		08/24/12 14:18	08/28/12 01:11	1
Lead	1.5	U	1.5	0.50	ug/L		08/24/12 14:18	08/28/12 01:11	1
Manganese	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:11	1
Mercury	0.80	U	0.80	0.40	ug/L		08/24/12 14:18	08/28/12 01:11	1
Nickel	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:11	1

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Field Blank 2 (@ MW-8 Wells)
Date Collected: 08/22/12 08:45
Date Received: 08/23/12 09:53

Lab Sample ID: 680-82284-7
Matrix: Water

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	2.5	U	2.5	1.1	ug/L		08/24/12 14:18	08/28/12 01:11	1
Vanadium	10	U	10	3.2	ug/L		08/24/12 14:18	08/28/12 01:11	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-8L-R

Date Collected: 08/22/12 10:45
Date Received: 08/23/12 09:53

Lab Sample ID: 680-82284-8

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	50	U	50	7.0	ug/L			09/04/12 15:52	50
1,1-Dichloroethane	50	U	50	13	ug/L			09/04/12 15:52	50
1,2-Dichloroethane	50	U	50	5.0	ug/L			09/04/12 15:52	50
Diethyl ether	**3400**		500	50	ug/L			09/04/12 15:52	50
t-Butanol	**4300**		250	130	ug/L			09/04/12 15:52	50
1,1,2,2-Tetrachloroethane	50	U	50	9.0	ug/L			09/04/12 15:52	50
Tetrachloroethene	50	U	50	7.5	ug/L			09/04/12 15:52	50
Trichloroethene	50	U	50	6.5	ug/L			09/04/12 15:52	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*09/04/12 15:52*	*50*
Dibromofluoromethane	*101*		*70 - 130*		*09/04/12 15:52*	*50*
Toluene-d8 (Surr)	*104*		*70 - 130*		*09/04/12 15:52*	*50*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/24/12 16:11	08/31/12 18:24	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/24/12 16:11	08/31/12 18:24	1
1,4-Dioxane	**18**		9.5	3.2	ug/L		08/24/12 16:11	08/31/12 18:24	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/24/12 16:11	08/31/12 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*38 - 130*	*08/24/12 16:11*	*08/31/12 18:24*	*1*
2-Fluorophenol (Surr)	*73*		*25 - 130*	*08/24/12 16:11*	*08/31/12 18:24*	*1*
Nitrobenzene-d5 (Surr)	*68*		*39 - 130*	*08/24/12 16:11*	*08/31/12 18:24*	*1*
Phenol-d5 (Surr)	*75*		*25 - 130*	*08/24/12 16:11*	*08/31/12 18:24*	*1*
Terphenyl-d14 (Surr)	*26*		*10 - 143*	*08/24/12 16:11*	*08/31/12 18:24*	*1*
2,4,6-Tribromophenol (Surr)	*104*		*31 - 141*	*08/24/12 16:11*	*08/31/12 18:24*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**2.6**	**J**	5.0	0.33	mg/L			08/24/12 16:53	1
Methanol	5.0	U	5.0	1.0	mg/L			08/24/12 16:53	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**160**		0.58	0.29	ug/L			08/27/12 22:51	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**600**		100	50	ug/L		08/24/12 14:18	08/28/12 01:19	1
Antimony	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:19	1
Arsenic	**29**		2.5	1.3	ug/L		08/24/12 14:18	08/28/12 01:19	1
Barium	**570**		5.0	1.4	ug/L		08/24/12 14:18	08/28/12 01:19	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/24/12 14:18	08/28/12 01:19	1
Cadmium	**0.35**	**J**	0.50	0.13	ug/L		08/24/12 14:18	08/28/12 01:19	1
Chromium	**4.2**	**J**	5.0	2.5	ug/L		08/24/12 14:18	08/28/12 01:19	1
Cobalt	**2.8**		0.50	0.12	ug/L		08/24/12 14:18	08/28/12 01:19	1
Copper	**3.7**	**J**	5.0	1.1	ug/L		08/24/12 14:18	08/28/12 01:19	1
Iron	**36000**		100	44	ug/L		08/24/12 14:18	08/28/12 01:19	1
Lead	**0.73**	**J**	1.5	0.50	ug/L		08/24/12 14:18	08/28/12 01:19	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-8L-R

Lab Sample ID: 680-82284-8

Date Collected: 08/22/12 10:45
Matrix: Water
Date Received: 08/23/12 09:53

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**2100**		5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:19	1
Mercury	0.80	U	0.80	0.40	ug/L		08/24/12 14:18	08/28/12 01:19	1
Nickel	**3.6**	**J**	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:19	1
Selenium	2.5	U	2.5	1.1	ug/L		08/24/12 14:18	08/28/12 01:19	1
Vanadium	**8.6**	**J**	10	3.2	ug/L		08/24/12 14:18	08/28/12 01:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**720**		10	1.8	mg/L			09/05/12 11:35	10
Total Kjeldahl Nitrogen	**22**		1.0	0.75	mg/L		08/29/12 08:46	08/30/12 16:53	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/24/12 09:42	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 09:42	1
Sulfate	**360**		100	50	mg/L			09/06/12 10:59	20
Total Organic Carbon	**24**		1.0	0.50	mg/L			09/02/12 22:07	1
Ferrous Iron	**13**	**HF**	1.0	0.25	mg/L			08/24/12 08:43	10

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-8U

Date Collected: 08/22/12 12:20
Date Received: 08/23/12 09:53

Lab Sample ID: 680-82284-9

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	25	U	25	3.5	ug/L			09/04/12 18:44	25
1,1-Dichloroethane	25	U	25	6.3	ug/L			09/04/12 18:44	25
1,2-Dichloroethane	25	U	25	2.5	ug/L			09/04/12 18:44	25
Diethyl ether	**2200**		250	25	ug/L			09/04/12 18:44	25
t-Butanol	**590**		130	65	ug/L			09/04/12 18:44	25
1,1,2,2-Tetrachloroethane	25	U	25	4.5	ug/L			09/04/12 18:44	25
Tetrachloroethene	25	U	25	3.8	ug/L			09/04/12 18:44	25
Trichloroethene	25	U	25	3.3	ug/L			09/04/12 18:44	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*70 - 130*		*09/04/12 18:44*	*25*
Dibromofluoromethane	*104*		*70 - 130*		*09/04/12 18:44*	*25*
Toluene-d8 (Surr)	*105*		*70 - 130*		*09/04/12 18:44*	*25*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/24/12 16:11	09/05/12 01:50	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/24/12 16:11	09/05/12 01:50	1
1,4-Dioxane	**14**		9.5	3.2	ug/L		08/24/12 16:11	09/05/12 01:50	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/24/12 16:11	09/05/12 01:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*38 - 130*	*08/24/12 16:11*	*09/05/12 01:50*	*1*
2-Fluorophenol (Surr)	*70*		*25 - 130*	*08/24/12 16:11*	*09/05/12 01:50*	*1*
Nitrobenzene-d5 (Surr)	*67*		*39 - 130*	*08/24/12 16:11*	*09/05/12 01:50*	*1*
Phenol-d5 (Surr)	*70*		*25 - 130*	*08/24/12 16:11*	*09/05/12 01:50*	*1*
Terphenyl-d14 (Surr)	*36*		*10 - 143*	*08/24/12 16:11*	*09/05/12 01:50*	*1*
2,4,6-Tribromophenol (Surr)	*100*		*31 - 141*	*08/24/12 16:11*	*09/05/12 01:50*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**1.6**	**J**	5.0	0.33	mg/L			08/24/12 17:16	1
Methanol	5.0	U	5.0	1.0	mg/L			08/24/12 17:16	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**50**		0.58	0.29	ug/L			08/27/12 22:38	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**410**		100	50	ug/L		08/24/12 14:18	08/28/12 01:26	1
Antimony	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:26	1
Arsenic	**8.7**		2.5	1.3	ug/L		08/24/12 14:18	08/28/12 01:26	1
Barium	**250**		5.0	1.4	ug/L		08/24/12 14:18	08/28/12 01:26	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/24/12 14:18	08/28/12 01:26	1
Cadmium	**0.18**	**J**	0.50	0.13	ug/L		08/24/12 14:18	08/28/12 01:26	1
Chromium	5.0	U	5.0	2.5	ug/L		08/24/12 14:18	08/28/12 01:26	1
Cobalt	**2.9**		0.50	0.12	ug/L		08/24/12 14:18	08/28/12 01:26	1
Copper	**13**		5.0	1.1	ug/L		08/24/12 14:18	08/28/12 01:26	1
Iron	**25000**		100	44	ug/L		08/24/12 14:18	08/28/12 01:26	1
Lead	1.5	U	1.5	0.50	ug/L		08/24/12 14:18	08/28/12 01:26	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-8U

Lab Sample ID: 680-82284-9

Date Collected: 08/22/12 12:20
Matrix: Water
Date Received: 08/23/12 09:53

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**790**		5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:26	1
Mercury	0.80	U	0.80	0.40	ug/L		08/24/12 14:18	08/28/12 01:26	1
Nickel	**2.1**	**J**	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:26	1
Selenium	2.5	U	2.5	1.1	ug/L		08/24/12 14:18	08/28/12 01:26	1
Vanadium	10	U	10	3.2	ug/L		08/24/12 14:18	08/28/12 01:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**450**		5.0	0.90	mg/L			09/05/12 11:24	5
Total Kjeldahl Nitrogen	**12**		1.0	0.75	mg/L		08/29/12 08:46	08/30/12 18:14	5
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/24/12 09:45	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 09:45	1
Sulfate	**510**		100	50	mg/L			09/06/12 11:03	20
Total Organic Carbon	**11**		1.0	0.50	mg/L			09/02/12 22:24	1
Ferrous Iron	**36**	**HF**	1.0	0.25	mg/L			08/24/12 08:39	10

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-6

Date Collected: 08/22/12 13:15
Date Received: 08/23/12 09:53

Lab Sample ID: 680-82284-10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	25	U	25	3.5	ug/L			09/04/12 16:49	25
1,1-Dichloroethane	25	U	25	6.3	ug/L			09/04/12 16:49	25
1,2-Dichloroethane	25	U	25	2.5	ug/L			09/04/12 16:49	25
Diethyl ether	**1600**		250	25	ug/L			09/04/12 16:49	25
t-Butanol	**1400**		130	65	ug/L			09/04/12 16:49	25
1,1,2,2-Tetrachloroethane	25	U	25	4.5	ug/L			09/04/12 16:49	25
Tetrachloroethene	25	U	25	3.8	ug/L			09/04/12 16:49	25
Trichloroethene	25	U	25	3.3	ug/L			09/04/12 16:49	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*09/04/12 16:49*	*25*
Dibromofluoromethane	*103*		*70 - 130*		*09/04/12 16:49*	*25*
Toluene-d8 (Surr)	*104*		*70 - 130*		*09/04/12 16:49*	*25*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/24/12 16:11	09/05/12 02:17	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/24/12 16:11	09/05/12 02:17	1
1,4-Dioxane	**4.6**	**J**	9.5	3.2	ug/L		08/24/12 16:11	09/05/12 02:17	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/24/12 16:11	09/05/12 02:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*74*		*38 - 130*	*08/24/12 16:11*	*09/05/12 02:17*	*1*
2-Fluorophenol (Surr)	*72*		*25 - 130*	*08/24/12 16:11*	*09/05/12 02:17*	*1*
Nitrobenzene-d5 (Surr)	*67*		*39 - 130*	*08/24/12 16:11*	*09/05/12 02:17*	*1*
Phenol-d5 (Surr)	*75*		*25 - 130*	*08/24/12 16:11*	*09/05/12 02:17*	*1*
Terphenyl-d14 (Surr)	*34*		*10 - 143*	*08/24/12 16:11*	*09/05/12 02:17*	*1*
2,4,6-Tribromophenol (Surr)	*103*		*31 - 141*	*08/24/12 16:11*	*09/05/12 02:17*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**0.94**	**J**	5.0	0.33	mg/L			08/24/12 17:40	1
Methanol	5.0	U	5.0	1.0	mg/L			08/24/12 17:40	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**120**		0.58	0.29	ug/L			08/27/12 22:25	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**520**		100	50	ug/L		08/24/12 14:18	08/28/12 01:34	1
Antimony	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:34	1
Arsenic	**2.1**	**J**	2.5	1.3	ug/L		08/24/12 14:18	08/28/12 01:34	1
Barium	**450**		5.0	1.4	ug/L		08/24/12 14:18	08/28/12 01:34	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/24/12 14:18	08/28/12 01:34	1
Cadmium	**1.9**		0.50	0.13	ug/L		08/24/12 14:18	08/28/12 01:34	1
Chromium	5.0	U	5.0	2.5	ug/L		08/24/12 14:18	08/28/12 01:34	1
Cobalt	**20**		0.50	0.12	ug/L		08/24/12 14:18	08/28/12 01:34	1
Copper	**2.4**	**J**	5.0	1.1	ug/L		08/24/12 14:18	08/28/12 01:34	1
Iron	**50000**		100	44	ug/L		08/24/12 14:18	08/28/12 01:34	1
Lead	**0.62**	**J**	1.5	0.50	ug/L		08/24/12 14:18	08/28/12 01:34	1

Client Sample ID: MW-6

Lab Sample ID: 680-82284-10

Date Collected: 08/22/12 13:15

Matrix: Water

Date Received: 08/23/12 09:53

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**4600**		5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:34	1
Mercury	0.80	U	0.80	0.40	ug/L		08/24/12 14:18	08/28/12 01:34	1
Nickel	**5.4**		5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:34	1
Selenium	2.5	U	2.5	1.1	ug/L		08/24/12 14:18	08/28/12 01:34	1
Vanadium	**4.1**	**J**	10	3.2	ug/L		08/24/12 14:18	08/28/12 01:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**720**		10	1.8	mg/L			09/05/12 11:35	10
Total Kjeldahl Nitrogen	**4.6**		0.20	0.15	mg/L		08/29/12 08:46	08/30/12 16:53	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/24/12 09:46	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 09:46	1
Sulfate	**140**		25	13	mg/L			09/06/12 12:44	5
Total Organic Carbon	**20**		1.0	0.50	mg/L			09/02/12 22:40	1
Ferrous Iron	**16**	**HF**	1.0	0.25	mg/L			08/24/12 08:43	10

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-4

Date Collected: 08/22/12 14:45
Date Received: 08/23/12 09:53

Lab Sample ID: 680-82284-11

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	25	U	25	3.5	ug/L			09/04/12 17:18	25
1,1-Dichloroethane	25	U	25	6.3	ug/L			09/04/12 17:18	25
1,2-Dichloroethane	25	U	25	2.5	ug/L			09/04/12 17:18	25
Diethyl ether	**1500**		250	25	ug/L			09/04/12 17:18	25
t-Butanol	**2200**		130	65	ug/L			09/04/12 17:18	25
1,1,2,2-Tetrachloroethane	25	U	25	4.5	ug/L			09/04/12 17:18	25
Tetrachloroethene	25	U	25	3.8	ug/L			09/04/12 17:18	25
Trichloroethene	25	U	25	3.3	ug/L			09/04/12 17:18	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*09/04/12 17:18*	*25*
Dibromofluoromethane	*103*		*70 - 130*		*09/04/12 17:18*	*25*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/04/12 17:18*	*25*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/24/12 16:11	09/05/12 02:45	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/24/12 16:11	09/05/12 02:45	1
1,4-Dioxane	**5.1**	**J**	9.5	3.2	ug/L		08/24/12 16:11	09/05/12 02:45	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/24/12 16:11	09/05/12 02:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*67*		*38 - 130*	*08/24/12 16:11*	*09/05/12 02:45*	*1*
2-Fluorophenol (Surr)	*63*		*25 - 130*	*08/24/12 16:11*	*09/05/12 02:45*	*1*
Nitrobenzene-d5 (Surr)	*61*		*39 - 130*	*08/24/12 16:11*	*09/05/12 02:45*	*1*
Phenol-d5 (Surr)	*63*		*25 - 130*	*08/24/12 16:11*	*09/05/12 02:45*	*1*
Terphenyl-d14 (Surr)	*30*		*10 - 143*	*08/24/12 16:11*	*09/05/12 02:45*	*1*
2,4,6-Tribromophenol (Surr)	*101*		*31 - 141*	*08/24/12 16:11*	*09/05/12 02:45*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**1.1**	**J**	5.0	0.33	mg/L			08/24/12 18:04	1
Methanol	5.0	U	5.0	1.0	mg/L			08/24/12 18:04	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**7400**		0.58	0.29	ug/L			08/27/12 23:04	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**1200**		100	50	ug/L		08/24/12 14:18	08/28/12 01:41	1
Antimony	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:41	1
Arsenic	**3.7**		2.5	1.3	ug/L		08/24/12 14:18	08/28/12 01:41	1
Barium	**760**		5.0	1.4	ug/L		08/24/12 14:18	08/28/12 01:41	1
Beryllium	**0.19**	**J**	0.50	0.15	ug/L		08/24/12 14:18	08/28/12 01:41	1
Cadmium	**0.26**	**J**	0.50	0.13	ug/L		08/24/12 14:18	08/28/12 01:41	1
Chromium	**6.6**		5.0	2.5	ug/L		08/24/12 14:18	08/28/12 01:41	1
Cobalt	**11**		0.50	0.12	ug/L		08/24/12 14:18	08/28/12 01:41	1
Copper	**5.8**		5.0	1.1	ug/L		08/24/12 14:18	08/28/12 01:41	1
Iron	**60000**		100	44	ug/L		08/24/12 14:18	08/28/12 01:41	1
Lead	**0.96**	**J**	1.5	0.50	ug/L		08/24/12 14:18	08/28/12 01:41	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-4

Lab Sample ID: 680-82284-11

Date Collected: 08/22/12 14:45
Matrix: Water
Date Received: 08/23/12 09:53

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**2600**		5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:41	1
Mercury	0.80	U	0.80	0.40	ug/L		08/24/12 14:18	08/28/12 01:41	1
Nickel	**5.1**		5.0	2.0	ug/L		08/24/12 14:18	08/28/12 01:41	1
Selenium	2.5	U	2.5	1.1	ug/L		08/24/12 14:18	08/28/12 01:41	1
Vanadium	**6.1**	**J**	10	3.2	ug/L		08/24/12 14:18	08/28/12 01:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**500**		5.0	0.90	mg/L			09/05/12 11:27	5
Total Kjeldahl Nitrogen	**4.7**		0.20	0.15	mg/L		08/29/12 08:46	08/30/12 16:53	1
Nitrate as N	**0.25**		0.050	0.010	mg/L			08/24/12 09:48	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 09:48	1
Sulfate	5.0	U	5.0	2.5	mg/L			09/06/12 12:04	1
Total Organic Carbon	**34**		1.0	0.50	mg/L			09/02/12 22:57	1
Ferrous Iron	**36**	**HF**	1.0	0.25	mg/L			08/24/12 08:43	10

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Trip Blank

Lab Sample ID: 680-82284-12

Date Collected: 08/22/12 00:00

Matrix: Water

Date Received: 08/23/12 09:53

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/01/12 16:32	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/01/12 16:32	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/01/12 16:32	1
Diethyl ether	10	U	10	1.0	ug/L			09/01/12 16:32	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/01/12 16:32	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/01/12 16:32	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/01/12 16:32	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/01/12 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*09/01/12 16:32*	*1*
Dibromofluoromethane	*111*		*70 - 130*		*09/01/12 16:32*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*09/01/12 16:32*	*1*

Surrogate Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
680-82186-1	RAB-MW1R	95	94	96
680-82186-2	RAB-MW3	91	95	96
680-82186-2 - DL	RAB-MW3	95	91	96
680-82186-3	RAB-MW4	93	99	91
680-82186-4	Trip Blank	93	102	91
680-82233-1	NAT-3	94	104	102
680-82233-2	Field Duplicate 2	94	104	103
680-82233-3	NAT-2	96	102	104
680-82233-4	Equipment Blank 2	93	106	101
680-82233-5	Field Blank 1	95	107	102
680-82233-6	MW-10	96	106	102
680-82233-7	Field Duplicate 1	93	106	101
680-82233-8	NAT-1	97	107	100
680-82233-9	MW-1	95	101	103
680-82233-10	Trip Blank	95	105	101
680-82284-1	SDB-MW-3	93	109	104
680-82284-2	SDB-MW-2	95	109	100
680-82284-2 MS	SDB-MW-2	113	113	116
680-82284-2 MSD	SDB-MW-2	110	111	112
680-82284-3	SDB-MW-1	95	108	102
680-82284-4	MW-5U	94	104	104
680-82284-5	MW-5	98	98	104
680-82284-6	MW-8D	94	107	101
680-82284-7	Field Blank 2 (@ MW-8 Wells)	96	112	103
680-82284-8	MW-8L-R	97	101	104
680-82284-9	MW-8U	92	104	105
680-82284-10	MW-6	95	103	104
680-82284-11	MW-4	95	103	102
680-82284-12	Trip Blank	95	111	104
LCS 680-247978/5	Lab Control Sample	91	94	91
LCS 680-248113/5	Lab Control Sample	93	91	76
LCS 680-248141/4	Lab Control Sample	104	110	106
LCS 680-248214/4	Lab Control Sample	87	86	91
LCS 680-248331/4	Lab Control Sample	103	113	112
LCS 680-248520/4	Lab Control Sample	107	106	106
LCS 680-248620/8	Lab Control Sample	106	107	104
LCSD 680-247978/6	Lab Control Sample Dup	102	107	104
LCSD 680-248113/6	Lab Control Sample Dup	99	103	98
LCSD 680-248141/5	Lab Control Sample Dup	106	108	108
LCSD 680-248214/5	Lab Control Sample Dup	91	91	95
LCSD 680-248331/5	Lab Control Sample Dup	107	118	114
LCSD 680-248520/5	Lab Control Sample Dup	110	105	108
LCSD 680-248620/9	Lab Control Sample Dup	105	106	104
MB 680-247978/8	Method Blank	94	102	92
MB 680-248113/7	Method Blank	93	116	91
MB 680-248141/6	Method Blank	95	108	99
MB 680-248214/7	Method Blank	94	95	95
MB 680-248331/6	Method Blank	96	108	99
MB 680-248520/6	Method Blank	94	110	99

Surrogate Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
MB 680-248620/4	Method Blank	96	110	100

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPH	TBP
Lab Sample ID	Client Sample ID	(38-130)	(25-130)	(39-130)	(25-130)	(10-143)	(31-141)
680-82233-1	NAT-3	73	71	70	71	27	97
680-82233-2	Field Duplicate 2	73	71	71	69	24	94
680-82233-3	NAT-2	15 X	4 X	7 X	5 X	21	52
680-82233-3 - RE	NAT-2	69	74	69	72	22	96
680-82233-4	Equipment Blank 2	72	68	69	64	24	99
680-82233-5	Field Blank 1	62	54	57	53	72	90
680-82233-6	MW-10	67	59	61	59	73	100
680-82233-7	Field Duplicate 1	80	72	72	72	75	108
680-82233-9	MW-1	78	72	72	73	54	107
680-82284-1	SDB-MW-3	80	77	75	71	31	100
680-82284-2	SDB-MW-2	77	71	71	68	29	99
680-82284-2 MS	SDB-MW-2	82	80	80	82	75	111
680-82284-2 MSD	SDB-MW-2	80	78	75	79	66	107
680-82284-3	SDB-MW-1	77	77	73	75	26	112
680-82284-4	MW-5U	80	81	73	81	13	111
680-82284-5	MW-5	72	62	64	62	27	103
680-82284-6	MW-8D	80	77	74	73	55	115
680-82284-7	Field Blank 2 (@ MW-8 Wells)	76	71	71	68	77	107
680-82284-8	MW-8L-R	73	73	68	75	26	104
680-82284-9	MW-8U	73	70	67	70	36	100
680-82284-10	MW-6	74	72	67	75	34	103
680-82284-11	MW-4	67	63	61	63	30	101
LCS 680-247624/21-A	Lab Control Sample	83	80	79	80	86	108
LCS 680-248570/14-A	Lab Control Sample	77	79	74	75	75	104
MB 680-247624/20-A	Method Blank	84	78	77	79	86	101
MB 680-248570/13-A	Method Blank	78	78	76	76	75	99

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-247978/8 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247978

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			08/27/12 19:45	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/27/12 19:45	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			08/27/12 19:45	1
Diethyl ether	10	U	10	1.0	ug/L			08/27/12 19:45	1
t-Butanol	5.0	U	5.0	2.6	ug/L			08/27/12 19:45	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			08/27/12 19:45	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			08/27/12 19:45	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			08/27/12 19:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*70 - 130*		*08/27/12 19:45*	*1*
Dibromofluoromethane	*102*		*70 - 130*		*08/27/12 19:45*	*1*
Toluene-d8 (Surr)	*92*		*70 - 130*		*08/27/12 19:45*	*1*

Lab Sample ID: LCS 680-247978/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247978

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	50.0	47.5		ug/L		95	70 - 130
1,1-Dichloroethane	50.0	47.9		ug/L		96	70 - 130
1,2-Dichloroethane	50.0	43.7		ug/L		87	70 - 130
Diethyl ether	50.0	37.8		ug/L		76	10 - 200
t-Butanol	50.0	41.3		ug/L		83	20 - 195
1,1,2,2-Tetrachloroethane	50.0	46.3		ug/L		93	70 - 130
Tetrachloroethene	50.0	47.9		ug/L		96	70 - 130
Trichloroethene	50.0	46.5		ug/L		93	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*91*		*70 - 130*
Dibromofluoromethane	*94*		*70 - 130*
Toluene-d8 (Surr)	*91*		*70 - 130*

Lab Sample ID: LCSD 680-247978/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247978

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloroform	50.0	53.5		ug/L		107	70 - 130	12	30
1,1-Dichloroethane	50.0	54.1		ug/L		108	70 - 130	12	30
1,2-Dichloroethane	50.0	49.7		ug/L		99	70 - 130	13	30
Diethyl ether	50.0	54.7		ug/L		109	10 - 200	37	50
t-Butanol	50.0	58.4		ug/L		117	20 - 195	34	50
1,1,2,2-Tetrachloroethane	50.0	51.5		ug/L		103	70 - 130	11	30
Tetrachloroethene	50.0	53.7		ug/L		107	70 - 130	11	30
Trichloroethene	50.0	52.7		ug/L		105	70 - 130	13	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-247978/6
Matrix: Water
Analysis Batch: 247978

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	102		70 - 130
Dibromofluoromethane	107		70 - 130
Toluene-d8 (Surr)	104		70 - 130

Lab Sample ID: MB 680-248113/7
Matrix: Water
Analysis Batch: 248113

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			08/28/12 15:09	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/28/12 15:09	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			08/28/12 15:09	1
Diethyl ether	10	U	10	1.0	ug/L			08/28/12 15:09	1
t-Butanol	5.0	U	5.0	2.6	ug/L			08/28/12 15:09	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			08/28/12 15:09	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			08/28/12 15:09	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			08/28/12 15:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		70 - 130		08/28/12 15:09	1
Dibromofluoromethane	116		70 - 130		08/28/12 15:09	1
Toluene-d8 (Surr)	91		70 - 130		08/28/12 15:09	1

Lab Sample ID: LCS 680-248113/5
Matrix: Water
Analysis Batch: 248113

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	50.0	46.7		ug/L		93	70 - 130
1,1-Dichloroethane	50.0	49.0		ug/L		98	70 - 130
1,2-Dichloroethane	50.0	42.3		ug/L		85	70 - 130
Diethyl ether	50.0	44.3		ug/L		89	10 - 200
t-Butanol	50.0	40.7		ug/L		81	20 - 195
1,1,2,2-Tetrachloroethane	50.0	42.9		ug/L		86	70 - 130
Tetrachloroethene	50.0	47.7		ug/L		95	70 - 130
Trichloroethene	50.0	42.4		ug/L		85	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	93		70 - 130
Dibromofluoromethane	91		70 - 130
Toluene-d8 (Surr)	76		70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-248113/6
Matrix: Water
Analysis Batch: 248113

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
Chloroform	50.0	50.2		ug/L		100	70 - 130	7	30
1,1-Dichloroethane	50.0	49.5		ug/L		99	70 - 130	1	30
1,2-Dichloroethane	50.0	44.4		ug/L		89	70 - 130	5	30
Diethyl ether	50.0	55.6		ug/L		111	10 - 200	23	50
t-Butanol	50.0	46.7		ug/L		93	20 - 195	14	50
1,1,2,2-Tetrachloroethane	50.0	46.4		ug/L		93	70 - 130	8	30
Tetrachloroethene	50.0	51.7		ug/L		103	70 - 130	8	30
Trichloroethene	50.0	48.5		ug/L		97	70 - 130	13	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*70 - 130*
Dibromofluoromethane	*103*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 680-248141/6
Matrix: Water
Analysis Batch: 248141

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			08/29/12 12:18	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/29/12 12:18	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			08/29/12 12:18	1
Diethyl ether	10	U	10	1.0	ug/L			08/29/12 12:18	1
t-Butanol	5.0	U	5.0	2.6	ug/L			08/29/12 12:18	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			08/29/12 12:18	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			08/29/12 12:18	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			08/29/12 12:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*08/29/12 12:18*	*1*
Dibromofluoromethane	*108*		*70 - 130*		*08/29/12 12:18*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*08/29/12 12:18*	*1*

Lab Sample ID: LCS 680-248141/4
Matrix: Water
Analysis Batch: 248141

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	50.0	57.8		ug/L		116	70 - 130
1,1-Dichloroethane	50.0	58.8		ug/L		118	70 - 130
1,2-Dichloroethane	50.0	48.4		ug/L		97	70 - 130
Diethyl ether	50.0	53.5		ug/L		107	10 - 200
t-Butanol	50.0	42.0		ug/L		84	20 - 195
1,1,2,2-Tetrachloroethane	50.0	51.4		ug/L		103	70 - 130
Tetrachloroethene	50.0	50.5		ug/L		101	70 - 130
Trichloroethene	50.0	52.9		ug/L		106	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-248141/4
Matrix: Water
Analysis Batch: 248141

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	104		70 - 130
Dibromofluoromethane	110		70 - 130
Toluene-d8 (Surr)	106		70 - 130

Lab Sample ID: LCSD 680-248141/5
Matrix: Water
Analysis Batch: 248141

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
Chloroform			50.0	56.3		ug/L		113	70 - 130	3	30
1,1-Dichloroethane			50.0	56.6		ug/L		113	70 - 130	4	30
1,2-Dichloroethane			50.0	51.2		ug/L		102	70 - 130	6	30
Diethyl ether			50.0	54.6		ug/L		109	10 - 200	2	50
t-Butanol			50.0	47.2		ug/L		94	20 - 195	12	50
1,1,2,2-Tetrachloroethane			50.0	53.4		ug/L		107	70 - 130	4	30
Tetrachloroethene			50.0	49.5		ug/L		99	70 - 130	2	30
Trichloroethene			50.0	53.1		ug/L		106	70 - 130	0	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	106		70 - 130
Dibromofluoromethane	108		70 - 130
Toluene-d8 (Surr)	108		70 - 130

Lab Sample ID: MB 680-248214/7
Matrix: Water
Analysis Batch: 248214

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			08/29/12 16:22	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/29/12 16:22	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			08/29/12 16:22	1
Diethyl ether	10	U	10	1.0	ug/L			08/29/12 16:22	1
t-Butanol	5.0	U	5.0	2.6	ug/L			08/29/12 16:22	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			08/29/12 16:22	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			08/29/12 16:22	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			08/29/12 16:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		70 - 130		08/29/12 16:22	1
Dibromofluoromethane	95		70 - 130		08/29/12 16:22	1
Toluene-d8 (Surr)	95		70 - 130		08/29/12 16:22	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-248214/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248214

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	50.0	43.9		ug/L		88	70 - 130
1,1-Dichloroethane	50.0	47.7		ug/L		95	70 - 130
1,2-Dichloroethane	50.0	45.2		ug/L		90	70 - 130
Diethyl ether	50.0	40.0		ug/L		80	10 - 200
t-Butanol	50.0	44.9		ug/L		90	20 - 195
1,1,2,2-Tetrachloroethane	50.0	47.3		ug/L		95	70 - 130
Tetrachloroethene	50.0	41.1		ug/L		82	70 - 130
Trichloroethene	50.0	42.6		ug/L		85	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*87*		*70 - 130*
Dibromofluoromethane	*86*		*70 - 130*
Toluene-d8 (Surr)	*91*		*70 - 130*

Lab Sample ID: LCSD 680-248214/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248214

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloroform	50.0	46.6		ug/L		93	70 - 130	6	30
1,1-Dichloroethane	50.0	51.6		ug/L		103	70 - 130	8	30
1,2-Dichloroethane	50.0	45.4		ug/L		91	70 - 130	0	30
Diethyl ether	50.0	43.2		ug/L		86	10 - 200	8	50
t-Butanol	50.0	51.2		ug/L		102	20 - 195	13	50
1,1,2,2-Tetrachloroethane	50.0	47.1		ug/L		94	70 - 130	0	30
Tetrachloroethene	50.0	43.4		ug/L		87	70 - 130	5	30
Trichloroethene	50.0	44.7		ug/L		89	70 - 130	5	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*91*		*70 - 130*
Dibromofluoromethane	*91*		*70 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Lab Sample ID: MB 680-248331/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248331

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			08/30/12 12:47	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/30/12 12:47	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			08/30/12 12:47	1
Diethyl ether	10	U	10	1.0	ug/L			08/30/12 12:47	1
t-Butanol	5.0	U	5.0	2.6	ug/L			08/30/12 12:47	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			08/30/12 12:47	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			08/30/12 12:47	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			08/30/12 12:47	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-248331/6
Matrix: Water
Analysis Batch: 248331

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		70 - 130		08/30/12 12:47	1
Dibromofluoromethane	108		70 - 130		08/30/12 12:47	1
Toluene-d8 (Surr)	99		70 - 130		08/30/12 12:47	1

Lab Sample ID: LCS 680-248331/4
Matrix: Water
Analysis Batch: 248331

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	50.0	58.8		ug/L		118	70 - 130
1,1-Dichloroethane	50.0	59.1		ug/L		118	70 - 130
1,2-Dichloroethane	50.0	53.5		ug/L		107	70 - 130
Diethyl ether	50.0	56.5		ug/L		113	10 - 200
t-Butanol	50.0	48.3		ug/L		97	20 - 195
1,1,2,2-Tetrachloroethane	50.0	52.8		ug/L		106	70 - 130
Tetrachloroethene	50.0	48.4		ug/L		97	70 - 130
Trichloroethene	50.0	54.3		ug/L		109	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	103		70 - 130
Dibromofluoromethane	113		70 - 130
Toluene-d8 (Surr)	112		70 - 130

Lab Sample ID: LCSD 680-248331/5
Matrix: Water
Analysis Batch: 248331

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
Chloroform	50.0	61.8		ug/L		124	70 - 130	5	30
1,1-Dichloroethane	50.0	62.7		ug/L		125	70 - 130	6	30
1,2-Dichloroethane	50.0	51.7		ug/L		103	70 - 130	3	30
Diethyl ether	50.0	57.1		ug/L		114	10 - 200	1	50
t-Butanol	50.0	49.9		ug/L		100	20 - 195	3	50
1,1,2,2-Tetrachloroethane	50.0	52.1		ug/L		104	70 - 130	1	30
Tetrachloroethene	50.0	50.1		ug/L		100	70 - 130	4	30
Trichloroethene	50.0	56.1		ug/L		112	70 - 130	3	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	107		70 - 130
Dibromofluoromethane	118		70 - 130
Toluene-d8 (Surr)	114		70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-248520/6
Matrix: Water
Analysis Batch: 248520

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/01/12 16:03	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/01/12 16:03	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/01/12 16:03	1
Diethyl ether	10	U	10	1.0	ug/L			09/01/12 16:03	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/01/12 16:03	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/01/12 16:03	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/01/12 16:03	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/01/12 16:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*70 - 130*		*09/01/12 16:03*	*1*
Dibromofluoromethane	*110*		*70 - 130*		*09/01/12 16:03*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/01/12 16:03*	*1*

Lab Sample ID: LCS 680-248520/4
Matrix: Water
Analysis Batch: 248520

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	50.0	54.4		ug/L		109	70 - 130
1,1-Dichloroethane	50.0	55.4		ug/L		111	70 - 130
1,2-Dichloroethane	50.0	50.0		ug/L		100	70 - 130
Diethyl ether	50.0	40.1		ug/L		80	10 - 200
t-Butanol	50.0	47.2		ug/L		94	20 - 195
1,1,2,2-Tetrachloroethane	50.0	55.8		ug/L		112	70 - 130
Tetrachloroethene	50.0	50.1		ug/L		100	70 - 130
Trichloroethene	50.0	51.7		ug/L		103	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*107*		*70 - 130*
Dibromofluoromethane	*106*		*70 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 680-248520/5
Matrix: Water
Analysis Batch: 248520

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
Chloroform	50.0	54.9		ug/L		110	70 - 130	1	30
1,1-Dichloroethane	50.0	55.6		ug/L		111	70 - 130	0	30
1,2-Dichloroethane	50.0	50.8		ug/L		102	70 - 130	2	30
Diethyl ether	50.0	41.3		ug/L		83	10 - 200	3	50
t-Butanol	50.0	49.6		ug/L		99	20 - 195	5	50
1,1,2,2-Tetrachloroethane	50.0	56.5		ug/L		113	70 - 130	1	30
Tetrachloroethene	50.0	51.0		ug/L		102	70 - 130	2	30
Trichloroethene	50.0	53.6		ug/L		107	70 - 130	4	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-248520/5
Matrix: Water
Analysis Batch: 248520

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	110		70 - 130
Dibromofluoromethane	105		70 - 130
Toluene-d8 (Surr)	108		70 - 130

Lab Sample ID: MB 680-248620/4
Matrix: Water
Analysis Batch: 248620

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/04/12 12:22	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/04/12 12:22	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/04/12 12:22	1
Diethyl ether	10	U	10	1.0	ug/L			09/04/12 12:22	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/04/12 12:22	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/04/12 12:22	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/04/12 12:22	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/04/12 12:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		70 - 130		09/04/12 12:22	1
Dibromofluoromethane	110		70 - 130		09/04/12 12:22	1
Toluene-d8 (Surr)	100		70 - 130		09/04/12 12:22	1

Lab Sample ID: LCS 680-248620/8
Matrix: Water
Analysis Batch: 248620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	50.0	60.8		ug/L		122	70 - 130
1,1-Dichloroethane	50.0	56.1		ug/L		112	70 - 130
1,2-Dichloroethane	50.0	47.2		ug/L		94	70 - 130
Diethyl ether	50.0	38.4		ug/L		77	10 - 200
t-Butanol	50.0	48.5		ug/L		97	20 - 195
1,1,2,2-Tetrachloroethane	50.0	52.6		ug/L		105	70 - 130
Tetrachloroethene	50.0	50.5		ug/L		101	70 - 130
Trichloroethene	50.0	49.5		ug/L		99	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	106		70 - 130
Dibromofluoromethane	107		70 - 130
Toluene-d8 (Surr)	104		70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-248620/9
Matrix: Water
Analysis Batch: 248620

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
Chloroform			50.0	60.0		ug/L		120	70 - 130	1	30
1,1-Dichloroethane			50.0	54.7		ug/L		109	70 - 130	3	30
1,2-Dichloroethane			50.0	46.8		ug/L		94	70 - 130	1	30
Diethyl ether			50.0	37.4		ug/L		75	10 - 200	3	50
t-Butanol			50.0	49.8		ug/L		100	20 - 195	3	50
1,1,2,2-Tetrachloroethane			50.0	51.3		ug/L		103	70 - 130	3	30
Tetrachloroethene			50.0	49.9		ug/L		100	70 - 130	1	30
Trichloroethene			50.0	49.9		ug/L		100	70 - 130	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*70 - 130*
Dibromofluoromethane	*106*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: 680-82284-2 MS
Matrix: Water
Analysis Batch: 248620

Client Sample ID: SDB-MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloroform	1.0	U	50.0	64.6		ug/L		129	70 - 130		
1,1-Dichloroethane	1.0	U	50.0	60.3		ug/L		121	70 - 130		
1,2-Dichloroethane	1.0	U	50.0	51.1		ug/L		102	70 - 130		
Diethyl ether	10	U	50.0	53.3		ug/L		107	10 - 200		
t-Butanol	5.0	U	50.0	39.1		ug/L		78	20 - 195		
1,1,2,2-Tetrachloroethane	1.0	U	50.0	55.9		ug/L		112	70 - 130		
Tetrachloroethene	1.0	U	50.0	53.7		ug/L		107	70 - 130		
Trichloroethene	1.0	U	50.0	53.9		ug/L		108	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*113*		*70 - 130*
Dibromofluoromethane	*113*		*70 - 130*
Toluene-d8 (Surr)	*116*		*70 - 130*

Lab Sample ID: 680-82284-2 MSD
Matrix: Water
Analysis Batch: 248620

Client Sample ID: SDB-MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloroform	1.0	U	50.0	63.6		ug/L		127	70 - 130	2	30
1,1-Dichloroethane	1.0	U	50.0	59.3		ug/L		119	70 - 130	2	30
1,2-Dichloroethane	1.0	U	50.0	49.8		ug/L		100	70 - 130	3	30
Diethyl ether	10	U	50.0	54.3		ug/L		109	10 - 200	2	50
t-Butanol	5.0	U	50.0	43.4		ug/L		87	20 - 195	10	50
1,1,2,2-Tetrachloroethane	1.0	U	50.0	54.6		ug/L		109	70 - 130	2	30
Tetrachloroethene	1.0	U	50.0	52.4		ug/L		105	70 - 130	3	30
Trichloroethene	1.0	U	50.0	52.4		ug/L		105	70 - 130	3	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-82284-2 MSD
Matrix: Water
Analysis Batch: 248620

Client Sample ID: SDB-MW-2
Prep Type: Total/NA

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*110*		*70 - 130*
Dibromofluoromethane	*111*		*70 - 130*
Toluene-d8 (Surr)	*112*		*70 - 130*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-247624/20-A
Matrix: Water
Analysis Batch: 248348

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247624

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	10	U	10	1.1	ug/L		08/24/12 16:11	08/28/12 16:03	1
Bis(2-ethylhexyl) phthalate	10	U	10	1.6	ug/L		08/24/12 16:11	08/28/12 16:03	1
1,4-Dioxane	10	U	10	3.4	ug/L		08/24/12 16:11	08/28/12 16:03	1
Naphthalene	10	U	10	0.70	ug/L		08/24/12 16:11	08/28/12 16:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*84*		*38 - 130*	*08/24/12 16:11*	*08/28/12 16:03*	*1*
2-Fluorophenol (Surr)	*78*		*25 - 130*	*08/24/12 16:11*	*08/28/12 16:03*	*1*
Nitrobenzene-d5 (Surr)	*77*		*39 - 130*	*08/24/12 16:11*	*08/28/12 16:03*	*1*
Phenol-d5 (Surr)	*79*		*25 - 130*	*08/24/12 16:11*	*08/28/12 16:03*	*1*
Terphenyl-d14 (Surr)	*86*		*10 - 143*	*08/24/12 16:11*	*08/28/12 16:03*	*1*
2,4,6-Tribromophenol (Surr)	*101*		*31 - 141*	*08/24/12 16:11*	*08/28/12 16:03*	*1*

Lab Sample ID: LCS 680-247624/21-A
Matrix: Water
Analysis Batch: 248348

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247624

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-chloroethyl)ether	100	81.4		ug/L		81	56 - 130
Bis(2-ethylhexyl) phthalate	100	91.5		ug/L		91	62 - 130
1,4-Dioxane	100	63.6		ug/L		64	35 - 130
Naphthalene	100	76.4		ug/L		76	50 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*83*		*38 - 130*
2-Fluorophenol (Surr)	*80*		*25 - 130*
Nitrobenzene-d5 (Surr)	*79*		*39 - 130*
Phenol-d5 (Surr)	*80*		*25 - 130*
Terphenyl-d14 (Surr)	*86*		*10 - 143*
2,4,6-Tribromophenol (Surr)	*108*		*31 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-82284-2 MS — **Client Sample ID: SDB-MW-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248348 — **Prep Batch: 247624**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-chloroethyl)ether	9.4	U	94.5	74.8		ug/L		79	56 - 130
Bis(2-ethylhexyl) phthalate	9.4	U	94.5	86.1		ug/L		91	62 - 130
1,4-Dioxane	9.4	U	94.5	53.8		ug/L		57	35 - 130
Naphthalene	9.4	U	94.5	69.6		ug/L		74	50 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*82*		*38 - 130*
2-Fluorophenol (Surr)	*80*		*25 - 130*
Nitrobenzene-d5 (Surr)	*80*		*39 - 130*
Phenol-d5 (Surr)	*82*		*25 - 130*
Terphenyl-d14 (Surr)	*75*		*10 - 143*
2,4,6-Tribromophenol (Surr)	*111*		*31 - 141*

Lab Sample ID: 680-82284-2 MSD — **Client Sample ID: SDB-MW-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248348 — **Prep Batch: 247624**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-chloroethyl)ether	9.4	U	95.1	73.0		ug/L		77	56 - 130	2	50
Bis(2-ethylhexyl) phthalate	9.4	U	95.1	87.8		ug/L		92	62 - 130	2	50
1,4-Dioxane	9.4	U	95.1	51.6		ug/L		54	35 - 130	4	50
Naphthalene	9.4	U	95.1	69.1		ug/L		73	50 - 130	1	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*80*		*38 - 130*
2-Fluorophenol (Surr)	*78*		*25 - 130*
Nitrobenzene-d5 (Surr)	*75*		*39 - 130*
Phenol-d5 (Surr)	*79*		*25 - 130*
Terphenyl-d14 (Surr)	*66*		*10 - 143*
2,4,6-Tribromophenol (Surr)	*107*		*31 - 141*

Lab Sample ID: MB 680-248570/13-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249157 — **Prep Batch: 248570**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	10	U	10	1.1	ug/L		09/04/12 15:31	09/06/12 12:57	1
Bis(2-ethylhexyl) phthalate	10	U	10	1.6	ug/L		09/04/12 15:31	09/06/12 12:57	1
1,4-Dioxane	10	U	10	3.4	ug/L		09/04/12 15:31	09/06/12 12:57	1
Naphthalene	10	U	10	0.70	ug/L		09/04/12 15:31	09/06/12 12:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*78*		*38 - 130*	*09/04/12 15:31*	*09/06/12 12:57*	*1*
2-Fluorophenol (Surr)	*78*		*25 - 130*	*09/04/12 15:31*	*09/06/12 12:57*	*1*
Nitrobenzene-d5 (Surr)	*76*		*39 - 130*	*09/04/12 15:31*	*09/06/12 12:57*	*1*
Phenol-d5 (Surr)	*76*		*25 - 130*	*09/04/12 15:31*	*09/06/12 12:57*	*1*
Terphenyl-d14 (Surr)	*75*		*10 - 143*	*09/04/12 15:31*	*09/06/12 12:57*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-248570/13-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249157 — **Prep Batch: 248570**

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	99		31 - 141	09/04/12 15:31	09/06/12 12:57	1

Lab Sample ID: LCS 680-248570/14-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249157 — **Prep Batch: 248570**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-chloroethyl)ether	100	81.2		ug/L		81	56 - 130
Bis(2-ethylhexyl) phthalate	100	79.6		ug/L		80	62 - 130
1,4-Dioxane	100	59.0		ug/L		59	35 - 130
Naphthalene	100	66.7		ug/L		67	50 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	77		38 - 130
2-Fluorophenol (Surr)	79		25 - 130
Nitrobenzene-d5 (Surr)	74		39 - 130
Phenol-d5 (Surr)	75		25 - 130
Terphenyl-d14 (Surr)	75		10 - 143
2,4,6-Tribromophenol (Surr)	104		31 - 141

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Lab Sample ID: MB 680-247601/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247601

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/23/12 11:38	1
Methanol	5.0	U	5.0	1.0	mg/L			08/23/12 11:38	1

Lab Sample ID: LCS 680-247601/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247601

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	20.0	20.1		mg/L		101	38 - 156
Methanol	20.0	19.0		mg/L		95	43 - 143

Lab Sample ID: LCSD 680-247601/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247601

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol	20.0	19.9		mg/L		99	38 - 156	1	50
Methanol	20.0	18.8		mg/L		94	43 - 143	1	50

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) (Continued)

Lab Sample ID: 680-82186-1 MS — **Client Sample ID: RAB-MW1R**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247601

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	5.0	U	20.0	21.2		mg/L		106	38 - 156
Methanol	5.0	U	20.0	11.0		mg/L		55	43 - 143

Lab Sample ID: 680-82186-1 MSD — **Client Sample ID: RAB-MW1R**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247601

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol	5.0	U	20.0	20.9		mg/L		105	38 - 156	1	50
Methanol	5.0	U	20.0	20.0	F	mg/L		100	43 - 143	58	50

Lab Sample ID: MB 680-247710/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247710

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/24/12 12:07	1
Methanol	5.0	U	5.0	1.0	mg/L			08/24/12 12:07	1

Lab Sample ID: LCS 680-247710/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247710

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	20.0	22.5		mg/L		112	38 - 156
Methanol	20.0	21.8		mg/L		109	43 - 143

Lab Sample ID: LCSD 680-247710/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247710

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol	20.0	21.9		mg/L		110	38 - 156	3	50
Methanol	20.0	21.4		mg/L		107	43 - 143	2	50

Lab Sample ID: 680-82284-2 MS — **Client Sample ID: SDB-MW-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247710

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	5.0	U	20.0	19.2		mg/L		96	38 - 156
Methanol	5.0	U	20.0	18.5		mg/L		93	43 - 143

Lab Sample ID: 680-82284-2 MSD — **Client Sample ID: SDB-MW-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247710

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol	5.0	U	20.0	19.2		mg/L		96	38 - 156	0	50

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) (Continued)

Lab Sample ID: 680-82284-2 MSD — **Client Sample ID: SDB-MW-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247710

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methanol	5.0	U	20.0	18.7		mg/L		93	43 - 143	1	50

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-247781/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247781

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58	0.29	ug/L			08/25/12 19:42	1

Lab Sample ID: LCS 680-247781/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247781

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	153	146		ug/L		95	75 - 125

Lab Sample ID: LCSD 680-247781/11 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247781

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	153	168		ug/L		110	75 - 125	14	30

Lab Sample ID: MB 680-248047/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248047

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58	0.29	ug/L			08/27/12 19:21	1

Lab Sample ID: LCS 680-248047/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248047

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	153	151		ug/L		99	75 - 125

Lab Sample ID: LCSD 680-248047/18 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248047

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	153	164		ug/L		107	75 - 125	8	30

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: MB 680-248049/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248049

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58	0.29	ug/L			08/27/12 19:21	1

Lab Sample ID: LCS 680-248049/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248049

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	1910	1690		ug/L		88	75 - 125

Lab Sample ID: LCSD 680-248049/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248049

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	1910	2030		ug/L		106	75 - 125	19	30

Lab Sample ID: MB 680-248562/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248562

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58	0.29	ug/L			09/03/12 19:15	1

Lab Sample ID: LCS 680-248562/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248562

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	153	139		ug/L		91	75 - 125

Lab Sample ID: LCSD 680-248562/7 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248562

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	153	126		ug/L		82	75 - 125	10	30

Lab Sample ID: MB 680-248598/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248598

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58	0.29	ug/L			09/03/12 19:15	1

Lab Sample ID: LCS 680-248598/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248598

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	1910	2080		ug/L		109	75 - 125

Lab Sample ID: LCSD 680-248598/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248598

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	1910	1460	*	ug/L		76	75 - 125	35	30

Lab Sample ID: MB 680-248739/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248739

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58	0.29	ug/L			09/04/12 11:44	1

Lab Sample ID: LCS 680-248739/22 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248739

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	153	129		ug/L		85	75 - 125

Lab Sample ID: LCSD 680-248739/20 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248739

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	153	140		ug/L		91	75 - 125	8	30

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-247405/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247778 — **Prep Batch: 247405**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	100	U	100	50	ug/L		08/22/12 09:06	08/24/12 18:32	1
Antimony	5.0	U	5.0	2.0	ug/L		08/22/12 09:06	08/24/12 18:32	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/22/12 09:06	08/24/12 18:32	1
Barium	5.0	U	5.0	1.4	ug/L		08/22/12 09:06	08/24/12 18:32	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/22/12 09:06	08/24/12 18:32	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/22/12 09:06	08/24/12 18:32	1
Chromium	5.0	U	5.0	2.5	ug/L		08/22/12 09:06	08/24/12 18:32	1
Cobalt	0.50	U	0.50	0.12	ug/L		08/22/12 09:06	08/24/12 18:32	1
Copper	5.0	U	5.0	1.1	ug/L		08/22/12 09:06	08/24/12 18:32	1
Iron	100	U	100	44	ug/L		08/22/12 09:06	08/24/12 18:32	1
Lead	0.618	J	1.5	0.50	ug/L		08/22/12 09:06	08/24/12 18:32	1
Manganese	5.0	U	5.0	2.0	ug/L		08/22/12 09:06	08/24/12 18:32	1
Mercury	0.80	U	0.80	0.40	ug/L		08/22/12 09:06	08/24/12 18:32	1
Nickel	5.0	U	5.0	2.0	ug/L		08/22/12 09:06	08/24/12 18:32	1
Selenium	2.5	U	2.5	1.1	ug/L		08/22/12 09:06	08/24/12 18:32	1
Vanadium	10	U	10	3.2	ug/L		08/22/12 09:06	08/24/12 18:32	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-247405/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247778 — **Prep Batch: 247405**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	5000	5110		ug/L		102	75 - 125
Antimony	50.0	52.8		ug/L		106	75 - 125
Arsenic	100	95.4		ug/L		95	75 - 125
Barium	100	101		ug/L		101	75 - 125
Beryllium	50.0	48.9		ug/L		98	75 - 125
Cadmium	50.0	49.3		ug/L		99	75 - 125
Chromium	100	93.7		ug/L		94	75 - 125
Cobalt	50.0	47.9		ug/L		96	75 - 125
Copper	100	99.3		ug/L		99	75 - 125
Iron	5000	5470		ug/L		109	75 - 125
Lead	50.0	51.5		ug/L		103	75 - 125
Manganese	500	485		ug/L		97	75 - 125
Mercury	5.00	4.49		ug/L		90	75 - 125
Nickel	100	97.0		ug/L		97	75 - 125
Selenium	100	99.5		ug/L		100	75 - 125
Vanadium	100	92.5		ug/L		92	75 - 125

Lab Sample ID: 680-82186-1 MS — **Client Sample ID: RAB-MW1R**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247778 — **Prep Batch: 247405**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	940		5000	5790		ug/L		97	75 - 125
Antimony	5.0	U	50.0	53.3		ug/L		107	75 - 125
Arsenic	2.2	J	100	101		ug/L		99	75 - 125
Barium	260		100	368		ug/L		104	75 - 125
Beryllium	0.50	U	50.0	48.8		ug/L		98	75 - 125
Cadmium	0.15	J	50.0	48.6		ug/L		97	75 - 125
Chromium	27		100	119		ug/L		92	75 - 125
Cobalt	68		50.0	116		ug/L		95	75 - 125
Copper	5.3		100	101		ug/L		96	75 - 125
Iron	89000		5000	97800	4	ug/L		173	75 - 125
Lead	1.6	B	50.0	51.1		ug/L		99	75 - 125
Manganese	6100		500	6680	4	ug/L		107	75 - 125
Mercury	0.80	U	5.00	4.73		ug/L		95	75 - 125
Nickel	28		100	122		ug/L		94	75 - 125
Selenium	2.5	U	100	96.4		ug/L		96	75 - 125
Vanadium	10	U	100	98.1		ug/L		98	75 - 125

Lab Sample ID: 680-82186-1 MSD — **Client Sample ID: RAB-MW1R**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247778 — **Prep Batch: 247405**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	940		5000	5470		ug/L		90	75 - 125	6	20
Antimony	5.0	U	50.0	53.9		ug/L		108	75 - 125	1	20
Arsenic	2.2	J	100	103		ug/L		101	75 - 125	2	20
Barium	260		100	371		ug/L		107	75 - 125	1	20

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-82186-1 MSD — **Client Sample ID: RAB-MW1R**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247778 — **Prep Batch: 247405**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Beryllium	0.50	U	50.0	49.6		ug/L		99	75 - 125	1	20
Cadmium	0.15	J	50.0	48.2		ug/L		96	75 - 125	1	20
Chromium	27		100	119		ug/L		92	75 - 125	0	20
Cobalt	68		50.0	116		ug/L		96	75 - 125	0	20
Copper	5.3		100	102		ug/L		97	75 - 125	1	20
Iron	89000		5000	93600	4	ug/L		88	75 - 125	4	20
Lead	1.6	B	50.0	50.9		ug/L		99	75 - 125	0	20
Manganese	6100		500	6710	4	ug/L		113	75 - 125	0	20
Mercury	0.80	U	5.00	4.79		ug/L		96	75 - 125	1	20
Nickel	28		100	122		ug/L		94	75 - 125	0	20
Selenium	2.5	U	100	96.0		ug/L		96	75 - 125	0	20
Vanadium	10	U	100	98.8		ug/L		99	75 - 125	1	20

Lab Sample ID: MB 680-247510/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247778 — **Prep Batch: 247510**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	100	U	100	50	ug/L		08/23/12 08:17	08/24/12 23:47	1
Antimony	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/24/12 23:47	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/23/12 08:17	08/24/12 23:47	1
Barium	5.0	U	5.0	1.4	ug/L		08/23/12 08:17	08/24/12 23:47	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/23/12 08:17	08/24/12 23:47	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/23/12 08:17	08/24/12 23:47	1
Chromium	5.0	U	5.0	2.5	ug/L		08/23/12 08:17	08/24/12 23:47	1
Cobalt	0.50	U	0.50	0.12	ug/L		08/23/12 08:17	08/24/12 23:47	1
Copper	5.0	U	5.0	1.1	ug/L		08/23/12 08:17	08/24/12 23:47	1
Iron	100	U	100	44	ug/L		08/23/12 08:17	08/24/12 23:47	1
Lead	1.5	U	1.5	0.50	ug/L		08/23/12 08:17	08/24/12 23:47	1
Manganese	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/24/12 23:47	1
Mercury	0.80	U	0.80	0.40	ug/L		08/23/12 08:17	08/24/12 23:47	1
Nickel	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/24/12 23:47	1
Selenium	2.5	U	2.5	1.1	ug/L		08/23/12 08:17	08/24/12 23:47	1
Vanadium	10	U	10	3.2	ug/L		08/23/12 08:17	08/24/12 23:47	1

Lab Sample ID: LCS 680-247510/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247778 — **Prep Batch: 247510**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	5000	4690		ug/L		94	75 - 125
Antimony	50.0	51.2		ug/L		102	75 - 125
Arsenic	100	96.5		ug/L		97	75 - 125
Barium	100	99.6		ug/L		100	75 - 125
Beryllium	50.0	49.2		ug/L		98	75 - 125
Cadmium	50.0	48.4		ug/L		97	75 - 125
Chromium	100	92.5		ug/L		92	75 - 125
Cobalt	50.0	49.0		ug/L		98	75 - 125
Copper	100	95.9		ug/L		96	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-247510/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247778 — **Prep Batch: 247510**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	5200		ug/L		104	75 - 125
Lead	50.0	49.9		ug/L		100	75 - 125
Manganese	500	487		ug/L		97	75 - 125
Mercury	5.00	4.38		ug/L		88	75 - 125
Nickel	100	96.8		ug/L		97	75 - 125
Selenium	100	93.1		ug/L		93	75 - 125
Vanadium	100	91.4		ug/L		91	75 - 125

Lab Sample ID: MB 680-247700/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248069 — **Prep Batch: 247700**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	100	U	100	50	ug/L		08/24/12 14:18	08/27/12 23:13	1
Antimony	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/27/12 23:13	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/24/12 14:18	08/27/12 23:13	1
Barium	5.0	U	5.0	1.4	ug/L		08/24/12 14:18	08/27/12 23:13	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/24/12 14:18	08/27/12 23:13	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/24/12 14:18	08/27/12 23:13	1
Chromium	5.0	U	5.0	2.5	ug/L		08/24/12 14:18	08/27/12 23:13	1
Cobalt	0.50	U	0.50	0.12	ug/L		08/24/12 14:18	08/27/12 23:13	1
Copper	5.0	U	5.0	1.1	ug/L		08/24/12 14:18	08/27/12 23:13	1
Iron	100	U	100	44	ug/L		08/24/12 14:18	08/27/12 23:13	1
Lead	1.5	U	1.5	0.50	ug/L		08/24/12 14:18	08/27/12 23:13	1
Manganese	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/27/12 23:13	1
Mercury	0.80	U	0.80	0.40	ug/L		08/24/12 14:18	08/27/12 23:13	1
Nickel	5.0	U	5.0	2.0	ug/L		08/24/12 14:18	08/27/12 23:13	1
Selenium	2.5	U	2.5	1.1	ug/L		08/24/12 14:18	08/27/12 23:13	1
Vanadium	10	U	10	3.2	ug/L		08/24/12 14:18	08/27/12 23:13	1

Lab Sample ID: LCS 680-247700/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248069 — **Prep Batch: 247700**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	5000	5090		ug/L		102	75 - 125
Antimony	50.0	49.5		ug/L		99	75 - 125
Arsenic	100	104		ug/L		104	75 - 125
Barium	100	99.1		ug/L		99	75 - 125
Beryllium	50.0	48.3		ug/L		97	75 - 125
Cadmium	50.0	48.2		ug/L		96	75 - 125
Chromium	100	104		ug/L		104	75 - 125
Cobalt	50.0	47.8		ug/L		96	75 - 125
Copper	100	106		ug/L		106	75 - 125
Iron	5000	5300		ug/L		106	75 - 125
Lead	50.0	49.7		ug/L		99	75 - 125
Manganese	500	505		ug/L		101	75 - 125
Mercury	5.00	4.58		ug/L		92	75 - 125
Nickel	100	106		ug/L		106	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-247700/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248069 — **Prep Batch: 247700**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	100	101		ug/L		101	75 - 125
Vanadium	100	103		ug/L		103	75 - 125

Lab Sample ID: 680-82284-1 MS — **Client Sample ID: SDB-MW-3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248069 — **Prep Batch: 247700**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	180		5000	5250		ug/L		101	75 - 125
Antimony	5.0	U	50.0	53.6		ug/L		107	75 - 125
Arsenic	2.5	U	100	105		ug/L		105	75 - 125
Barium	11		100	118		ug/L		107	75 - 125
Beryllium	0.50	U	50.0	48.9		ug/L		98	75 - 125
Cadmium	0.24	J	50.0	51.0		ug/L		101	75 - 125
Chromium	5.3		100	106		ug/L		101	75 - 125
Cobalt	4.7		50.0	52.9		ug/L		96	75 - 125
Copper	9.8		100	110		ug/L		101	75 - 125
Iron	610		5000	5740		ug/L		103	75 - 125
Lead	1.5	U	50.0	49.9		ug/L		100	75 - 125
Manganese	930		500	1480		ug/L		110	75 - 125
Mercury	0.80	U	5.00	5.01		ug/L		100	75 - 125
Nickel	33		100	134		ug/L		101	75 - 125
Selenium	9.2		100	112		ug/L		103	75 - 125
Vanadium	10	U	100	104		ug/L		104	75 - 125

Lab Sample ID: 680-82284-1 MSD — **Client Sample ID: SDB-MW-3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248069 — **Prep Batch: 247700**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	180		5000	7700	F	ug/L		150	75 - 125	38	20
Antimony	5.0	U	50.0	51.8		ug/L		104	75 - 125	3	20
Arsenic	2.5	U	100	103		ug/L		103	75 - 125	3	20
Barium	11		100	115		ug/L		104	75 - 125	3	20
Beryllium	0.50	U	50.0	47.8		ug/L		96	75 - 125	2	20
Cadmium	0.24	J	50.0	48.2		ug/L		96	75 - 125	6	20
Chromium	5.3		100	109		ug/L		103	75 - 125	2	20
Cobalt	4.7		50.0	51.4		ug/L		93	75 - 125	3	20
Copper	9.8		100	110		ug/L		101	75 - 125	0	20
Iron	610		5000	6270		ug/L		113	75 - 125	9	20
Lead	1.5	U	50.0	47.8		ug/L		96	75 - 125	4	20
Manganese	930		500	1420		ug/L		98	75 - 125	4	20
Mercury	0.80	U	5.00	4.76		ug/L		95	75 - 125	5	20
Nickel	33		100	133		ug/L		99	75 - 125	1	20
Selenium	9.2		100	111		ug/L		102	75 - 125	1	20
Vanadium	10	U	100	103		ug/L		103	75 - 125	2	20

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-82284-2 MS — **Client Sample ID: SDB-MW-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248069 — **Prep Batch: 247700**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	110		5000	5170		ug/L		101	75 - 125
Antimony	5.0	U	50.0	50.5		ug/L		101	75 - 125
Arsenic	2.5	U	100	104		ug/L		104	75 - 125
Barium	11		100	111		ug/L		100	75 - 125
Beryllium	0.50	U	50.0	46.1		ug/L		92	75 - 125
Cadmium	0.14	J	50.0	47.9		ug/L		95	75 - 125
Chromium	4.3	J	100	105		ug/L		101	75 - 125
Cobalt	2.7		50.0	48.9		ug/L		92	75 - 125
Copper	1.8	J	100	100		ug/L		98	75 - 125
Iron	510		5000	5630		ug/L		102	75 - 125
Lead	1.5	U	50.0	46.6		ug/L		93	75 - 125
Manganese	1100		500	1600		ug/L		90	75 - 125
Mercury	0.80	U	5.00	4.64		ug/L		93	75 - 125
Nickel	26		100	125		ug/L		99	75 - 125
Selenium	2.5	U	100	101		ug/L		101	75 - 125
Vanadium	10	U	100	103		ug/L		103	75 - 125

Lab Sample ID: 680-82284-2 MSD — **Client Sample ID: SDB-MW-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248069 — **Prep Batch: 247700**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	110		5000	5200		ug/L		102	75 - 125	1	20
Antimony	5.0	U	50.0	51.9		ug/L		104	75 - 125	3	20
Arsenic	2.5	U	100	103		ug/L		103	75 - 125	1	20
Barium	11		100	115		ug/L		104	75 - 125	3	20
Beryllium	0.50	U	50.0	48.3		ug/L		97	75 - 125	5	20
Cadmium	0.14	J	50.0	49.3		ug/L		98	75 - 125	3	20
Chromium	4.3	J	100	105		ug/L		100	75 - 125	1	20
Cobalt	2.7		50.0	49.2		ug/L		93	75 - 125	1	20
Copper	1.8	J	100	99.1		ug/L		97	75 - 125	1	20
Iron	510		5000	5750		ug/L		105	75 - 125	2	20
Lead	1.5	U	50.0	47.3		ug/L		95	75 - 125	1	20
Manganese	1100		500	1600		ug/L		92	75 - 125	1	20
Mercury	0.80	U	5.00	4.82		ug/L		96	75 - 125	4	20
Nickel	26		100	122		ug/L		97	75 - 125	2	20
Selenium	2.5	U	100	103		ug/L		103	75 - 125	2	20
Vanadium	10	U	100	102		ug/L		102	75 - 125	1	20

Method: 325.2 - Chloride

Lab Sample ID: MB 680-248808/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248808

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.18	mg/L			09/05/12 10:51	1

Method: 325.2 - Chloride (Continued)

Lab Sample ID: LCS 680-248808/8 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248808

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	52.3		mg/L		105	85 - 115

Lab Sample ID: 680-82284-1 MS — **Client Sample ID: SDB-MW-3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248808

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	280		50.0	393	4	mg/L		220	85 - 115

Lab Sample ID: 680-82284-1 MSD — **Client Sample ID: SDB-MW-3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248808

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	280		50.0	314	4	mg/L		63	85 - 115	22	30

Lab Sample ID: MB 680-249208/21 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249208

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.18	mg/L			09/10/12 13:48	1

Lab Sample ID: LCS 680-249208/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249208

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	51.1		mg/L		102	85 - 115

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 680-248188/2-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248504 — **Prep Batch: 248188**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	0.20	U	0.20	0.15	mg/L		08/29/12 08:46	08/30/12 18:05	1

Lab Sample ID: LCS 680-248188/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248504 — **Prep Batch: 248188**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Kjeldahl Nitrogen	2.00	1.93		mg/L		97	75 - 125

Method: 351.2 - Nitrogen, Total Kjeldahl (Continued)

Lab Sample ID: 680-82284-1 MS — **Client Sample ID: SDB-MW-3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248504 — **Prep Batch: 248188**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Kjeldahl Nitrogen	0.69		2.00	2.26		mg/L		78	75 - 125

Lab Sample ID: 680-82284-1 MSD — **Client Sample ID: SDB-MW-3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248504 — **Prep Batch: 248188**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	0.69		2.00	2.23		mg/L		77	75 - 125	1	40

Lab Sample ID: 680-82284-2 DU — **Client Sample ID: SDB-MW-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248504 — **Prep Batch: 248188**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Kjeldahl Nitrogen	0.46		0.693	F	mg/L		41	40

Lab Sample ID: MB 680-248189/2-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248504 — **Prep Batch: 248189**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	0.20	U	0.20	0.15	mg/L		08/29/12 08:46	08/30/12 18:05	1

Lab Sample ID: LCS 680-248189/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248504 — **Prep Batch: 248189**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Kjeldahl Nitrogen	2.00	1.95		mg/L		98	75 - 125

Lab Sample ID: MB 680-248193/2-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248504 — **Prep Batch: 248193**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	0.20	U	0.20	0.15	mg/L		08/29/12 08:46	08/30/12 17:28	1

Lab Sample ID: LCS 680-248193/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248504 — **Prep Batch: 248193**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Kjeldahl Nitrogen	2.00	1.77		mg/L		89	75 - 125

Lab Sample ID: MB 680-248661/2-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249017 — **Prep Batch: 248661**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	0.20	U	0.20	0.15	mg/L		09/04/12 08:41	09/07/12 09:22	1

Lab Sample ID: LCS 680-248661/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249017 — **Prep Batch: 248661**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Kjeldahl Nitrogen			2.00	1.90		mg/L		95	75 - 125		

Lab Sample ID: 680-82233-1 MS — **Client Sample ID: NAT-3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249017 — **Prep Batch: 248661**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Kjeldahl Nitrogen	2.1		2.00	4.32		mg/L		111	75 - 125		

Lab Sample ID: 680-82233-1 MSD — **Client Sample ID: NAT-3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249017 — **Prep Batch: 248661**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	2.1		2.00	4.20		mg/L		105	75 - 125	3	40

Lab Sample ID: 680-82233-3 DU — **Client Sample ID: NAT-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249017 — **Prep Batch: 248661**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Kjeldahl Nitrogen	1.9			1.82		mg/L				4	40

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 680-247365/13 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247365

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/21/12 18:20	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/21/12 18:20	1

Lab Sample ID: LCS 680-247365/14 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247365

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N			0.998	1.00		mg/L		101	90 - 110		
Nitrite as N			0.502	0.499		mg/L		99	90 - 110		

Lab Sample ID: 680-82186-3 MS — **Client Sample ID: RAB-MW4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247365

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N	0.050		0.998	1.01		mg/L		101	90 - 110		
Nitrite as N	0.050	U	0.502	0.510		mg/L		102	90 - 110		

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 680-82186-3 MSD — **Client Sample ID: RAB-MW4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247365

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.050		0.998	1.01		mg/L		101	90 - 110	0	10
Nitrite as N	0.050	U	0.502	0.509		mg/L		102	90 - 110	0	10

Lab Sample ID: MB 680-247535/13 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247535

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/22/12 15:30	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/22/12 15:30	1

Lab Sample ID: LCS 680-247535/14 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247535

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.998	1.03		mg/L		104	90 - 110
Nitrite as N	0.502	0.496		mg/L		99	90 - 110

Lab Sample ID: MB 680-247536/13 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247536

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/22/12 16:32	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/22/12 16:32	1

Lab Sample ID: LCS 680-247536/14 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247536

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.998	1.04		mg/L		104	90 - 110
Nitrite as N	0.502	0.500		mg/L		100	90 - 110

Lab Sample ID: 680-82233-8 MS — **Client Sample ID: NAT-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247536

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	12		0.998	12.9	4	mg/L		86	90 - 110
Nitrite as N	0.50	U	0.502	0.509		mg/L		101	90 - 110

Lab Sample ID: 680-82233-8 MSD — **Client Sample ID: NAT-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247536

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	12		0.998	12.9	4	mg/L		85	90 - 110	0	10

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 680-82233-8 MSD — **Client Sample ID: NAT-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247536

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	0.50	U	0.502	0.512		mg/L		102	90 - 110	1	10

Lab Sample ID: MB 680-247623/13 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247623

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/23/12 17:37	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/23/12 17:37	1

Lab Sample ID: LCS 680-247623/14 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247623

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.998	1.02		mg/L		102	90 - 110
Nitrite as N	0.502	0.501		mg/L		100	90 - 110

Lab Sample ID: MB 680-247652/13 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247652

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/24/12 09:39	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 09:39	1

Lab Sample ID: LCS 680-247652/14 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247652

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.998	1.00		mg/L		100	90 - 110
Nitrite as N	0.502	0.499		mg/L		100	90 - 110

Lab Sample ID: 680-82284-8 MS — **Client Sample ID: MW-8L-R**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247652

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.050		0.998	0.971		mg/L		97	90 - 110
Nitrite as N	0.050	U	0.502	0.493		mg/L		98	90 - 110

Lab Sample ID: 680-82284-8 MSD — **Client Sample ID: MW-8L-R**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247652

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.050		0.998	0.972		mg/L		97	90 - 110	0	10
Nitrite as N	0.050	U	0.502	0.496		mg/L		99	90 - 110	0	10

Method: 375.4 - Sulfate

Lab Sample ID: MB 680-248910/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248910

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	5.0	U	5.0	2.5	mg/L			09/06/12 10:20	1

Lab Sample ID: LCS 680-248910/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248910

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	18.7		mg/L		93	75 - 125

Lab Sample ID: MB 680-248911/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248911

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	5.0	U	5.0	2.5	mg/L			09/06/12 12:04	1

Lab Sample ID: LCS 680-248911/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248911

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	21.0		mg/L		105	75 - 125

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 680-247705/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247705

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.0	0.50	mg/L			08/23/12 18:37	1

Lab Sample ID: LCS 680-247705/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247705

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	20.0	20.1		mg/L		100	80 - 120

Lab Sample ID: MB 680-248545/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248545

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.0	0.50	mg/L			09/02/12 11:04	1

Method: 9060 - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 680-248545/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248545

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	20.0	19.6		mg/L		98	80 - 120

Lab Sample ID: MB 680-248547/26 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.0	0.50	mg/L			09/02/12 17:56	1

Lab Sample ID: LCS 680-248547/30 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248547

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	20.0	19.4		mg/L		97	80 - 120

Lab Sample ID: 680-82284-1 MS — **Client Sample ID: SDB-MW-3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248547

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	4.4		20.0	24.0		mg/L		98	80 - 120

Lab Sample ID: 680-82284-1 MSD — **Client Sample ID: SDB-MW-3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248547

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	4.4		20.0	23.9		mg/L		98	80 - 120	1	25

Method: SM 3500 FE D - Iron, Ferrous

Lab Sample ID: MB 680-247514/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247514

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ferrous Iron	0.10	U	0.10	0.025	mg/L			08/22/12 09:34	1

Lab Sample ID: LCS 680-247514/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247514

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ferrous Iron	2.00	2.02		mg/L		101	80 - 120

Method: SM 3500 FE D - Iron, Ferrous (Continued)

Lab Sample ID: 680-82186-3 MS — **Client Sample ID: RAB-MW4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247514

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ferrous Iron	0.027	J HF	2.00	2.03		mg/L		100	80 - 120		

Lab Sample ID: 680-82186-3 MSD — **Client Sample ID: RAB-MW4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247514

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ferrous Iron	0.027	J HF	2.00	2.04		mg/L		101	80 - 120	0	20

Lab Sample ID: 680-82233-1 DU — **Client Sample ID: NAT-3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247514

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ferrous Iron	0.065	J HF		0.0799	J	mg/L				20	20

Lab Sample ID: MB 680-247641/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247641

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ferrous Iron	0.10	U	0.10	0.025	mg/L			08/23/12 11:01	1

Lab Sample ID: LCS 680-247641/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247641

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ferrous Iron			2.00	2.04		mg/L		102	80 - 120		

Lab Sample ID: 680-82284-9 DU — **Client Sample ID: MW-8U**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247641

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ferrous Iron	36	HF		35.5		mg/L				0.8	20

QC Association Summary

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

GC/MS VOA

Analysis Batch: 247978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-3	RAB-MW4	Total/NA	Water	8260B	
680-82186-4	Trip Blank	Total/NA	Water	8260B	
LCS 680-247978/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-247978/6	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-247978/8	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 248113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-2	RAB-MW3	Total/NA	Water	8260B	
LCS 680-248113/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-248113/6	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-248113/7	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 248141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-1	NAT-3	Total/NA	Water	8260B	
680-82233-2	Field Duplicate 2	Total/NA	Water	8260B	
680-82233-4	Equipment Blank 2	Total/NA	Water	8260B	
680-82233-5	Field Blank 1	Total/NA	Water	8260B	
680-82233-6	MW-10	Total/NA	Water	8260B	
680-82233-7	Field Duplicate 1	Total/NA	Water	8260B	
680-82233-8	NAT-1	Total/NA	Water	8260B	
680-82233-10	Trip Blank	Total/NA	Water	8260B	
LCS 680-248141/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-248141/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-248141/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 248214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-1	RAB-MW1R	Total/NA	Water	8260B	
680-82186-2 - DL	RAB-MW3	Total/NA	Water	8260B	
LCS 680-248214/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-248214/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-248214/7	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 248331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-3	NAT-2	Total/NA	Water	8260B	
680-82233-9	MW-1	Total/NA	Water	8260B	
LCS 680-248331/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-248331/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-248331/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 248520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-7	Field Blank 2 (@ MW-8 Wells)	Total/NA	Water	8260B	
680-82284-12	Trip Blank	Total/NA	Water	8260B	
LCS 680-248520/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-248520/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-248520/6	Method Blank	Total/NA	Water	8260B	

GC/MS VOA (Continued)

Analysis Batch: 248620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-1	SDB-MW-3	Total/NA	Water	8260B	
680-82284-2	SDB-MW-2	Total/NA	Water	8260B	
680-82284-2 MS	SDB-MW-2	Total/NA	Water	8260B	
680-82284-2 MSD	SDB-MW-2	Total/NA	Water	8260B	
680-82284-3	SDB-MW-1	Total/NA	Water	8260B	
680-82284-4	MW-5U	Total/NA	Water	8260B	
680-82284-5	MW-5	Total/NA	Water	8260B	
680-82284-6	MW-8D	Total/NA	Water	8260B	
680-82284-8	MW-8L-R	Total/NA	Water	8260B	
680-82284-9	MW-8U	Total/NA	Water	8260B	
680-82284-10	MW-6	Total/NA	Water	8260B	
680-82284-11	MW-4	Total/NA	Water	8260B	
LCS 680-248620/8	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-248620/9	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-248620/4	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 247624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-1	NAT-3	Total/NA	Water	3520C	
680-82233-2	Field Duplicate 2	Total/NA	Water	3520C	
680-82233-3	NAT-2	Total/NA	Water	3520C	
680-82233-4	Equipment Blank 2	Total/NA	Water	3520C	
680-82233-5	Field Blank 1	Total/NA	Water	3520C	
680-82233-6	MW-10	Total/NA	Water	3520C	
680-82233-7	Field Duplicate 1	Total/NA	Water	3520C	
680-82233-9	MW-1	Total/NA	Water	3520C	
680-82284-1	SDB-MW-3	Total/NA	Water	3520C	
680-82284-2	SDB-MW-2	Total/NA	Water	3520C	
680-82284-2 MS	SDB-MW-2	Total/NA	Water	3520C	
680-82284-2 MSD	SDB-MW-2	Total/NA	Water	3520C	
680-82284-3	SDB-MW-1	Total/NA	Water	3520C	
680-82284-4	MW-5U	Total/NA	Water	3520C	
680-82284-5	MW-5	Total/NA	Water	3520C	
680-82284-6	MW-8D	Total/NA	Water	3520C	
680-82284-7	Field Blank 2 (@ MW-8 Wells)	Total/NA	Water	3520C	
680-82284-8	MW-8L-R	Total/NA	Water	3520C	
680-82284-9	MW-8U	Total/NA	Water	3520C	
680-82284-10	MW-6	Total/NA	Water	3520C	
680-82284-11	MW-4	Total/NA	Water	3520C	
LCS 680-247624/21-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-247624/20-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 248346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-1	NAT-3	Total/NA	Water	8270D	247624
680-82233-2	Field Duplicate 2	Total/NA	Water	8270D	247624
680-82233-3	NAT-2	Total/NA	Water	8270D	247624
680-82233-4	Equipment Blank 2	Total/NA	Water	8270D	247624

GC/MS Semi VOA (Continued)

Analysis Batch: 248346 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-5	Field Blank 1	Total/NA	Water	8270D	247624
680-82233-6	MW-10	Total/NA	Water	8270D	247624
680-82233-7	Field Duplicate 1	Total/NA	Water	8270D	247624
680-82233-9	MW-1	Total/NA	Water	8270D	247624
680-82284-1	SDB-MW-3	Total/NA	Water	8270D	247624
680-82284-2	SDB-MW-2	Total/NA	Water	8270D	247624
680-82284-3	SDB-MW-1	Total/NA	Water	8270D	247624

Analysis Batch: 248348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-2 MS	SDB-MW-2	Total/NA	Water	8270D	247624
680-82284-2 MSD	SDB-MW-2	Total/NA	Water	8270D	247624
LCS 680-247624/21-A	Lab Control Sample	Total/NA	Water	8270D	247624
MB 680-247624/20-A	Method Blank	Total/NA	Water	8270D	247624

Prep Batch: 248570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-3 - RE	NAT-2	Total/NA	Water	3520C	
LCS 680-248570/14-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-248570/13-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 248608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-4	MW-5U	Total/NA	Water	8270D	247624
680-82284-5	MW-5	Total/NA	Water	8270D	247624
680-82284-6	MW-8D	Total/NA	Water	8270D	247624
680-82284-7	Field Blank 2 (@ MW-8 Wells)	Total/NA	Water	8270D	247624
680-82284-8	MW-8L-R	Total/NA	Water	8270D	247624

Analysis Batch: 248730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-9	MW-8U	Total/NA	Water	8270D	247624
680-82284-10	MW-6	Total/NA	Water	8270D	247624
680-82284-11	MW-4	Total/NA	Water	8270D	247624

Analysis Batch: 249157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-3 - RE	NAT-2	Total/NA	Water	8270D	248570
LCS 680-248570/14-A	Lab Control Sample	Total/NA	Water	8270D	248570
MB 680-248570/13-A	Method Blank	Total/NA	Water	8270D	248570

GC VOA

Analysis Batch: 247601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-1	RAB-MW1R	Total/NA	Water	8015C	
680-82186-1 MS	RAB-MW1R	Total/NA	Water	8015C	
680-82186-1 MSD	RAB-MW1R	Total/NA	Water	8015C	
680-82186-2	RAB-MW3	Total/NA	Water	8015C	
680-82186-3	RAB-MW4	Total/NA	Water	8015C	

GC VOA (Continued)

Analysis Batch: 247601 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-1	NAT-3	Total/NA	Water	8015C	
680-82233-2	Field Duplicate 2	Total/NA	Water	8015C	
680-82233-3	NAT-2	Total/NA	Water	8015C	
680-82233-4	Equipment Blank 2	Total/NA	Water	8015C	
680-82233-5	Field Blank 1	Total/NA	Water	8015C	
680-82233-6	MW-10	Total/NA	Water	8015C	
680-82233-7	Field Duplicate 1	Total/NA	Water	8015C	
680-82233-8	NAT-1	Total/NA	Water	8015C	
680-82233-9	MW-1	Total/NA	Water	8015C	
LCS 680-247601/3	Lab Control Sample	Total/NA	Water	8015C	
LCSD 680-247601/4	Lab Control Sample Dup	Total/NA	Water	8015C	
MB 680-247601/2	Method Blank	Total/NA	Water	8015C	

Analysis Batch: 247710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-1	SDB-MW-3	Total/NA	Water	8015C	
680-82284-2	SDB-MW-2	Total/NA	Water	8015C	
680-82284-2 MS	SDB-MW-2	Total/NA	Water	8015C	
680-82284-2 MSD	SDB-MW-2	Total/NA	Water	8015C	
680-82284-3	SDB-MW-1	Total/NA	Water	8015C	
680-82284-4	MW-5U	Total/NA	Water	8015C	
680-82284-5	MW-5	Total/NA	Water	8015C	
680-82284-6	MW-8D	Total/NA	Water	8015C	
680-82284-7	Field Blank 2 (@ MW-8 Wells)	Total/NA	Water	8015C	
680-82284-8	MW-8L-R	Total/NA	Water	8015C	
680-82284-9	MW-8U	Total/NA	Water	8015C	
680-82284-10	MW-6	Total/NA	Water	8015C	
680-82284-11	MW-4	Total/NA	Water	8015C	
LCS 680-247710/3	Lab Control Sample	Total/NA	Water	8015C	
LCSD 680-247710/4	Lab Control Sample Dup	Total/NA	Water	8015C	
MB 680-247710/2	Method Blank	Total/NA	Water	8015C	

Analysis Batch: 247781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-2	RAB-MW3	Total/NA	Water	RSK-175	
680-82186-3	RAB-MW4	Total/NA	Water	RSK-175	
680-82233-1	NAT-3	Total/NA	Water	RSK-175	
680-82233-8	NAT-1	Total/NA	Water	RSK-175	
LCS 680-247781/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-247781/11	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-247781/2	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 248047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-3	NAT-2	Total/NA	Water	RSK-175	
680-82284-1	SDB-MW-3	Total/NA	Water	RSK-175	
680-82284-2	SDB-MW-2	Total/NA	Water	RSK-175	
680-82284-4	MW-5U	Total/NA	Water	RSK-175	
680-82284-5	MW-5	Total/NA	Water	RSK-175	
680-82284-6	MW-8D	Total/NA	Water	RSK-175	
680-82284-8	MW-8L-R	Total/NA	Water	RSK-175	

GC VOA (Continued)

Analysis Batch: 248047 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-9	MW-8U	Total/NA	Water	RSK-175	
680-82284-10	MW-6	Total/NA	Water	RSK-175	
LCS 680-248047/1	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-248047/18	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-248047/2	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 248049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-3	SDB-MW-1	Total/NA	Water	RSK-175	
680-82284-11	MW-4	Total/NA	Water	RSK-175	
LCS 680-248049/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-248049/6	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-248049/2	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 248562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-248562/2	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-248562/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-248562/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 248598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-1	RAB-MW1R	Total/NA	Water	RSK-175	
LCS 680-248598/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-248598/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-248598/2	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 248739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-6	MW-10	Total/NA	Water	RSK-175	
680-82233-9	MW-1	Total/NA	Water	RSK-175	
LCS 680-248739/22	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-248739/20	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-248739/2	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 247405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-1	RAB-MW1R	Total/NA	Water	3010A	
680-82186-1 MS	RAB-MW1R	Total/NA	Water	3010A	
680-82186-1 MSD	RAB-MW1R	Total/NA	Water	3010A	
680-82186-2	RAB-MW3	Total/NA	Water	3010A	
680-82186-3	RAB-MW4	Total/NA	Water	3010A	
LCS 680-247405/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 680-247405/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 247510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-1	NAT-3	Total/NA	Water	3010A	

Metals (Continued)

Prep Batch: 247510 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-2	Field Duplicate 2	Total/NA	Water	3010A	
680-82233-3	NAT-2	Total/NA	Water	3010A	
680-82233-4	Equipment Blank 2	Total/NA	Water	3010A	
680-82233-5	Field Blank 1	Total/NA	Water	3010A	
680-82233-6	MW-10	Total/NA	Water	3010A	
680-82233-7	Field Duplicate 1	Total/NA	Water	3010A	
680-82233-8	NAT-1	Total/NA	Water	3010A	
680-82233-9	MW-1	Total/NA	Water	3010A	
LCS 680-247510/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 680-247510/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 247700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-1	SDB-MW-3	Total/NA	Water	3010A	
680-82284-1 MS	SDB-MW-3	Total/NA	Water	3010A	
680-82284-1 MSD	SDB-MW-3	Total/NA	Water	3010A	
680-82284-2	SDB-MW-2	Total/NA	Water	3010A	
680-82284-2 MS	SDB-MW-2	Total/NA	Water	3010A	
680-82284-2 MSD	SDB-MW-2	Total/NA	Water	3010A	
680-82284-3	SDB-MW-1	Total/NA	Water	3010A	
680-82284-4	MW-5U	Total/NA	Water	3010A	
680-82284-5	MW-5	Total/NA	Water	3010A	
680-82284-6	MW-8D	Total/NA	Water	3010A	
680-82284-7	Field Blank 2 (@ MW-8 Wells)	Total/NA	Water	3010A	
680-82284-8	MW-8L-R	Total/NA	Water	3010A	
680-82284-9	MW-8U	Total/NA	Water	3010A	
680-82284-10	MW-6	Total/NA	Water	3010A	
680-82284-11	MW-4	Total/NA	Water	3010A	
LCS 680-247700/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 680-247700/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 247778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-1	RAB-MW1R	Total/NA	Water	6020A	247405
680-82186-1 MS	RAB-MW1R	Total/NA	Water	6020A	247405
680-82186-1 MSD	RAB-MW1R	Total/NA	Water	6020A	247405
680-82186-2	RAB-MW3	Total/NA	Water	6020A	247405
680-82186-3	RAB-MW4	Total/NA	Water	6020A	247405
680-82233-1	NAT-3	Total/NA	Water	6020A	247510
680-82233-2	Field Duplicate 2	Total/NA	Water	6020A	247510
680-82233-3	NAT-2	Total/NA	Water	6020A	247510
680-82233-4	Equipment Blank 2	Total/NA	Water	6020A	247510
680-82233-5	Field Blank 1	Total/NA	Water	6020A	247510
680-82233-6	MW-10	Total/NA	Water	6020A	247510
680-82233-7	Field Duplicate 1	Total/NA	Water	6020A	247510
680-82233-8	NAT-1	Total/NA	Water	6020A	247510
680-82233-9	MW-1	Total/NA	Water	6020A	247510
LCS 680-247405/2-A	Lab Control Sample	Total/NA	Water	6020A	247405
LCS 680-247510/2-A	Lab Control Sample	Total/NA	Water	6020A	247510
MB 680-247405/1-A	Method Blank	Total/NA	Water	6020A	247405
MB 680-247510/1-A	Method Blank	Total/NA	Water	6020A	247510

Metals (Continued)

Analysis Batch: 248069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-1	SDB-MW-3	Total/NA	Water	6020A	247700
680-82284-1 MS	SDB-MW-3	Total/NA	Water	6020A	247700
680-82284-1 MSD	SDB-MW-3	Total/NA	Water	6020A	247700
680-82284-2	SDB-MW-2	Total/NA	Water	6020A	247700
680-82284-2 MS	SDB-MW-2	Total/NA	Water	6020A	247700
680-82284-2 MSD	SDB-MW-2	Total/NA	Water	6020A	247700
680-82284-3	SDB-MW-1	Total/NA	Water	6020A	247700
680-82284-4	MW-5U	Total/NA	Water	6020A	247700
680-82284-5	MW-5	Total/NA	Water	6020A	247700
680-82284-6	MW-8D	Total/NA	Water	6020A	247700
680-82284-7	Field Blank 2 (@ MW-8 Wells)	Total/NA	Water	6020A	247700
680-82284-8	MW-8L-R	Total/NA	Water	6020A	247700
680-82284-9	MW-8U	Total/NA	Water	6020A	247700
680-82284-10	MW-6	Total/NA	Water	6020A	247700
680-82284-11	MW-4	Total/NA	Water	6020A	247700
LCS 680-247700/2-A	Lab Control Sample	Total/NA	Water	6020A	247700
MB 680-247700/1-A	Method Blank	Total/NA	Water	6020A	247700

General Chemistry

Analysis Batch: 247365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-1	RAB-MW1R	Total/NA	Water	353.2	
680-82186-2	RAB-MW3	Total/NA	Water	353.2	
680-82186-3	RAB-MW4	Total/NA	Water	353.2	
680-82186-3 MS	RAB-MW4	Total/NA	Water	353.2	
680-82186-3 MSD	RAB-MW4	Total/NA	Water	353.2	
LCS 680-247365/14	Lab Control Sample	Total/NA	Water	353.2	
MB 680-247365/13	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 247514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-1	RAB-MW1R	Total/NA	Water	SM 3500 FE D	
680-82186-2	RAB-MW3	Total/NA	Water	SM 3500 FE D	
680-82186-3	RAB-MW4	Total/NA	Water	SM 3500 FE D	
680-82186-3 MS	RAB-MW4	Total/NA	Water	SM 3500 FE D	
680-82186-3 MSD	RAB-MW4	Total/NA	Water	SM 3500 FE D	
680-82233-1	NAT-3	Total/NA	Water	SM 3500 FE D	
680-82233-1 DU	NAT-3	Total/NA	Water	SM 3500 FE D	
680-82233-3	NAT-2	Total/NA	Water	SM 3500 FE D	
680-82233-6	MW-10	Total/NA	Water	SM 3500 FE D	
680-82233-8	NAT-1	Total/NA	Water	SM 3500 FE D	
680-82233-9	MW-1	Total/NA	Water	SM 3500 FE D	
LCS 680-247514/1	Lab Control Sample	Total/NA	Water	SM 3500 FE D	
MB 680-247514/2	Method Blank	Total/NA	Water	SM 3500 FE D	

Analysis Batch: 247535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-1	NAT-3	Total/NA	Water	353.2	
680-82233-3	NAT-2	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 247535 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-6	MW-10	Total/NA	Water	353.2	
LCS 680-247535/14	Lab Control Sample	Total/NA	Water	353.2	
MB 680-247535/13	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 247536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-8	NAT-1	Total/NA	Water	353.2	
680-82233-8 MS	NAT-1	Total/NA	Water	353.2	
680-82233-8 MSD	NAT-1	Total/NA	Water	353.2	
680-82233-9	MW-1	Total/NA	Water	353.2	
LCS 680-247536/14	Lab Control Sample	Total/NA	Water	353.2	
MB 680-247536/13	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 247623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-1	SDB-MW-3	Total/NA	Water	353.2	
680-82284-2	SDB-MW-2	Total/NA	Water	353.2	
680-82284-3	SDB-MW-1	Total/NA	Water	353.2	
680-82284-4	MW-5U	Total/NA	Water	353.2	
680-82284-5	MW-5	Total/NA	Water	353.2	
680-82284-6	MW-8D	Total/NA	Water	353.2	
LCS 680-247623/14	Lab Control Sample	Total/NA	Water	353.2	
MB 680-247623/13	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 247641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-1	SDB-MW-3	Total/NA	Water	SM 3500 FE D	
680-82284-2	SDB-MW-2	Total/NA	Water	SM 3500 FE D	
680-82284-3	SDB-MW-1	Total/NA	Water	SM 3500 FE D	
680-82284-4	MW-5U	Total/NA	Water	SM 3500 FE D	
680-82284-5	MW-5	Total/NA	Water	SM 3500 FE D	
680-82284-6	MW-8D	Total/NA	Water	SM 3500 FE D	
680-82284-8	MW-8L-R	Total/NA	Water	SM 3500 FE D	
680-82284-9	MW-8U	Total/NA	Water	SM 3500 FE D	
680-82284-9 DU	MW-8U	Total/NA	Water	SM 3500 FE D	
680-82284-10	MW-6	Total/NA	Water	SM 3500 FE D	
680-82284-11	MW-4	Total/NA	Water	SM 3500 FE D	
LCS 680-247641/1	Lab Control Sample	Total/NA	Water	SM 3500 FE D	
MB 680-247641/2	Method Blank	Total/NA	Water	SM 3500 FE D	

Analysis Batch: 247652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-8	MW-8L-R	Total/NA	Water	353.2	
680-82284-8 MS	MW-8L-R	Total/NA	Water	353.2	
680-82284-8 MSD	MW-8L-R	Total/NA	Water	353.2	
680-82284-9	MW-8U	Total/NA	Water	353.2	
680-82284-10	MW-6	Total/NA	Water	353.2	
680-82284-11	MW-4	Total/NA	Water	353.2	
LCS 680-247652/14	Lab Control Sample	Total/NA	Water	353.2	
MB 680-247652/13	Method Blank	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 247705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-1	RAB-MW1R	Total/NA	Water	9060	
680-82186-2	RAB-MW3	Total/NA	Water	9060	
680-82186-3	RAB-MW4	Total/NA	Water	9060	
LCS 680-247705/4	Lab Control Sample	Total/NA	Water	9060	
MB 680-247705/2	Method Blank	Total/NA	Water	9060	

Prep Batch: 248188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-1	SDB-MW-3	Total/NA	Water	351.2	
680-82284-1 MS	SDB-MW-3	Total/NA	Water	351.2	
680-82284-1 MSD	SDB-MW-3	Total/NA	Water	351.2	
680-82284-2	SDB-MW-2	Total/NA	Water	351.2	
680-82284-2 DU	SDB-MW-2	Total/NA	Water	351.2	
680-82284-3	SDB-MW-1	Total/NA	Water	351.2	
680-82284-4	MW-5U	Total/NA	Water	351.2	
680-82284-5	MW-5	Total/NA	Water	351.2	
680-82284-6	MW-8D	Total/NA	Water	351.2	
680-82284-8	MW-8L-R	Total/NA	Water	351.2	
680-82284-9	MW-8U	Total/NA	Water	351.2	
680-82284-10	MW-6	Total/NA	Water	351.2	
680-82284-11	MW-4	Total/NA	Water	351.2	
LCS 680-248188/1-A	Lab Control Sample	Total/NA	Water	351.2	
MB 680-248188/2-A	Method Blank	Total/NA	Water	351.2	

Prep Batch: 248189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-9	MW-1	Total/NA	Water	351.2	
LCS 680-248189/1-A	Lab Control Sample	Total/NA	Water	351.2	
MB 680-248189/2-A	Method Blank	Total/NA	Water	351.2	

Prep Batch: 248193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-1	RAB-MW1R	Total/NA	Water	351.2	
680-82186-2	RAB-MW3	Total/NA	Water	351.2	
680-82186-3	RAB-MW4	Total/NA	Water	351.2	
LCS 680-248193/1-A	Lab Control Sample	Total/NA	Water	351.2	
MB 680-248193/2-A	Method Blank	Total/NA	Water	351.2	

Analysis Batch: 248504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-1	RAB-MW1R	Total/NA	Water	351.2	248193
680-82186-2	RAB-MW3	Total/NA	Water	351.2	248193
680-82186-3	RAB-MW4	Total/NA	Water	351.2	248193
680-82233-9	MW-1	Total/NA	Water	351.2	248189
680-82284-1	SDB-MW-3	Total/NA	Water	351.2	248188
680-82284-1 MS	SDB-MW-3	Total/NA	Water	351.2	248188
680-82284-1 MSD	SDB-MW-3	Total/NA	Water	351.2	248188
680-82284-2	SDB-MW-2	Total/NA	Water	351.2	248188
680-82284-2 DU	SDB-MW-2	Total/NA	Water	351.2	248188
680-82284-3	SDB-MW-1	Total/NA	Water	351.2	248188
680-82284-4	MW-5U	Total/NA	Water	351.2	248188

General Chemistry (Continued)

Analysis Batch: 248504 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-5	MW-5	Total/NA	Water	351.2	248188
680-82284-6	MW-8D	Total/NA	Water	351.2	248188
680-82284-8	MW-8L-R	Total/NA	Water	351.2	248188
680-82284-9	MW-8U	Total/NA	Water	351.2	248188
680-82284-10	MW-6	Total/NA	Water	351.2	248188
680-82284-11	MW-4	Total/NA	Water	351.2	248188
LCS 680-248188/1-A	Lab Control Sample	Total/NA	Water	351.2	248188
LCS 680-248189/1-A	Lab Control Sample	Total/NA	Water	351.2	248189
LCS 680-248193/1-A	Lab Control Sample	Total/NA	Water	351.2	248193
MB 680-248188/2-A	Method Blank	Total/NA	Water	351.2	248188
MB 680-248189/2-A	Method Blank	Total/NA	Water	351.2	248189
MB 680-248193/2-A	Method Blank	Total/NA	Water	351.2	248193

Analysis Batch: 248545

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-1	NAT-3	Total/NA	Water	9060	
680-82233-3	NAT-2	Total/NA	Water	9060	
680-82233-6	MW-10	Total/NA	Water	9060	
680-82233-8	NAT-1	Total/NA	Water	9060	
680-82233-9	MW-1	Total/NA	Water	9060	
LCS 680-248545/4	Lab Control Sample	Total/NA	Water	9060	
MB 680-248545/2	Method Blank	Total/NA	Water	9060	

Analysis Batch: 248547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-1	SDB-MW-3	Total/NA	Water	9060	
680-82284-1 MS	SDB-MW-3	Total/NA	Water	9060	
680-82284-1 MSD	SDB-MW-3	Total/NA	Water	9060	
680-82284-2	SDB-MW-2	Total/NA	Water	9060	
680-82284-3	SDB-MW-1	Total/NA	Water	9060	
680-82284-4	MW-5U	Total/NA	Water	9060	
680-82284-5	MW-5	Total/NA	Water	9060	
680-82284-6	MW-8D	Total/NA	Water	9060	
680-82284-8	MW-8L-R	Total/NA	Water	9060	
680-82284-9	MW-8U	Total/NA	Water	9060	
680-82284-10	MW-6	Total/NA	Water	9060	
680-82284-11	MW-4	Total/NA	Water	9060	
LCS 680-248547/30	Lab Control Sample	Total/NA	Water	9060	
MB 680-248547/26	Method Blank	Total/NA	Water	9060	

Prep Batch: 248661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-1	NAT-3	Total/NA	Water	351.2	
680-82233-1 MS	NAT-3	Total/NA	Water	351.2	
680-82233-1 MSD	NAT-3	Total/NA	Water	351.2	
680-82233-3	NAT-2	Total/NA	Water	351.2	
680-82233-3 DU	NAT-2	Total/NA	Water	351.2	
680-82233-6	MW-10	Total/NA	Water	351.2	
680-82233-8	NAT-1	Total/NA	Water	351.2	
LCS 680-248661/1-A	Lab Control Sample	Total/NA	Water	351.2	
MB 680-248661/2-A	Method Blank	Total/NA	Water	351.2	

General Chemistry (Continued)

Analysis Batch: 248808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-1	RAB-MW1R	Total/NA	Water	325.2	
680-82186-2	RAB-MW3	Total/NA	Water	325.2	
680-82186-3	RAB-MW4	Total/NA	Water	325.2	
680-82284-1	SDB-MW-3	Total/NA	Water	325.2	
680-82284-1 MS	SDB-MW-3	Total/NA	Water	325.2	
680-82284-1 MSD	SDB-MW-3	Total/NA	Water	325.2	
680-82284-2	SDB-MW-2	Total/NA	Water	325.2	
680-82284-3	SDB-MW-1	Total/NA	Water	325.2	
680-82284-4	MW-5U	Total/NA	Water	325.2	
680-82284-5	MW-5	Total/NA	Water	325.2	
680-82284-6	MW-8D	Total/NA	Water	325.2	
680-82284-8	MW-8L-R	Total/NA	Water	325.2	
680-82284-9	MW-8U	Total/NA	Water	325.2	
680-82284-10	MW-6	Total/NA	Water	325.2	
680-82284-11	MW-4	Total/NA	Water	325.2	
LCS 680-248808/8	Lab Control Sample	Total/NA	Water	325.2	
MB 680-248808/1	Method Blank	Total/NA	Water	325.2	

Analysis Batch: 248910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82186-1	RAB-MW1R	Total/NA	Water	375.4	
680-82186-2	RAB-MW3	Total/NA	Water	375.4	
680-82186-3	RAB-MW4	Total/NA	Water	375.4	
680-82233-1	NAT-3	Total/NA	Water	375.4	
680-82233-3	NAT-2	Total/NA	Water	375.4	
680-82233-6	MW-10	Total/NA	Water	375.4	
680-82233-8	NAT-1	Total/NA	Water	375.4	
680-82233-9	MW-1	Total/NA	Water	375.4	
680-82284-1	SDB-MW-3	Total/NA	Water	375.4	
680-82284-2	SDB-MW-2	Total/NA	Water	375.4	
680-82284-3	SDB-MW-1	Total/NA	Water	375.4	
680-82284-4	MW-5U	Total/NA	Water	375.4	
680-82284-5	MW-5	Total/NA	Water	375.4	
680-82284-6	MW-8D	Total/NA	Water	375.4	
680-82284-8	MW-8L-R	Total/NA	Water	375.4	
680-82284-9	MW-8U	Total/NA	Water	375.4	
LCS 680-248910/1	Lab Control Sample	Total/NA	Water	375.4	
MB 680-248910/2	Method Blank	Total/NA	Water	375.4	

Analysis Batch: 248911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82284-10	MW-6	Total/NA	Water	375.4	
680-82284-11	MW-4	Total/NA	Water	375.4	
LCS 680-248911/1	Lab Control Sample	Total/NA	Water	375.4	
MB 680-248911/2	Method Blank	Total/NA	Water	375.4	

Analysis Batch: 249017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-1	NAT-3	Total/NA	Water	351.2	248661
680-82233-1 MS	NAT-3	Total/NA	Water	351.2	248661
680-82233-1 MSD	NAT-3	Total/NA	Water	351.2	248661

General Chemistry (Continued)

Analysis Batch: 249017 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-3	NAT-2	Total/NA	Water	351.2	248661
680-82233-3 DU	NAT-2	Total/NA	Water	351.2	248661
680-82233-6	MW-10	Total/NA	Water	351.2	248661
680-82233-8	NAT-1	Total/NA	Water	351.2	248661
LCS 680-248661/1-A	Lab Control Sample	Total/NA	Water	351.2	248661
MB 680-248661/2-A	Method Blank	Total/NA	Water	351.2	248661

Analysis Batch: 249208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82233-1	NAT-3	Total/NA	Water	325.2	
680-82233-3	NAT-2	Total/NA	Water	325.2	
680-82233-6	MW-10	Total/NA	Water	325.2	
680-82233-8	NAT-1	Total/NA	Water	325.2	
680-82233-9	MW-1	Total/NA	Water	325.2	
LCS 680-249208/3	Lab Control Sample	Total/NA	Water	325.2	
MB 680-249208/21	Method Blank	Total/NA	Water	325.2	

Lab Chronicle

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: RAB-MW1R

Lab Sample ID: 680-82186-1
Date Collected: 08/20/12 13:10
Matrix: Water
Date Received: 08/21/12 09:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		250	248214	08/29/12 22:19	AJMC	TAL SAV
Total/NA	Analysis	8015C		1	247601	08/23/12 13:01	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248598	09/03/12 19:49	AJMC	TAL SAV
Total/NA	Prep	3010A			247405	08/22/12 09:06	VHB	TAL SAV
Total/NA	Analysis	6020A		1	247778	08/24/12 18:47	BR	TAL SAV
Total/NA	Analysis	353.2		1	247365	08/21/12 18:37	MAP	TAL SAV
Total/NA	Analysis	SM 3500 FE D		20	247514	08/22/12 09:51	MAP	TAL SAV
Total/NA	Analysis	9060		1	247705	08/24/12 02:00	JR	TAL SAV
Total/NA	Prep	351.2			248193	08/29/12 08:46	MAP	TAL SAV
Total/NA	Analysis	351.2		1	248504	08/30/12 17:37	JR	TAL SAV
Total/NA	Analysis	325.2		2	248808	09/05/12 11:27	JR	TAL SAV
Total/NA	Analysis	375.4		20	248910	09/06/12 11:09	JR	TAL SAV

Client Sample ID: RAB-MW3

Lab Sample ID: 680-82186-2
Date Collected: 08/20/12 12:45
Matrix: Water
Date Received: 08/21/12 09:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248113	08/28/12 18:37	AJMC	TAL SAV
Total/NA	Analysis	8260B	DL	5	248214	08/29/12 22:48	AJMC	TAL SAV
Total/NA	Analysis	8015C		1	247601	08/23/12 14:12	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	247781	08/25/12 23:21	AJMC	TAL SAV
Total/NA	Prep	3010A			247405	08/22/12 09:06	VHB	TAL SAV
Total/NA	Analysis	6020A		1	247778	08/24/12 19:23	BR	TAL SAV
Total/NA	Analysis	353.2		1	247365	08/21/12 18:38	MAP	TAL SAV
Total/NA	Analysis	SM 3500 FE D		50	247514	08/22/12 10:40	MAP	TAL SAV
Total/NA	Analysis	9060		1	247705	08/24/12 02:17	JR	TAL SAV
Total/NA	Prep	351.2			248193	08/29/12 08:46	MAP	TAL SAV
Total/NA	Analysis	351.2		1	248504	08/30/12 17:37	JR	TAL SAV
Total/NA	Analysis	325.2		1	248808	09/05/12 10:54	JR	TAL SAV
Total/NA	Analysis	375.4		1	248910	09/06/12 10:30	JR	TAL SAV

Client Sample ID: RAB-MW4

Lab Sample ID: 680-82186-3
Date Collected: 08/20/12 14:35
Matrix: Water
Date Received: 08/21/12 09:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	247978	08/28/12 01:11	AJMC	TAL SAV
Total/NA	Analysis	8015C		1	247601	08/23/12 14:36	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	247781	08/25/12 23:09	AJMC	TAL SAV
Total/NA	Prep	3010A			247405	08/22/12 09:06	VHB	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: RAB-MW4

Lab Sample ID: 680-82186-3
Date Collected: 08/20/12 14:35
Matrix: Water
Date Received: 08/21/12 09:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6020A		1	247778	08/24/12 19:31	BR	TAL SAV
Total/NA	Analysis	353.2		1	247365	08/21/12 18:22	MAP	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247514	08/22/12 09:35	MAP	TAL SAV
Total/NA	Analysis	9060		1	247705	08/24/12 02:35	JR	TAL SAV
Total/NA	Prep	351.2			248193	08/29/12 08:46	MAP	TAL SAV
Total/NA	Analysis	351.2		1	248504	08/30/12 17:37	JR	TAL SAV
Total/NA	Analysis	325.2		2	248808	09/05/12 11:27	JR	TAL SAV
Total/NA	Analysis	375.4		50	248910	09/06/12 11:28	JR	TAL SAV

Client Sample ID: Trip Blank

Lab Sample ID: 680-82186-4
Date Collected: 08/20/12 00:00
Matrix: Water
Date Received: 08/21/12 09:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	247978	08/27/12 21:14	AJMC	TAL SAV

Client Sample ID: NAT-3

Lab Sample ID: 680-82233-1
Date Collected: 08/21/12 09:25
Matrix: Water
Date Received: 08/22/12 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2000	248141	08/29/12 20:08	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248346	08/29/12 14:23	MJC	TAL SAV
Total/NA	Analysis	8015C		1	247601	08/23/12 15:00	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	247781	08/25/12 22:56	AJMC	TAL SAV
Total/NA	Prep	3010A			247510	08/23/12 08:17	VHB	TAL SAV
Total/NA	Analysis	6020A		1	247778	08/25/12 02:35	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247514	08/22/12 16:43	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247535	08/22/12 16:28	MAP	TAL SAV
Total/NA	Analysis	9060		1	248545	09/02/12 15:05	JR	TAL SAV
Total/NA	Analysis	375.4		1	248910	09/06/12 10:37	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 09:22	RW	TAL SAV
Total/NA	Analysis	325.2		5	249208	09/10/12 14:22	JR	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Field Duplicate 2

Lab Sample ID: 680-82233-2

Date Collected: 08/21/12 09:45
Matrix: Water
Date Received: 08/22/12 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2000	248141	08/29/12 20:37	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248346	08/29/12 14:50	MJC	TAL SAV
Total/NA	Analysis	8015C		1	247601	08/23/12 15:24	SMC	TAL SAV
Total/NA	Prep	3010A			247510	08/23/12 08:17	VHB	TAL SAV
Total/NA	Analysis	6020A		1	247778	08/25/12 02:43	BR	TAL SAV

Client Sample ID: NAT-2

Lab Sample ID: 680-82233-3

Date Collected: 08/21/12 11:50
Matrix: Water
Date Received: 08/22/12 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		250	248331	08/30/12 14:24	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248346	08/29/12 15:18	MJC	TAL SAV
Total/NA	Prep	3520C	RE		248570	09/04/12 15:31	RBS	TAL SAV
Total/NA	Analysis	8270D	RE	1	249157	09/06/12 13:24	BB	TAL SAV
Total/NA	Analysis	8015C		1	247601	08/23/12 15:47	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248047	08/27/12 21:47	AJMC	TAL SAV
Total/NA	Prep	3010A			247510	08/23/12 08:17	VHB	TAL SAV
Total/NA	Analysis	6020A		1	247778	08/25/12 02:50	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247514	08/22/12 16:43	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247535	08/22/12 16:30	MAP	TAL SAV
Total/NA	Analysis	9060		1	248545	09/02/12 15:21	JR	TAL SAV
Total/NA	Analysis	375.4		10	248910	09/06/12 11:09	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 09:22	RW	TAL SAV
Total/NA	Analysis	325.2		2	249208	09/10/12 14:15	JR	TAL SAV

Client Sample ID: Equipment Blank 2

Lab Sample ID: 680-82233-4

Date Collected: 08/21/12 12:05
Matrix: Water
Date Received: 08/22/12 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248141	08/29/12 13:53	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248346	08/29/12 15:45	MJC	TAL SAV
Total/NA	Analysis	8015C		1	247601	08/23/12 16:11	SMC	TAL SAV
Total/NA	Prep	3010A			247510	08/23/12 08:17	VHB	TAL SAV
Total/NA	Analysis	6020A		1	247778	08/25/12 02:57	BR	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Field Blank 1

Lab Sample ID: 680-82233-5
Date Collected: 08/21/12 10:10
Matrix: Water
Date Received: 08/22/12 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248141	08/29/12 14:22	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248346	08/29/12 16:13	MJC	TAL SAV
Total/NA	Analysis	8015C		1	247601	08/23/12 16:35	SMC	TAL SAV
Total/NA	Prep	3010A			247510	08/23/12 08:17	VHB	TAL SAV
Total/NA	Analysis	6020A		1	247778	08/25/12 03:05	BR	TAL SAV

Client Sample ID: MW-10

Lab Sample ID: 680-82233-6
Date Collected: 08/21/12 10:50
Matrix: Water
Date Received: 08/22/12 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248141	08/29/12 18:13	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248346	08/29/12 16:40	MJC	TAL SAV
Total/NA	Analysis	8015C		1	247601	08/23/12 16:59	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248739	09/04/12 14:30	AJMC	TAL SAV
Total/NA	Prep	3010A			247510	08/23/12 08:17	VHB	TAL SAV
Total/NA	Analysis	6020A		1	247778	08/25/12 03:12	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247514	08/22/12 16:43	MAP	TAL SAV
Total/NA	Analysis	353.2		5	247535	08/22/12 16:44	MAP	TAL SAV
Total/NA	Analysis	9060		1	248545	09/02/12 15:40	JR	TAL SAV
Total/NA	Analysis	375.4		20	248910	09/06/12 10:53	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 09:22	RW	TAL SAV
Total/NA	Analysis	325.2		5	249208	09/10/12 14:22	JR	TAL SAV

Client Sample ID: Field Duplicate 1

Lab Sample ID: 680-82233-7
Date Collected: 08/21/12 10:55
Matrix: Water
Date Received: 08/22/12 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248141	08/29/12 18:42	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248346	08/29/12 17:08	MJC	TAL SAV
Total/NA	Analysis	8015C		1	247601	08/23/12 17:22	SMC	TAL SAV
Total/NA	Prep	3010A			247510	08/23/12 08:17	VHB	TAL SAV
Total/NA	Analysis	6020A		1	247778	08/25/12 03:19	BR	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: NAT-1

Lab Sample ID: 680-82233-8

Date Collected: 08/21/12 12:25
Matrix: Water
Date Received: 08/22/12 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248141	08/29/12 17:44	JD	TAL SAV
Total/NA	Analysis	8015C		1	247601	08/23/12 17:46	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	247781	08/25/12 22:17	AJMC	TAL SAV
Total/NA	Prep	3010A			247510	08/23/12 08:17	VHB	TAL SAV
Total/NA	Analysis	6020A		1	247778	08/25/12 03:27	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247514	08/22/12 16:43	MAP	TAL SAV
Total/NA	Analysis	353.2		10	247536	08/22/12 16:47	MAP	TAL SAV
Total/NA	Analysis	9060		1	248545	09/02/12 16:00	JR	TAL SAV
Total/NA	Analysis	375.4		20	248910	09/06/12 10:53	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 09:22	RW	TAL SAV
Total/NA	Analysis	325.2		1	249208	09/10/12 13:33	JR	TAL SAV

Client Sample ID: MW-1

Lab Sample ID: 680-82233-9

Date Collected: 08/21/12 14:10
Matrix: Water
Date Received: 08/22/12 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		50	248331	08/30/12 14:52	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248346	08/29/12 17:35	MJC	TAL SAV
Total/NA	Analysis	8015C		1	247601	08/23/12 18:10	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248739	09/04/12 14:43	AJMC	TAL SAV
Total/NA	Prep	3010A			247510	08/23/12 08:17	VHB	TAL SAV
Total/NA	Analysis	6020A		1	247778	08/25/12 03:34	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		2	247514	08/22/12 19:09	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247536	08/22/12 16:38	MAP	TAL SAV
Total/NA	Prep	351.2			248189	08/29/12 08:46	MAP	TAL SAV
Total/NA	Analysis	351.2		1	248504	08/30/12 17:20	JR	TAL SAV
Total/NA	Analysis	9060		1	248545	09/02/12 16:18	JR	TAL SAV
Total/NA	Analysis	375.4		50	248910	09/06/12 11:27	JR	TAL SAV
Total/NA	Analysis	325.2		5	249208	09/10/12 14:15	JR	TAL SAV

Client Sample ID: Trip Blank

Lab Sample ID: 680-82233-10

Date Collected: 08/21/12 00:00
Matrix: Water
Date Received: 08/22/12 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248141	08/29/12 13:25	JD	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: SDB-MW-3

Lab Sample ID: 680-82284-1

Date Collected: 08/22/12 09:20
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248620	09/04/12 17:47	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248346	08/29/12 18:03	MJC	TAL SAV
Total/NA	Analysis	8015C		1	247710	08/24/12 14:06	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248047	08/27/12 21:21	AJMC	TAL SAV
Total/NA	Prep	3010A			247700	08/24/12 14:18	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248069	08/27/12 23:28	BR	TAL SAV
Total/NA	Analysis	353.2		1	247623	08/23/12 18:03	MAP	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247641	08/23/12 19:02	MAP	TAL SAV
Total/NA	Prep	351.2			248188	08/29/12 08:46	MAP	TAL SAV
Total/NA	Analysis	351.2		1	248504	08/30/12 16:44	JR	TAL SAV
Total/NA	Analysis	9060		1	248547	09/02/12 19:20	JR	TAL SAV
Total/NA	Analysis	325.2		5	248808	09/05/12 11:24	JR	TAL SAV
Total/NA	Analysis	375.4		50	248910	09/06/12 11:27	JR	TAL SAV

Client Sample ID: SDB-MW-2

Lab Sample ID: 680-82284-2

Date Collected: 08/22/12 10:40
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248620	09/04/12 12:59	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248346	08/29/12 13:55	MJC	TAL SAV
Total/NA	Analysis	8015C		1	247710	08/24/12 14:30	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248047	08/27/12 21:08	AJMC	TAL SAV
Total/NA	Prep	3010A			247700	08/24/12 14:18	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248069	08/28/12 00:05	BR	TAL SAV
Total/NA	Analysis	353.2		1	247623	08/23/12 18:07	MAP	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247641	08/23/12 19:02	MAP	TAL SAV
Total/NA	Prep	351.2			248188	08/29/12 08:46	MAP	TAL SAV
Total/NA	Analysis	351.2		1	248504	08/30/12 16:44	JR	TAL SAV
Total/NA	Analysis	9060		1	248547	09/02/12 20:06	JR	TAL SAV
Total/NA	Analysis	325.2		2	248808	09/05/12 11:27	JR	TAL SAV
Total/NA	Analysis	375.4		50	248910	09/06/12 11:28	JR	TAL SAV

Client Sample ID: SDB-MW-1

Lab Sample ID: 680-82284-3

Date Collected: 08/22/12 12:45
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248620	09/04/12 13:28	JD	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: SDB-MW-1

Lab Sample ID: 680-82284-3

Date Collected: 08/22/12 12:45
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248346	08/29/12 18:30	MJC	TAL SAV
Total/NA	Analysis	8015C		1	247710	08/24/12 14:54	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248049	08/27/12 22:12	AJMC	TAL SAV
Total/NA	Prep	3010A			247700	08/24/12 14:18	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248069	08/28/12 00:42	BR	TAL SAV
Total/NA	Analysis	353.2		1	247623	08/23/12 18:08	MAP	TAL SAV
Total/NA	Analysis	SM 3500 FE D		50	247641	08/24/12 09:09	MAP	TAL SAV
Total/NA	Prep	351.2			248188	08/29/12 08:46	MAP	TAL SAV
Total/NA	Analysis	351.2		5	248504	08/30/12 18:14	JR	TAL SAV
Total/NA	Analysis	9060		1	248547	09/02/12 20:22	JR	TAL SAV
Total/NA	Analysis	325.2		1	248808	09/05/12 11:01	JR	TAL SAV
Total/NA	Analysis	375.4		1	248910	09/06/12 10:21	JR	TAL SAV

Client Sample ID: MW-5U

Lab Sample ID: 680-82284-4

Date Collected: 08/22/12 14:50
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	248620	09/04/12 18:16	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248608	08/31/12 16:34	BB	TAL SAV
Total/NA	Analysis	8015C		1	247710	08/24/12 15:17	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248047	08/27/12 21:59	AJMC	TAL SAV
Total/NA	Prep	3010A			247700	08/24/12 14:18	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248069	08/28/12 00:49	BR	TAL SAV
Total/NA	Analysis	353.2		1	247623	08/23/12 18:09	MAP	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247641	08/23/12 19:02	MAP	TAL SAV
Total/NA	Prep	351.2			248188	08/29/12 08:46	MAP	TAL SAV
Total/NA	Analysis	351.2		1	248504	08/30/12 16:44	JR	TAL SAV
Total/NA	Analysis	9060		1	248547	09/02/12 20:41	JR	TAL SAV
Total/NA	Analysis	325.2		50	248808	09/05/12 11:50	JR	TAL SAV
Total/NA	Analysis	375.4		20	248910	09/06/12 10:57	JR	TAL SAV

Client Sample ID: MW-5

Lab Sample ID: 680-82284-5

Date Collected: 08/22/12 15:55
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	248620	09/04/12 15:23	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248608	08/31/12 17:02	BB	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-5

Lab Sample ID: 680-82284-5
Date Collected: 08/22/12 15:55
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015C		1	247710	08/24/12 15:41	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248047	08/27/12 23:29	AJMC	TAL SAV
Total/NA	Prep	3010A			247700	08/24/12 14:18	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248069	08/28/12 00:57	BR	TAL SAV
Total/NA	Analysis	353.2		1	247623	08/23/12 18:11	MAP	TAL SAV
Total/NA	Analysis	SM 3500 FE D		50	247641	08/24/12 09:09	MAP	TAL SAV
Total/NA	Prep	351.2			248188	08/29/12 08:46	MAP	TAL SAV
Total/NA	Analysis	351.2		1	248504	08/30/12 16:44	JR	TAL SAV
Total/NA	Analysis	9060		1	248547	09/02/12 21:35	JR	TAL SAV
Total/NA	Analysis	325.2		20	248808	09/05/12 11:27	JR	TAL SAV
Total/NA	Analysis	375.4		10	248910	09/06/12 11:03	JR	TAL SAV

Client Sample ID: MW-8D

Lab Sample ID: 680-82284-6
Date Collected: 08/22/12 09:40
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248620	09/04/12 13:57	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248608	08/31/12 17:29	BB	TAL SAV
Total/NA	Analysis	8015C		1	247710	08/24/12 16:05	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248047	08/27/12 21:34	AJMC	TAL SAV
Total/NA	Prep	3010A			247700	08/24/12 14:18	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248069	08/28/12 01:04	BR	TAL SAV
Total/NA	Analysis	353.2		1	247623	08/23/12 18:12	MAP	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247641	08/23/12 19:08	MAP	TAL SAV
Total/NA	Prep	351.2			248188	08/29/12 08:46	MAP	TAL SAV
Total/NA	Analysis	351.2		1	248504	08/30/12 16:53	JR	TAL SAV
Total/NA	Analysis	9060		1	248547	09/02/12 21:51	JR	TAL SAV
Total/NA	Analysis	325.2		1	248808	09/05/12 11:32	JR	TAL SAV
Total/NA	Analysis	375.4		1	248910	09/06/12 10:25	JR	TAL SAV

Client Sample ID: Field Blank 2 (@ MW-8 Wells)

Lab Sample ID: 680-82284-7
Date Collected: 08/22/12 08:45
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248520	09/01/12 17:29	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248608	08/31/12 17:57	BB	TAL SAV
Total/NA	Analysis	8015C		1	247710	08/24/12 16:29	SMC	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: Field Blank 2 (@ MW-8 Wells)

Lab Sample ID: 680-82284-7

Date Collected: 08/22/12 08:45
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			247700	08/24/12 14:18	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248069	08/28/12 01:11	BR	TAL SAV

Client Sample ID: MW-8L-R

Lab Sample ID: 680-82284-8

Date Collected: 08/22/12 10:45
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		50	248620	09/04/12 15:52	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248608	08/31/12 18:24	BB	TAL SAV
Total/NA	Analysis	8015C		1	247710	08/24/12 16:53	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248047	08/27/12 22:51	AJMC	TAL SAV
Total/NA	Prep	3010A			247700	08/24/12 14:18	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248069	08/28/12 01:19	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		10	247641	08/24/12 08:43	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247652	08/24/12 09:42	MAP	TAL SAV
Total/NA	Prep	351.2			248188	08/29/12 08:46	MAP	TAL SAV
Total/NA	Analysis	351.2		1	248504	08/30/12 16:53	JR	TAL SAV
Total/NA	Analysis	9060		1	248547	09/02/12 22:07	JR	TAL SAV
Total/NA	Analysis	325.2		10	248808	09/05/12 11:35	JR	TAL SAV
Total/NA	Analysis	375.4		20	248910	09/06/12 10:59	JR	TAL SAV

Client Sample ID: MW-8U

Lab Sample ID: 680-82284-9

Date Collected: 08/22/12 12:20
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		25	248620	09/04/12 18:44	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248730	09/05/12 01:50	MJC	TAL SAV
Total/NA	Analysis	8015C		1	247710	08/24/12 17:16	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248047	08/27/12 22:38	AJMC	TAL SAV
Total/NA	Prep	3010A			247700	08/24/12 14:18	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248069	08/28/12 01:26	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		10	247641	08/24/12 08:39	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247652	08/24/12 09:45	MAP	TAL SAV
Total/NA	Prep	351.2			248188	08/29/12 08:46	MAP	TAL SAV
Total/NA	Analysis	351.2		5	248504	08/30/12 18:14	JR	TAL SAV
Total/NA	Analysis	9060		1	248547	09/02/12 22:24	JR	TAL SAV
Total/NA	Analysis	325.2		5	248808	09/05/12 11:24	JR	TAL SAV
Total/NA	Analysis	375.4		20	248910	09/06/12 11:03	JR	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: MW-6

Lab Sample ID: 680-82284-10

Date Collected: 08/22/12 13:15
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		25	248620	09/04/12 16:49	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248730	09/05/12 02:17	MJC	TAL SAV
Total/NA	Analysis	8015C		1	247710	08/24/12 17:40	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248047	08/27/12 22:25	AJMC	TAL SAV
Total/NA	Prep	3010A			247700	08/24/12 14:18	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248069	08/28/12 01:34	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		10	247641	08/24/12 08:43	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247652	08/24/12 09:46	MAP	TAL SAV
Total/NA	Prep	351.2			248188	08/29/12 08:46	MAP	TAL SAV
Total/NA	Analysis	351.2		1	248504	08/30/12 16:53	JR	TAL SAV
Total/NA	Analysis	9060		1	248547	09/02/12 22:40	JR	TAL SAV
Total/NA	Analysis	325.2		10	248808	09/05/12 11:35	JR	TAL SAV
Total/NA	Analysis	375.4		5	248911	09/06/12 12:44	JR	TAL SAV

Client Sample ID: MW-4

Lab Sample ID: 680-82284-11

Date Collected: 08/22/12 14:45
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		25	248620	09/04/12 17:18	JD	TAL SAV
Total/NA	Prep	3520C			247624	08/24/12 16:11	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248730	09/05/12 02:45	MJC	TAL SAV
Total/NA	Analysis	8015C		1	247710	08/24/12 18:04	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248049	08/27/12 23:04	AJMC	TAL SAV
Total/NA	Prep	3010A			247700	08/24/12 14:18	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248069	08/28/12 01:41	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		10	247641	08/24/12 08:43	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247652	08/24/12 09:48	MAP	TAL SAV
Total/NA	Prep	351.2			248188	08/29/12 08:46	MAP	TAL SAV
Total/NA	Analysis	351.2		1	248504	08/30/12 16:53	JR	TAL SAV
Total/NA	Analysis	9060		1	248547	09/02/12 22:57	JR	TAL SAV
Total/NA	Analysis	325.2		5	248808	09/05/12 11:27	JR	TAL SAV
Total/NA	Analysis	375.4		1	248911	09/06/12 12:04	JR	TAL SAV

Client Sample ID: Trip Blank

Lab Sample ID: 680-82284-12

Date Collected: 08/22/12 00:00
Matrix: Water
Date Received: 08/23/12 09:53

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248520	09/01/12 16:32	JD	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number 57155

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: Ashland Aquifer	PROJECT NO.: 1201723	PROJECT LOCATION (STATE): VA
TAL (LAB) PROJECT MANAGER: Lydia	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Erin Wright	CLIENT PHONE: 866-222-7786	CLIENT FAX: 804-343-0770
CLIENT NAME: GES	CLIENT E-MAIL	
CLIENT ADDRESS: 23 S. 13th St Richmond VA 23219		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ✓

DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE)

DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	8260-VOC	6020 Metals	8015 Methanol & Ethanol	325.2 Chloride Sulfate Ferrous Iron	353.2 Nitrate/Nitrite	351.2 Total Kjeldahl Nitrogen	TOC (9060)	RSK-175 Methane			REMARKS
								PRESERVATIVE										
								NUMBER OF CONTAINERS SUBMITTED										
8/20/12	13:10	RAB-MW1R		X				X	X	X	X	X	X	X	X			
		~~RAB-MW2~~ MB																
8/20/12	12:45	RAB-MW3						X	X	X	X	X	X	X	X			
8/20/12	14:35	RAB-MW4						X	X	X	X	X	X	X	X			
8/20/12	—	Trip Blank						X	~~X~~									

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	8/20/12	17:40						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	8/21/12	0933	YES ○ NO ○		680 82186	4.6 °C

TAL8240-680 (1008)

Serial Number 55954

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:

See Note

PROJECT REFERENCE: Ashland - Aqualon	PROJECT NO.: 1201723	PROJECT LOCATION (STATE): VA	PAGE 1 OF 1
TAL (LAB) PROJECT MANAGER: Lydia	P.O. NUMBER:	CONTRACT NO.:	STANDARD REPORT DELIVERY ○ DATE DUE
CLIENT (SITE) PM: Erin Wright	CLIENT PHONE: 866-222-7786	CLIENT FAX:	EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE
CLIENT NAME: GES	CLIENT E-MAIL: Ewright@gesonline.com		
CLIENT ADDRESS: 23 S. 13th St Richmond VA 23219			
COMPANY CONTRACTING THIS WORK (if applicable): Ashland			NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT, ...)

REQUIRED ANALYSIS — NUMBER OF CONTAINERS SUBMITTED

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	8260 VOC	8270 SVOC	6020 metals	8015B Methanol and Ethanol	325.2 3754 3500 Fe Iron	353.2 Nitrite/Nitrate	351.2 TKN	9060 TOC	RSK 175 Methane		REMARKS
8/21/12	9:25	NAT-3		X				X	X	X	X	X	X	X	X	X		3252-Chloride
	9:45	Field Duplicate 2		X				X	X	X	X							3754-Sulfate
	11:50	NAT-2		X				X	X	X	X	X	X	X	X	X		3500_FE Ferrous Iron
	12:05	Equipment Blank 2		X				X	X	X	X							
	10:10	Field Blank 1		X				X	X	X	X							
	10:50	MW-10		X				X	X	X	X	X	X	X	X	X		
	10:55	Field Duplicate 1		X				X	X	X	X							
	12:25	NAT-1		X				X		X	X	X	X	X	X	X		
	14:10	MW-1		X				X	X	X	X	X	X	X	X	X		
	—	Trip Blank		X				X										

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	8/21/12	16:20						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	8/22/12	1000	YES ○ NO ○		680-82233	4.1/3.8/3.6/3.3°C

TAL 8240-680 (1008)

Serial Number 55949

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: Ashland - Aqualon	PROJECT NO.: 1201723	PROJECT LOCATION (STATE): VA
TAL (LAB) PROJECT MANAGER: Lydia	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Erin Wright	CLIENT PHONE: 866-222-7786	CLIENT FAX: 804-343-0770
CLIENT NAME: GES	CLIENT E-MAIL: EWright@gesdilmc.com	
CLIENT ADDRESS: 23 S 13th St Richmond VA 23219		
COMPANY CONTRACTING THIS WORK (if applicable): Ashland		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ◯

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ◯

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

PRESERVATIVE

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	8260 VOC (HCl)	8270 SVOC (None)	6020 Metals (HNO3)	8015B Methanol & Ethanol (None)	3252 Sulfate Chloride Fe (None)	353.2 Nitrate/Nitrite (H2SO4)	351.2 TKN (H2SO4)	9060 TOC (HCl)	RSK Methane (None)	REMARKS
8/22/12	9:20	SDB-MW-3		X				X	X	X	X	X	X	X	X	X	Trip Blank
	10:40	SDB-MW-2						X	X	X	X	X	X	X	X	X	Included
	10:50	MS/MSD 2 (SDB-MW-2)						X	X	X	X						w/VOC
	12:45	SDB-MW-1						X	X	X	X	X	X	X	X	X	Cooler
	1450	MW-5U						X	X	X	X	X	X	X	X	X	
	1555	MW-5						X	X	X	X	X	X	X	X	X	
	0940	MW-8D						X	X	X	X	X	X	X	X	X	
	0845	Field Blank 2 (@ MW-8 wells)						X	X	X	X						
	1045	MW-8L-R						X	X	X	X	X	X	X	X	X	
	1220	MW-8U						X	X	X	X	X	X	X	X	X	
	1315	MW-6						X	X	X	X	X	X	X	X	X	
	1445	MW-4						X	X	X	X	X	X	X	X	X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	8/22/12	1600						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	08/23/12	0953	YES ◯ NO ◯		680-82284	2.2°C/5.8°C/5.0°C/5.0°C/5.2°C/4.0°C

TAL8240-680 (1008)

Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-82186-1
SDG Number: HAQ037

Login Number: 82186
List Number: 1
Creator: Barnett, Eddie T

List Source: TestAmerica Savannah

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	4.6 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.	False	One vial for sample -2 was received broken.
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.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-82186-1
SDG Number: HAQ037

Login Number: 82233
List Number: 1
Creator: Conner, Keaton

List Source: TestAmerica Savannah

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	3.3, 3.6, 3.8, 4.1 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	
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	

Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-82186-1
SDG Number: HAQ037

Login Number: 82284
List Number: 1
Creator: Barnett, Eddie T

List Source: TestAmerica Savannah

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, 4.0, 5.0, 5.0, 5.8 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	
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.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

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	03-31-13
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

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
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TestAmerica Job ID: 680-82341-1
TestAmerica Sample Delivery Group: HAQ038
Client Project/Site: Hercules Aqualon - GW AUG 2012
Revision: 2

For:
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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.

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Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Ashland Inc.

Project: Hercules Aqualon - GW AUG 2012

Report Number: 680-82341-1 Revised

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.

The sample report was revised on October 23, 2012 in order to report estimated results (J) down to the method detection limits (MDL).

The sample report was revised further on February 20, 2013 in order to report Arsenic in the metals scan.

RECEIPT

With the exception of the items noted below, the samples were received on 08/24/2012 and 08/25/2012; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 9 coolers at receipt time were 4.0º C, 4.0º C, 4.2º C, 4.2º C, 4.2º C, 4.2º C, 4.6º C, 5.0º C and 5.6º C.

Sample containers for client sample MW-3 were received, but this sample was not listed on the chain-of-custody (COC) record, but was added per client request to the COC andlogged for analysis. Of the containers received for this sample, both liter ambers for semivolatiles analysis were received and the client was informed of this circumstance.

A second trip blank sample was listed on COC #55950 in the receipt on August 24, 2012, however only one trip blank sample was received on this day.

The COC #55950 specified Method 8270 semivolatiles analysis for sample NAT-4, however, per the client this analysis is not required on the sample.

In the sample receipt on August 25, 2012, the COC listed client sample MW-3 collected 8/24/12 at time 12:50. The sample ID for this sample was revised to MW-2 per GES on 8/27/12.

The following sample(s) was received with headspace in the sample vial: LF-1 (680-82341-6), MW-3 (680-82341-13), MW-4U (680-82341-8), NAT-4 (680-82341-12).

The following samples was received with headspace in two of the three the sample vials: MW-7U (680-82380-4), WWL-1 (680-82380-1), WWL-2 (680-82380-2).

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples WWL-1 (680-82380-1)[5X], WWL-2 (680-82380-2)[2X], RAB-MW-2 (680-82380-3)[5X], MW-7U (680-82380-4)[2X], LF-3 (680-82380-4)[5X], MW-2 (680-82380-6)[200X], MW-4U (680-82380-8)[50X], WWL-3L (680-82380-9)[100X], WWL-3U (680-82380-10) [100X], MW-9 (680-82380-11)[50X], NAT-4 (680-82380-12)[5X] and MW-3 (680-82380-13)[5X] required dilution prior to analysis. The

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Laboratory: TestAmerica Savannah (Continued)

reporting limits have been adjusted accordingly.

No difficulties were encountered during the volatiles analyses.

All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (AQUEOUS)
The continuing calibration verification (CCV) analyzed in batch 248245 exceeded the method criteria for the following analytes: bis(2-chloroethyl)ether. 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 is considered estimated.

Internal standard (ISTD) response for the following samples was outside control limits: Equipment Blank 1 (680-82341-2), LF-1 (680-82341-6), LF-5 (680-82341-3), VFSP-MW1 (680-82380-7). The samples was re-analyzed with concurring results.

No other difficulties were encountered during the semivolatiles analyses.

All other quality control parameters were within the acceptance limits.

ORGANICS BY DIRECT AQUEOUS INJECTION (DAI)
No difficulties were encountered during the organics by direct aqueous injection (DAI) analyses.

All quality control parameters were within the acceptance limits.

DISSOLVED GASES
Manual integration was performed on the following sample: LF-5 (680-82341-3), VFSP-MW1 (680-82380-7), MW-7L (680-82380-5), RAB-MW-2 (680-82380-3).

No difficulties were encountered during the dissolved gases analyses.

All quality control parameters were within the acceptance limits.

METALS (ICPMS)
Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample(s): WWL-2 (680-82380-2).

Due to the high concentration of barium, iron, and manganese, the matrix spike / matrix spike duplicate (MS/MSD) for batch 680-247845 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Due to the high concentration of iron and manganese, the matrix spike / matrix spike duplicate (MS/MSD) for batch 680-247869 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteriaBarium and Iron failed the recovery criteria high for the MS of sample WWL-1MS (680-82380-1) in batch 680-248269.

Samples WWL-2 (680-82380-2)[2X], WWL-2 (680-82380-2)[4X] and MW-7U (680-82380-4)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the metals analyses.

All other quality control parameters were within the acceptance limits.

CHLORIDE
The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch249693 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Samples WWL-1 (680-82380-1)[10X], WWL-2 (680-82380-2)[100X], RAB-MW-2 (680-82380-3)[10X], LF-5 (680-82380-3)[2X], MW-7U (680-82380-4)[50X], LF-2 (680-82380-5)[2X], MW-2 (680-82380-6)[10X], LF-1 (680-82380-6)[2X], MW-4U (680-82380-8)[10X], WWL-3L

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Laboratory: TestAmerica Savannah (Continued)

(680-82380-9)[50X], WWL-3U (680-82380-10)[50X] and MW-9 (680-82380-11)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Chloride analyses.

All other quality control parameters were within the acceptance limits.

FERROUS IRON

This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. This sample(s) was performed in the laboratory outside the 15 minute timeframe. This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. This sample(s) was performed in the laboratory outside the 15 minute timeframe.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 247935 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria. Client sample WWL-1 (680-82380-1)[20X] and the associated MS/MSD required a 20X dilution which was performed automatically by the instrumentation which effectively diluted out the spike addition in the MS/MSD.

Samples WWL-1 (680-82380-1)[20X], WWL-2 (680-82380-2)[5X], LF-5 (680-82380-3)[2X], RAB-MW-2 (680-82380-3)[20X], MW-7U (680-82380-4)[20X], LF-2 (680-82380-5)[2X], LF-1 (680-82380-6)[2X], MW-2 (680-82380-6)[40X], MW-4U (680-82380-8)[10X], WWL-3L (680-82380-9)[50X], WWL-3U (680-82380-10)[50X] and MW-9 (680-82380-11)[40X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the ferrous iron analyses.

All other quality control parameters were within the acceptance limits.

TOTAL KJELDAHL NITROGEN

Due to the high concentration of nitrogen, the matrix spike / matrix spike duplicate (MS/MSD) for batch 248665 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Samples MW-4U (680-82380-8)[5X] and MW-3 (680-82380-13)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the TKN analyses.

All other quality control parameters were within the acceptance limits.

NITRATE-NITRITE AS NITROGEN

The nitrate result is obtained from a calculation incorporating the nitrate plue nitrite and nitrite results. Re-analysis is not performed if QC for the calculated analyte does not meet acceptance criteria, provided the QC results for the component analytes are acceptable. Data have been qualified to denote this situation.

No difficulties were encountered during the nitrate-nitrite analyses.

All quality control parameters were within the acceptance limits.

SULFATE

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 248911 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 249644 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

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Laboratory: TestAmerica Savannah (Continued)

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 249644 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Samples WWL-1 (680-82380-1)[20X], WWL-2 (680-82380-2)[2X], LF-5 (680-82380-3)[10X], RAB-MW-2 (680-82380-3)[50X], MW-7U (680-82380-4)[20X], LF-3 (680-82380-4)[5X], LF-2 (680-82380-5)[10X], LF-1 (680-82380-6)[10X], MW-2 (680-82380-6)[20X], VFSP-MW1 (680-82380-7)[5X], WWL-3L (680-82380-9)[20X], WWL-3U (680-82380-10)[20X], MW-9 (680-82380-11)[20X] and NAT-4 (680-82380-12) [2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the sulfate analyses.

All other quality control parameters were within the acceptance limits.

TOTAL ORGANIC CARBON

Sample WWL-1 (680-82380-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the TOC analyses.

All quality control parameters were within the acceptance limits.

Method Summary

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
8015C	Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)	SW846	TAL SAV
RSK-175	Dissolved Gases (GC)	RSK	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
325.2	Chloride	MCAWW	TAL SAV
351.2	Nitrogen, Total Kjeldahl	MCAWW	TAL SAV
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL SAV
375.4	Sulfate	MCAWW	TAL SAV
9060	Organic Carbon, Total (TOC)	SW846	TAL SAV
SM 3500 FE D	Iron, Ferrous	SM	TAL SAV

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater",

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.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-82341-1	LF-4	Water	08/23/12 09:35	08/24/12 09:21
680-82341-2	Equipment Blank 1	Water	08/23/12 10:05	08/24/12 09:21
680-82341-3	LF-5	Water	08/23/12 11:10	08/24/12 09:21
680-82341-4	LF-3	Water	08/23/12 14:45	08/24/12 09:21
680-82341-5	LF-2	Water	08/23/12 12:40	08/24/12 09:21
680-82341-6	LF-1	Water	08/23/12 13:40	08/24/12 09:21
680-82341-7	Trip Blank	Water	08/23/12 00:00	08/24/12 09:21
680-82341-8	MW-4U	Water	08/23/12 09:15	08/24/12 09:21
680-82341-9	WWL-3L	Water	08/23/12 12:05	08/24/12 09:21
680-82341-10	WWL-3U	Water	08/23/12 12:45	08/24/12 09:21
680-82341-11	MW-9	Water	08/23/12 14:40	08/24/12 09:21
680-82341-12	NAT-4	Water	08/23/12 16:30	08/24/12 09:21
680-82341-13	MW-3	Water	08/23/12 10:25	08/24/12 09:21
680-82380-1	WWL-1	Water	08/24/12 10:35	08/25/12 09:20
680-82380-2	WWL-2	Water	08/24/12 12:20	08/25/12 09:20
680-82380-3	RAB-MW-2	Water	08/24/12 14:30	08/25/12 09:20
680-82380-4	MW-7U	Water	08/24/12 09:30	08/25/12 09:20
680-82380-5	MW-7L	Water	08/24/12 11:15	08/25/12 09:20
680-82380-6	MW-2	Water	08/24/12 12:50	08/25/12 09:20
680-82380-7	VFSP-MW1	Water	08/24/12 14:20	08/25/12 09:20
680-82380-8	Trip Blank	Water	08/24/12 00:00	08/25/12 09:20

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.
E	Result exceeded calibration range.
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
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/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.

GC 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.
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes
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.
B	Compound was found in the blank and sample.

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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-4 — Lab Sample ID: 680-82341-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	3.1		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	150		100	50	ug/L	1		6020A	Total/NA
Barium	68		5.0	1.4	ug/L	1		6020A	Total/NA
Cobalt	0.20	J	0.50	0.12	ug/L	1		6020A	Total/NA
Iron	920		100	44	ug/L	1		6020A	Total/NA
Manganese	260		5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	11		1.0	0.18	mg/L	1		325.2	Total/NA
Total Kjeldahl Nitrogen	0.25		0.20	0.15	mg/L	1		351.2	Total/NA
Sulfate	21		5.0	2.5	mg/L	1		375.4	Total/NA
Ferrous Iron	0.35	HF	0.10	0.025	mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: Equipment Blank 1 — Lab Sample ID: 680-82341-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	68	J	100	44	ug/L	1		6020A	Total/NA
Manganese	32		5.0	2.0	ug/L	1		6020A	Total/NA

Client Sample ID: LF-5 — Lab Sample ID: 680-82341-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	3.1		1.0	0.25	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	0.24	J	1.0	0.10	ug/L	1		8260B	Total/NA
Diethyl ether	51		10	1.0	ug/L	1		8260B	Total/NA
t-Butanol	16		5.0	2.6	ug/L	1		8260B	Total/NA
Trichloroethene	0.70	J	1.0	0.13	ug/L	1		8260B	Total/NA
1,4-Dioxane	7.0	J	9.6	3.3	ug/L	1		8270D	Total/NA
Methanol	1.1	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	2.7		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	170		100	50	ug/L	1		6020A	Total/NA
Barium	120		5.0	1.4	ug/L	1		6020A	Total/NA
Chromium	7.2		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	0.28	J	0.50	0.12	ug/L	1		6020A	Total/NA
Copper	1.6	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	6800		100	44	ug/L	1		6020A	Total/NA
Manganese	1100		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	6.2		5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	150		2.0	0.36	mg/L	2		325.2	Total/NA
Total Kjeldahl Nitrogen	0.53		0.20	0.15	mg/L	1		351.2	Total/NA
Sulfate	280		50	25	mg/L	10		375.4	Total/NA
Total Organic Carbon	0.91	J	1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	6.1	HF	0.20	0.050	mg/L	2		SM 3500 FE D	Total/NA

Client Sample ID: LF-3 — Lab Sample ID: 680-82341-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	7.0	J	10	1.0	ug/L	1		8260B	Total/NA
t-Butanol	240	E	5.0	2.6	ug/L	1		8260B	Total/NA
Diethyl ether - DL	5.2	J D	50	5.0	ug/L	5		8260B	Total/NA
t-Butanol - DL	180	D	25	13	ug/L	5		8260B	Total/NA
1,4-Dioxane	21		9.5	3.2	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-3 (Continued) — Lab Sample ID: 680-82341-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methanol	1.4	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	1.6		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	650		100	50	ug/L	1		6020A	Total/NA
Barium	130		5.0	1.4	ug/L	1		6020A	Total/NA
Chromium	4.5	J	5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	4.6		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	1.5	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	2900		100	44	ug/L	1		6020A	Total/NA
Manganese	2500		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	9.8		5.0	2.0	ug/L	1		6020A	Total/NA
Selenium	1.3	J	2.5	1.1	ug/L	1		6020A	Total/NA
Vanadium	3.4	J	10	3.2	ug/L	1		6020A	Total/NA
Chloride	91		1.0	0.18	mg/L	1		325.2	Total/NA
Total Kjeldahl Nitrogen	1.5		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	0.076		0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	140		25	13	mg/L	5		375.4	Total/NA
Total Organic Carbon	3.0		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	3.1	HF	0.10	0.025	mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: LF-2 — Lab Sample ID: 680-82341-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.7		1.0	0.25	ug/L	1		8260B	Total/NA
Diethyl ether	98		10	1.0	ug/L	1		8260B	Total/NA
t-Butanol	35		5.0	2.6	ug/L	1		8260B	Total/NA
Trichloroethene	0.58	J	1.0	0.13	ug/L	1		8260B	Total/NA
Methanol	1.4	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	3.9		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	360		100	50	ug/L	1		6020A	Total/NA
Barium	110		5.0	1.4	ug/L	1		6020A	Total/NA
Cobalt	0.98		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	1.4	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	6200		100	44	ug/L	1		6020A	Total/NA
Lead	1.2	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	1100		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	2.6	J	5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	130		2.0	0.36	mg/L	2		325.2	Total/NA
Total Kjeldahl Nitrogen	0.44		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	0.014	J	0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	250		50	25	mg/L	10		375.4	Total/NA
Total Organic Carbon	0.74	J	1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	4.9	HF	0.20	0.050	mg/L	2		SM 3500 FE D	Total/NA

Client Sample ID: LF-1 — Lab Sample ID: 680-82341-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	2.7		1.0	0.25	ug/L	1		8260B	Total/NA
Diethyl ether	66		10	1.0	ug/L	1		8260B	Total/NA
t-Butanol	37		5.0	2.6	ug/L	1		8260B	Total/NA
Tetrachloroethene	0.26	J	1.0	0.15	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: LF-1 (Continued) — Lab Sample ID: 680-82341-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.97	J	1.0	0.13	ug/L	1		8260B	Total/NA
1,4-Dioxane	4.2	J	9.5	3.2	ug/L	1		8270D	Total/NA
Methanol	1.5	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	4.6		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	140		100	50	ug/L	1		6020A	Total/NA
Barium	120		5.0	1.4	ug/L	1		6020A	Total/NA
Cobalt	0.22	J	0.50	0.12	ug/L	1		6020A	Total/NA
Iron	9100		100	44	ug/L	1		6020A	Total/NA
Manganese	1800		5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	140		2.0	0.36	mg/L	2		325.2	Total/NA
Total Kjeldahl Nitrogen	0.51		0.20	0.15	mg/L	1		351.2	Total/NA
Sulfate	310		50	25	mg/L	10		375.4	Total/NA
Total Organic Carbon	0.95	J	1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	7.7	HF	0.20	0.050	mg/L	2		SM 3500 FE D	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 680-82341-7

No Detections

Client Sample ID: MW-4U — Lab Sample ID: 680-82341-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	1800		500	50	ug/L	50		8260B	Total/NA
t-Butanol	3000		250	130	ug/L	50		8260B	Total/NA
1,4-Dioxane	6.9	J	9.5	3.2	ug/L	1		8270D	Total/NA
Ethanol	1.4	J	5.0	0.33	mg/L	1		8015C	Total/NA
Methanol	2.3	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	6800		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	950		100	50	ug/L	1		6020A	Total/NA
Arsenic	5.7		2.5	1.3	ug/L	1		6020A	Total/NA
Barium	890		5.0	1.4	ug/L	1		6020A	Total/NA
Beryllium	0.48	J	0.50	0.15	ug/L	1		6020A	Total/NA
Cadmium	0.30	J	0.50	0.13	ug/L	1		6020A	Total/NA
Chromium	6.2		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	34		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	9.4		5.0	1.1	ug/L	1		6020A	Total/NA
Iron	86000		100	44	ug/L	1		6020A	Total/NA
Lead	1.1	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	1800		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	9.1		5.0	2.0	ug/L	1		6020A	Total/NA
Vanadium	6.0	J	10	3.2	ug/L	1		6020A	Total/NA
Chloride	660		10	1.8	mg/L	10		325.2	Total/NA
Total Kjeldahl Nitrogen	11		1.0	0.75	mg/L	5		351.2	Total/NA
Nitrate as N	0.56		0.050	0.010	mg/L	1		353.2	Total/NA
Nitrite as N	0.014	J	0.050	0.010	mg/L	1		353.2	Total/NA
Total Organic Carbon	27		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	33	HF	1.0	0.25	mg/L	10		SM 3500 FE D	Total/NA

Client Sample ID: WWL-3L — Lab Sample ID: 680-82341-9

This Detection Summary does not include radiochemical test results.

Client Sample ID: WWL-3L (Continued) — Lab Sample ID: 680-82341-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	7700		1000	100	ug/L	100		8260B	Total/NA
1,4-Dioxane	19		10	3.4	ug/L	1		8270D	Total/NA
Ethanol	6.5		5.0	0.33	mg/L	1		8015C	Total/NA
Methanol	1.4	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	24		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	110		100	50	ug/L	1		6020A	Total/NA
Arsenic	1.5	J	2.5	1.3	ug/L	1		6020A	Total/NA
Barium	34		5.0	1.4	ug/L	1		6020A	Total/NA
Chromium	3.8	J	5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	72		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	3.0	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	170000		100	44	ug/L	1		6020A	Total/NA
Manganese	12000		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	14		5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	1200		50	9.0	mg/L	50		325.2	Total/NA
Total Kjeldahl Nitrogen	1.5		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	0.37		0.050	0.010	mg/L	1		353.2	Total/NA
Nitrite as N	0.011	J	0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	430		100	50	mg/L	20		375.4	Total/NA
Total Organic Carbon	4.4		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	130	HF	5.0	1.3	mg/L	50		SM 3500 FE D	Total/NA

Client Sample ID: WWL-3U — Lab Sample ID: 680-82341-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	7400		1000	100	ug/L	100		8260B	Total/NA
1,4-Dioxane	19		10	3.5	ug/L	1		8270D	Total/NA
Ethanol	5.8		5.0	0.33	mg/L	1		8015C	Total/NA
Methanol	1.9	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	32		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	64	J	100	50	ug/L	1		6020A	Total/NA
Arsenic	1.5	J	2.5	1.3	ug/L	1		6020A	Total/NA
Barium	33		5.0	1.4	ug/L	1		6020A	Total/NA
Chromium	3.6	J	5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	71		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	3.3	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	170000		100	44	ug/L	1		6020A	Total/NA
Manganese	11000		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	14		5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	1200		50	9.0	mg/L	50		325.2	Total/NA
Total Kjeldahl Nitrogen	1.7		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	0.21		0.050	0.010	mg/L	1		353.2	Total/NA
Nitrite as N	0.010	J	0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	430		100	50	mg/L	20		375.4	Total/NA
Total Organic Carbon	4.3		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	140	HF	5.0	1.3	mg/L	50		SM 3500 FE D	Total/NA

Client Sample ID: MW-9 — Lab Sample ID: 680-82341-11

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-9 (Continued) — Lab Sample ID: 680-82341-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	3800		500	50	ug/L	50		8260B	Total/NA
1,4-Dioxane	9.7	J	10	3.5	ug/L	1		8270D	Total/NA
Ethanol	3.2	J	5.0	0.33	mg/L	1		8015C	Total/NA
Methanol	1.6	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	36		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	380		100	50	ug/L	1		6020A	Total/NA
Arsenic	3.1		2.5	1.3	ug/L	1		6020A	Total/NA
Barium	89		5.0	1.4	ug/L	1		6020A	Total/NA
Cadmium	0.35	J	0.50	0.13	ug/L	1		6020A	Total/NA
Chromium	7.7		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	2.2		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	3.2	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	95000		100	44	ug/L	1		6020A	Total/NA
Lead	0.57	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	2400		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	5.1		5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	580		10	1.8	mg/L	10		325.2	Total/NA
Total Kjeldahl Nitrogen	1.7		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	0.97		0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	600		100	50	mg/L	20		375.4	Total/NA
Total Organic Carbon	8.2		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	48	HF	4.0	1.0	mg/L	40		SM 3500 FE D	Total/NA

Client Sample ID: NAT-4 — Lab Sample ID: 680-82341-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
t-Butanol	310		25	13	ug/L	5		8260B	Total/NA
Methanol	1.5	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	680		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	1100		100	50	ug/L	1		6020A	Total/NA
Arsenic	3.1		2.5	1.3	ug/L	1		6020A	Total/NA
Barium	41		5.0	1.4	ug/L	1		6020A	Total/NA
Cadmium	0.42	J	0.50	0.13	ug/L	1		6020A	Total/NA
Chromium	5.8		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	0.77		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	7.8		5.0	1.1	ug/L	1		6020A	Total/NA
Iron	6100		100	44	ug/L	1		6020A	Total/NA
Lead	1.6		1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	220		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	4.7	J	5.0	2.0	ug/L	1		6020A	Total/NA
Vanadium	4.9	J	10	3.2	ug/L	1		6020A	Total/NA
Chloride	9.2		1.0	0.18	mg/L	1		325.2	Total/NA
Total Kjeldahl Nitrogen	3.6		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	0.74		0.050	0.010	mg/L	1		353.2	Total/NA
Nitrite as N	0.011	J	0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	35		10	5.0	mg/L	2		375.4	Total/NA
Total Organic Carbon	12		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	0.35	HF	0.10	0.025	mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 680-82341-13

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-3 (Continued) — Lab Sample ID: 680-82341-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	330		50	5.0	ug/L	5		8260B	Total/NA
t-Butanol	270		25	13	ug/L	5		8260B	Total/NA
Methanol	1.2	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	3600		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	180		100	50	ug/L	1		6020A	Total/NA
Arsenic	1.6	J	2.5	1.3	ug/L	1		6020A	Total/NA
Barium	320		5.0	1.4	ug/L	1		6020A	Total/NA
Cobalt	0.49	J	0.50	0.12	ug/L	1		6020A	Total/NA
Copper	1.5	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	14000		100	44	ug/L	1		6020A	Total/NA
Manganese	520		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	2.3	J	5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	67		1.0	0.18	mg/L	1		325.2	Total/NA
Total Kjeldahl Nitrogen	3.7		0.40	0.30	mg/L	2		351.2	Total/NA
Nitrate as N	0.29		0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	33		5.0	2.5	mg/L	1		375.4	Total/NA
Total Organic Carbon	5.9		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	0.18	HF	0.10	0.025	mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: WWL-1 — Lab Sample ID: 680-82380-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	110		50	5.0	ug/L	5		8260B	Total/NA
t-Butanol	250		25	13	ug/L	5		8260B	Total/NA
Methane	0.38	J	0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	440		100	50	ug/L	1		6020A	Total/NA
Antimony	2.4	J	5.0	2.0	ug/L	1		6020A	Total/NA
Arsenic	1.4	J	2.5	1.3	ug/L	1		6020A	Total/NA
Barium	770		5.0	1.4	ug/L	1		6020A	Total/NA
Cadmium	0.18	J	0.50	0.13	ug/L	1		6020A	Total/NA
Cobalt	1.7		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	3.1	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	110000		100	44	ug/L	1		6020A	Total/NA
Manganese	2900		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	2.8	J	5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	640		10	1.8	mg/L	10		325.2	Total/NA
Total Kjeldahl Nitrogen	1.6		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrite as N	0.035	J	0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	370		100	50	mg/L	20		375.4	Total/NA
Total Organic Carbon	270		5.0	2.5	mg/L	5		9060	Total/NA
Ferrous Iron	87	HF B	2.0	0.50	mg/L	20		SM 3500 FE D	Total/NA

Client Sample ID: WWL-2 — Lab Sample ID: 680-82380-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
t-Butanol	100	E	5.0	2.6	ug/L	1		8260B	Total/NA
t-Butanol - DL	78	D	10	5.2	ug/L	2		8260B	Total/NA
Methanol	2.5	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	2000		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	180		100	50	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: WWL-2 (Continued) — Lab Sample ID: 680-82380-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.5		2.5	1.3	ug/L	1		6020A	Total/NA
Barium	2500		5.0	1.4	ug/L	1		6020A	Total/NA
Cadmium	0.13	J	0.50	0.13	ug/L	1		6020A	Total/NA
Cobalt	120		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	3.3	J	5.0	1.1	ug/L	1		6020A	Total/NA
Iron	11000		100	44	ug/L	1		6020A	Total/NA
Manganese	37000		20	8.0	ug/L	4		6020A	Total/NA
Nickel	27		5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	6200		100	18	mg/L	100		325.2	Total/NA
Total Kjeldahl Nitrogen	1.4		0.20	0.15	mg/L	1		351.2	Total/NA
Sulfate	68		10	5.0	mg/L	2		375.4	Total/NA
Total Organic Carbon	69		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	11	HF B	0.50	0.13	mg/L	5		SM 3500 FE D	Total/NA

Client Sample ID: RAB-MW-2 — Lab Sample ID: 680-82380-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	12		10	1.0	ug/L	1		8260B	Total/NA
t-Butanol	180	E	5.0	2.6	ug/L	1		8260B	Total/NA
Diethyl ether - DL	14	J	50	5.0	ug/L	5		8260B	Total/NA
t-Butanol - DL	150	D	25	13	ug/L	5		8260B	Total/NA
Methanol	1.1	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	0.32	J	0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	7900		100	50	ug/L	1		6020A	Total/NA
Arsenic	7.2		2.5	1.3	ug/L	1		6020A	Total/NA
Barium	92		5.0	1.4	ug/L	1		6020A	Total/NA
Beryllium	0.54		0.50	0.15	ug/L	1		6020A	Total/NA
Cadmium	0.99		0.50	0.13	ug/L	1		6020A	Total/NA
Chromium	57		5.0	2.5	ug/L	1		6020A	Total/NA
Cobalt	170		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	17		5.0	1.1	ug/L	1		6020A	Total/NA
Iron	80000		100	44	ug/L	1		6020A	Total/NA
Lead	7.7		1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	12000		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	120		5.0	2.0	ug/L	1		6020A	Total/NA
Vanadium	21		10	3.2	ug/L	1		6020A	Total/NA
Aluminum	83		50	23	ug/L	1		6020A	Dissolved
Arsenic	1.6	J	2.5	1.3	ug/L	1		6020A	Dissolved
Barium	34		5.0	1.3	ug/L	1		6020A	Dissolved
Cadmium	0.32	J	0.50	0.095	ug/L	1		6020A	Dissolved
Chromium	4.1	J	5.0	2.5	ug/L	1		6020A	Dissolved
Cobalt	140		0.50	0.15	ug/L	1		6020A	Dissolved
Copper	1.8	J	5.0	1.1	ug/L	1		6020A	Dissolved
Iron	54000		100	33	ug/L	1		6020A	Dissolved
Manganese	12000		5.0	1.0	ug/L	1		6020A	Dissolved
Nickel	100		5.0	2.0	ug/L	1		6020A	Dissolved
Chloride	580		10	1.8	mg/L	10		325.2	Total/NA
Total Kjeldahl Nitrogen	1.8		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrite as N	0.042	J	0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	1500		250	130	mg/L	50		375.4	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: RAB-MW-2 (Continued) — Lab Sample ID: 680-82380-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon	13		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	56	HF B	2.0	0.50	mg/L	20		SM 3500 FE D	Total/NA

Client Sample ID: MW-7U — Lab Sample ID: 680-82380-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethane	0.14	J	1.0	0.10	ug/L	1		8260B	Total/NA
Diethyl ether	110	E	10	1.0	ug/L	1		8260B	Total/NA
t-Butanol	6.5		5.0	2.6	ug/L	1		8260B	Total/NA
Trichloroethene	0.52	J	1.0	0.13	ug/L	1		8260B	Total/NA
Diethyl ether - DL	110	D	20	2.0	ug/L	2		8260B	Total/NA
Trichloroethene - DL	0.70	J	2.0	0.26	ug/L	2		8260B	Total/NA
Methanol	1.3	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	130		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	1100		100	50	ug/L	1		6020A	Total/NA
Barium	45		5.0	1.4	ug/L	1		6020A	Total/NA
Beryllium	2.6		0.50	0.15	ug/L	1		6020A	Total/NA
Cadmium	20		0.50	0.13	ug/L	1		6020A	Total/NA
Cobalt	350		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	170		5.0	1.1	ug/L	1		6020A	Total/NA
Iron	42000		100	44	ug/L	1		6020A	Total/NA
Lead	2.3		1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	38000		20	8.0	ug/L	4		6020A	Total/NA
Mercury	4.2		0.80	0.40	ug/L	1		6020A	Total/NA
Nickel	110		5.0	2.0	ug/L	1		6020A	Total/NA
Vanadium	3.3	J	10	3.2	ug/L	1		6020A	Total/NA
Chloride	2100		50	9.0	mg/L	50		325.2	Total/NA
Total Kjeldahl Nitrogen	0.86		0.20	0.15	mg/L	1		351.2	Total/NA
Sulfate	540		100	50	mg/L	20		375.4	Total/NA
Total Organic Carbon	2.1		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	41	HF B	2.0	0.50	mg/L	20		SM 3500 FE D	Total/NA

Client Sample ID: MW-7L — Lab Sample ID: 680-82380-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methanol	1.5	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	1.6		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	200		100	50	ug/L	1		6020A	Total/NA
Barium	110		5.0	1.4	ug/L	1		6020A	Total/NA
Cobalt	0.60		0.50	0.12	ug/L	1		6020A	Total/NA
Iron	1600		100	44	ug/L	1		6020A	Total/NA
Manganese	480		5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	49		1.0	0.18	mg/L	1		325.2	Total/NA
Total Kjeldahl Nitrogen	0.29		0.20	0.15	mg/L	1		351.2	Total/NA
Sulfate	32		5.0	2.5	mg/L	1		375.4	Total/NA
Ferrous Iron	0.16	HF B	0.10	0.025	mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 680-82380-6

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-2 (Continued) — Lab Sample ID: 680-82380-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	12000		2000	200	ug/L	200		8260B	Total/NA
1,4-Dioxane	23		12	4.1	ug/L	1		8270D	Total/NA
Ethanol	7.8		5.0	0.33	mg/L	1		8015C	Total/NA
Methanol	1.3	J	5.0	1.0	mg/L	1		8015C	Total/NA
Methane	8.4		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	710		100	50	ug/L	1		6020A	Total/NA
Arsenic	3.5		2.5	1.3	ug/L	1		6020A	Total/NA
Barium	110		5.0	1.4	ug/L	1		6020A	Total/NA
Beryllium	0.35	J	0.50	0.15	ug/L	1		6020A	Total/NA
Cobalt	16		0.50	0.12	ug/L	1		6020A	Total/NA
Copper	8.9		5.0	1.1	ug/L	1		6020A	Total/NA
Iron	120000		100	44	ug/L	1		6020A	Total/NA
Lead	0.62	J	1.5	0.50	ug/L	1		6020A	Total/NA
Manganese	7900		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	2.9	J	5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	940		10	1.8	mg/L	10		325.2	Total/NA
Total Kjeldahl Nitrogen	1.2		0.20	0.15	mg/L	1		351.2	Total/NA
Nitrate as N	0.71		0.050	0.010	mg/L	1		353.2	Total/NA
Sulfate	460		100	50	mg/L	20		375.4	Total/NA
Total Organic Carbon	5.3		1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	110	HF B	4.0	1.0	mg/L	40		SM 3500 FE D	Total/NA

Client Sample ID: VFSP-MW1 — Lab Sample ID: 680-82380-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl ether	67		10	1.0	ug/L	1		8260B	Total/NA
t-Butanol	9.4		5.0	2.6	ug/L	1		8260B	Total/NA
Methane	3.2		0.58	0.29	ug/L	1		RSK-175	Total/NA
Aluminum	100		100	50	ug/L	1		6020A	Total/NA
Barium	190		5.0	1.4	ug/L	1		6020A	Total/NA
Cobalt	2.7		0.50	0.12	ug/L	1		6020A	Total/NA
Iron	4300		100	44	ug/L	1		6020A	Total/NA
Manganese	820		5.0	2.0	ug/L	1		6020A	Total/NA
Nickel	2.2	J	5.0	2.0	ug/L	1		6020A	Total/NA
Chloride	56		1.0	0.18	mg/L	1		325.2	Total/NA
Total Kjeldahl Nitrogen	0.43		0.20	0.15	mg/L	1		351.2	Total/NA
Sulfate	150		25	13	mg/L	5		375.4	Total/NA
Total Organic Carbon	0.57	J	1.0	0.50	mg/L	1		9060	Total/NA
Ferrous Iron	3.6	HF B	0.10	0.025	mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 680-82380-8

No Detections

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-4

Date Collected: 08/23/12 09:35
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/05/12 20:05	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/05/12 20:05	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/05/12 20:05	1
Diethyl ether	10	U	10	1.0	ug/L			09/05/12 20:05	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/05/12 20:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/05/12 20:05	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/05/12 20:05	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/05/12 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*09/05/12 20:05*	*1*
Dibromofluoromethane	*107*		*70 - 130*		*09/05/12 20:05*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/05/12 20:05*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.4	U	9.4	1.0	ug/L		08/27/12 15:44	08/28/12 23:06	1
Bis(2-ethylhexyl) phthalate	9.4	U	9.4	1.5	ug/L		08/27/12 15:44	08/28/12 23:06	1
1,4-Dioxane	9.4	U	9.4	3.2	ug/L		08/27/12 15:44	08/28/12 23:06	1
Naphthalene	9.4	U	9.4	0.66	ug/L		08/27/12 15:44	08/28/12 23:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*81*		*38 - 130*	*08/27/12 15:44*	*08/28/12 23:06*	*1*
2-Fluorophenol (Surr)	*83*		*25 - 130*	*08/27/12 15:44*	*08/28/12 23:06*	*1*
Nitrobenzene-d5 (Surr)	*90*		*39 - 130*	*08/27/12 15:44*	*08/28/12 23:06*	*1*
Phenol-d5 (Surr)	*79*		*25 - 130*	*08/27/12 15:44*	*08/28/12 23:06*	*1*
Terphenyl-d14 (Surr)	*91*		*10 - 143*	*08/27/12 15:44*	*08/28/12 23:06*	*1*
2,4,6-Tribromophenol (Surr)	*101*		*31 - 141*	*08/27/12 15:44*	*08/28/12 23:06*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			09/04/12 15:29	1
Methanol	5.0	U	5.0	1.0	mg/L			09/04/12 15:29	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**3.1**		0.58	0.29	ug/L			09/06/12 18:06	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**150**		100	50	ug/L		08/27/12 12:52	08/29/12 21:22	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 21:22	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/27/12 12:52	08/29/12 21:22	1
Barium	**68**		5.0	1.4	ug/L		08/27/12 12:52	08/29/12 21:22	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 21:22	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 21:22	1
Chromium	5.0	U	5.0	2.5	ug/L		08/27/12 12:52	08/29/12 21:22	1
Cobalt	**0.20**	**J**	0.50	0.12	ug/L		08/27/12 12:52	08/29/12 21:22	1
Copper	5.0	U	5.0	1.1	ug/L		08/27/12 12:52	08/29/12 21:22	1
Iron	**920**		100	44	ug/L		08/27/12 12:52	08/29/12 21:22	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 21:22	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-4

Date Collected: 08/23/12 09:35
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-1

Matrix: Water

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**260**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 21:22	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 21:22	1
Nickel	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 21:22	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 21:22	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:52	08/29/12 21:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11**		1.0	0.18	mg/L			09/13/12 15:59	1
Total Kjeldahl Nitrogen	**0.25**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 09:22	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:42	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:42	1
Sulfate	**21**		5.0	2.5	mg/L			09/13/12 11:21	1
Total Organic Carbon	1.0	U	1.0	0.50	mg/L			09/05/12 14:22	1
Ferrous Iron	**0.35**	**HF**	0.10	0.025	mg/L			08/24/12 18:10	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: Equipment Blank 1

Lab Sample ID: 680-82341-2

Date Collected: 08/23/12 10:05
Matrix: Water
Date Received: 08/24/12 09:21

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/05/12 14:19	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/05/12 14:19	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/05/12 14:19	1
Diethyl ether	10	U	10	1.0	ug/L			09/05/12 14:19	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/05/12 14:19	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/05/12 14:19	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/05/12 14:19	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/05/12 14:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*09/05/12 14:19*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*09/05/12 14:19*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*09/05/12 14:19*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/27/12 15:44	08/29/12 16:06	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/27/12 15:44	08/29/12 16:06	1
1,4-Dioxane	9.5	U	9.5	3.2	ug/L		08/27/12 15:44	08/29/12 16:06	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/27/12 15:44	08/29/12 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*86*		*38 - 130*	*08/27/12 15:44*	*08/29/12 16:06*	*1*
2-Fluorophenol (Surr)	*76*		*25 - 130*	*08/27/12 15:44*	*08/29/12 16:06*	*1*
Nitrobenzene-d5 (Surr)	*84*		*39 - 130*	*08/27/12 15:44*	*08/29/12 16:06*	*1*
Phenol-d5 (Surr)	*75*		*25 - 130*	*08/27/12 15:44*	*08/29/12 16:06*	*1*
Terphenyl-d14 (Surr)	*79*		*10 - 143*	*08/27/12 15:44*	*08/29/12 16:06*	*1*
2,4,6-Tribromophenol (Surr)	*94*		*31 - 141*	*08/27/12 15:44*	*08/29/12 16:06*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			09/04/12 16:17	1
Methanol	5.0	U	5.0	1.0	mg/L			09/04/12 16:17	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	100	U	100	50	ug/L		08/27/12 12:52	08/29/12 22:14	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:14	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/27/12 12:52	08/29/12 22:14	1
Barium	5.0	U	5.0	1.4	ug/L		08/27/12 12:52	08/29/12 22:14	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 22:14	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 22:14	1
Chromium	5.0	U	5.0	2.5	ug/L		08/27/12 12:52	08/29/12 22:14	1
Cobalt	0.50	U	0.50	0.12	ug/L		08/27/12 12:52	08/29/12 22:14	1
Copper	5.0	U	5.0	1.1	ug/L		08/27/12 12:52	08/29/12 22:14	1
Iron	**68**	**J**	100	44	ug/L		08/27/12 12:52	08/29/12 22:14	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 22:14	1
Manganese	**32**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:14	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 22:14	1
Nickel	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:14	1

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: Equipment Blank 1
Date Collected: 08/23/12 10:05
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-2
Matrix: Water

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 22:14	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:52	08/29/12 22:14	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-5

Date Collected: 08/23/12 11:10
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/05/12 16:15	1
1,1-Dichloroethane	**3.1**		1.0	0.25	ug/L			09/05/12 16:15	1
1,2-Dichloroethane	**0.24**	**J**	1.0	0.10	ug/L			09/05/12 16:15	1
Diethyl ether	**51**		10	1.0	ug/L			09/05/12 16:15	1
t-Butanol	**16**		5.0	2.6	ug/L			09/05/12 16:15	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/05/12 16:15	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/05/12 16:15	1
Trichloroethene	**0.70**	**J**	1.0	0.13	ug/L			09/05/12 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*70 - 130*		*09/05/12 16:15*	*1*
Dibromofluoromethane	*111*		*70 - 130*		*09/05/12 16:15*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*09/05/12 16:15*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.6	U	9.6	1.1	ug/L		08/27/12 15:44	08/29/12 16:34	1
Bis(2-ethylhexyl) phthalate	9.6	U	9.6	1.5	ug/L		08/27/12 15:44	08/29/12 16:34	1
1,4-Dioxane	**7.0**	**J**	9.6	3.3	ug/L		08/27/12 15:44	08/29/12 16:34	1
Naphthalene	9.6	U	9.6	0.67	ug/L		08/27/12 15:44	08/29/12 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*38 - 130*	*08/27/12 15:44*	*08/29/12 16:34*	*1*
2-Fluorophenol (Surr)	*73*		*25 - 130*	*08/27/12 15:44*	*08/29/12 16:34*	*1*
Nitrobenzene-d5 (Surr)	*77*		*39 - 130*	*08/27/12 15:44*	*08/29/12 16:34*	*1*
Phenol-d5 (Surr)	*73*		*25 - 130*	*08/27/12 15:44*	*08/29/12 16:34*	*1*
Terphenyl-d14 (Surr)	*81*		*10 - 143*	*08/27/12 15:44*	*08/29/12 16:34*	*1*
2,4,6-Tribromophenol (Surr)	*85*		*31 - 141*	*08/27/12 15:44*	*08/29/12 16:34*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			09/04/12 15:53	1
Methanol	**1.1**	**J**	5.0	1.0	mg/L			09/04/12 15:53	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**2.7**		0.58	0.29	ug/L			09/04/12 15:08	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**170**		100	50	ug/L		08/27/12 12:52	08/29/12 22:21	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:21	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/27/12 12:52	08/29/12 22:21	1
Barium	**120**		5.0	1.4	ug/L		08/27/12 12:52	08/29/12 22:21	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 22:21	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 22:21	1
Chromium	**7.2**		5.0	2.5	ug/L		08/27/12 12:52	08/29/12 22:21	1
Cobalt	**0.28**	**J**	0.50	0.12	ug/L		08/27/12 12:52	08/29/12 22:21	1
Copper	**1.6**	**J**	5.0	1.1	ug/L		08/27/12 12:52	08/29/12 22:21	1
Iron	**6800**		100	44	ug/L		08/27/12 12:52	08/29/12 22:21	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 22:21	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-5

Lab Sample ID: 680-82341-3

Date Collected: 08/23/12 11:10
Matrix: Water
Date Received: 08/24/12 09:21

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**1100**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:21	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 22:21	1
Nickel	**6.2**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:21	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 22:21	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:52	08/29/12 22:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**150**		2.0	0.36	mg/L			09/13/12 16:21	2
Total Kjeldahl Nitrogen	**0.53**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:55	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:48	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:48	1
Sulfate	**280**		50	25	mg/L			09/13/12 12:29	10
Total Organic Carbon	**0.91**	**J**	1.0	0.50	mg/L			09/05/12 14:42	1
Ferrous Iron	**6.1**	**HF**	0.20	0.050	mg/L			08/24/12 18:26	2

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-3

Date Collected: 08/23/12 14:45
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-4

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/05/12 16:43	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/05/12 16:43	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/05/12 16:43	1
Diethyl ether	**7.0**	**J**	10	1.0	ug/L			09/05/12 16:43	1
t-Butanol	**240**	**E**	5.0	2.6	ug/L			09/05/12 16:43	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/05/12 16:43	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/05/12 16:43	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/05/12 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*09/05/12 16:43*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*09/05/12 16:43*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*09/05/12 16:43*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	5.0	U	5.0	0.70	ug/L			09/05/12 20:34	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			09/05/12 20:34	5
1,2-Dichloroethane	5.0	U	5.0	0.50	ug/L			09/05/12 20:34	5
Diethyl ether	**5.2**	**J D**	50	5.0	ug/L			09/05/12 20:34	5
t-Butanol	**180**	**D**	25	13	ug/L			09/05/12 20:34	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.90	ug/L			09/05/12 20:34	5
Tetrachloroethene	5.0	U	5.0	0.75	ug/L			09/05/12 20:34	5
Trichloroethene	5.0	U	5.0	0.65	ug/L			09/05/12 20:34	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*09/05/12 20:34*	*5*
Dibromofluoromethane	*105*		*70 - 130*		*09/05/12 20:34*	*5*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/05/12 20:34*	*5*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/27/12 15:44	08/29/12 17:02	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/27/12 15:44	08/29/12 17:02	1
1,4-Dioxane	**21**		9.5	3.2	ug/L		08/27/12 15:44	08/29/12 17:02	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/27/12 15:44	08/29/12 17:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*67*		*38 - 130*	*08/27/12 15:44*	*08/29/12 17:02*	*1*
2-Fluorophenol (Surr)	*64*		*25 - 130*	*08/27/12 15:44*	*08/29/12 17:02*	*1*
Nitrobenzene-d5 (Surr)	*73*		*39 - 130*	*08/27/12 15:44*	*08/29/12 17:02*	*1*
Phenol-d5 (Surr)	*64*		*25 - 130*	*08/27/12 15:44*	*08/29/12 17:02*	*1*
Terphenyl-d14 (Surr)	*63*		*10 - 143*	*08/27/12 15:44*	*08/29/12 17:02*	*1*
2,4,6-Tribromophenol (Surr)	*76*		*31 - 141*	*08/27/12 15:44*	*08/29/12 17:02*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			09/04/12 16:41	1
Methanol	**1.4**	**J**	5.0	1.0	mg/L			09/04/12 16:41	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-3

Lab Sample ID: 680-82341-4

Date Collected: 08/23/12 14:45
Matrix: Water
Date Received: 08/24/12 09:21

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	1.6		0.58	0.29	ug/L			09/04/12 15:21	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	650		100	50	ug/L		08/27/12 12:52	08/29/12 22:29	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:29	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/27/12 12:52	08/29/12 22:29	1
Barium	130		5.0	1.4	ug/L		08/27/12 12:52	08/29/12 22:29	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 22:29	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 22:29	1
Chromium	4.5	J	5.0	2.5	ug/L		08/27/12 12:52	08/29/12 22:29	1
Cobalt	4.6		0.50	0.12	ug/L		08/27/12 12:52	08/29/12 22:29	1
Copper	1.5	J	5.0	1.1	ug/L		08/27/12 12:52	08/29/12 22:29	1
Iron	2900		100	44	ug/L		08/27/12 12:52	08/29/12 22:29	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 22:29	1
Manganese	2500		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:29	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 22:29	1
Nickel	9.8		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:29	1
Selenium	1.3	J	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 22:29	1
Vanadium	3.4	J	10	3.2	ug/L		08/27/12 12:52	08/29/12 22:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	91		1.0	0.18	mg/L			09/13/12 15:59	1
Total Kjeldahl Nitrogen	1.5		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:55	1
Nitrate as N	0.076		0.050	0.010	mg/L			08/24/12 16:49	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:49	1
Sulfate	140		25	13	mg/L			09/13/12 12:02	5
Total Organic Carbon	3.0		1.0	0.50	mg/L			09/05/12 15:01	1
Ferrous Iron	3.1	HF	0.10	0.025	mg/L			08/24/12 18:10	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-2

Date Collected: 08/23/12 12:40
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-5

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/05/12 17:12	1
1,1-Dichloroethane	**1.7**		1.0	0.25	ug/L			09/05/12 17:12	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/05/12 17:12	1
Diethyl ether	**98**		10	1.0	ug/L			09/05/12 17:12	1
t-Butanol	**35**		5.0	2.6	ug/L			09/05/12 17:12	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/05/12 17:12	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/05/12 17:12	1
Trichloroethene	**0.58**	**J**	1.0	0.13	ug/L			09/05/12 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*09/05/12 17:12*	*1*
Dibromofluoromethane	*108*		*70 - 130*		*09/05/12 17:12*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/05/12 17:12*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			09/04/12 17:04	1
Methanol	**1.4**	**J**	5.0	1.0	mg/L			09/04/12 17:04	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**3.9**		0.58	0.29	ug/L			09/04/12 15:34	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**360**		100	50	ug/L		08/27/12 12:52	08/29/12 22:36	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:36	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/27/12 12:52	08/29/12 22:36	1
Barium	**110**		5.0	1.4	ug/L		08/27/12 12:52	08/29/12 22:36	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 22:36	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 22:36	1
Chromium	5.0	U	5.0	2.5	ug/L		08/27/12 12:52	08/29/12 22:36	1
Cobalt	**0.98**		0.50	0.12	ug/L		08/27/12 12:52	08/29/12 22:36	1
Copper	**1.4**	**J**	5.0	1.1	ug/L		08/27/12 12:52	08/29/12 22:36	1
Iron	**6200**		100	44	ug/L		08/27/12 12:52	08/29/12 22:36	1
Lead	**1.2**	**J**	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 22:36	1
Manganese	**1100**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:36	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 22:36	1
Nickel	**2.6**	**J**	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:36	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 22:36	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:52	08/29/12 22:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**130**		2.0	0.36	mg/L			09/13/12 16:21	2
Total Kjeldahl Nitrogen	**0.44**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:55	1
Nitrate as N	**0.014**	**J**	0.050	0.010	mg/L			08/24/12 16:50	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:50	1
Sulfate	**250**		50	25	mg/L			09/13/12 12:31	10
Total Organic Carbon	**0.74**	**J**	1.0	0.50	mg/L			09/05/12 15:19	1

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-2
Date Collected: 08/23/12 12:40
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-5
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ferrous Iron	4.9	HF	0.20	0.050	mg/L			08/24/12 18:33	2

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-1

Date Collected: 08/23/12 13:40
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-6

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/05/12 15:46	1
1,1-Dichloroethane	**2.7**		1.0	0.25	ug/L			09/05/12 15:46	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/05/12 15:46	1
Diethyl ether	**66**		10	1.0	ug/L			09/05/12 15:46	1
t-Butanol	**37**		5.0	2.6	ug/L			09/05/12 15:46	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/05/12 15:46	1
Tetrachloroethene	**0.26**	**J**	1.0	0.15	ug/L			09/05/12 15:46	1
Trichloroethene	**0.97**	**J**	1.0	0.13	ug/L			09/05/12 15:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*09/05/12 15:46*	*1*
Dibromofluoromethane	*108*		*70 - 130*		*09/05/12 15:46*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/05/12 15:46*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/27/12 15:44	08/29/12 17:30	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/27/12 15:44	08/29/12 17:30	1
1,4-Dioxane	**4.2**	**J**	9.5	3.2	ug/L		08/27/12 15:44	08/29/12 17:30	1
Naphthalene	9.5	U	9.5	0.67	ug/L		08/27/12 15:44	08/29/12 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*74*		*38 - 130*	*08/27/12 15:44*	*08/29/12 17:30*	*1*
2-Fluorophenol (Surr)	*68*		*25 - 130*	*08/27/12 15:44*	*08/29/12 17:30*	*1*
Nitrobenzene-d5 (Surr)	*74*		*39 - 130*	*08/27/12 15:44*	*08/29/12 17:30*	*1*
Phenol-d5 (Surr)	*68*		*25 - 130*	*08/27/12 15:44*	*08/29/12 17:30*	*1*
Terphenyl-d14 (Surr)	*64*		*10 - 143*	*08/27/12 15:44*	*08/29/12 17:30*	*1*
2,4,6-Tribromophenol (Surr)	*92*		*31 - 141*	*08/27/12 15:44*	*08/29/12 17:30*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			09/04/12 17:28	1
Methanol	**1.5**	**J**	5.0	1.0	mg/L			09/04/12 17:28	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**4.6**		0.58	0.29	ug/L			09/04/12 15:47	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**140**		100	50	ug/L		08/27/12 12:52	08/29/12 22:43	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:43	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/27/12 12:52	08/29/12 22:43	1
Barium	**120**		5.0	1.4	ug/L		08/27/12 12:52	08/29/12 22:43	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 22:43	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 22:43	1
Chromium	5.0	U	5.0	2.5	ug/L		08/27/12 12:52	08/29/12 22:43	1
Cobalt	**0.22**	**J**	0.50	0.12	ug/L		08/27/12 12:52	08/29/12 22:43	1
Copper	5.0	U	5.0	1.1	ug/L		08/27/12 12:52	08/29/12 22:43	1
Iron	**9100**		100	44	ug/L		08/27/12 12:52	08/29/12 22:43	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 22:43	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-1

Lab Sample ID: 680-82341-6

Date Collected: 08/23/12 13:40
Matrix: Water
Date Received: 08/24/12 09:21

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**1800**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:43	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 22:43	1
Nickel	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:43	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 22:43	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:52	08/29/12 22:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**140**		2.0	0.36	mg/L			09/13/12 16:21	2
Total Kjeldahl Nitrogen	**0.51**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:55	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:22	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:22	1
Sulfate	**310**		50	25	mg/L			09/13/12 12:31	10
Total Organic Carbon	**0.95**	**J**	1.0	0.50	mg/L			09/05/12 15:36	1
Ferrous Iron	**7.7**	**HF**	0.20	0.050	mg/L			08/24/12 18:33	2

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: Trip Blank

Lab Sample ID: 680-82341-7

Date Collected: 08/23/12 00:00
Matrix: Water
Date Received: 08/24/12 09:21

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/05/12 13:51	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/05/12 13:51	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/05/12 13:51	1
Diethyl ether	10	U	10	1.0	ug/L			09/05/12 13:51	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/05/12 13:51	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/05/12 13:51	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/05/12 13:51	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/05/12 13:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*09/05/12 13:51*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*09/05/12 13:51*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/05/12 13:51*	*1*

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-4U

Date Collected: 08/23/12 09:15
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-8

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	50	U	50	7.0	ug/L			09/05/12 17:41	50
1,1-Dichloroethane	50	U	50	13	ug/L			09/05/12 17:41	50
1,2-Dichloroethane	50	U	50	5.0	ug/L			09/05/12 17:41	50
Diethyl ether	**1800**		500	50	ug/L			09/05/12 17:41	50
t-Butanol	**3000**		250	130	ug/L			09/05/12 17:41	50
1,1,2,2-Tetrachloroethane	50	U	50	9.0	ug/L			09/05/12 17:41	50
Tetrachloroethene	50	U	50	7.5	ug/L			09/05/12 17:41	50
Trichloroethene	50	U	50	6.5	ug/L			09/05/12 17:41	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*70 - 130*		*09/05/12 17:41*	*50*
Dibromofluoromethane	*103*		*70 - 130*		*09/05/12 17:41*	*50*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/05/12 17:41*	*50*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/27/12 15:44	08/29/12 22:52	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/27/12 15:44	08/29/12 22:52	1
1,4-Dioxane	**6.9**	**J**	9.5	3.2	ug/L		08/27/12 15:44	08/29/12 22:52	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/27/12 15:44	08/29/12 22:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*57*		*38 - 130*	*08/27/12 15:44*	*08/29/12 22:52*	*1*
2-Fluorophenol (Surr)	*57*		*25 - 130*	*08/27/12 15:44*	*08/29/12 22:52*	*1*
Nitrobenzene-d5 (Surr)	*61*		*39 - 130*	*08/27/12 15:44*	*08/29/12 22:52*	*1*
Phenol-d5 (Surr)	*62*		*25 - 130*	*08/27/12 15:44*	*08/29/12 22:52*	*1*
Terphenyl-d14 (Surr)	*31*		*10 - 143*	*08/27/12 15:44*	*08/29/12 22:52*	*1*
2,4,6-Tribromophenol (Surr)	*88*		*31 - 141*	*08/27/12 15:44*	*08/29/12 22:52*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**1.4**	**J**	5.0	0.33	mg/L			09/04/12 17:52	1
Methanol	**2.3**	**J**	5.0	1.0	mg/L			09/04/12 17:52	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**6800**		0.58	0.29	ug/L			09/04/12 18:07	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**950**		100	50	ug/L		08/27/12 12:52	08/29/12 22:51	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:51	1
Arsenic	**5.7**		2.5	1.3	ug/L		08/27/12 12:52	08/29/12 22:51	1
Barium	**890**		5.0	1.4	ug/L		08/27/12 12:52	08/29/12 22:51	1
Beryllium	**0.48**	**J**	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 22:51	1
Cadmium	**0.30**	**J**	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 22:51	1
Chromium	**6.2**		5.0	2.5	ug/L		08/27/12 12:52	08/29/12 22:51	1
Cobalt	**34**		0.50	0.12	ug/L		08/27/12 12:52	08/29/12 22:51	1
Copper	**9.4**		5.0	1.1	ug/L		08/27/12 12:52	08/29/12 22:51	1
Iron	**86000**		100	44	ug/L		08/27/12 12:52	08/29/12 22:51	1
Lead	**1.1**	**J**	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 22:51	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-4U

Lab Sample ID: 680-82341-8

Date Collected: 08/23/12 09:15
Matrix: Water
Date Received: 08/24/12 09:21

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**1800**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:51	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 22:51	1
Nickel	**9.1**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:51	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 22:51	1
Vanadium	**6.0**	**J**	10	3.2	ug/L		08/27/12 12:52	08/29/12 22:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**660**		10	1.8	mg/L			09/13/12 16:28	10
Total Kjeldahl Nitrogen	**11**		1.0	0.75	mg/L		09/04/12 08:41	09/07/12 11:09	5
Nitrate as N	**0.56**		0.050	0.010	mg/L			08/24/12 16:25	1
Nitrite as N	**0.014**	**J**	0.050	0.010	mg/L			08/24/12 16:25	1
Sulfate	5.0	U	5.0	2.5	mg/L			09/10/12 10:21	1
Total Organic Carbon	**27**		1.0	0.50	mg/L			09/05/12 15:52	1
Ferrous Iron	**33**	**HF**	1.0	0.25	mg/L			08/24/12 18:33	10

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: WWL-3L

Date Collected: 08/23/12 12:05
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-9

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	100	U	100	14	ug/L			09/05/12 18:10	100
1,1-Dichloroethane	100	U	100	25	ug/L			09/05/12 18:10	100
1,2-Dichloroethane	100	U	100	10	ug/L			09/05/12 18:10	100
Diethyl ether	**7700**		1000	100	ug/L			09/05/12 18:10	100
t-Butanol	500	U	500	260	ug/L			09/05/12 18:10	100
1,1,2,2-Tetrachloroethane	100	U	100	18	ug/L			09/05/12 18:10	100
Tetrachloroethene	100	U	100	15	ug/L			09/05/12 18:10	100
Trichloroethene	100	U	100	13	ug/L			09/05/12 18:10	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*09/05/12 18:10*	*100*
Dibromofluoromethane	*104*		*70 - 130*		*09/05/12 18:10*	*100*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/05/12 18:10*	*100*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	10	U	10	1.1	ug/L		08/27/12 15:44	08/29/12 23:20	1
Bis(2-ethylhexyl) phthalate	10	U	10	1.6	ug/L		08/27/12 15:44	08/29/12 23:20	1
1,4-Dioxane	**19**		10	3.4	ug/L		08/27/12 15:44	08/29/12 23:20	1
Naphthalene	10	U	10	0.70	ug/L		08/27/12 15:44	08/29/12 23:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*61*		*38 - 130*	*08/27/12 15:44*	*08/29/12 23:20*	*1*
2-Fluorophenol (Surr)	*66*		*25 - 130*	*08/27/12 15:44*	*08/29/12 23:20*	*1*
Nitrobenzene-d5 (Surr)	*70*		*39 - 130*	*08/27/12 15:44*	*08/29/12 23:20*	*1*
Phenol-d5 (Surr)	*69*		*25 - 130*	*08/27/12 15:44*	*08/29/12 23:20*	*1*
Terphenyl-d14 (Surr)	*47*		*10 - 143*	*08/27/12 15:44*	*08/29/12 23:20*	*1*
2,4,6-Tribromophenol (Surr)	*82*		*31 - 141*	*08/27/12 15:44*	*08/29/12 23:20*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**6.5**		5.0	0.33	mg/L			09/04/12 18:16	1
Methanol	**1.4**	**J**	5.0	1.0	mg/L			09/04/12 18:16	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**24**		0.58	0.29	ug/L			09/04/12 17:54	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**110**		100	50	ug/L		08/27/12 12:52	08/29/12 22:58	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:58	1
Arsenic	**1.5**	**J**	2.5	1.3	ug/L		08/27/12 12:52	08/29/12 22:58	1
Barium	**34**		5.0	1.4	ug/L		08/27/12 12:52	08/29/12 22:58	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 22:58	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 22:58	1
Chromium	**3.8**	**J**	5.0	2.5	ug/L		08/27/12 12:52	08/29/12 22:58	1
Cobalt	**72**		0.50	0.12	ug/L		08/27/12 12:52	08/29/12 22:58	1
Copper	**3.0**	**J**	5.0	1.1	ug/L		08/27/12 12:52	08/29/12 22:58	1
Iron	**170000**		100	44	ug/L		08/27/12 12:52	08/29/12 22:58	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 22:58	1

Client Sample ID: WWL-3L

Lab Sample ID: 680-82341-9

Date Collected: 08/23/12 12:05

Matrix: Water

Date Received: 08/24/12 09:21

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**12000**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:58	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 22:58	1
Nickel	**14**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:58	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 22:58	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:52	08/29/12 22:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1200**		50	9.0	mg/L			09/13/12 16:28	50
Total Kjeldahl Nitrogen	**1.5**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:55	1
Nitrate as N	**0.37**		0.050	0.010	mg/L			08/24/12 16:26	1
Nitrite as N	**0.011**	**J**	0.050	0.010	mg/L			08/24/12 16:26	1
Sulfate	**430**		100	50	mg/L			09/10/12 11:27	20
Total Organic Carbon	**4.4**		1.0	0.50	mg/L			09/05/12 16:11	1
Ferrous Iron	**130**	**HF**	5.0	1.3	mg/L			08/25/12 12:19	50

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: WWL-3U

Date Collected: 08/23/12 12:45
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	100	U	100	14	ug/L			09/05/12 18:39	100
1,1-Dichloroethane	100	U	100	25	ug/L			09/05/12 18:39	100
1,2-Dichloroethane	100	U	100	10	ug/L			09/05/12 18:39	100
Diethyl ether	**7400**		1000	100	ug/L			09/05/12 18:39	100
t-Butanol	500	U	500	260	ug/L			09/05/12 18:39	100
1,1,2,2-Tetrachloroethane	100	U	100	18	ug/L			09/05/12 18:39	100
Tetrachloroethene	100	U	100	15	ug/L			09/05/12 18:39	100
Trichloroethene	100	U	100	13	ug/L			09/05/12 18:39	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*70 - 130*		*09/05/12 18:39*	*100*
Dibromofluoromethane	*101*		*70 - 130*		*09/05/12 18:39*	*100*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/05/12 18:39*	*100*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	10	U	10	1.1	ug/L		08/27/12 15:44	08/29/12 23:47	1
Bis(2-ethylhexyl) phthalate	10	U	10	1.6	ug/L		08/27/12 15:44	08/29/12 23:47	1
1,4-Dioxane	**19**		10	3.5	ug/L		08/27/12 15:44	08/29/12 23:47	1
Naphthalene	10	U	10	0.72	ug/L		08/27/12 15:44	08/29/12 23:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*65*		*38 - 130*	*08/27/12 15:44*	*08/29/12 23:47*	*1*
2-Fluorophenol (Surr)	*69*		*25 - 130*	*08/27/12 15:44*	*08/29/12 23:47*	*1*
Nitrobenzene-d5 (Surr)	*72*		*39 - 130*	*08/27/12 15:44*	*08/29/12 23:47*	*1*
Phenol-d5 (Surr)	*71*		*25 - 130*	*08/27/12 15:44*	*08/29/12 23:47*	*1*
Terphenyl-d14 (Surr)	*67*		*10 - 143*	*08/27/12 15:44*	*08/29/12 23:47*	*1*
2,4,6-Tribromophenol (Surr)	*79*		*31 - 141*	*08/27/12 15:44*	*08/29/12 23:47*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**5.8**		5.0	0.33	mg/L			09/04/12 18:40	1
Methanol	**1.9**	**J**	5.0	1.0	mg/L			09/04/12 18:40	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**32**		0.58	0.29	ug/L			09/04/12 17:42	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**64**	**J**	100	50	ug/L		08/27/12 12:52	08/29/12 23:06	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:06	1
Arsenic	**1.5**	**J**	2.5	1.3	ug/L		08/27/12 12:52	08/29/12 23:06	1
Barium	**33**		5.0	1.4	ug/L		08/27/12 12:52	08/29/12 23:06	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 23:06	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 23:06	1
Chromium	**3.6**	**J**	5.0	2.5	ug/L		08/27/12 12:52	08/29/12 23:06	1
Cobalt	**71**		0.50	0.12	ug/L		08/27/12 12:52	08/29/12 23:06	1
Copper	**3.3**	**J**	5.0	1.1	ug/L		08/27/12 12:52	08/29/12 23:06	1
Iron	**170000**		100	44	ug/L		08/27/12 12:52	08/29/12 23:06	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 23:06	1

Client Sample ID: WWL-3U

Lab Sample ID: 680-82341-10

Date Collected: 08/23/12 12:45

Matrix: Water

Date Received: 08/24/12 09:21

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**11000**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:06	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 23:06	1
Nickel	**14**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:06	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 23:06	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:52	08/29/12 23:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1200**		50	9.0	mg/L			09/13/12 16:28	50
Total Kjeldahl Nitrogen	**1.7**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:55	1
Nitrate as N	**0.21**		0.050	0.010	mg/L			08/24/12 16:27	1
Nitrite as N	**0.010**	**J**	0.050	0.010	mg/L			08/24/12 16:27	1
Sulfate	**430**		100	50	mg/L			09/10/12 11:27	20
Total Organic Carbon	**4.3**		1.0	0.50	mg/L			09/05/12 17:30	1
Ferrous Iron	**140**	**HF**	5.0	1.3	mg/L			08/25/12 12:19	50

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-9

Date Collected: 08/23/12 14:40
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-11

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	50	U	50	7.0	ug/L			09/05/12 19:08	50
1,1-Dichloroethane	50	U	50	13	ug/L			09/05/12 19:08	50
1,2-Dichloroethane	50	U	50	5.0	ug/L			09/05/12 19:08	50
Diethyl ether	**3800**		500	50	ug/L			09/05/12 19:08	50
t-Butanol	250	U	250	130	ug/L			09/05/12 19:08	50
1,1,2,2-Tetrachloroethane	50	U	50	9.0	ug/L			09/05/12 19:08	50
Tetrachloroethene	50	U	50	7.5	ug/L			09/05/12 19:08	50
Trichloroethene	50	U	50	6.5	ug/L			09/05/12 19:08	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*70 - 130*		*09/05/12 19:08*	*50*
Dibromofluoromethane	*102*		*70 - 130*		*09/05/12 19:08*	*50*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/05/12 19:08*	*50*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	10	U	10	1.1	ug/L		08/27/12 15:44	08/30/12 00:15	1
Bis(2-ethylhexyl) phthalate	10	U	10	1.6	ug/L		08/27/12 15:44	08/30/12 00:15	1
1,4-Dioxane	**9.7**	**J**	10	3.5	ug/L		08/27/12 15:44	08/30/12 00:15	1
Naphthalene	10	U	10	0.71	ug/L		08/27/12 15:44	08/30/12 00:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*59*		*38 - 130*	*08/27/12 15:44*	*08/30/12 00:15*	*1*
2-Fluorophenol (Surr)	*63*		*25 - 130*	*08/27/12 15:44*	*08/30/12 00:15*	*1*
Nitrobenzene-d5 (Surr)	*67*		*39 - 130*	*08/27/12 15:44*	*08/30/12 00:15*	*1*
Phenol-d5 (Surr)	*67*		*25 - 130*	*08/27/12 15:44*	*08/30/12 00:15*	*1*
Terphenyl-d14 (Surr)	*31*		*10 - 143*	*08/27/12 15:44*	*08/30/12 00:15*	*1*
2,4,6-Tribromophenol (Surr)	*79*		*31 - 141*	*08/27/12 15:44*	*08/30/12 00:15*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**3.2**	**J**	5.0	0.33	mg/L			09/04/12 19:04	1
Methanol	**1.6**	**J**	5.0	1.0	mg/L			09/04/12 19:04	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**36**		0.58	0.29	ug/L			09/06/12 17:53	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**380**		100	50	ug/L		08/27/12 12:52	08/29/12 23:13	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:13	1
Arsenic	**3.1**		2.5	1.3	ug/L		08/27/12 12:52	08/29/12 23:13	1
Barium	**89**		5.0	1.4	ug/L		08/27/12 12:52	08/29/12 23:13	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 23:13	1
Cadmium	**0.35**	**J**	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 23:13	1
Chromium	**7.7**		5.0	2.5	ug/L		08/27/12 12:52	08/29/12 23:13	1
Cobalt	**2.2**		0.50	0.12	ug/L		08/27/12 12:52	08/29/12 23:13	1
Copper	**3.2**	**J**	5.0	1.1	ug/L		08/27/12 12:52	08/29/12 23:13	1
Iron	**95000**		100	44	ug/L		08/27/12 12:52	08/29/12 23:13	1
Lead	**0.57**	**J**	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 23:13	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-9

Lab Sample ID: 680-82341-11

Date Collected: 08/23/12 14:40
Matrix: Water
Date Received: 08/24/12 09:21

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**2400**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:13	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 23:13	1
Nickel	**5.1**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:13	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 23:13	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:52	08/29/12 23:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**580**		10	1.8	mg/L			09/13/12 16:28	10
Total Kjeldahl Nitrogen	**1.7**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:55	1
Nitrate as N	**0.97**		0.050	0.010	mg/L			08/24/12 16:28	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:28	1
Sulfate	**600**		100	50	mg/L			09/10/12 11:25	20
Total Organic Carbon	**8.2**		1.0	0.50	mg/L			09/05/12 17:48	1
Ferrous Iron	**48**	**HF**	4.0	1.0	mg/L			08/25/12 12:19	40

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: NAT-4

Date Collected: 08/23/12 16:30
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-12

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	5.0	U	5.0	0.70	ug/L			09/05/12 15:17	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			09/05/12 15:17	5
1,2-Dichloroethane	5.0	U	5.0	0.50	ug/L			09/05/12 15:17	5
Diethyl ether	50	U	50	5.0	ug/L			09/05/12 15:17	5
t-Butanol	**310**		25	13	ug/L			09/05/12 15:17	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.90	ug/L			09/05/12 15:17	5
Tetrachloroethene	5.0	U	5.0	0.75	ug/L			09/05/12 15:17	5
Trichloroethene	5.0	U	5.0	0.65	ug/L			09/05/12 15:17	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*70 - 130*		*09/05/12 15:17*	*5*
Dibromofluoromethane	*103*		*70 - 130*		*09/05/12 15:17*	*5*
Toluene-d8 (Surr)	*105*		*70 - 130*		*09/05/12 15:17*	*5*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			09/04/12 19:28	1
Methanol	**1.5**	**J**	5.0	1.0	mg/L			09/04/12 19:28	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**680**		0.58	0.29	ug/L			09/04/12 17:16	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**1100**		100	50	ug/L		08/27/12 12:52	08/29/12 23:20	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:20	1
Arsenic	**3.1**		2.5	1.3	ug/L		08/27/12 12:52	08/29/12 23:20	1
Barium	**41**		5.0	1.4	ug/L		08/27/12 12:52	08/29/12 23:20	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 23:20	1
Cadmium	**0.42**	**J**	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 23:20	1
Chromium	**5.8**		5.0	2.5	ug/L		08/27/12 12:52	08/29/12 23:20	1
Cobalt	**0.77**		0.50	0.12	ug/L		08/27/12 12:52	08/29/12 23:20	1
Copper	**7.8**		5.0	1.1	ug/L		08/27/12 12:52	08/29/12 23:20	1
Iron	**6100**		100	44	ug/L		08/27/12 12:52	08/29/12 23:20	1
Lead	**1.6**		1.5	0.50	ug/L		08/27/12 12:52	08/29/12 23:20	1
Manganese	**220**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:20	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 23:20	1
Nickel	**4.7**	**J**	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:20	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 23:20	1
Vanadium	**4.9**	**J**	10	3.2	ug/L		08/27/12 12:52	08/29/12 23:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.2**		1.0	0.18	mg/L			09/13/12 16:08	1
Total Kjeldahl Nitrogen	**3.6**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:55	1
Nitrate as N	**0.74**		0.050	0.010	mg/L			08/24/12 16:32	1
Nitrite as N	**0.011**	**J**	0.050	0.010	mg/L			08/24/12 16:32	1
Sulfate	**35**		10	5.0	mg/L			09/10/12 10:55	2
Total Organic Carbon	**12**		1.0	0.50	mg/L			09/05/12 18:04	1

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: NAT-4
Date Collected: 08/23/12 16:30
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-12
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ferrous Iron	0.35	HF	0.10	0.025	mg/L			08/24/12 18:18	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-3

Date Collected: 08/23/12 10:25
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-13

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	5.0	U	5.0	0.70	ug/L			09/05/12 19:36	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			09/05/12 19:36	5
1,2-Dichloroethane	5.0	U	5.0	0.50	ug/L			09/05/12 19:36	5
Diethyl ether	**330**		50	5.0	ug/L			09/05/12 19:36	5
t-Butanol	**270**		25	13	ug/L			09/05/12 19:36	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.90	ug/L			09/05/12 19:36	5
Tetrachloroethene	5.0	U	5.0	0.75	ug/L			09/05/12 19:36	5
Trichloroethene	5.0	U	5.0	0.65	ug/L			09/05/12 19:36	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*70 - 130*		*09/05/12 19:36*	*5*
Dibromofluoromethane	*100*		*70 - 130*		*09/05/12 19:36*	*5*
Toluene-d8 (Surr)	*105*		*70 - 130*		*09/05/12 19:36*	*5*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			09/04/12 19:51	1
Methanol	**1.2**	**J**	5.0	1.0	mg/L			09/04/12 19:51	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**3600**		0.58	0.29	ug/L			09/04/12 17:03	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**180**		100	50	ug/L		08/27/12 12:52	08/29/12 23:42	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:42	1
Arsenic	**1.6**	**J**	2.5	1.3	ug/L		08/27/12 12:52	08/29/12 23:42	1
Barium	**320**		5.0	1.4	ug/L		08/27/12 12:52	08/29/12 23:42	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 23:42	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 23:42	1
Chromium	5.0	U	5.0	2.5	ug/L		08/27/12 12:52	08/29/12 23:42	1
Cobalt	**0.49**	**J**	0.50	0.12	ug/L		08/27/12 12:52	08/29/12 23:42	1
Copper	**1.5**	**J**	5.0	1.1	ug/L		08/27/12 12:52	08/29/12 23:42	1
Iron	**14000**		100	44	ug/L		08/27/12 12:52	08/29/12 23:42	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 23:42	1
Manganese	**520**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:42	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 23:42	1
Nickel	**2.3**	**J**	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:42	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 23:42	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:52	08/29/12 23:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**67**		1.0	0.18	mg/L			09/13/12 16:02	1
Total Kjeldahl Nitrogen	**3.7**		0.40	0.30	mg/L		09/04/12 08:41	09/07/12 11:18	2
Nitrate as N	**0.29**		0.050	0.010	mg/L			08/24/12 16:33	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:33	1
Sulfate	**33**		5.0	2.5	mg/L			09/10/12 10:22	1
Total Organic Carbon	**5.9**		1.0	0.50	mg/L			09/05/12 18:50	1

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-3
Date Collected: 08/23/12 10:25
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-13
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ferrous Iron	0.18	HF	0.10	0.025	mg/L			08/24/12 18:18	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: WWL-1

Date Collected: 08/24/12 10:35
Date Received: 08/25/12 09:20

Lab Sample ID: 680-82380-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	5.0	U	5.0	0.70	ug/L			09/06/12 15:51	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			09/06/12 15:51	5
1,2-Dichloroethane	5.0	U	5.0	0.50	ug/L			09/06/12 15:51	5
Diethyl ether	**110**		50	5.0	ug/L			09/06/12 15:51	5
t-Butanol	**250**		25	13	ug/L			09/06/12 15:51	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.90	ug/L			09/06/12 15:51	5
Tetrachloroethene	5.0	U	5.0	0.75	ug/L			09/06/12 15:51	5
Trichloroethene	5.0	U	5.0	0.65	ug/L			09/06/12 15:51	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*70 - 130*		*09/06/12 15:51*	*5*
Dibromofluoromethane	*100*		*70 - 130*		*09/06/12 15:51*	*5*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/06/12 15:51*	*5*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/31/12 17:39	1
Methanol	5.0	U	5.0	1.0	mg/L			08/31/12 17:39	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**0.38**	**J**	0.58	0.29	ug/L			09/06/12 18:31	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**440**		100	50	ug/L		08/27/12 12:55	08/29/12 16:32	1
Antimony	**2.4**	**J**	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 16:32	1
Arsenic	**1.4**	**J**	2.5	1.3	ug/L		08/27/12 12:55	08/29/12 16:32	1
Barium	**770**		5.0	1.4	ug/L		08/27/12 12:55	08/29/12 16:32	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:55	08/28/12 13:07	1
Cadmium	**0.18**	**J**	0.50	0.13	ug/L		08/27/12 12:55	08/29/12 16:32	1
Chromium	5.0	U	5.0	2.5	ug/L		08/27/12 12:55	08/29/12 16:32	1
Cobalt	**1.7**		0.50	0.12	ug/L		08/27/12 12:55	08/29/12 16:32	1
Copper	**3.1**	**J**	5.0	1.1	ug/L		08/27/12 12:55	08/29/12 16:32	1
Iron	**110000**		100	44	ug/L		08/27/12 12:55	08/29/12 16:32	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:55	08/29/12 16:32	1
Manganese	**2900**		5.0	2.0	ug/L		08/27/12 12:55	08/29/12 16:32	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:55	08/29/12 16:32	1
Nickel	**2.8**	**J**	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 16:32	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:55	08/29/12 16:32	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:55	08/29/12 16:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**640**		10	1.8	mg/L			09/07/12 17:31	10
Total Kjeldahl Nitrogen	**1.6**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:46	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/25/12 13:46	1
Nitrite as N	**0.035**	**J**	0.050	0.010	mg/L			08/25/12 13:46	1
Sulfate	**370**		100	50	mg/L			09/06/12 12:15	20
Total Organic Carbon	**270**		5.0	2.5	mg/L			09/05/12 14:04	5

Client Sample ID: WWL-1
Date Collected: 08/24/12 10:35
Date Received: 08/25/12 09:20

Lab Sample ID: 680-82380-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ferrous Iron	87	HF B	2.0	0.50	mg/L			08/25/12 14:05	20

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: WWL-2

Date Collected: 08/24/12 12:20
Date Received: 08/25/12 09:20

Lab Sample ID: 680-82380-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/06/12 14:24	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/06/12 14:24	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/06/12 14:24	1
Diethyl ether	10	U	10	1.0	ug/L			09/06/12 14:24	1
t-Butanol	**100**	**E**	5.0	2.6	ug/L			09/06/12 14:24	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/06/12 14:24	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/06/12 14:24	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/06/12 14:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*89*		*70 - 130*		*09/06/12 14:24*	*1*
Dibromofluoromethane	*110*		*70 - 130*		*09/06/12 14:24*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/06/12 14:24*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	2.0	U	2.0	0.28	ug/L			09/06/12 17:46	2
1,1-Dichloroethane	2.0	U	2.0	0.50	ug/L			09/06/12 17:46	2
1,2-Dichloroethane	2.0	U	2.0	0.20	ug/L			09/06/12 17:46	2
Diethyl ether	20	U	20	2.0	ug/L			09/06/12 17:46	2
t-Butanol	**78**	**D**	10	5.2	ug/L			09/06/12 17:46	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.36	ug/L			09/06/12 17:46	2
Tetrachloroethene	2.0	U	2.0	0.30	ug/L			09/06/12 17:46	2
Trichloroethene	2.0	U	2.0	0.26	ug/L			09/06/12 17:46	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*70 - 130*		*09/06/12 17:46*	*2*
Dibromofluoromethane	*95*		*70 - 130*		*09/06/12 17:46*	*2*
Toluene-d8 (Surr)	*105*		*70 - 130*		*09/06/12 17:46*	*2*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/31/12 18:03	1
Methanol	**2.5**	**J**	5.0	1.0	mg/L			08/31/12 18:03	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**2000**		0.58	0.29	ug/L			09/06/12 18:19	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**180**		100	50	ug/L		08/27/12 12:55	08/29/12 17:11	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 17:11	1
Arsenic	**2.5**		2.5	1.3	ug/L		08/27/12 12:55	08/29/12 17:11	1
Barium	**2500**		5.0	1.4	ug/L		08/27/12 12:55	08/29/12 17:11	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:55	08/28/12 13:40	1
Cadmium	**0.13**	**J**	0.50	0.13	ug/L		08/27/12 12:55	08/29/12 17:11	1
Chromium	5.0	U	5.0	2.5	ug/L		08/27/12 12:55	08/29/12 17:11	1
Cobalt	**120**		0.50	0.12	ug/L		08/27/12 12:55	08/29/12 17:11	1
Copper	**3.3**	**J**	5.0	1.1	ug/L		08/27/12 12:55	08/29/12 17:11	1
Iron	**11000**		100	44	ug/L		08/27/12 12:55	08/29/12 17:11	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: WWL-2

Date Collected: 08/24/12 12:20
Date Received: 08/25/12 09:20

Lab Sample ID: 680-82380-2

Matrix: Water

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:55	08/29/12 17:11	1
Manganese	**37000**		20	8.0	ug/L		08/27/12 12:55	08/29/12 17:19	4
Mercury	1.6	U	1.6	0.80	ug/L		08/27/12 12:55	09/04/12 18:37	2
Nickel	**27**		5.0	2.0	ug/L		08/27/12 12:55	08/29/12 17:11	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:55	08/29/12 17:11	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:55	08/29/12 17:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6200**		100	18	mg/L			09/07/12 17:32	100
Total Kjeldahl Nitrogen	**1.4**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:46	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/25/12 13:50	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/25/12 13:50	1
Sulfate	**68**		10	5.0	mg/L			09/06/12 12:42	2
Total Organic Carbon	**69**		1.0	0.50	mg/L			09/02/12 23:29	1
Ferrous Iron	**11**	**HF B**	0.50	0.13	mg/L			08/25/12 14:08	5

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: RAB-MW-2

Date Collected: 08/24/12 14:30
Date Received: 08/25/12 09:20

Lab Sample ID: 680-82380-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/06/12 14:53	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/06/12 14:53	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/06/12 14:53	1
Diethyl ether	**12**		10	1.0	ug/L			09/06/12 14:53	1
t-Butanol	**180**	**E**	5.0	2.6	ug/L			09/06/12 14:53	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/06/12 14:53	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/06/12 14:53	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/06/12 14:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*		*70 - 130*		*09/06/12 14:53*	*1*
Dibromofluoromethane	*108*		*70 - 130*		*09/06/12 14:53*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/06/12 14:53*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	5.0	U	5.0	0.70	ug/L			09/06/12 18:15	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			09/06/12 18:15	5
1,2-Dichloroethane	5.0	U	5.0	0.50	ug/L			09/06/12 18:15	5
Diethyl ether	**14**	**J**	50	5.0	ug/L			09/06/12 18:15	5
t-Butanol	**150**	**D**	25	13	ug/L			09/06/12 18:15	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.90	ug/L			09/06/12 18:15	5
Tetrachloroethene	5.0	U	5.0	0.75	ug/L			09/06/12 18:15	5
Trichloroethene	5.0	U	5.0	0.65	ug/L			09/06/12 18:15	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*70 - 130*		*09/06/12 18:15*	*5*
Dibromofluoromethane	*99*		*70 - 130*		*09/06/12 18:15*	*5*
Toluene-d8 (Surr)	*107*		*70 - 130*		*09/06/12 18:15*	*5*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/31/12 18:27	1
Methanol	**1.1**	**J**	5.0	1.0	mg/L			08/31/12 18:27	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**0.32**	**J**	0.58	0.29	ug/L			09/06/12 19:10	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**7900**		100	50	ug/L		08/27/12 12:55	08/29/12 17:26	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 17:26	1
Arsenic	**7.2**		2.5	1.3	ug/L		08/27/12 12:55	08/29/12 17:26	1
Barium	**92**		5.0	1.4	ug/L		08/27/12 12:55	08/29/12 17:26	1
Beryllium	**0.54**		0.50	0.15	ug/L		08/27/12 12:55	08/28/12 13:47	1
Cadmium	**0.99**		0.50	0.13	ug/L		08/27/12 12:55	08/29/12 17:26	1
Chromium	**57**		5.0	2.5	ug/L		08/27/12 12:55	08/29/12 17:26	1
Cobalt	**170**		0.50	0.12	ug/L		08/27/12 12:55	08/29/12 17:26	1
Copper	**17**		5.0	1.1	ug/L		08/27/12 12:55	08/29/12 17:26	1
Iron	**80000**		100	44	ug/L		08/27/12 12:55	08/29/12 17:26	1

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: RAB-MW-2

Lab Sample ID: 680-82380-3

Date Collected: 08/24/12 14:30
Matrix: Water
Date Received: 08/25/12 09:20

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	7.7		1.5	0.50	ug/L		08/27/12 12:55	08/29/12 17:26	1
Manganese	12000		5.0	2.0	ug/L		08/27/12 12:55	08/29/12 17:26	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:55	08/29/12 17:26	1
Nickel	120		5.0	2.0	ug/L		08/27/12 12:55	08/29/12 17:26	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:55	08/29/12 17:26	1
Vanadium	21		10	3.2	ug/L		08/27/12 12:55	08/29/12 17:26	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	83		50	23	ug/L		08/27/12 14:36	08/30/12 03:09	1
Antimony	5.0	U	5.0	2.3	ug/L		08/27/12 14:36	08/30/12 03:09	1
Arsenic	1.6	J	2.5	1.3	ug/L		08/27/12 14:36	08/30/12 03:09	1
Barium	34		5.0	1.3	ug/L		08/27/12 14:36	08/30/12 03:09	1
Beryllium	0.50	U	0.50	0.25	ug/L		08/27/12 14:36	08/30/12 03:09	1
Cadmium	0.32	J	0.50	0.095	ug/L		08/27/12 14:36	08/30/12 03:09	1
Chromium	4.1	J	5.0	2.5	ug/L		08/27/12 14:36	08/30/12 03:09	1
Cobalt	140		0.50	0.15	ug/L		08/27/12 14:36	08/30/12 03:09	1
Copper	1.8	J	5.0	1.1	ug/L		08/27/12 14:36	08/30/12 03:09	1
Iron	54000		100	33	ug/L		08/27/12 14:36	08/30/12 03:09	1
Lead	1.5	U	1.5	0.20	ug/L		08/27/12 14:36	08/30/12 03:09	1
Manganese	12000		5.0	1.0	ug/L		08/27/12 14:36	08/30/12 03:09	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 14:36	08/30/12 03:09	1
Nickel	100		5.0	2.0	ug/L		08/27/12 14:36	08/30/12 03:09	1
Selenium	2.5	U	2.5	1.0	ug/L		08/27/12 14:36	08/30/12 03:09	1
Vanadium	10	U	10	3.8	ug/L		08/27/12 14:36	08/30/12 03:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	580		10	1.8	mg/L			09/07/12 17:31	10
Total Kjeldahl Nitrogen	1.8		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:46	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/25/12 13:51	1
Nitrite as N	0.042	J	0.050	0.010	mg/L			08/25/12 13:51	1
Sulfate	1500		250	130	mg/L			09/06/12 12:44	50
Total Organic Carbon	13		1.0	0.50	mg/L			09/02/12 23:48	1
Ferrous Iron	56	HF B	2.0	0.50	mg/L			08/25/12 14:05	20

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-7U

Date Collected: 08/24/12 09:30
Date Received: 08/25/12 09:20

Lab Sample ID: 680-82380-4

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/06/12 13:26	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/06/12 13:26	1
1,2-Dichloroethane	**0.14**	**J**	1.0	0.10	ug/L			09/06/12 13:26	1
Diethyl ether	**110**	**E**	10	1.0	ug/L			09/06/12 13:26	1
t-Butanol	**6.5**		5.0	2.6	ug/L			09/06/12 13:26	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/06/12 13:26	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/06/12 13:26	1
Trichloroethene	**0.52**	**J**	1.0	0.13	ug/L			09/06/12 13:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*09/06/12 13:26*	*1*
Dibromofluoromethane	*108*		*70 - 130*		*09/06/12 13:26*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*09/06/12 13:26*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	2.0	U	2.0	0.28	ug/L			09/06/12 16:48	2
1,1-Dichloroethane	2.0	U	2.0	0.50	ug/L			09/06/12 16:48	2
1,2-Dichloroethane	2.0	U	2.0	0.20	ug/L			09/06/12 16:48	2
Diethyl ether	**110**	**D**	20	2.0	ug/L			09/06/12 16:48	2
t-Butanol	10	U	10	5.2	ug/L			09/06/12 16:48	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.36	ug/L			09/06/12 16:48	2
Tetrachloroethene	2.0	U	2.0	0.30	ug/L			09/06/12 16:48	2
Trichloroethene	**0.70**	**J**	2.0	0.26	ug/L			09/06/12 16:48	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*70 - 130*		*09/06/12 16:48*	*2*
Dibromofluoromethane	*95*		*70 - 130*		*09/06/12 16:48*	*2*
Toluene-d8 (Surr)	*105*		*70 - 130*		*09/06/12 16:48*	*2*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	12	U	12	1.3	ug/L		08/27/12 15:44	08/28/12 23:34	1
Bis(2-ethylhexyl) phthalate	12	U	12	1.9	ug/L		08/27/12 15:44	08/28/12 23:34	1
1,4-Dioxane	12	U	12	4.0	ug/L		08/27/12 15:44	08/28/12 23:34	1
Naphthalene	12	U	12	0.83	ug/L		08/27/12 15:44	08/28/12 23:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*82*		*38 - 130*	*08/27/12 15:44*	*08/28/12 23:34*	*1*
2-Fluorophenol (Surr)	*77*		*25 - 130*	*08/27/12 15:44*	*08/28/12 23:34*	*1*
Nitrobenzene-d5 (Surr)	*86*		*39 - 130*	*08/27/12 15:44*	*08/28/12 23:34*	*1*
Phenol-d5 (Surr)	*76*		*25 - 130*	*08/27/12 15:44*	*08/28/12 23:34*	*1*
Terphenyl-d14 (Surr)	*79*		*10 - 143*	*08/27/12 15:44*	*08/28/12 23:34*	*1*
2,4,6-Tribromophenol (Surr)	*100*		*31 - 141*	*08/27/12 15:44*	*08/28/12 23:34*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/31/12 18:51	1
Methanol	**1.3**	**J**	5.0	1.0	mg/L			08/31/12 18:51	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-7U

Lab Sample ID: 680-82380-4

Date Collected: 08/24/12 09:30
Date Received: 08/25/12 09:20

Matrix: Water

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	130		0.58	0.29	ug/L			09/06/12 18:57	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1100		100	50	ug/L		08/27/12 12:55	08/29/12 17:48	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 17:48	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/27/12 12:55	08/29/12 17:48	1
Barium	45		5.0	1.4	ug/L		08/27/12 12:55	08/29/12 17:48	1
Beryllium	2.6		0.50	0.15	ug/L		08/27/12 12:55	08/28/12 13:54	1
Cadmium	20		0.50	0.13	ug/L		08/27/12 12:55	08/29/12 17:48	1
Chromium	5.0	U	5.0	2.5	ug/L		08/27/12 12:55	08/29/12 17:48	1
Cobalt	350		0.50	0.12	ug/L		08/27/12 12:55	08/29/12 17:48	1
Copper	170		5.0	1.1	ug/L		08/27/12 12:55	08/29/12 17:48	1
Iron	42000		100	44	ug/L		08/27/12 12:55	08/29/12 17:48	1
Lead	2.3		1.5	0.50	ug/L		08/27/12 12:55	08/29/12 17:48	1
Manganese	38000		20	8.0	ug/L		08/27/12 12:55	08/29/12 17:56	4
Mercury	4.2		0.80	0.40	ug/L		08/27/12 12:55	08/29/12 17:48	1
Nickel	110		5.0	2.0	ug/L		08/27/12 12:55	08/29/12 17:48	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:55	08/29/12 17:48	1
Vanadium	3.3	J	10	3.2	ug/L		08/27/12 12:55	08/29/12 17:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2100		50	9.0	mg/L			09/07/12 17:32	50
Total Kjeldahl Nitrogen	0.86		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:46	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/25/12 14:00	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/25/12 14:00	1
Sulfate	540		100	50	mg/L			09/06/12 12:18	20
Total Organic Carbon	2.1		1.0	0.50	mg/L			09/03/12 00:54	1
Ferrous Iron	41	HF B	2.0	0.50	mg/L			08/25/12 14:05	20

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-7L

Date Collected: 08/24/12 11:15
Date Received: 08/25/12 09:20

Lab Sample ID: 680-82380-5

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/06/12 15:22	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/06/12 15:22	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/06/12 15:22	1
Diethyl ether	10	U	10	1.0	ug/L			09/06/12 15:22	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/06/12 15:22	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/06/12 15:22	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/06/12 15:22	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/06/12 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*89*		*70 - 130*		*09/06/12 15:22*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*09/06/12 15:22*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/06/12 15:22*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.7	U	9.7	1.1	ug/L		08/27/12 15:44	08/29/12 00:02	1
Bis(2-ethylhexyl) phthalate	9.7	U	9.7	1.5	ug/L		08/27/12 15:44	08/29/12 00:02	1
1,4-Dioxane	9.7	U	9.7	3.3	ug/L		08/27/12 15:44	08/29/12 00:02	1
Naphthalene	9.7	U	9.7	0.68	ug/L		08/27/12 15:44	08/29/12 00:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*82*		*38 - 130*	*08/27/12 15:44*	*08/29/12 00:02*	*1*
2-Fluorophenol (Surr)	*84*		*25 - 130*	*08/27/12 15:44*	*08/29/12 00:02*	*1*
Nitrobenzene-d5 (Surr)	*89*		*39 - 130*	*08/27/12 15:44*	*08/29/12 00:02*	*1*
Phenol-d5 (Surr)	*77*		*25 - 130*	*08/27/12 15:44*	*08/29/12 00:02*	*1*
Terphenyl-d14 (Surr)	*81*		*10 - 143*	*08/27/12 15:44*	*08/29/12 00:02*	*1*
2,4,6-Tribromophenol (Surr)	*98*		*31 - 141*	*08/27/12 15:44*	*08/29/12 00:02*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/31/12 19:15	1
Methanol	**1.5**	**J**	5.0	1.0	mg/L			08/31/12 19:15	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**1.6**		0.58	0.29	ug/L			09/06/12 18:44	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**200**		100	50	ug/L		08/27/12 12:55	08/29/12 18:03	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 18:03	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/27/12 12:55	08/29/12 18:03	1
Barium	**110**		5.0	1.4	ug/L		08/27/12 12:55	08/29/12 18:03	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:55	08/28/12 14:14	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:55	08/29/12 18:03	1
Chromium	5.0	U	5.0	2.5	ug/L		08/27/12 12:55	08/29/12 18:03	1
Cobalt	**0.60**		0.50	0.12	ug/L		08/27/12 12:55	08/29/12 18:03	1
Copper	5.0	U	5.0	1.1	ug/L		08/27/12 12:55	08/29/12 18:03	1
Iron	**1600**		100	44	ug/L		08/27/12 12:55	08/29/12 18:03	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:55	08/29/12 18:03	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-7L

Lab Sample ID: 680-82380-5

Date Collected: 08/24/12 11:15
Matrix: Water
Date Received: 08/25/12 09:20

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**480**		5.0	2.0	ug/L		08/27/12 12:55	08/29/12 18:03	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:55	08/29/12 18:03	1
Nickel	5.0	U	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 18:03	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:55	08/29/12 18:03	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:55	08/29/12 18:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**49**		1.0	0.18	mg/L			09/07/12 16:50	1
Total Kjeldahl Nitrogen	**0.29**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:46	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/25/12 13:54	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/25/12 13:54	1
Sulfate	**32**		5.0	2.5	mg/L			09/06/12 12:13	1
Total Organic Carbon	1.0	U	1.0	0.50	mg/L			09/03/12 01:11	1
Ferrous Iron	**0.16**	**HF B**	0.10	0.025	mg/L			08/25/12 13:52	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-2

Date Collected: 08/24/12 12:50
Date Received: 08/25/12 09:20

Lab Sample ID: 680-82380-6

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	200	U	200	28	ug/L			09/06/12 16:19	200
1,1-Dichloroethane	200	U	200	50	ug/L			09/06/12 16:19	200
1,2-Dichloroethane	200	U	200	20	ug/L			09/06/12 16:19	200
Diethyl ether	**12000**		2000	200	ug/L			09/06/12 16:19	200
t-Butanol	1000	U	1000	520	ug/L			09/06/12 16:19	200
1,1,2,2-Tetrachloroethane	200	U	200	36	ug/L			09/06/12 16:19	200
Tetrachloroethene	200	U	200	30	ug/L			09/06/12 16:19	200
Trichloroethene	200	U	200	26	ug/L			09/06/12 16:19	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*70 - 130*		*09/06/12 16:19*	*200*
Dibromofluoromethane	*104*		*70 - 130*		*09/06/12 16:19*	*200*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/06/12 16:19*	*200*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	12	U	12	1.3	ug/L		08/27/12 15:44	08/29/12 00:30	1
Bis(2-ethylhexyl) phthalate	12	U	12	1.9	ug/L		08/27/12 15:44	08/29/12 00:30	1
1,4-Dioxane	**23**		12	4.1	ug/L		08/27/12 15:44	08/29/12 00:30	1
Naphthalene	12	U	12	0.85	ug/L		08/27/12 15:44	08/29/12 00:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*61*		*38 - 130*	*08/27/12 15:44*	*08/29/12 00:30*	*1*
2-Fluorophenol (Surr)	*62*		*25 - 130*	*08/27/12 15:44*	*08/29/12 00:30*	*1*
Nitrobenzene-d5 (Surr)	*69*		*39 - 130*	*08/27/12 15:44*	*08/29/12 00:30*	*1*
Phenol-d5 (Surr)	*62*		*25 - 130*	*08/27/12 15:44*	*08/29/12 00:30*	*1*
Terphenyl-d14 (Surr)	*50*		*10 - 143*	*08/27/12 15:44*	*08/29/12 00:30*	*1*
2,4,6-Tribromophenol (Surr)	*82*		*31 - 141*	*08/27/12 15:44*	*08/29/12 00:30*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**7.8**		5.0	0.33	mg/L			08/31/12 19:39	1
Methanol	**1.3**	**J**	5.0	1.0	mg/L			08/31/12 19:39	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**8.4**		0.58	0.29	ug/L			09/05/12 12:30	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**710**		100	50	ug/L		08/27/12 12:55	08/29/12 18:10	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 18:10	1
Arsenic	**3.5**		2.5	1.3	ug/L		08/27/12 12:55	08/29/12 18:10	1
Barium	**110**		5.0	1.4	ug/L		08/27/12 12:55	08/29/12 18:10	1
Beryllium	**0.35**	**J**	0.50	0.15	ug/L		08/27/12 12:55	08/28/12 14:21	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:55	08/29/12 18:10	1
Chromium	5.0	U	5.0	2.5	ug/L		08/27/12 12:55	08/29/12 18:10	1
Cobalt	**16**		0.50	0.12	ug/L		08/27/12 12:55	08/29/12 18:10	1
Copper	**8.9**		5.0	1.1	ug/L		08/27/12 12:55	08/29/12 18:10	1
Iron	**120000**		100	44	ug/L		08/27/12 12:55	08/29/12 18:10	1
Lead	**0.62**	**J**	1.5	0.50	ug/L		08/27/12 12:55	08/29/12 18:10	1

Client Sample ID: MW-2

Lab Sample ID: 680-82380-6

Date Collected: 08/24/12 12:50

Matrix: Water

Date Received: 08/25/12 09:20

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**7900**		5.0	2.0	ug/L		08/27/12 12:55	08/29/12 18:10	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:55	08/29/12 18:10	1
Nickel	**2.9**	**J**	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 18:10	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:55	08/29/12 18:10	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:55	08/29/12 18:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**940**		10	1.8	mg/L			09/07/12 17:06	10
Total Kjeldahl Nitrogen	**1.2**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:46	1
Nitrate as N	**0.71**		0.050	0.010	mg/L			08/25/12 13:55	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/25/12 13:55	1
Sulfate	**460**		100	50	mg/L			09/06/12 12:19	20
Total Organic Carbon	**5.3**		1.0	0.50	mg/L			09/03/12 01:27	1
Ferrous Iron	**110**	**HF B**	4.0	1.0	mg/L			08/25/12 14:14	40

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: VFSP-MW1

Date Collected: 08/24/12 14:20
Date Received: 08/25/12 09:20

Lab Sample ID: 680-82380-7

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/06/12 17:17	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/06/12 17:17	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/06/12 17:17	1
Diethyl ether	**67**		10	1.0	ug/L			09/06/12 17:17	1
t-Butanol	**9.4**		5.0	2.6	ug/L			09/06/12 17:17	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/06/12 17:17	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/06/12 17:17	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/06/12 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*90*		*70 - 130*		*09/06/12 17:17*	*1*
Dibromofluoromethane	*104*		*70 - 130*		*09/06/12 17:17*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*09/06/12 17:17*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.9	U	9.9	1.1	ug/L		08/27/12 15:44	08/29/12 15:37	1
Bis(2-ethylhexyl) phthalate	9.9	U	9.9	1.6	ug/L		08/27/12 15:44	08/29/12 15:37	1
1,4-Dioxane	9.9	U	9.9	3.4	ug/L		08/27/12 15:44	08/29/12 15:37	1
Naphthalene	9.9	U	9.9	0.69	ug/L		08/27/12 15:44	08/29/12 15:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*86*		*38 - 130*	*08/27/12 15:44*	*08/29/12 15:37*	*1*
2-Fluorophenol (Surr)	*78*		*25 - 130*	*08/27/12 15:44*	*08/29/12 15:37*	*1*
Nitrobenzene-d5 (Surr)	*89*		*39 - 130*	*08/27/12 15:44*	*08/29/12 15:37*	*1*
Phenol-d5 (Surr)	*76*		*25 - 130*	*08/27/12 15:44*	*08/29/12 15:37*	*1*
Terphenyl-d14 (Surr)	*89*		*10 - 143*	*08/27/12 15:44*	*08/29/12 15:37*	*1*
2,4,6-Tribromophenol (Surr)	*94*		*31 - 141*	*08/27/12 15:44*	*08/29/12 15:37*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/31/12 20:02	1
Methanol	5.0	U	5.0	1.0	mg/L			08/31/12 20:02	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**3.2**		0.58	0.29	ug/L			09/05/12 12:18	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**100**		100	50	ug/L		08/27/12 12:55	08/29/12 18:18	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 18:18	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/27/12 12:55	08/29/12 18:18	1
Barium	**190**		5.0	1.4	ug/L		08/27/12 12:55	08/29/12 18:18	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:55	08/28/12 14:27	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:55	08/29/12 18:18	1
Chromium	5.0	U	5.0	2.5	ug/L		08/27/12 12:55	08/29/12 18:18	1
Cobalt	**2.7**		0.50	0.12	ug/L		08/27/12 12:55	08/29/12 18:18	1
Copper	5.0	U	5.0	1.1	ug/L		08/27/12 12:55	08/29/12 18:18	1
Iron	**4300**		100	44	ug/L		08/27/12 12:55	08/29/12 18:18	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:55	08/29/12 18:18	1

Client Sample ID: VFSP-MW1

Lab Sample ID: 680-82380-7

Date Collected: 08/24/12 14:20

Matrix: Water

Date Received: 08/25/12 09:20

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**820**		5.0	2.0	ug/L		08/27/12 12:55	08/29/12 18:18	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:55	08/29/12 18:18	1
Nickel	**2.2**	**J**	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 18:18	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:55	08/29/12 18:18	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:55	08/29/12 18:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**56**		1.0	0.18	mg/L			09/07/12 16:50	1
Total Kjeldahl Nitrogen	**0.43**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:46	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/25/12 13:58	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/25/12 13:58	1
Sulfate	**150**		25	13	mg/L			09/06/12 12:44	5
Total Organic Carbon	**0.57**	**J**	1.0	0.50	mg/L			09/03/12 01:43	1
Ferrous Iron	**3.6**	**HF B**	0.10	0.025	mg/L			08/25/12 13:52	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: Trip Blank

Lab Sample ID: 680-82380-8

Date Collected: 08/24/12 00:00
Matrix: Water
Date Received: 08/25/12 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/06/12 12:58	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/06/12 12:58	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/06/12 12:58	1
Diethyl ether	10	U	10	1.0	ug/L			09/06/12 12:58	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/06/12 12:58	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/06/12 12:58	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/06/12 12:58	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/06/12 12:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*70 - 130*		*09/06/12 12:58*	*1*
Dibromofluoromethane	*111*		*70 - 130*		*09/06/12 12:58*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*09/06/12 12:58*	*1*

Surrogate Summary

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
680-82341-1	LF-4	95	107	103
680-82341-1 MS	LF-4	105	106	108
680-82341-1 MSD	LF-4	107	109	108
680-82341-2	Equipment Blank 1	95	109	101
680-82341-3	LF-5	98	111	98
680-82341-4	LF-3	97	109	101
680-82341-4 - DL	LF-3	95	105	102
680-82341-5	LF-2	96	108	102
680-82341-6	LF-1	96	108	103
680-82341-7	Trip Blank	97	109	102
680-82341-8	MW-4U	99	103	103
680-82341-9	WWL-3L	97	104	103
680-82341-10	WWL-3U	99	101	103
680-82341-11	MW-9	98	102	103
680-82341-12	NAT-4	98	103	105
680-82341-13	MW-3	100	100	105
680-82380-1	WWL-1	91	100	103
680-82380-2	WWL-2	89	110	103
680-82380-2 - DL	WWL-2	93	95	105
680-82380-3	RAB-MW-2	88	108	99
680-82380-3 - DL	RAB-MW-2	92	99	107
680-82380-4 - DL	MW-7U	94	95	105
680-82380-4	MW-7U	97	108	105
680-82380-5	MW-7L	89	109	102
680-82380-6	MW-2	91	104	103
680-82380-7	VFSP-MW1	90	104	104
680-82380-8	Trip Blank	99	111	104
LCS 680-248744/4	Lab Control Sample	105	109	105
LCS 680-248879/4	Lab Control Sample	105	107	106
LCSD 680-248744/5	Lab Control Sample Dup	106	110	106
LCSD 680-248879/5	Lab Control Sample Dup	106	105	106
MB 680-248744/6	Method Blank	96	109	101
MB 680-248879/6	Method Blank	96	113	103

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPH	TBP
Lab Sample ID	Client Sample ID	(38-130)	(25-130)	(39-130)	(25-130)	(10-143)	(31-141)
680-82341-1	LF-4	81	83	90	79	91	101
680-82341-1 MS	LF-4	79	79	90	72	71	96
680-82341-1 MSD	LF-4	79	80	88	75	71	96
680-82341-2	Equipment Blank 1	86	76	84	75	79	94

Surrogate Summary

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPH	TBP
Lab Sample ID	Client Sample ID	(38-130)	(25-130)	(39-130)	(25-130)	(10-143)	(31-141)
680-82341-3	LF-5	73	73	77	73	81	85
680-82341-4	LF-3	67	64	73	64	63	76
680-82341-6	LF-1	74	68	74	68	64	92
680-82341-8	MW-4U	57	57	61	62	31	88
680-82341-9	WWL-3L	61	66	70	69	47	82
680-82341-10	WWL-3U	65	69	72	71	67	79
680-82341-11	MW-9	59	63	67	67	31	79
680-82380-4	MW-7U	82	77	86	76	79	100
680-82380-5	MW-7L	82	84	89	77	81	98
680-82380-6	MW-2	61	62	69	62	50	82
680-82380-7	VFSP-MW1	86	78	89	76	89	94
LCS 680-247805/18-A	Lab Control Sample	79	82	91	79	81	102
MB 680-247805/17-A	Method Blank	83	83	91	78	88	97

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-248744/6
Matrix: Water
Analysis Batch: 248744

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/05/12 13:09	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/05/12 13:09	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/05/12 13:09	1
Diethyl ether	10	U	10	1.0	ug/L			09/05/12 13:09	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/05/12 13:09	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/05/12 13:09	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/05/12 13:09	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/05/12 13:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*09/05/12 13:09*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*09/05/12 13:09*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*09/05/12 13:09*	*1*

Lab Sample ID: LCS 680-248744/4
Matrix: Water
Analysis Batch: 248744

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	50.0	60.7		ug/L		121	70 - 130
1,1-Dichloroethane	50.0	57.0		ug/L		114	70 - 130
1,2-Dichloroethane	50.0	46.0		ug/L		92	70 - 130
Diethyl ether	50.0	54.8		ug/L		110	10 - 200
t-Butanol	50.0	46.1		ug/L		92	20 - 195
1,1,2,2-Tetrachloroethane	50.0	50.9		ug/L		102	70 - 130
Tetrachloroethene	50.0	51.9		ug/L		104	70 - 130
Trichloroethene	50.0	50.3		ug/L		101	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*70 - 130*
Dibromofluoromethane	*109*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 680-248744/5
Matrix: Water
Analysis Batch: 248744

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
Chloroform	50.0	61.0		ug/L		122	70 - 130	0	30
1,1-Dichloroethane	50.0	56.8		ug/L		114	70 - 130	0	30
1,2-Dichloroethane	50.0	46.6		ug/L		93	70 - 130	1	30
Diethyl ether	50.0	54.5		ug/L		109	10 - 200	1	50
t-Butanol	50.0	44.2		ug/L		88	20 - 195	4	50
1,1,2,2-Tetrachloroethane	50.0	51.0		ug/L		102	70 - 130	0	30
Tetrachloroethene	50.0	51.7		ug/L		103	70 - 130	0	30
Trichloroethene	50.0	49.7		ug/L		99	70 - 130	1	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-248744/5
Matrix: Water
Analysis Batch: 248744

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	106		70 - 130
Dibromofluoromethane	110		70 - 130
Toluene-d8 (Surr)	106		70 - 130

Lab Sample ID: 680-82341-1 MS
Matrix: Water
Analysis Batch: 248744

Client Sample ID: LF-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	1.0	U	50.0	59.7		ug/L		119	70 - 130
1,1-Dichloroethane	1.0	U	50.0	56.8		ug/L		114	70 - 130
1,2-Dichloroethane	1.0	U	50.0	47.4		ug/L		95	70 - 130
Diethyl ether	10	U	50.0	52.8		ug/L		106	10 - 200
t-Butanol	5.0	U	50.0	41.1		ug/L		82	20 - 195
1,1,2,2-Tetrachloroethane	1.0	U	50.0	50.3		ug/L		101	70 - 130
Tetrachloroethene	1.0	U	50.0	51.0		ug/L		102	70 - 130
Trichloroethene	1.0	U	50.0	50.1		ug/L		100	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene	105		70 - 130
Dibromofluoromethane	106		70 - 130
Toluene-d8 (Surr)	108		70 - 130

Lab Sample ID: 680-82341-1 MSD
Matrix: Water
Analysis Batch: 248744

Client Sample ID: LF-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloroform	1.0	U	50.0	61.6		ug/L		123	70 - 130	3	30
1,1-Dichloroethane	1.0	U	50.0	57.8		ug/L		116	70 - 130	2	30
1,2-Dichloroethane	1.0	U	50.0	46.3		ug/L		93	70 - 130	2	30
Diethyl ether	10	U	50.0	53.3		ug/L		107	10 - 200	1	50
t-Butanol	5.0	U	50.0	44.6		ug/L		89	20 - 195	8	50
1,1,2,2-Tetrachloroethane	1.0	U	50.0	51.3		ug/L		103	70 - 130	2	30
Tetrachloroethene	1.0	U	50.0	52.9		ug/L		106	70 - 130	4	30
Trichloroethene	1.0	U	50.0	50.9		ug/L		102	70 - 130	2	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene	107		70 - 130
Dibromofluoromethane	109		70 - 130
Toluene-d8 (Surr)	108		70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-248879/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248879

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/06/12 12:13	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/06/12 12:13	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/06/12 12:13	1
Diethyl ether	10	U	10	1.0	ug/L			09/06/12 12:13	1
t-Butanol	5.0	U	5.0	2.6	ug/L			09/06/12 12:13	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/06/12 12:13	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/06/12 12:13	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/06/12 12:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*09/06/12 12:13*	*1*
Dibromofluoromethane	*113*		*70 - 130*		*09/06/12 12:13*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/06/12 12:13*	*1*

Lab Sample ID: LCS 680-248879/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248879

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	50.0	60.1		ug/L		120	70 - 130
1,1-Dichloroethane	50.0	55.7		ug/L		111	70 - 130
1,2-Dichloroethane	50.0	46.5		ug/L		93	70 - 130
Diethyl ether	50.0	52.5		ug/L		105	10 - 200
t-Butanol	50.0	42.3		ug/L		85	20 - 195
1,1,2,2-Tetrachloroethane	50.0	50.5		ug/L		101	70 - 130
Tetrachloroethene	50.0	50.8		ug/L		102	70 - 130
Trichloroethene	50.0	50.5		ug/L		101	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*70 - 130*
Dibromofluoromethane	*107*		*70 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 680-248879/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248879

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloroform	50.0	58.4		ug/L		117	70 - 130	3	30
1,1-Dichloroethane	50.0	54.0		ug/L		108	70 - 130	3	30
1,2-Dichloroethane	50.0	47.1		ug/L		94	70 - 130	1	30
Diethyl ether	50.0	54.1		ug/L		108	10 - 200	3	50
t-Butanol	50.0	47.1		ug/L		94	20 - 195	11	50
1,1,2,2-Tetrachloroethane	50.0	51.8		ug/L		104	70 - 130	2	30
Tetrachloroethene	50.0	49.2		ug/L		98	70 - 130	3	30
Trichloroethene	50.0	49.6		ug/L		99	70 - 130	2	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-248879/5
Matrix: Water
Analysis Batch: 248879

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*106*		*70 - 130*
Dibromofluoromethane	*105*		*70 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-247805/17-A
Matrix: Water
Analysis Batch: 248194

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247805

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	10	U	10	1.1	ug/L		08/27/12 15:44	08/28/12 15:25	1
Bis(2-ethylhexyl) phthalate	10	U	10	1.6	ug/L		08/27/12 15:44	08/28/12 15:25	1
1,4-Dioxane	10	U	10	3.4	ug/L		08/27/12 15:44	08/28/12 15:25	1
Naphthalene	10	U	10	0.70	ug/L		08/27/12 15:44	08/28/12 15:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*83*		*38 - 130*	*08/27/12 15:44*	*08/28/12 15:25*	*1*
2-Fluorophenol (Surr)	*83*		*25 - 130*	*08/27/12 15:44*	*08/28/12 15:25*	*1*
Nitrobenzene-d5 (Surr)	*91*		*39 - 130*	*08/27/12 15:44*	*08/28/12 15:25*	*1*
Phenol-d5 (Surr)	*78*		*25 - 130*	*08/27/12 15:44*	*08/28/12 15:25*	*1*
Terphenyl-d14 (Surr)	*88*		*10 - 143*	*08/27/12 15:44*	*08/28/12 15:25*	*1*
2,4,6-Tribromophenol (Surr)	*97*		*31 - 141*	*08/27/12 15:44*	*08/28/12 15:25*	*1*

Lab Sample ID: LCS 680-247805/18-A
Matrix: Water
Analysis Batch: 248194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247805

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-chloroethyl)ether	100	97.1		ug/L		97	56 - 130
Bis(2-ethylhexyl) phthalate	100	69.1		ug/L		69	62 - 130
1,4-Dioxane	100	56.6		ug/L		57	35 - 130
Naphthalene	100	76.5		ug/L		77	50 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*79*		*38 - 130*
2-Fluorophenol (Surr)	*82*		*25 - 130*
Nitrobenzene-d5 (Surr)	*91*		*39 - 130*
Phenol-d5 (Surr)	*79*		*25 - 130*
Terphenyl-d14 (Surr)	*81*		*10 - 143*
2,4,6-Tribromophenol (Surr)	*102*		*31 - 141*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-82341-1 MS — **Client Sample ID: LF-4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248194 — **Prep Batch: 247805**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-chloroethyl)ether	9.4	U	95.4	86.0		ug/L		90	56 - 130
Bis(2-ethylhexyl) phthalate	9.4	U	95.4	72.8		ug/L		76	62 - 130
1,4-Dioxane	9.4	U	95.4	48.9		ug/L		51	35 - 130
Naphthalene	9.4	U	95.4	71.3		ug/L		75	50 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*79*		*38 - 130*
2-Fluorophenol (Surr)	*79*		*25 - 130*
Nitrobenzene-d5 (Surr)	*90*		*39 - 130*
Phenol-d5 (Surr)	*72*		*25 - 130*
Terphenyl-d14 (Surr)	*71*		*10 - 143*
2,4,6-Tribromophenol (Surr)	*96*		*31 - 141*

Lab Sample ID: 680-82341-1 MSD — **Client Sample ID: LF-4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248194 — **Prep Batch: 247805**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-chloroethyl)ether	9.4	U	95.1	85.1		ug/L		90	56 - 130	1	50
Bis(2-ethylhexyl) phthalate	9.4	U	95.1	86.4		ug/L		91	62 - 130	17	50
1,4-Dioxane	9.4	U	95.1	52.3		ug/L		55	35 - 130	7	50
Naphthalene	9.4	U	95.1	70.8		ug/L		74	50 - 130	1	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*79*		*38 - 130*
2-Fluorophenol (Surr)	*80*		*25 - 130*
Nitrobenzene-d5 (Surr)	*88*		*39 - 130*
Phenol-d5 (Surr)	*75*		*25 - 130*
Terphenyl-d14 (Surr)	*71*		*10 - 143*
2,4,6-Tribromophenol (Surr)	*96*		*31 - 141*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Lab Sample ID: MB 680-248550/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248550

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/31/12 12:29	1
Methanol	5.0	U	5.0	1.0	mg/L			08/31/12 12:29	1

Lab Sample ID: LCS 680-248550/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248550

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	20.0	21.4		mg/L		107	38 - 156

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) (Continued)

Lab Sample ID: LCS 680-248550/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248550

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methanol	20.0	20.8		mg/L		104	43 - 143

Lab Sample ID: LCSD 680-248550/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248550

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol	20.0	18.6		mg/L		93	38 - 156	14	50
Methanol	20.0	14.5		mg/L		73	43 - 143	35	50

Lab Sample ID: MB 680-248619/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248619

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			09/04/12 13:22	1
Methanol	5.0	U	5.0	1.0	mg/L			09/04/12 13:22	1

Lab Sample ID: LCS 680-248619/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248619

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	20.0	18.6		mg/L		93	38 - 156
Methanol	20.0	18.4		mg/L		92	43 - 143

Lab Sample ID: LCSD 680-248619/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248619

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol	20.0	18.4		mg/L		92	38 - 156	1	50
Methanol	20.0	18.3		mg/L		92	43 - 143	1	50

Lab Sample ID: 680-82341-1 MS — **Client Sample ID: LF-4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248619

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	5.0	U	20.0	21.7		mg/L		109	38 - 156
Methanol	5.0	U	20.0	22.5		mg/L		112	43 - 143

Lab Sample ID: 680-82341-1 MSD — **Client Sample ID: LF-4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248619

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol	5.0	U	20.0	20.4		mg/L		102	38 - 156	6	50
Methanol	5.0	U	20.0	21.2		mg/L		106	43 - 143	6	50

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-248300/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248300

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58	0.29	ug/L			08/29/12 17:24	1

Lab Sample ID: MB 680-248739/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248739

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58	0.29	ug/L			09/04/12 11:44	1

Lab Sample ID: LCS 680-248739/22 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248739

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	153	129		ug/L		85	75 - 125

Lab Sample ID: LCSD 680-248739/20 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248739

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	153	140		ug/L		91	75 - 125	8	30

Lab Sample ID: MB 680-248740/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248740

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58	0.29	ug/L			09/04/12 11:44	1

Lab Sample ID: LCS 680-248740/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248740

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	1910	2260		ug/L		118	75 - 125

Lab Sample ID: LCSD 680-248740/7 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248740

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	1910	2140		ug/L		112	75 - 125	6	30

Lab Sample ID: MB 680-248793/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248793

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58	0.29	ug/L			09/05/12 09:45	1

QC Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Lab Sample ID: LCS 680-248793/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248793

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	153	167		ug/L		109	75 - 125

Lab Sample ID: LCSD 680-248793/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248793

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	153	175		ug/L		114	75 - 125	5	30

Lab Sample ID: MB 680-248993/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248993

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58	0.29	ug/L			09/06/12 13:53	1

Lab Sample ID: LCS 680-248993/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248993

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	153	182		ug/L		119	75 - 125

Lab Sample ID: LCSD 680-248993/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248993

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	153	149		ug/L		98	75 - 125	20	30

Lab Sample ID: MB 680-248996/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248996

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58	0.29	ug/L			09/06/12 13:53	1

Lab Sample ID: LCS 680-248996/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248996

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	1910	2170		ug/L		114	75 - 125

Lab Sample ID: LCSD 680-248996/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248996

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	1910	2040		ug/L		107	75 - 125	6	30

QC Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-247844/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248269 — **Prep Batch: 247844**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	100	U	100	50	ug/L		08/27/12 12:52	08/29/12 20:46	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 20:46	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/27/12 12:52	08/29/12 20:46	1
Barium	5.0	U	5.0	1.4	ug/L		08/27/12 12:52	08/29/12 20:46	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 20:46	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 20:46	1
Chromium	5.0	U	5.0	2.5	ug/L		08/27/12 12:52	08/29/12 20:46	1
Cobalt	0.50	U	0.50	0.12	ug/L		08/27/12 12:52	08/29/12 20:46	1
Copper	5.0	U	5.0	1.1	ug/L		08/27/12 12:52	08/29/12 20:46	1
Iron	100	U	100	44	ug/L		08/27/12 12:52	08/29/12 20:46	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 20:46	1
Manganese	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 20:46	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 20:46	1
Nickel	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 20:46	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 20:46	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:52	08/29/12 20:46	1

Lab Sample ID: LCS 680-247844/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248269 — **Prep Batch: 247844**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	5000	4810		ug/L		96	75 - 125
Antimony	50.0	50.3		ug/L		101	75 - 125
Arsenic	100	99.2		ug/L		99	75 - 125
Barium	100	97.2		ug/L		97	75 - 125
Beryllium	50.0	47.8		ug/L		96	75 - 125
Cadmium	50.0	46.5		ug/L		93	75 - 125
Chromium	100	98.2		ug/L		98	75 - 125
Cobalt	50.0	46.4		ug/L		93	75 - 125
Copper	100	100		ug/L		100	75 - 125
Iron	5000	5110		ug/L		102	75 - 125
Lead	50.0	48.2		ug/L		96	75 - 125
Manganese	500	480		ug/L		96	75 - 125
Mercury	5.00	4.35		ug/L		87	75 - 125
Nickel	100	99.8		ug/L		100	75 - 125
Selenium	100	95.3		ug/L		95	75 - 125
Vanadium	100	98.0		ug/L		98	75 - 125

Lab Sample ID: LCSD 680-247844/22-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248269 — **Prep Batch: 247844**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	5000	4730		ug/L		95	75 - 125	2	20
Antimony	50.0	50.8		ug/L		102	75 - 125	1	20
Arsenic	100	98.1		ug/L		98	75 - 125	1	20
Barium	100	99.1		ug/L		99	75 - 125	2	20

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 680-247844/22-A
Matrix: Water
Analysis Batch: 248269

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 247844

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Beryllium	50.0	49.7		ug/L		99	75 - 125	4	20
Cadmium	50.0	46.5		ug/L		93	75 - 125	0	20
Chromium	100	95.7		ug/L		96	75 - 125	3	20
Cobalt	50.0	46.9		ug/L		94	75 - 125	1	20
Copper	100	98.1		ug/L		98	75 - 125	2	20
Iron	5000	4980		ug/L		100	75 - 125	2	20
Lead	50.0	48.4		ug/L		97	75 - 125	0	20
Manganese	500	484		ug/L		97	75 - 125	1	20
Mercury	5.00	4.51		ug/L		90	75 - 125	3	20
Nickel	100	98.0		ug/L		98	75 - 125	2	20
Selenium	100	93.2		ug/L		93	75 - 125	2	20
Vanadium	100	95.4		ug/L		95	75 - 125	3	20

Lab Sample ID: 680-82341-1 MS
Matrix: Water
Analysis Batch: 248269

Client Sample ID: LF-4
Prep Type: Total/NA
Prep Batch: 247844

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	150		5000	5070		ug/L		98	75 - 125
Antimony	5.0	U	50.0	53.7		ug/L		107	75 - 125
Arsenic	2.5	U	100	101		ug/L		101	75 - 125
Barium	68		100	175		ug/L		107	75 - 125
Beryllium	0.50	U	50.0	49.8		ug/L		100	75 - 125
Cadmium	0.50	U	50.0	49.0		ug/L		98	75 - 125
Chromium	5.0	U	100	100		ug/L		100	75 - 125
Cobalt	0.20	J	50.0	47.7		ug/L		95	75 - 125
Copper	5.0	U	100	101		ug/L		101	75 - 125
Iron	920		5000	6110		ug/L		104	75 - 125
Lead	1.5	U	50.0	51.3		ug/L		103	75 - 125
Manganese	260		500	755		ug/L		99	75 - 125
Mercury	0.80	U	5.00	4.60		ug/L		92	75 - 125
Nickel	5.0	U	100	99.7		ug/L		100	75 - 125
Selenium	2.5	U	100	94.7		ug/L		95	75 - 125
Vanadium	10	U	100	99.5		ug/L		100	75 - 125

Lab Sample ID: 680-82341-1 MSD
Matrix: Water
Analysis Batch: 248269

Client Sample ID: LF-4
Prep Type: Total/NA
Prep Batch: 247844

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	150		5000	4940		ug/L		96	75 - 125	3	20
Antimony	5.0	U	50.0	53.0		ug/L		106	75 - 125	1	20
Arsenic	2.5	U	100	98.5		ug/L		99	75 - 125	2	20
Barium	68		100	172		ug/L		103	75 - 125	2	20
Beryllium	0.50	U	50.0	48.9		ug/L		98	75 - 125	2	20
Cadmium	0.50	U	50.0	48.1		ug/L		96	75 - 125	2	20
Chromium	5.0	U	100	97.0		ug/L		97	75 - 125	3	20
Cobalt	0.20	J	50.0	47.0		ug/L		94	75 - 125	1	20
Copper	5.0	U	100	97.4		ug/L		97	75 - 125	3	20

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-82341-1 MSD — **Client Sample ID: LF-4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248269 — **Prep Batch: 247844**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	920		5000	6000		ug/L		101	75 - 125	2	20
Lead	1.5	U	50.0	50.1		ug/L		100	75 - 125	2	20
Manganese	260		500	731		ug/L		94	75 - 125	3	20
Mercury	0.80	U	5.00	4.51		ug/L		90	75 - 125	2	20
Nickel	5.0	U	100	97.3		ug/L		97	75 - 125	2	20
Selenium	2.5	U	100	92.8		ug/L		93	75 - 125	2	20
Vanadium	10	U	100	97.0		ug/L		97	75 - 125	3	20

Lab Sample ID: MB 680-247845/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248178 — **Prep Batch: 247845**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:55	08/28/12 12:53	1

Lab Sample ID: MB 680-247845/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248269 — **Prep Batch: 247845**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	100	U	100	50	ug/L		08/27/12 12:55	08/29/12 16:17	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 16:17	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/27/12 12:55	08/29/12 16:17	1
Barium	5.0	U	5.0	1.4	ug/L		08/27/12 12:55	08/29/12 16:17	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:55	08/29/12 16:17	1
Chromium	5.0	U	5.0	2.5	ug/L		08/27/12 12:55	08/29/12 16:17	1
Cobalt	0.50	U	0.50	0.12	ug/L		08/27/12 12:55	08/29/12 16:17	1
Copper	5.0	U	5.0	1.1	ug/L		08/27/12 12:55	08/29/12 16:17	1
Iron	100	U	100	44	ug/L		08/27/12 12:55	08/29/12 16:17	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:55	08/29/12 16:17	1
Manganese	5.0	U	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 16:17	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:55	08/29/12 16:17	1
Nickel	5.0	U	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 16:17	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:55	08/29/12 16:17	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:55	08/29/12 16:17	1

Lab Sample ID: LCS 680-247845/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248178 — **Prep Batch: 247845**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	50.0	46.8		ug/L		94	75 - 125

Lab Sample ID: LCS 680-247845/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248269 — **Prep Batch: 247845**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	5000	4810		ug/L		96	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-247845/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248269 — **Prep Batch: 247845**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	53.4		ug/L		107	75 - 125
Arsenic	100	98.0		ug/L		98	75 - 125
Barium	100	103		ug/L		103	75 - 125
Cadmium	50.0	50.7		ug/L		101	75 - 125
Chromium	100	99.3		ug/L		99	75 - 125
Cobalt	50.0	48.6		ug/L		97	75 - 125
Copper	100	103		ug/L		103	75 - 125
Iron	5000	5100		ug/L		102	75 - 125
Lead	50.0	51.7		ug/L		103	75 - 125
Manganese	500	501		ug/L		100	75 - 125
Mercury	5.00	4.53		ug/L		91	75 - 125
Nickel	100	102		ug/L		102	75 - 125
Selenium	100	96.2		ug/L		96	75 - 125
Vanadium	100	97.9		ug/L		98	75 - 125

Lab Sample ID: 680-82380-1 MS — **Client Sample ID: WWL-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248178 — **Prep Batch: 247845**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	0.50	U	50.0	48.1		ug/L		96	75 - 125

Lab Sample ID: 680-82380-1 MS — **Client Sample ID: WWL-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248269 — **Prep Batch: 247845**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	440		5000	5550		ug/L		102	75 - 125
Antimony	2.4	J	50.0	54.5		ug/L		104	75 - 125
Arsenic	1.4	J	100	101		ug/L		100	75 - 125
Barium	770		100	914	4	ug/L		142	75 - 125
Cadmium	0.18	J	50.0	46.7		ug/L		93	75 - 125
Chromium	5.0	U	100	100		ug/L		100	75 - 125
Cobalt	1.7		50.0	47.8		ug/L		92	75 - 125
Copper	3.1	J	100	100		ug/L		97	75 - 125
Iron	110000		5000	122000	4	ug/L		262	75 - 125
Lead	1.5	U	50.0	47.9		ug/L		96	75 - 125
Manganese	2900		500	3430	4	ug/L		103	75 - 125
Mercury	0.80	U	5.00	5.05		ug/L		101	75 - 125
Nickel	2.8	J	100	98.5		ug/L		96	75 - 125
Selenium	2.5	U	100	97.3		ug/L		97	75 - 125
Vanadium	10	U	100	102		ug/L		102	75 - 125

Lab Sample ID: 680-82380-1 MSD — **Client Sample ID: WWL-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248178 — **Prep Batch: 247845**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Beryllium	0.50	U	50.0	48.1		ug/L		96	75 - 125	0	20

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-82380-1 MSD — **Client Sample ID: WWL-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248269 — **Prep Batch: 247845**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	440		5000	5010		ug/L		91	75 - 125	10	20
Antimony	2.4	J	50.0	53.3		ug/L		102	75 - 125	2	20
Arsenic	1.4	J	100	99.6		ug/L		98	75 - 125	2	20
Barium	770		100	892	4	ug/L		121	75 - 125	2	20
Cadmium	0.18	J	50.0	45.9		ug/L		91	75 - 125	2	20
Chromium	5.0	U	100	100		ug/L		100	75 - 125	0	20
Cobalt	1.7		50.0	46.5		ug/L		90	75 - 125	3	20
Copper	3.1	J	100	99.7		ug/L		97	75 - 125	1	20
Iron	110000		5000	113000	4	ug/L		87	75 - 125	7	20
Lead	1.5	U	50.0	47.1		ug/L		94	75 - 125	2	20
Manganese	2900		500	3370	4	ug/L		90	75 - 125	2	20
Mercury	0.80	U	5.00	4.91		ug/L		98	75 - 125	3	20
Nickel	2.8	J	100	99.4		ug/L		97	75 - 125	1	20
Selenium	2.5	U	100	91.0		ug/L		91	75 - 125	7	20
Vanadium	10	U	100	101		ug/L		101	75 - 125	1	20

Lab Sample ID: MB 680-247869/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 248269 — **Prep Batch: 247869**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	23	ug/L		08/27/12 14:36	08/30/12 02:55	1
Antimony	5.0	U	5.0	2.3	ug/L		08/27/12 14:36	08/30/12 02:55	1
Arsenic	2.5	U	2.5	1.3	ug/L		08/27/12 14:36	08/30/12 02:55	1
Barium	5.0	U	5.0	1.3	ug/L		08/27/12 14:36	08/30/12 02:55	1
Beryllium	0.50	U	0.50	0.25	ug/L		08/27/12 14:36	08/30/12 02:55	1
Cadmium	0.50	U	0.50	0.095	ug/L		08/27/12 14:36	08/30/12 02:55	1
Chromium	5.0	U	5.0	2.5	ug/L		08/27/12 14:36	08/30/12 02:55	1
Cobalt	0.50	U	0.50	0.15	ug/L		08/27/12 14:36	08/30/12 02:55	1
Copper	5.0	U	5.0	1.1	ug/L		08/27/12 14:36	08/30/12 02:55	1
Iron	100	U	100	33	ug/L		08/27/12 14:36	08/30/12 02:55	1
Lead	1.5	U	1.5	0.20	ug/L		08/27/12 14:36	08/30/12 02:55	1
Manganese	5.0	U	5.0	1.0	ug/L		08/27/12 14:36	08/30/12 02:55	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 14:36	08/30/12 02:55	1
Nickel	5.0	U	5.0	2.0	ug/L		08/27/12 14:36	08/30/12 02:55	1
Selenium	2.5	U	2.5	1.0	ug/L		08/27/12 14:36	08/30/12 02:55	1
Vanadium	10	U	10	3.8	ug/L		08/27/12 14:36	08/30/12 02:55	1

Lab Sample ID: LCS 680-247869/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 248269 — **Prep Batch: 247869**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	5000	4680		ug/L		94	75 - 125
Antimony	50.0	52.5		ug/L		105	75 - 125
Arsenic	100	102		ug/L		102	75 - 125
Barium	100	101		ug/L		101	75 - 125
Beryllium	50.0	51.9		ug/L		104	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-247869/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 248269 — **Prep Batch: 247869**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	50.0	48.6		ug/L		97	75 - 125
Chromium	100	97.2		ug/L		97	75 - 125
Cobalt	50.0	47.4		ug/L		95	75 - 125
Copper	100	99.9		ug/L		100	75 - 125
Iron	5000	5090		ug/L		102	75 - 125
Lead	50.0	49.6		ug/L		99	75 - 125
Manganese	500	489		ug/L		98	75 - 125
Mercury	5.00	4.47		ug/L		89	75 - 125
Nickel	100	100		ug/L		100	75 - 125
Selenium	100	99.3		ug/L		99	75 - 125
Vanadium	100	96.6		ug/L		97	75 - 125

Lab Sample ID: 680-82380-3 MS — **Client Sample ID: RAB-MW-2**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 248269 — **Prep Batch: 247869**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	83		5000	4760		ug/L		94	75 - 125
Antimony	5.0	U	50.0	52.3		ug/L		105	75 - 125
Arsenic	1.6	J	100	106		ug/L		104	75 - 125
Barium	34		100	133		ug/L		99	75 - 125
Beryllium	0.50	U	50.0	51.7		ug/L		103	75 - 125
Cadmium	0.32	J	50.0	47.1		ug/L		94	75 - 125
Chromium	4.1	J	100	102		ug/L		98	75 - 125
Cobalt	140		50.0	187		ug/L		94	75 - 125
Copper	1.8	J	100	95.0		ug/L		93	75 - 125
Iron	54000		5000	56500	4	ug/L		58	75 - 125
Lead	1.5	U	50.0	46.2		ug/L		92	75 - 125
Manganese	12000		500	12500	4	ug/L		119	75 - 125
Mercury	0.80	U	5.00	4.78		ug/L		96	75 - 125
Nickel	100		100	195		ug/L		94	75 - 125
Selenium	2.5	U	100	105		ug/L		105	75 - 125
Vanadium	10	U	100	102		ug/L		102	75 - 125

Lab Sample ID: 680-82380-3 MSD — **Client Sample ID: RAB-MW-2**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 248269 — **Prep Batch: 247869**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	83		5000	4500		ug/L		88	75 - 125	6	20
Antimony	5.0	U	50.0	51.0		ug/L		102	75 - 125	2	20
Arsenic	1.6	J	100	102		ug/L		101	75 - 125	3	20
Barium	34		100	131		ug/L		98	75 - 125	1	20
Beryllium	0.50	U	50.0	50.2		ug/L		100	75 - 125	3	20
Cadmium	0.32	J	50.0	46.8		ug/L		93	75 - 125	1	20
Chromium	4.1	J	100	99.2		ug/L		95	75 - 125	3	20
Cobalt	140		50.0	185		ug/L		91	75 - 125	1	20
Copper	1.8	J	100	92.3		ug/L		90	75 - 125	3	20
Iron	54000		5000	54800	4	ug/L		25	75 - 125	3	20

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-82380-3 MSD — **Client Sample ID: RAB-MW-2**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 248269 — **Prep Batch: 247869**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	1.5	U	50.0	45.6		ug/L		91	75 - 125	1	20
Manganese	12000		500	12300	4	ug/L		76	75 - 125	2	20
Mercury	0.80	U	5.00	4.71		ug/L		94	75 - 125	1	20
Nickel	100		100	194		ug/L		93	75 - 125	1	20
Selenium	2.5	U	100	102		ug/L		102	75 - 125	3	20
Vanadium	10	U	100	99.7		ug/L		100	75 - 125	3	20

Method: 325.2 - Chloride

Lab Sample ID: MB 680-249063/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249063

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.18	mg/L			09/07/12 16:34	1

Lab Sample ID: LCS 680-249063/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249063

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	51.4		mg/L		103	85 - 115

Lab Sample ID: MB 680-249693/12 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249693

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.18	mg/L			09/13/12 17:34	1

Lab Sample ID: LCS 680-249693/14 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249693

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	51.8		mg/L		104	85 - 115

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 680-248661/2-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249017 — **Prep Batch: 248661**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	0.20	U	0.20	0.15	mg/L		09/04/12 08:41	09/07/12 09:22	1

Method: 351.2 - Nitrogen, Total Kjeldahl (Continued)

Lab Sample ID: LCS 680-248661/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249017 — **Prep Batch: 248661**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Kjeldahl Nitrogen	2.00	1.90		mg/L		95	75 - 125

Lab Sample ID: MB 680-248665/2-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249017 — **Prep Batch: 248665**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	0.20	U	0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:46	1

Lab Sample ID: LCS 680-248665/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249017 — **Prep Batch: 248665**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Kjeldahl Nitrogen	2.00	2.12		mg/L		106	75 - 125

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 680-247958/13 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247958

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:00	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:00	1

Lab Sample ID: LCS 680-247958/14 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247958

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.998	1.01		mg/L		102	90 - 110
Nitrite as N	0.502	0.498		mg/L		99	90 - 110

Lab Sample ID: 680-82341-6 DU — **Client Sample ID: LF-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247958

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	0.050	U	0.050	U	mg/L		NC	10
Nitrite as N	0.050	U	0.050	U	mg/L		NC	10

Lab Sample ID: MB 680-247959/13 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247959

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:39	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:39	1

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 680-247959/14 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247959

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.998	1.01		mg/L		101	90 - 110
Nitrite as N	0.502	0.501		mg/L		100	90 - 110

Lab Sample ID: 680-82341-1 MS — **Client Sample ID: LF-4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247959

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.050		0.998	1.02		mg/L		102	90 - 110
Nitrite as N	0.050	U	0.502	0.509		mg/L		101	90 - 110

Lab Sample ID: 680-82341-1 MSD — **Client Sample ID: LF-4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247959

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.050		0.998	1.02		mg/L		102	90 - 110	0	10
Nitrite as N	0.050	U	0.502	0.506		mg/L		101	90 - 110	1	10

Lab Sample ID: MB 680-247960/13 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247960

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/25/12 13:44	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/25/12 13:44	1

Lab Sample ID: LCS 680-247960/14 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247960

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.998	1.01		mg/L		101	90 - 110
Nitrite as N	0.502	0.503		mg/L		100	90 - 110

Lab Sample ID: 680-82380-1 MS — **Client Sample ID: WWL-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247960

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.015		0.998	0.952		mg/L		94	90 - 110
Nitrite as N	0.035	J	0.502	0.516		mg/L		96	90 - 110

Lab Sample ID: 680-82380-1 MSD — **Client Sample ID: WWL-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247960

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.015		0.998	0.955		mg/L		94	90 - 110	0	10

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 680-82380-1 MSD — **Client Sample ID: WWL-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247960

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	0.035	J	0.502	0.518		mg/L		96	90 - 110	0	10

Method: 375.4 - Sulfate

Lab Sample ID: MB 680-248911/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248911

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	5.0	U	5.0	2.5	mg/L			09/06/12 12:04	1

Lab Sample ID: LCS 680-248911/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248911

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	21.0		mg/L		105	75 - 125

Lab Sample ID: 680-82380-5 MS — **Client Sample ID: MW-7L**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248911

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	32		20.0	29.9	F	mg/L		-9	75 - 125

Lab Sample ID: 680-82380-5 MSD — **Client Sample ID: MW-7L**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248911

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	32		20.0	30.5	F	mg/L		-6	75 - 125	2	30

Lab Sample ID: MB 680-249189/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249189

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	5.0	U	5.0	2.5	mg/L			09/10/12 10:09	1

Lab Sample ID: LCS 680-249189/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249189

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	19.9		mg/L		99	75 - 125

Method: 375.4 - Sulfate (Continued)

Lab Sample ID: MB 680-249644/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249644

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	5.0	U	5.0	2.5	mg/L			09/13/12 11:19	1

Lab Sample ID: LCS 680-249644/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249644

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	19.2		mg/L		96	75 - 125

Lab Sample ID: 680-82341-1 MS — **Client Sample ID: LF-4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249644

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	21		20.0	31.5	F	mg/L		53	75 - 125

Lab Sample ID: 680-82341-1 MSD — **Client Sample ID: LF-4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 249644

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	21		20.0	32.7	F	mg/L		59	75 - 125	4	30

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 680-248547/26 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.0	0.50	mg/L			09/02/12 17:56	1

Lab Sample ID: LCS 680-248547/30 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248547

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	20.0	19.4		mg/L		97	80 - 120

Lab Sample ID: 680-82380-3 DU — **Client Sample ID: RAB-MW-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248547

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	13		13.1		mg/L		2	25

Method: 9060 - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: MB 680-248918/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248918

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.0	0.50	mg/L			09/05/12 13:04	1

Lab Sample ID: LCS 680-248918/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248918

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	20.0	19.3		mg/L		96	80 - 120

Lab Sample ID: 680-82341-12 MS — **Client Sample ID: NAT-4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248918

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	12		20.0	32.2		mg/L		100	80 - 120

Lab Sample ID: 680-82341-12 MSD — **Client Sample ID: NAT-4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248918

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	12		20.0	31.9		mg/L		98	80 - 120	1	25

Method: SM 3500 FE D - Iron, Ferrous

Lab Sample ID: MB 680-247935/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247935

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ferrous Iron	0.0886	J	0.10	0.025	mg/L			08/25/12 13:52	1

Lab Sample ID: LCS 680-247935/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247935

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ferrous Iron	2.00	1.98		mg/L		99	80 - 120

Lab Sample ID: 680-82380-1 MS — **Client Sample ID: WWL-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247935

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ferrous Iron	87	HF B	40.0	83.2	F	mg/L		-10	80 - 120

Method: SM 3500 FE D - Iron, Ferrous (Continued)

Lab Sample ID: 680-82380-1 MSD — **Client Sample ID: WWL-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247935

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ferrous Iron	87	HF B	40.0	83.4	F	mg/L		-10	80 - 120	0	20

Lab Sample ID: MB 680-247937/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247937

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ferrous Iron	0.10	U	0.10	0.025	mg/L			08/24/12 18:10	1

Lab Sample ID: LCS 680-247937/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247937

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ferrous Iron	2.00	2.02		mg/L		101	80 - 120

Lab Sample ID: 680-82341-8 DU — **Client Sample ID: MW-4U**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 247937

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ferrous Iron	33	HF	32.7		mg/L		0.007	20

QC Association Summary

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

GC/MS VOA

Analysis Batch: 248744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-1	LF-4	Total/NA	Water	8260B	
680-82341-1 MS	LF-4	Total/NA	Water	8260B	
680-82341-1 MSD	LF-4	Total/NA	Water	8260B	
680-82341-2	Equipment Blank 1	Total/NA	Water	8260B	
680-82341-3	LF-5	Total/NA	Water	8260B	
680-82341-4	LF-3	Total/NA	Water	8260B	
680-82341-4 - DL	LF-3	Total/NA	Water	8260B	
680-82341-5	LF-2	Total/NA	Water	8260B	
680-82341-6	LF-1	Total/NA	Water	8260B	
680-82341-7	Trip Blank	Total/NA	Water	8260B	
680-82341-8	MW-4U	Total/NA	Water	8260B	
680-82341-9	WWL-3L	Total/NA	Water	8260B	
680-82341-10	WWL-3U	Total/NA	Water	8260B	
680-82341-11	MW-9	Total/NA	Water	8260B	
680-82341-12	NAT-4	Total/NA	Water	8260B	
680-82341-13	MW-3	Total/NA	Water	8260B	
LCS 680-248744/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-248744/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-248744/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 248879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-1	WWL-1	Total/NA	Water	8260B	
680-82380-2	WWL-2	Total/NA	Water	8260B	
680-82380-2 - DL	WWL-2	Total/NA	Water	8260B	
680-82380-3	RAB-MW-2	Total/NA	Water	8260B	
680-82380-3 - DL	RAB-MW-2	Total/NA	Water	8260B	
680-82380-4 - DL	MW-7U	Total/NA	Water	8260B	
680-82380-4	MW-7U	Total/NA	Water	8260B	
680-82380-5	MW-7L	Total/NA	Water	8260B	
680-82380-6	MW-2	Total/NA	Water	8260B	
680-82380-7	VFSP-MW1	Total/NA	Water	8260B	
680-82380-8	Trip Blank	Total/NA	Water	8260B	
LCS 680-248879/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-248879/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-248879/6	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 247805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-1	LF-4	Total/NA	Water	3520C	
680-82341-1 MS	LF-4	Total/NA	Water	3520C	
680-82341-1 MSD	LF-4	Total/NA	Water	3520C	
680-82341-2	Equipment Blank 1	Total/NA	Water	3520C	
680-82341-3	LF-5	Total/NA	Water	3520C	
680-82341-4	LF-3	Total/NA	Water	3520C	
680-82341-6	LF-1	Total/NA	Water	3520C	
680-82341-8	MW-4U	Total/NA	Water	3520C	
680-82341-9	WWL-3L	Total/NA	Water	3520C	

GC/MS Semi VOA (Continued)

Prep Batch: 247805 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-10	WWL-3U	Total/NA	Water	3520C	
680-82341-11	MW-9	Total/NA	Water	3520C	
680-82380-4	MW-7U	Total/NA	Water	3520C	
680-82380-5	MW-7L	Total/NA	Water	3520C	
680-82380-6	MW-2	Total/NA	Water	3520C	
680-82380-7	VFSP-MW1	Total/NA	Water	3520C	
LCS 680-247805/18-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-247805/17-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 248194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-1	LF-4	Total/NA	Water	8270D	247805
680-82341-1 MS	LF-4	Total/NA	Water	8270D	247805
680-82341-1 MSD	LF-4	Total/NA	Water	8270D	247805
680-82380-4	MW-7U	Total/NA	Water	8270D	247805
680-82380-5	MW-7L	Total/NA	Water	8270D	247805
680-82380-6	MW-2	Total/NA	Water	8270D	247805
LCS 680-247805/18-A	Lab Control Sample	Total/NA	Water	8270D	247805
MB 680-247805/17-A	Method Blank	Total/NA	Water	8270D	247805

Analysis Batch: 248245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-2	Equipment Blank 1	Total/NA	Water	8270D	247805
680-82341-3	LF-5	Total/NA	Water	8270D	247805
680-82341-4	LF-3	Total/NA	Water	8270D	247805
680-82341-6	LF-1	Total/NA	Water	8270D	247805
680-82341-8	MW-4U	Total/NA	Water	8270D	247805
680-82341-9	WWL-3L	Total/NA	Water	8270D	247805
680-82341-10	WWL-3U	Total/NA	Water	8270D	247805
680-82341-11	MW-9	Total/NA	Water	8270D	247805
680-82380-7	VFSP-MW1	Total/NA	Water	8270D	247805

GC VOA

Analysis Batch: 248300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-248300/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-248300/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-248300/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 248550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-1	WWL-1	Total/NA	Water	8015C	
680-82380-2	WWL-2	Total/NA	Water	8015C	
680-82380-3	RAB-MW-2	Total/NA	Water	8015C	
680-82380-4	MW-7U	Total/NA	Water	8015C	
680-82380-5	MW-7L	Total/NA	Water	8015C	
680-82380-6	MW-2	Total/NA	Water	8015C	
680-82380-7	VFSP-MW1	Total/NA	Water	8015C	
LCS 680-248550/3	Lab Control Sample	Total/NA	Water	8015C	

GC VOA (Continued)

Analysis Batch: 248550 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 680-248550/4	Lab Control Sample Dup	Total/NA	Water	8015C	
MB 680-248550/2	Method Blank	Total/NA	Water	8015C	

Analysis Batch: 248619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-1	LF-4	Total/NA	Water	8015C	
680-82341-1 MS	LF-4	Total/NA	Water	8015C	
680-82341-1 MSD	LF-4	Total/NA	Water	8015C	
680-82341-2	Equipment Blank 1	Total/NA	Water	8015C	
680-82341-3	LF-5	Total/NA	Water	8015C	
680-82341-4	LF-3	Total/NA	Water	8015C	
680-82341-5	LF-2	Total/NA	Water	8015C	
680-82341-6	LF-1	Total/NA	Water	8015C	
680-82341-8	MW-4U	Total/NA	Water	8015C	
680-82341-9	WWL-3L	Total/NA	Water	8015C	
680-82341-10	WWL-3U	Total/NA	Water	8015C	
680-82341-11	MW-9	Total/NA	Water	8015C	
680-82341-12	NAT-4	Total/NA	Water	8015C	
680-82341-13	MW-3	Total/NA	Water	8015C	
LCS 680-248619/2	Lab Control Sample	Total/NA	Water	8015C	
LCSD 680-248619/3	Lab Control Sample Dup	Total/NA	Water	8015C	
MB 680-248619/4	Method Blank	Total/NA	Water	8015C	

Analysis Batch: 248739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-3	LF-5	Total/NA	Water	RSK-175	
680-82341-4	LF-3	Total/NA	Water	RSK-175	
680-82341-5	LF-2	Total/NA	Water	RSK-175	
680-82341-6	LF-1	Total/NA	Water	RSK-175	
680-82341-9	WWL-3L	Total/NA	Water	RSK-175	
680-82341-10	WWL-3U	Total/NA	Water	RSK-175	
LCS 680-248739/22	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-248739/20	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-248739/2	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 248740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-8	MW-4U	Total/NA	Water	RSK-175	
680-82341-12	NAT-4	Total/NA	Water	RSK-175	
680-82341-13	MW-3	Total/NA	Water	RSK-175	
LCS 680-248740/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-248740/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-248740/2	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 248793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-6	MW-2	Total/NA	Water	RSK-175	
680-82380-7	VFSP-MW1	Total/NA	Water	RSK-175	
LCS 680-248793/2	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-248793/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-248793/3	Method Blank	Total/NA	Water	RSK-175	

GC VOA (Continued)

Analysis Batch: 248993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-1	LF-4	Total/NA	Water	RSK-175	
680-82341-11	MW-9	Total/NA	Water	RSK-175	
680-82380-1	WWL-1	Total/NA	Water	RSK-175	
680-82380-3	RAB-MW-2	Total/NA	Water	RSK-175	
680-82380-4	MW-7U	Total/NA	Water	RSK-175	
680-82380-5	MW-7L	Total/NA	Water	RSK-175	
LCS 680-248993/2	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-248993/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-248993/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 248996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-2	WWL-2	Total/NA	Water	RSK-175	
LCS 680-248996/2	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-248996/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-248996/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 247844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-1	LF-4	Total/NA	Water	3010A	
680-82341-1 MS	LF-4	Total/NA	Water	3010A	
680-82341-1 MSD	LF-4	Total/NA	Water	3010A	
680-82341-2	Equipment Blank 1	Total/NA	Water	3010A	
680-82341-3	LF-5	Total/NA	Water	3010A	
680-82341-4	LF-3	Total/NA	Water	3010A	
680-82341-5	LF-2	Total/NA	Water	3010A	
680-82341-6	LF-1	Total/NA	Water	3010A	
680-82341-8	MW-4U	Total/NA	Water	3010A	
680-82341-9	WWL-3L	Total/NA	Water	3010A	
680-82341-10	WWL-3U	Total/NA	Water	3010A	
680-82341-11	MW-9	Total/NA	Water	3010A	
680-82341-12	NAT-4	Total/NA	Water	3010A	
680-82341-13	MW-3	Total/NA	Water	3010A	
LCS 680-247844/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 680-247844/22-A	Lab Control Sample Dup	Total/NA	Water	3010A	
MB 680-247844/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 247845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-1	WWL-1	Total/NA	Water	3010A	
680-82380-1 MS	WWL-1	Total/NA	Water	3010A	
680-82380-1 MSD	WWL-1	Total/NA	Water	3010A	
680-82380-2	WWL-2	Total/NA	Water	3010A	
680-82380-3	RAB-MW-2	Total/NA	Water	3010A	
680-82380-4	MW-7U	Total/NA	Water	3010A	
680-82380-5	MW-7L	Total/NA	Water	3010A	
680-82380-6	MW-2	Total/NA	Water	3010A	
680-82380-7	VFSP-MW1	Total/NA	Water	3010A	

Metals (Continued)

Prep Batch: 247845 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-247845/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 680-247845/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 247869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-3	RAB-MW-2	Dissolved	Water	3005A	
680-82380-3 MS	RAB-MW-2	Dissolved	Water	3005A	
680-82380-3 MSD	RAB-MW-2	Dissolved	Water	3005A	
LCS 680-247869/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 680-247869/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 248178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-1	WWL-1	Total/NA	Water	6020A	247845
680-82380-1 MS	WWL-1	Total/NA	Water	6020A	247845
680-82380-1 MSD	WWL-1	Total/NA	Water	6020A	247845
680-82380-2	WWL-2	Total/NA	Water	6020A	247845
680-82380-3	RAB-MW-2	Total/NA	Water	6020A	247845
680-82380-4	MW-7U	Total/NA	Water	6020A	247845
680-82380-5	MW-7L	Total/NA	Water	6020A	247845
680-82380-6	MW-2	Total/NA	Water	6020A	247845
680-82380-7	VFSP-MW1	Total/NA	Water	6020A	247845
LCS 680-247845/2-A	Lab Control Sample	Total/NA	Water	6020A	247845
MB 680-247845/1-A	Method Blank	Total/NA	Water	6020A	247845

Analysis Batch: 248269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-1	LF-4	Total/NA	Water	6020A	247844
680-82341-1 MS	LF-4	Total/NA	Water	6020A	247844
680-82341-1 MSD	LF-4	Total/NA	Water	6020A	247844
680-82341-2	Equipment Blank 1	Total/NA	Water	6020A	247844
680-82341-3	LF-5	Total/NA	Water	6020A	247844
680-82341-4	LF-3	Total/NA	Water	6020A	247844
680-82341-5	LF-2	Total/NA	Water	6020A	247844
680-82341-6	LF-1	Total/NA	Water	6020A	247844
680-82341-8	MW-4U	Total/NA	Water	6020A	247844
680-82341-9	WWL-3L	Total/NA	Water	6020A	247844
680-82341-10	WWL-3U	Total/NA	Water	6020A	247844
680-82341-11	MW-9	Total/NA	Water	6020A	247844
680-82341-12	NAT-4	Total/NA	Water	6020A	247844
680-82341-13	MW-3	Total/NA	Water	6020A	247844
680-82380-1	WWL-1	Total/NA	Water	6020A	247845
680-82380-1 MS	WWL-1	Total/NA	Water	6020A	247845
680-82380-1 MSD	WWL-1	Total/NA	Water	6020A	247845
680-82380-2	WWL-2	Total/NA	Water	6020A	247845
680-82380-2	WWL-2	Total/NA	Water	6020A	247845
680-82380-3	RAB-MW-2	Dissolved	Water	6020A	247869
680-82380-3	RAB-MW-2	Total/NA	Water	6020A	247845
680-82380-3 MS	RAB-MW-2	Dissolved	Water	6020A	247869
680-82380-3 MSD	RAB-MW-2	Dissolved	Water	6020A	247869
680-82380-4	MW-7U	Total/NA	Water	6020A	247845

Metals (Continued)

Analysis Batch: 248269 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-4	MW-7U	Total/NA	Water	6020A	247845
680-82380-5	MW-7L	Total/NA	Water	6020A	247845
680-82380-6	MW-2	Total/NA	Water	6020A	247845
680-82380-7	VFSP-MW1	Total/NA	Water	6020A	247845
LCS 680-247844/2-A	Lab Control Sample	Total/NA	Water	6020A	247844
LCS 680-247845/2-A	Lab Control Sample	Total/NA	Water	6020A	247845
LCS 680-247869/2-A	Lab Control Sample	Total Recoverable	Water	6020A	247869
LCSD 680-247844/22-A	Lab Control Sample Dup	Total/NA	Water	6020A	247844
MB 680-247844/1-A	Method Blank	Total/NA	Water	6020A	247844
MB 680-247845/1-A	Method Blank	Total/NA	Water	6020A	247845
MB 680-247869/1-A	Method Blank	Total Recoverable	Water	6020A	247869

Analysis Batch: 248742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-2	WWL-2	Total/NA	Water	6020A	247845

General Chemistry

Analysis Batch: 247935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-1	WWL-1	Total/NA	Water	SM 3500 FE D	
680-82380-1 MS	WWL-1	Total/NA	Water	SM 3500 FE D	
680-82380-1 MSD	WWL-1	Total/NA	Water	SM 3500 FE D	
680-82380-2	WWL-2	Total/NA	Water	SM 3500 FE D	
680-82380-3	RAB-MW-2	Total/NA	Water	SM 3500 FE D	
680-82380-4	MW-7U	Total/NA	Water	SM 3500 FE D	
680-82380-5	MW-7L	Total/NA	Water	SM 3500 FE D	
680-82380-6	MW-2	Total/NA	Water	SM 3500 FE D	
680-82380-7	VFSP-MW1	Total/NA	Water	SM 3500 FE D	
LCS 680-247935/2	Lab Control Sample	Total/NA	Water	SM 3500 FE D	
MB 680-247935/1	Method Blank	Total/NA	Water	SM 3500 FE D	

Analysis Batch: 247937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-1	LF-4	Total/NA	Water	SM 3500 FE D	
680-82341-3	LF-5	Total/NA	Water	SM 3500 FE D	
680-82341-4	LF-3	Total/NA	Water	SM 3500 FE D	
680-82341-5	LF-2	Total/NA	Water	SM 3500 FE D	
680-82341-6	LF-1	Total/NA	Water	SM 3500 FE D	
680-82341-8	MW-4U	Total/NA	Water	SM 3500 FE D	
680-82341-8 DU	MW-4U	Total/NA	Water	SM 3500 FE D	
680-82341-9	WWL-3L	Total/NA	Water	SM 3500 FE D	
680-82341-10	WWL-3U	Total/NA	Water	SM 3500 FE D	
680-82341-11	MW-9	Total/NA	Water	SM 3500 FE D	
680-82341-12	NAT-4	Total/NA	Water	SM 3500 FE D	
680-82341-13	MW-3	Total/NA	Water	SM 3500 FE D	
LCS 680-247937/1	Lab Control Sample	Total/NA	Water	SM 3500 FE D	
MB 680-247937/2	Method Blank	Total/NA	Water	SM 3500 FE D	

General Chemistry (Continued)

Analysis Batch: 247958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-6	LF-1	Total/NA	Water	353.2	
680-82341-6 DU	LF-1	Total/NA	Water	353.2	
680-82341-8	MW-4U	Total/NA	Water	353.2	
680-82341-9	WWL-3L	Total/NA	Water	353.2	
680-82341-10	WWL-3U	Total/NA	Water	353.2	
680-82341-11	MW-9	Total/NA	Water	353.2	
680-82341-12	NAT-4	Total/NA	Water	353.2	
680-82341-13	MW-3	Total/NA	Water	353.2	
LCS 680-247958/14	Lab Control Sample	Total/NA	Water	353.2	
MB 680-247958/13	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 247959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-1	LF-4	Total/NA	Water	353.2	
680-82341-1 MS	LF-4	Total/NA	Water	353.2	
680-82341-1 MSD	LF-4	Total/NA	Water	353.2	
680-82341-3	LF-5	Total/NA	Water	353.2	
680-82341-4	LF-3	Total/NA	Water	353.2	
680-82341-5	LF-2	Total/NA	Water	353.2	
LCS 680-247959/14	Lab Control Sample	Total/NA	Water	353.2	
MB 680-247959/13	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 247960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-1	WWL-1	Total/NA	Water	353.2	
680-82380-1 MS	WWL-1	Total/NA	Water	353.2	
680-82380-1 MSD	WWL-1	Total/NA	Water	353.2	
680-82380-2	WWL-2	Total/NA	Water	353.2	
680-82380-3	RAB-MW-2	Total/NA	Water	353.2	
680-82380-4	MW-7U	Total/NA	Water	353.2	
680-82380-5	MW-7L	Total/NA	Water	353.2	
680-82380-6	MW-2	Total/NA	Water	353.2	
680-82380-7	VFSP-MW1	Total/NA	Water	353.2	
LCS 680-247960/14	Lab Control Sample	Total/NA	Water	353.2	
MB 680-247960/13	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 248547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-2	WWL-2	Total/NA	Water	9060	
680-82380-3	RAB-MW-2	Total/NA	Water	9060	
680-82380-3 DU	RAB-MW-2	Total/NA	Water	9060	
680-82380-4	MW-7U	Total/NA	Water	9060	
680-82380-5	MW-7L	Total/NA	Water	9060	
680-82380-6	MW-2	Total/NA	Water	9060	
680-82380-7	VFSP-MW1	Total/NA	Water	9060	
LCS 680-248547/30	Lab Control Sample	Total/NA	Water	9060	
MB 680-248547/26	Method Blank	Total/NA	Water	9060	

Prep Batch: 248661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-1	LF-4	Total/NA	Water	351.2	

General Chemistry (Continued)

Prep Batch: 248661 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-3	LF-5	Total/NA	Water	351.2	
680-82341-4	LF-3	Total/NA	Water	351.2	
680-82341-5	LF-2	Total/NA	Water	351.2	
680-82341-6	LF-1	Total/NA	Water	351.2	
680-82341-8	MW-4U	Total/NA	Water	351.2	
680-82341-9	WWL-3L	Total/NA	Water	351.2	
680-82341-10	WWL-3U	Total/NA	Water	351.2	
680-82341-11	MW-9	Total/NA	Water	351.2	
680-82341-12	NAT-4	Total/NA	Water	351.2	
680-82341-13	MW-3	Total/NA	Water	351.2	
680-82380-1	WWL-1	Total/NA	Water	351.2	
680-82380-2	WWL-2	Total/NA	Water	351.2	
680-82380-3	RAB-MW-2	Total/NA	Water	351.2	
680-82380-4	MW-7U	Total/NA	Water	351.2	
LCS 680-248661/1-A	Lab Control Sample	Total/NA	Water	351.2	
MB 680-248661/2-A	Method Blank	Total/NA	Water	351.2	

Prep Batch: 248665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-5	MW-7L	Total/NA	Water	351.2	
680-82380-6	MW-2	Total/NA	Water	351.2	
680-82380-7	VFSP-MW1	Total/NA	Water	351.2	
LCS 680-248665/1-A	Lab Control Sample	Total/NA	Water	351.2	
MB 680-248665/2-A	Method Blank	Total/NA	Water	351.2	

Analysis Batch: 248911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-1	WWL-1	Total/NA	Water	375.4	
680-82380-2	WWL-2	Total/NA	Water	375.4	
680-82380-3	RAB-MW-2	Total/NA	Water	375.4	
680-82380-4	MW-7U	Total/NA	Water	375.4	
680-82380-5	MW-7L	Total/NA	Water	375.4	
680-82380-5 MS	MW-7L	Total/NA	Water	375.4	
680-82380-5 MSD	MW-7L	Total/NA	Water	375.4	
680-82380-6	MW-2	Total/NA	Water	375.4	
680-82380-7	VFSP-MW1	Total/NA	Water	375.4	
LCS 680-248911/1	Lab Control Sample	Total/NA	Water	375.4	
MB 680-248911/2	Method Blank	Total/NA	Water	375.4	

Analysis Batch: 248918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-1	LF-4	Total/NA	Water	9060	
680-82341-3	LF-5	Total/NA	Water	9060	
680-82341-4	LF-3	Total/NA	Water	9060	
680-82341-5	LF-2	Total/NA	Water	9060	
680-82341-6	LF-1	Total/NA	Water	9060	
680-82341-8	MW-4U	Total/NA	Water	9060	
680-82341-9	WWL-3L	Total/NA	Water	9060	
680-82341-10	WWL-3U	Total/NA	Water	9060	
680-82341-11	MW-9	Total/NA	Water	9060	
680-82341-12	NAT-4	Total/NA	Water	9060	

General Chemistry (Continued)

Analysis Batch: 248918 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-12 MS	NAT-4	Total/NA	Water	9060	
680-82341-12 MSD	NAT-4	Total/NA	Water	9060	
680-82341-13	MW-3	Total/NA	Water	9060	
680-82380-1	WWL-1	Total/NA	Water	9060	
LCS 680-248918/4	Lab Control Sample	Total/NA	Water	9060	
MB 680-248918/2	Method Blank	Total/NA	Water	9060	

Analysis Batch: 249017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-1	LF-4	Total/NA	Water	351.2	248661
680-82341-3	LF-5	Total/NA	Water	351.2	248661
680-82341-4	LF-3	Total/NA	Water	351.2	248661
680-82341-5	LF-2	Total/NA	Water	351.2	248661
680-82341-6	LF-1	Total/NA	Water	351.2	248661
680-82341-8	MW-4U	Total/NA	Water	351.2	248661
680-82341-9	WWL-3L	Total/NA	Water	351.2	248661
680-82341-10	WWL-3U	Total/NA	Water	351.2	248661
680-82341-11	MW-9	Total/NA	Water	351.2	248661
680-82341-12	NAT-4	Total/NA	Water	351.2	248661
680-82341-13	MW-3	Total/NA	Water	351.2	248661
680-82380-1	WWL-1	Total/NA	Water	351.2	248661
680-82380-2	WWL-2	Total/NA	Water	351.2	248661
680-82380-3	RAB-MW-2	Total/NA	Water	351.2	248661
680-82380-4	MW-7U	Total/NA	Water	351.2	248661
680-82380-5	MW-7L	Total/NA	Water	351.2	248665
680-82380-6	MW-2	Total/NA	Water	351.2	248665
680-82380-7	VFSP-MW1	Total/NA	Water	351.2	248665
LCS 680-248661/1-A	Lab Control Sample	Total/NA	Water	351.2	248661
LCS 680-248665/1-A	Lab Control Sample	Total/NA	Water	351.2	248665
MB 680-248661/2-A	Method Blank	Total/NA	Water	351.2	248661
MB 680-248665/2-A	Method Blank	Total/NA	Water	351.2	248665

Analysis Batch: 249063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82380-1	WWL-1	Total/NA	Water	325.2	
680-82380-2	WWL-2	Total/NA	Water	325.2	
680-82380-3	RAB-MW-2	Total/NA	Water	325.2	
680-82380-4	MW-7U	Total/NA	Water	325.2	
680-82380-5	MW-7L	Total/NA	Water	325.2	
680-82380-6	MW-2	Total/NA	Water	325.2	
680-82380-7	VFSP-MW1	Total/NA	Water	325.2	
LCS 680-249063/3	Lab Control Sample	Total/NA	Water	325.2	
MB 680-249063/2	Method Blank	Total/NA	Water	325.2	

Analysis Batch: 249189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-8	MW-4U	Total/NA	Water	375.4	
680-82341-9	WWL-3L	Total/NA	Water	375.4	
680-82341-10	WWL-3U	Total/NA	Water	375.4	
680-82341-11	MW-9	Total/NA	Water	375.4	
680-82341-12	NAT-4	Total/NA	Water	375.4	

General Chemistry (Continued)

Analysis Batch: 249189 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-13	MW-3	Total/NA	Water	375.4	
LCS 680-249189/1	Lab Control Sample	Total/NA	Water	375.4	
MB 680-249189/2	Method Blank	Total/NA	Water	375.4	

Analysis Batch: 249644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-1	LF-4	Total/NA	Water	375.4	
680-82341-1 MS	LF-4	Total/NA	Water	375.4	
680-82341-1 MSD	LF-4	Total/NA	Water	375.4	
680-82341-3	LF-5	Total/NA	Water	375.4	
680-82341-4	LF-3	Total/NA	Water	375.4	
680-82341-5	LF-2	Total/NA	Water	375.4	
680-82341-6	LF-1	Total/NA	Water	375.4	
LCS 680-249644/5	Lab Control Sample	Total/NA	Water	375.4	
MB 680-249644/6	Method Blank	Total/NA	Water	375.4	

Analysis Batch: 249693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-82341-1	LF-4	Total/NA	Water	325.2	
680-82341-3	LF-5	Total/NA	Water	325.2	
680-82341-4	LF-3	Total/NA	Water	325.2	
680-82341-5	LF-2	Total/NA	Water	325.2	
680-82341-6	LF-1	Total/NA	Water	325.2	
680-82341-8	MW-4U	Total/NA	Water	325.2	
680-82341-9	WWL-3L	Total/NA	Water	325.2	
680-82341-10	WWL-3U	Total/NA	Water	325.2	
680-82341-11	MW-9	Total/NA	Water	325.2	
680-82341-12	NAT-4	Total/NA	Water	325.2	
680-82341-13	MW-3	Total/NA	Water	325.2	
LCS 680-249693/14	Lab Control Sample	Total/NA	Water	325.2	
MB 680-249693/12	Method Blank	Total/NA	Water	325.2	

Lab Chronicle

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-4

Lab Sample ID: 680-82341-1

Date Collected: 08/23/12 09:35
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248744	09/05/12 20:05	JD	TAL SAV
Total/NA	Prep	3520C			247805	08/27/12 15:44	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248194	08/28/12 23:06	MJC	TAL SAV
Total/NA	Analysis	8015C		1	248619	09/04/12 15:29	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248993	09/06/12 18:06	AJMC	TAL SAV
Total/NA	Prep	3010A			247844	08/27/12 12:52	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 21:22	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247937	08/24/12 18:10	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247959	08/24/12 16:42	MAP	TAL SAV
Total/NA	Analysis	9060		1	248918	09/05/12 14:22	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 09:22	RW	TAL SAV
Total/NA	Analysis	375.4		1	249644	09/13/12 11:21	RW	TAL SAV
Total/NA	Analysis	325.2		1	249693	09/13/12 15:59	JNC	TAL SAV

Client Sample ID: Equipment Blank 1

Lab Sample ID: 680-82341-2

Date Collected: 08/23/12 10:05
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248744	09/05/12 14:19	JD	TAL SAV
Total/NA	Prep	3520C			247805	08/27/12 15:44	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248245	08/29/12 16:06	MJC	TAL SAV
Total/NA	Analysis	8015C		1	248619	09/04/12 16:17	SMC	TAL SAV
Total/NA	Prep	3010A			247844	08/27/12 12:52	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 22:14	BR	TAL SAV

Client Sample ID: LF-5

Lab Sample ID: 680-82341-3

Date Collected: 08/23/12 11:10
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248744	09/05/12 16:15	JD	TAL SAV
Total/NA	Prep	3520C			247805	08/27/12 15:44	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248245	08/29/12 16:34	MJC	TAL SAV
Total/NA	Analysis	8015C		1	248619	09/04/12 15:53	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248739	09/04/12 15:08	AJMC	TAL SAV
Total/NA	Prep	3010A			247844	08/27/12 12:52	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 22:21	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		2	247937	08/24/12 18:26	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247959	08/24/12 16:48	MAP	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-5

Lab Sample ID: 680-82341-3
Date Collected: 08/23/12 11:10
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060		1	248918	09/05/12 14:42	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 10:55	RW	TAL SAV
Total/NA	Analysis	375.4		10	249644	09/13/12 12:29	RW	TAL SAV
Total/NA	Analysis	325.2		2	249693	09/13/12 16:21	JNC	TAL SAV

Client Sample ID: LF-3

Lab Sample ID: 680-82341-4
Date Collected: 08/23/12 14:45
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248744	09/05/12 16:43	JD	TAL SAV
Total/NA	Analysis	8260B	DL	5	248744	09/05/12 20:34	JD	TAL SAV
Total/NA	Prep	3520C			247805	08/27/12 15:44	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248245	08/29/12 17:02	MJC	TAL SAV
Total/NA	Analysis	8015C		1	248619	09/04/12 16:41	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248739	09/04/12 15:21	AJMC	TAL SAV
Total/NA	Prep	3010A			247844	08/27/12 12:52	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 22:29	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247937	08/24/12 18:10	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247959	08/24/12 16:49	MAP	TAL SAV
Total/NA	Analysis	9060		1	248918	09/05/12 15:01	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 10:55	RW	TAL SAV
Total/NA	Analysis	375.4		5	249644	09/13/12 12:02	RW	TAL SAV
Total/NA	Analysis	325.2		1	249693	09/13/12 15:59	JNC	TAL SAV

Client Sample ID: LF-2

Lab Sample ID: 680-82341-5
Date Collected: 08/23/12 12:40
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248744	09/05/12 17:12	JD	TAL SAV
Total/NA	Analysis	8015C		1	248619	09/04/12 17:04	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248739	09/04/12 15:34	AJMC	TAL SAV
Total/NA	Prep	3010A			247844	08/27/12 12:52	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 22:36	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		2	247937	08/24/12 18:33	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247959	08/24/12 16:50	MAP	TAL SAV
Total/NA	Analysis	9060		1	248918	09/05/12 15:19	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-2

Lab Sample ID: 680-82341-5
Date Collected: 08/23/12 12:40
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	351.2		1	249017	09/07/12 10:55	RW	TAL SAV
Total/NA	Analysis	375.4		10	249644	09/13/12 12:31	RW	TAL SAV
Total/NA	Analysis	325.2		2	249693	09/13/12 16:21	JNC	TAL SAV

Client Sample ID: LF-1

Lab Sample ID: 680-82341-6
Date Collected: 08/23/12 13:40
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248744	09/05/12 15:46	JD	TAL SAV
Total/NA	Prep	3520C			247805	08/27/12 15:44	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248245	08/29/12 17:30	MJC	TAL SAV
Total/NA	Analysis	8015C		1	248619	09/04/12 17:28	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248739	09/04/12 15:47	AJMC	TAL SAV
Total/NA	Prep	3010A			247844	08/27/12 12:52	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 22:43	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		2	247937	08/24/12 18:33	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247958	08/24/12 16:22	MAP	TAL SAV
Total/NA	Analysis	9060		1	248918	09/05/12 15:36	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 10:55	RW	TAL SAV
Total/NA	Analysis	375.4		10	249644	09/13/12 12:31	RW	TAL SAV
Total/NA	Analysis	325.2		2	249693	09/13/12 16:21	JNC	TAL SAV

Client Sample ID: Trip Blank

Lab Sample ID: 680-82341-7
Date Collected: 08/23/12 00:00
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248744	09/05/12 13:51	JD	TAL SAV

Client Sample ID: MW-4U

Lab Sample ID: 680-82341-8
Date Collected: 08/23/12 09:15
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		50	248744	09/05/12 17:41	JD	TAL SAV
Total/NA	Prep	3520C			247805	08/27/12 15:44	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248245	08/29/12 22:52	MJC	TAL SAV
Total/NA	Analysis	8015C		1	248619	09/04/12 17:52	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248740	09/04/12 18:07	AJMC	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-4U

Lab Sample ID: 680-82341-8

Date Collected: 08/23/12 09:15
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			247844	08/27/12 12:52	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 22:51	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		10	247937	08/24/12 18:33	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247958	08/24/12 16:25	MAP	TAL SAV
Total/NA	Analysis	9060		1	248918	09/05/12 15:52	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		5	249017	09/07/12 11:09	RW	TAL SAV
Total/NA	Analysis	375.4		1	249189	09/10/12 10:21	JR	TAL SAV
Total/NA	Analysis	325.2		10	249693	09/13/12 16:28	JNC	TAL SAV

Client Sample ID: WWL-3L

Lab Sample ID: 680-82341-9

Date Collected: 08/23/12 12:05
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		100	248744	09/05/12 18:10	JD	TAL SAV
Total/NA	Prep	3520C			247805	08/27/12 15:44	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248245	08/29/12 23:20	MJC	TAL SAV
Total/NA	Analysis	8015C		1	248619	09/04/12 18:16	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248739	09/04/12 17:54	AJMC	TAL SAV
Total/NA	Prep	3010A			247844	08/27/12 12:52	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 22:58	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		50	247937	08/25/12 12:19	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247958	08/24/12 16:26	MAP	TAL SAV
Total/NA	Analysis	9060		1	248918	09/05/12 16:11	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 10:55	RW	TAL SAV
Total/NA	Analysis	375.4		20	249189	09/10/12 11:27	JR	TAL SAV
Total/NA	Analysis	325.2		50	249693	09/13/12 16:28	JNC	TAL SAV

Client Sample ID: WWL-3U

Lab Sample ID: 680-82341-10

Date Collected: 08/23/12 12:45
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		100	248744	09/05/12 18:39	JD	TAL SAV
Total/NA	Prep	3520C			247805	08/27/12 15:44	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248245	08/29/12 23:47	MJC	TAL SAV
Total/NA	Analysis	8015C		1	248619	09/04/12 18:40	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248739	09/04/12 17:42	AJMC	TAL SAV
Total/NA	Prep	3010A			247844	08/27/12 12:52	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 23:06	BR	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: WWL-3U

Lab Sample ID: 680-82341-10

Date Collected: 08/23/12 12:45
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 3500 FE D		50	247937	08/25/12 12:19	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247958	08/24/12 16:27	MAP	TAL SAV
Total/NA	Analysis	9060		1	248918	09/05/12 17:30	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 10:55	RW	TAL SAV
Total/NA	Analysis	375.4		20	249189	09/10/12 11:27	JR	TAL SAV
Total/NA	Analysis	325.2		50	249693	09/13/12 16:28	JNC	TAL SAV

Client Sample ID: MW-9

Lab Sample ID: 680-82341-11

Date Collected: 08/23/12 14:40
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		50	248744	09/05/12 19:08	JD	TAL SAV
Total/NA	Prep	3520C			247805	08/27/12 15:44	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248245	08/30/12 00:15	MJC	TAL SAV
Total/NA	Analysis	8015C		1	248619	09/04/12 19:04	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248993	09/06/12 17:53	AJMC	TAL SAV
Total/NA	Prep	3010A			247844	08/27/12 12:52	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 23:13	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		40	247937	08/25/12 12:19	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247958	08/24/12 16:28	MAP	TAL SAV
Total/NA	Analysis	9060		1	248918	09/05/12 17:48	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 10:55	RW	TAL SAV
Total/NA	Analysis	375.4		20	249189	09/10/12 11:25	JR	TAL SAV
Total/NA	Analysis	325.2		10	249693	09/13/12 16:28	JNC	TAL SAV

Client Sample ID: NAT-4

Lab Sample ID: 680-82341-12

Date Collected: 08/23/12 16:30
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	248744	09/05/12 15:17	JD	TAL SAV
Total/NA	Analysis	8015C		1	248619	09/04/12 19:28	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248740	09/04/12 17:16	AJMC	TAL SAV
Total/NA	Prep	3010A			247844	08/27/12 12:52	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 23:20	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247937	08/24/12 18:18	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247958	08/24/12 16:32	MAP	TAL SAV
Total/NA	Analysis	9060		1	248918	09/05/12 18:04	JR	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: NAT-4

Lab Sample ID: 680-82341-12

Date Collected: 08/23/12 16:30
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 10:55	RW	TAL SAV
Total/NA	Analysis	375.4		2	249189	09/10/12 10:55	JR	TAL SAV
Total/NA	Analysis	325.2		1	249693	09/13/12 16:08	JNC	TAL SAV

Client Sample ID: MW-3

Lab Sample ID: 680-82341-13

Date Collected: 08/23/12 10:25
Matrix: Water
Date Received: 08/24/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	248744	09/05/12 19:36	JD	TAL SAV
Total/NA	Analysis	8015C		1	248619	09/04/12 19:51	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248740	09/04/12 17:03	AJMC	TAL SAV
Total/NA	Prep	3010A			247844	08/27/12 12:52	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 23:42	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247937	08/24/12 18:18	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247958	08/24/12 16:33	MAP	TAL SAV
Total/NA	Analysis	9060		1	248918	09/05/12 18:50	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		2	249017	09/07/12 11:18	RW	TAL SAV
Total/NA	Analysis	375.4		1	249189	09/10/12 10:22	JR	TAL SAV
Total/NA	Analysis	325.2		1	249693	09/13/12 16:02	JNC	TAL SAV

Client Sample ID: WWL-1

Lab Sample ID: 680-82380-1

Date Collected: 08/24/12 10:35
Matrix: Water
Date Received: 08/25/12 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	248879	09/06/12 15:51	JD	TAL SAV
Total/NA	Analysis	8015C		1	248550	08/31/12 17:39	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248993	09/06/12 18:31	AJMC	TAL SAV
Total/NA	Prep	3010A			247845	08/27/12 12:55	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248178	08/28/12 13:07	RAM	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 16:32	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		20	247935	08/25/12 14:05	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247960	08/25/12 13:46	MAP	TAL SAV
Total/NA	Analysis	375.4		20	248911	09/06/12 12:15	JR	TAL SAV
Total/NA	Analysis	9060		5	248918	09/05/12 14:04	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 10:46	RW	TAL SAV
Total/NA	Analysis	325.2		10	249063	09/07/12 17:31	JR	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: WWL-2

Lab Sample ID: 680-82380-2

Date Collected: 08/24/12 12:20
Date Received: 08/25/12 09:20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248879	09/06/12 14:24	JD	TAL SAV
Total/NA	Analysis	8260B	DL	2	248879	09/06/12 17:46	JD	TAL SAV
Total/NA	Analysis	8015C		1	248550	08/31/12 18:03	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248996	09/06/12 18:19	AJMC	TAL SAV
Total/NA	Prep	3010A			247845	08/27/12 12:55	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248178	08/28/12 13:40	RAM	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 17:11	BR	TAL SAV
Total/NA	Analysis	6020A		4	248269	08/29/12 17:19	BR	TAL SAV
Total/NA	Analysis	6020A		2	248742	09/04/12 18:37	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		5	247935	08/25/12 14:08	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247960	08/25/12 13:50	MAP	TAL SAV
Total/NA	Analysis	9060		1	248547	09/02/12 23:29	JR	TAL SAV
Total/NA	Analysis	375.4		2	248911	09/06/12 12:42	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 10:46	RW	TAL SAV
Total/NA	Analysis	325.2		100	249063	09/07/12 17:32	JR	TAL SAV

Client Sample ID: RAB-MW-2

Lab Sample ID: 680-82380-3

Date Collected: 08/24/12 14:30
Date Received: 08/25/12 09:20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248879	09/06/12 14:53	JD	TAL SAV
Total/NA	Analysis	8260B	DL	5	248879	09/06/12 18:15	JD	TAL SAV
Total/NA	Analysis	8015C		1	248550	08/31/12 18:27	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248993	09/06/12 19:10	AJMC	TAL SAV
Total/NA	Prep	3010A			247845	08/27/12 12:55	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248178	08/28/12 13:47	RAM	TAL SAV
Dissolved	Prep	3005A			247869	08/27/12 14:36	VHB	TAL SAV
Dissolved	Analysis	6020A		1	248269	08/30/12 03:09	BR	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 17:26	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		20	247935	08/25/12 14:05	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247960	08/25/12 13:51	MAP	TAL SAV
Total/NA	Analysis	9060		1	248547	09/02/12 23:48	JR	TAL SAV
Total/NA	Analysis	375.4		50	248911	09/06/12 12:44	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 10:46	RW	TAL SAV
Total/NA	Analysis	325.2		10	249063	09/07/12 17:31	JR	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-7U

Lab Sample ID: 680-82380-4

Date Collected: 08/24/12 09:30
Matrix: Water
Date Received: 08/25/12 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B	DL	2	248879	09/06/12 16:48	JD	TAL SAV
Total/NA	Analysis	8260B		1	248879	09/06/12 13:26	JD	TAL SAV
Total/NA	Prep	3520C			247805	08/27/12 15:44	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248194	08/28/12 23:34	MJC	TAL SAV
Total/NA	Analysis	8015C		1	248550	08/31/12 18:51	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248993	09/06/12 18:57	AJMC	TAL SAV
Total/NA	Prep	3010A			247845	08/27/12 12:55	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248178	08/28/12 13:54	RAM	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 17:48	BR	TAL SAV
Total/NA	Analysis	6020A		4	248269	08/29/12 17:56	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		20	247935	08/25/12 14:05	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247960	08/25/12 14:00	MAP	TAL SAV
Total/NA	Analysis	9060		1	248547	09/03/12 00:54	JR	TAL SAV
Total/NA	Analysis	375.4		20	248911	09/06/12 12:18	JR	TAL SAV
Total/NA	Prep	351.2			248661	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 10:46	RW	TAL SAV
Total/NA	Analysis	325.2		50	249063	09/07/12 17:32	JR	TAL SAV

Client Sample ID: MW-7L

Lab Sample ID: 680-82380-5

Date Collected: 08/24/12 11:15
Matrix: Water
Date Received: 08/25/12 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248879	09/06/12 15:22	JD	TAL SAV
Total/NA	Prep	3520C			247805	08/27/12 15:44	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248194	08/29/12 00:02	MJC	TAL SAV
Total/NA	Analysis	8015C		1	248550	08/31/12 19:15	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248993	09/06/12 18:44	AJMC	TAL SAV
Total/NA	Prep	3010A			247845	08/27/12 12:55	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248178	08/28/12 14:14	RAM	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 18:03	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247935	08/25/12 13:52	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247960	08/25/12 13:54	MAP	TAL SAV
Total/NA	Analysis	9060		1	248547	09/03/12 01:11	JR	TAL SAV
Total/NA	Analysis	375.4		1	248911	09/06/12 12:13	JR	TAL SAV
Total/NA	Prep	351.2			248665	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 10:46	RW	TAL SAV
Total/NA	Analysis	325.2		1	249063	09/07/12 16:50	JR	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-2

Lab Sample ID: 680-82380-6

Date Collected: 08/24/12 12:50
Matrix: Water
Date Received: 08/25/12 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		200	248879	09/06/12 16:19	JD	TAL SAV
Total/NA	Prep	3520C			247805	08/27/12 15:44	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248194	08/29/12 00:30	MJC	TAL SAV
Total/NA	Analysis	8015C		1	248550	08/31/12 19:39	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248793	09/05/12 12:30	AJMC	TAL SAV
Total/NA	Prep	3010A			247845	08/27/12 12:55	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248178	08/28/12 14:21	RAM	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 18:10	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		40	247935	08/25/12 14:14	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247960	08/25/12 13:55	MAP	TAL SAV
Total/NA	Analysis	9060		1	248547	09/03/12 01:27	JR	TAL SAV
Total/NA	Analysis	375.4		20	248911	09/06/12 12:19	JR	TAL SAV
Total/NA	Prep	351.2			248665	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 10:46	RW	TAL SAV
Total/NA	Analysis	325.2		10	249063	09/07/12 17:06	JR	TAL SAV

Client Sample ID: VFSP-MW1

Lab Sample ID: 680-82380-7

Date Collected: 08/24/12 14:20
Matrix: Water
Date Received: 08/25/12 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248879	09/06/12 17:17	JD	TAL SAV
Total/NA	Prep	3520C			247805	08/27/12 15:44	RBS	TAL SAV
Total/NA	Analysis	8270D		1	248245	08/29/12 15:37	MJC	TAL SAV
Total/NA	Analysis	8015C		1	248550	08/31/12 20:02	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	248793	09/05/12 12:18	AJMC	TAL SAV
Total/NA	Prep	3010A			247845	08/27/12 12:55	VHB	TAL SAV
Total/NA	Analysis	6020A		1	248178	08/28/12 14:27	RAM	TAL SAV
Total/NA	Analysis	6020A		1	248269	08/29/12 18:18	BR	TAL SAV
Total/NA	Analysis	SM 3500 FE D		1	247935	08/25/12 13:52	MAP	TAL SAV
Total/NA	Analysis	353.2		1	247960	08/25/12 13:58	MAP	TAL SAV
Total/NA	Analysis	9060		1	248547	09/03/12 01:43	JR	TAL SAV
Total/NA	Analysis	375.4		5	248911	09/06/12 12:44	JR	TAL SAV
Total/NA	Prep	351.2			248665	09/04/12 08:41	MAP	TAL SAV
Total/NA	Analysis	351.2		1	249017	09/07/12 10:46	RW	TAL SAV
Total/NA	Analysis	325.2		1	249063	09/07/12 16:50	JR	TAL SAV

Lab Chronicle

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: Trip Blank

Lab Sample ID: 680-82380-8

Date Collected: 08/24/12 00:00
Matrix: Water
Date Received: 08/25/12 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	248879	09/06/12 12:58	JD	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number 55953

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: Ashland - Aquilon	PROJECT NO.: 1201764	PROJECT LOCATION (STATE): VA
TAL (LAB) PROJECT MANAGER: Lydia	P.O. NUMBER: 866-222-7786	CONTRACT NO.:
CLIENT (SITE) PM: Erin Wright	CLIENT PHONE:	CLIENT FAX:
CLIENT NAME: GES	CLIENT E-MAIL:	
CLIENT ADDRESS: 23 S. 13th St Richmond VA 23219		
COMPANY CONTRACTING THIS WORK (if applicable): Ashland		

PAGE 1 OF 2

STANDARD REPORT DELIVERY ☒

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

MATRIX TYPE (COMPOSITE (C) OR GRAB (G) INDICATE): AQUEOUS (WATER), SOLID OR SEMISOLID, AIR, NONAQUEOUS LIQUID (OIL, SOLVENT, ...)

REQUIRED ANALYSIS / NUMBER OF CONTAINERS SUBMITTED

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	AQUEOUS (WATER)	8260 VOC	8270 SVOC	6020 Metals	8015B Methanol & Ethanol	325.2 Chloride 375.4 Sulfate 353.2 Nitrate/Nitrite	353.2 Nitrate/Nitrite	351.2 TKN	9060 TOC	RSK 175 Methane	REMARKS
8/23/12	9:35	LF-4	X	X	X	X	X	X	X	X	X	X	
	9:40	MS/MSD 1 (LF-4)		X	X	X	X						
	10:05	Equipment Blank 1		X	X	X	X						
	11:10	LF-5		X	X	X	X	X	X	X	X	X	
14:45 MB	~~12:40~~	LF-3		X	X	X	X	X	X	X	X	X	
	12:40	LF-2		X		X	X	X	X	X	X	X	
	13:40	LF-1		X	X	X	X	X	X	X	X	X	
	—	Trip Blank		X									
	9:15	MW-4U		X	X	X	X	X	X	X	X	X	
	12:05	~~Tab~~ WWL-3L		X	X	X	X	X	X	X	X	X	
	12:45	WWL-3U		X	X	X	X	X	X	X	X	X	

PRESERVATIVE

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	8/23/12	18:15						

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	~~08/24/12~~ 08/24/12	~~0942~~	YES ○ NO ○		680 82341	4.2°C / 4.2°C / 4.2°C / 4.0°C / 5.0°C / 5.6°C

TAL8240-680 (1008)

Serial Number 55950

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: Ashland - Aqualon	PROJECT NO.: 1201764	PROJECT LOCATION (STATE): VA
TAL (LAB) PROJECT MANAGER: Lydia	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Erin Wright	CLIENT PHONE: 866-222-7786	CLIENT FAX: 804-343-0770
CLIENT NAME: GES	CLIENT E-MAIL:	
CLIENT ADDRESS: 23 S. 13th St Richmond VA 23219		
COMPANY CONTRACTING THIS WORK (if applicable): Ashland		

PAGE 1 OF 2

STANDARD REPORT DELIVERY ○ DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT, ...)

REQUIRED ANALYSIS / NUMBER OF CONTAINERS SUBMITTED

PRESERVATIVE

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	8260 VOC	8270 SVOC	8020 Metals	8015B Methanol Ethanol	3500 Ferr Iron 325.2 chloride 375.4 sulfate	353.2 Nitrite Nitrate	351.2 TKN	9060 TOC	RSK-175 Methane	REMARKS
8/23/12	14:40	MW-9	X	X	X	X	X	X	X	X	X	
↓	16:30	NAT-4	X	X	X	X	X	X	X	X	X	
↓	—	Trip Blank (*did not receive TB) LG 8/27/12	X									

SVOC analysis not required per sampling matrix and GES LG 8/27/12

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	8/23/12	18:15						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	08/24/12	0921	YES ○ NO ○		680-82341	4.2C / 4.2C / 4.2C / 4.0C / 5.0C / 5.6C

TAL8240-680 (1008)

Serial Number 55951

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: Ashland - Aqualon	PROJECT NO.: 1201764	PROJECT LOCATION (STATE): VA
TAL (LAB) PROJECT MANAGER: Lydia	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Erin Wright	CLIENT PHONE: 866-222-7786	CLIENT FAX: 804 343-0770
CLIENT NAME: GES	CLIENT E-MAIL:	
CLIENT ADDRESS: 23 S. 13th St Richmond VA 23219		
COMPANY CONTRACTING THIS WORK (if applicable): Ashland		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○ DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT, ...)

REQUIRED ANALYSIS — PRESERVATIVE

NUMBER OF CONTAINERS SUBMITTED

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	8260 VOC	8270 SVOC	6020 Metals	8015B Methanol & Ethanol	325.2 Chloride 375.4 Sulfate 300 Ferrous Iron	353.2 Nitrate/Nitrite	351.2 TKN	9060 TOC	RSK-175 Methane	6020A Diss Metals	REMARKS
8/24/12	~~[illegible]~~			X														
	1035	WWL-1						X		X	X	X	X	X	X	X		
	1220	WWL-2						X		X	X	X	X	X	X	X		
	1430	RAB-MW-2						X		X	X	X	X	X	X	X	X	Used Field Filter
	930	MW-7U						X	X	X	X	X	X	X	X	X	~~X~~ M	(Only RAB-MW-2
	1115	MW-7L						X	X	X	X	X	X	X	X	X	~~X~~ M	analyzed for
	1250	~~MW-3~~ MW-2*						X	X	X	X	X	X	X	X	X	~~X~~ M	dissolved metals)
	1420	VFSP-MW1						X	X	X	X	X	X	X	X	X	~~X~~ M	
		Trip Blank						X										8/27/12
																		*Revised ID
																		per K. Hall
																		A Rogneden

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	8/24/12	1538						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	08/25/12	0920	YES ○ NO ○		680-82380	4.2c / 4.0c / 4.6c

TAL8240-680 (1008)

Login Sample Receipt Checklist

Client: Ashland Inc.

Job Number: 680-82341-1
SDG Number: HAQ038

Login Number: 82341
List Number: 1
Creator: Barnett, Eddie T

List Source: TestAmerica Savannah

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	6 coolers received on ice
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	Temp range 4.2 C min through 5.6 C max
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	Trip Blank listed twice. MW3 is 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	Both liters broken for MW3, one liter broken for WWL-3U
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.	N/A	
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: 680-82341-1
SDG Number: HAQ038

Login Number: 82380
List Number: 1
Creator: Barnett, Eddie T

List Source: TestAmerica Savannah

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	4.0, 4.2, 4.6 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	Sample -6 was listed on the COC as MW3, but labels state MW2
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.
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.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

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	03-31-13
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

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.
E	Result exceeded calibration range.
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
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/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.

GC 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.
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes
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.
B	Compound was found in the blank and sample.

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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)

ATTACHMENT D

2012 GROUNDWATER SAMPLING EVENT DATA VALIDATION REPORTS (ON CD)

Project: 2012 Annual Groundwater Monitoring Event – Ashland Aqualon Functional Ingredients, 1111 Hercules Road, Hopewell, Virginia
Laboratory: Test America, Savannah, Georgia
Sample Delivery Group: HAQ037
Fraction: Organic
Matrix: Aqueous
Report Date: 10/29/2012

This analytical quality assurance report is based upon a review of analytical data generated for groundwater samples. The sample locations, laboratory identification numbers, sample collection dates, sample matrix, and analyses performed are presented in Table 1. Test America's, Savannah, Georgia performed all analyses.

The samples were analyzed for select volatile organic compounds, select semivolatile organic compounds, and alcohols. The sample analyses were performed in accordance with the procedures outlined in "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, IVA, and IVB, January 2008. Test America's, Savannah, Georgia performed all analyses.

All sample analyses have undergone an analytical quality assurance review to ensure adherence to the required protocols. Results have been validated or qualified according to general guidance provided in the Region III modifications to "Laboratory Data Validation Functional Guidelines for Validating Organic Analyses", USEPA 9/94. This document specifies procedures for validating data generated for CLP analyses. Therefore, the quality control requirements specified in the methods and associated acceptance criteria were also used to evaluate the non-CLP data. The parameters presented on the following page were evaluated.

X	•	Data Completeness
X	•	Chain of Custody Documentation
X	•	Holding Times
X	•	Instrument Performance
X	•	Initial and Continuing Calibrations
X	•	Laboratory and Field Blank Analysis Results
X	•	Surrogate Compound Recoveries
	•	Matrix Spike/Matrix Spike Duplicate Recoveries and Reproducibility
	•	Field Duplicate Analysis Results
X	•	Laboratory Control Sample Results
X	•	Internal Standard Performance
X	•	Qualitative Identification
X	•	Quantitation/Reporting Limits

X - Denotes parameter evaluated.

It is recommended that the data only be used according to the qualifiers presented, and discussed in this report. All other data should be considered qualitatively and quantitatively valid as reported by the laboratory, based on the items evaluated.

Report Approved By:

Shawne M. Rodgers
President

10/30/08

Date

1.0 *DATA COMPLETENESS*

None of the results originally included in the data package presented results for compounds detected at concentrations below the Reporting Limit (RL), but greater than their Method Detection Limit (MDL). The laboratory was contacted and provided revised data packages that included results reported to the MDL. The Level 2 report and electronic data deliverables were also resubmitted.

2.0 *CHAIN OF CUSTODY DOCUMENTATION*

The chain of custody documentation was complete.

3.0 *HOLDING TIMES*

The semivolatile results for sample NAT-2 should be considered biased low quantitative estimates, and may be higher than reported. Surrogate compounds 2-fluorobiphenyl, 2-fluorophenol, nitrbenene-d_5, and phenol-d_5 were below the acceptance limits. Recoveries for 2-fluorophenol, nitrbenene-d_5, and phenol-d_5 were less than 10 percent. The sample was re-extracted and reanalyzed for semivolatile compounds. The re-extracted analysis surrogate recoveries were acceptable. However, the sample re-extraction was performed 7 days past the 7-day extraction holding time mandated by USEPA Region III for aqueous samples. Because the sample was re-extracted outside of the holding time, chemical or biological degradation may have occurred. The semivolatile results are being reported from the reextraction analysis of sample NAT-2, and have been marked "UJ" to indicate that they are quantitative estimates.

4.0 *INSTRUMENT PERFORMANCE*

All criteria were met. No qualifiers were applied.

5.0 *INITIAL AND CONTINUING CALIBRATIONS*

All criteria were met. No qualifiers were applied.

6.0 *LABORATORY AND FIELD BLANK ANALYSIS RESULTS*

The following compounds were detected in associated laboratory method and/or field blanks.

Blank	Compound	Concentration (µg/L)	Associated Samples
Equipment Blank 2	tert-Butyl alcohol	48	NAT-2

This compound was detected in the associated sample at a concentration significantly higher than the equipment blank. There was no qualification necessary.

7.0 *SURROGATE COMPOUNDS*

Surrogate compounds 2-fluorobiphenyl, 2-fluorophenol, nitrbenene-d_5, and phenol-d_5 were below the acceptance limits for sample NAT-2. Recoveries for 2-fluorophenol, nitrbenene-d_5, and phenol-d_5 were less than 10 percent. The sample was re-extracted 7 days past the 7-day extraction holding time mandated by USEPA Region III for aqueous samples, and reanalyzed for semivolatile compounds. The re-extracted analysis surrogate recoveries were acceptable. The semivolatile results are being reported from the reextraction analysis of sample NAT-2.

8.0 *MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND REPRODUCIBILITY*

The laboratory did not select a site sample to perform matrix spike/ matrix spike duplicate analyses. Therefore, the associated sample data could not be evaluated based on these parameters. This should be noted when assessing the sample data.

9.0 *FIELD DUPLICATE RESULTS*

There was no field duplicate sample submitted with this SDG..

10.0 *LABORATORY CONTROL SAMPLE RESULTS*

All criteria were met. No qualifiers were applied.

11.0 *INTERNAL STANDARD PERFORMANCE*

All criteria were met. No qualifiers were applied.

12.0 *QUALITATIVE IDENTIFICATION*

All criteria were met. No qualifiers were applied.

13.0 *QUANTITATION/REPORTING LIMITS*

Sample NAT-2 was analyzed at a 250-fold dilution for volatile organic compounds. The dilution analysis was performed because of the suspected presence of high levels of target compounds and/or interferences. RLs are elevated by the dilution factor for this sample for target compounds that were not detected. The elevated RLs should be noted when assessing the data for these samples.

As required by USEPA protocol, all compounds, which were qualitatively identified at concentrations below their respective RLs, have been marked with "J" qualifiers to indicate that they are quantitative estimates.

METHODOLOGY REFERENCES

Analysis	Reference
Volatile Organic Compounds	Method 8260B, "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, IVA, and IVB, January 2008.
Semivolatile Organic Compounds	Method 8270C, "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, IVA, and IVB, January 2008.
Alcohols	Method 8015B, "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, IVA, and IVB, January 2008.

Table 1 Samples For Data Validation Review
2012 Annual Groundwater Monitoring Event - Ashland Aqualon Functional Ingredients
1111 Hercules Road, Hopewell, Virginia
Test America Sample Delivery Group HAQ037

SAMPLE I.D.	LABORATORY I.D	DATE COLLECTED	MATRIX	ANALYSES PERFORMED			
				VOC	SVOC	ALC	TMET
NAT-2	680-82233-3	08/21/2012 11:50	Groundwater	X	X	X	X

Project: 2012 Annual Groundwater Monitoring Event – Ashland Aqualon Functional Ingredients, 1111 Hercules Road, Hopewell, Virginia
Laboratory: Test America, Savannah, Georgia
Sample Delivery Group: HAQ037
Fraction: Inorganic
Matrix: Aqueous
Report Date: 10/29/2012

This analytical quality assurance report is based upon a review of analytical data generated for groundwater samples. The sample locations, laboratory identification numbers, sample collection dates, sample matrix, and analyses performed are presented in Table 1. Test America's, Savannah, Georgia performed all analyses.

The sample analyses were performed in accordance with the procedures outlined in "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, IVA, and IVB, January 2008.

All sample analyses have undergone an analytical quality assurance review to ensure adherence to the required protocols. Results have been validated or qualified according to general guidance provided in the Region III modifications to "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", USEPA 10/2004. This document specifies procedures for validating data generated for CLP analyses. Therefore, the quality control requirements specified in the methods and associated acceptance criteria were also used to evaluate the non-CLP data. The parameters presented on the following page were evaluated.

X • Data Completeness

X • Chain of Custody Documentation

X • Holding Times

X • Initial and Continuing Calibrations

X • ICP Interference Check Sample Results

X • Laboratory and Field Blank Analysis Results

X • Matrix Spike Recoveries and Reproducibility

X • Laboratory Duplicate Analysis Results

	• ICP Serial Dilution Results
	• Field Duplicate Analysis Results
X	• Laboratory Control Sample Results
	• GFAA Post-Digestion Spike Recovery/Duplicate Burn Precision
X	• Qualitative Identification
X	• Quantitation/Reporting Limits

X - Denotes parameter evaluated.

It is recommended that the data only be used according to the qualifiers presented, and discussed in this report. All other data should be considered qualitatively and quantitatively valid as reported by the laboratory, based on the items evaluated.

Report Approved By:

Shawne M. Rodgers
President

10/30/2008

Date

1.0 *DATA COMPLETENESS*

None of the results originally included in the data package presented results for compounds detected at concentrations below the Reporting Limit (RL), but greater than their Method Detection Limit (MDL). The laboratory was contacted and provided revised data packages that included results reported to the MDL. The Level 2 report and electronic data deliverables were also resubmitted.

2.0 *CHAIN OF CUSTODY DOCUMENTATION*

All chain of custody documentation was complete.

3.0 *HOLDING TIMES*

All criteria were met. No qualifiers were applied.

4.0 *INITIAL AND CONTINUING CALIBRATIONS*

All criteria were met. No qualifiers were applied.

5.0 *ICP INTERFERENCE CHECK SAMPLE RESULTS*

All criteria were met. No qualifiers were applied.

6.0 *LABORATORY AND FIELD BLANK ANALYSIS RESULTS*

Inorganic analytes were detected in the following associated continuing calibration blanks and/or field or preparation blanks.

Analyte	Concentration	Blank	Associated Samples
Lead	0.73 @g/L	Equipment Blank 2	NAT-2

The positive lead result reported for sample NAT-is qualitatively invalid due to the presence of this analyte in the associated equipment blank. USEPA Region III protocol requires positive results for inorganic contaminants, that are less than or equal to five times the blank contamination level, to be considered qualitatively invalid. Placing a "B" qualifier next to the quantitative result has indicated this.

7.0 *MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND REPRODUCIBILITY*

The laboratory did not select a site sample to perform matrix spike analyses. Therefore, the associated sample data could not be evaluated based on this parameter. This should be noted when assessing the sample data.

8.0 *LABORATORY DUPLICATE RESULTS*

The laboratory did not select a site sample to perform laboratory duplicate analyses. Therefore, the associated sample data could not be evaluated based on this parameter. This should be noted when assessing the sample data.

9.0 *ICP SERIAL DILUTION RESULTS*

The laboratory did not select a site sample to perform ICP serial dilution analyses. Therefore, the associated sample data could not be evaluated based on this parameter. This should be noted when assessing the sample data.

10.0 FIELD DUPLICATE RESULTS

There were no field duplicate samples submitted with this SDG.

11.0 LABORATORY CONTROL SAMPLE RESULTS

All criteria were met. No qualifiers were applied.

12.0 GFAA POST-DIGESTION SPIKE/DUPLICATE BURN

This parameter is not applicable to the analyses performed.

13.0 QUALITATIVE IDENTIFICATION

This parameter is not applicable to the analyses performed.

14.0 QUANTITATION/REPORTING LIMITS

As required by USEPA protocol, all inorganic analytes which were qualitatively identified at concentrations between their respective RLs and their method detection limits, have been marked with "J" qualifiers to indicate that they are quantitative estimates.

METHODOLOGY REFERENCES

Analysis	Reference
Metals	Method 6020, "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, IVA, and IVB, January 2008

Table 1 Samples For Data Validation Review
2012 Annual Groundwater Monitoring Event - Ashland Aqualon Functional Ingredients
1111 Hercules Road, Hopewell, Virginia
Test America Sample Delivery Group HAQ037

SAMPLE I.D.	LABORATORY I.D	DATE COLLECTED	MATRIX	ANALYSES PERFORMED			
				VOC	SVOC	ALC	TMET
NAT-2	680-82233-3	08/21/2012 11:50	Groundwater	X	X	X	X

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: NAT-2
Date Collected: 08/21/12 11:50
Date Received: 08/22/12 10:00

Lab Sample ID: 680-82233-3
Matrix: Water

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Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	250	U	250	35	ug/L			08/30/12 14:24	250
1,1-Dichloroethane	250	U	250	63	ug/L			08/30/12 14:24	250
1,2-Dichloroethane	250	U	250	25	ug/L			08/30/12 14:24	250
Diethyl ether	2500	U	2500	250	ug/L			08/30/12 14:24	250
t-Butanol	**11000**		1300	650	ug/L			08/30/12 14:24	250
1,1,2,2-Tetrachloroethane	250	U	250	45	ug/L			08/30/12 14:24	250
Tetrachloroethene	250	U	250	38	ug/L			08/30/12 14:24	250
Trichloroethene	250	U	250	33	ug/L			08/30/12 14:24	250

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*08/30/12 14:24*	*250*
Dibromofluoromethane	*102*		*70 - 130*		*08/30/12 14:24*	*250*
Toluene-d8 (Surr)	*104*		*70 - 130*		*08/30/12 14:24*	*250*

SMM 10/29/2012

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/24/12 16:11	08/29/12 15:18	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/24/12 16:11	08/29/12 15:18	1
1,4-Dioxane	9.5	U	9.5	3.2	ug/L		08/24/12 16:11	08/29/12 15:18	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/24/12 16:11	08/29/12 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*15*	*X*	*38 - 130*	*08/24/12 16:11*	*08/29/12 15:18*	*1*
2-Fluorophenol (Surr)	*4*	*X*	*25 - 130*	*08/24/12 16:11*	*08/29/12 15:18*	*1*
Nitrobenzene-d5 (Surr)	*7*	*X*	*39 - 130*	*08/24/12 16:11*	*08/29/12 15:18*	*1*
Phenol-d5 (Surr)	*5*	*X*	*25 - 130*	*08/24/12 16:11*	*08/29/12 15:18*	*1*
Terphenyl-d14 (Surr)	*21*		*10 - 143*	*08/24/12 16:11*	*08/29/12 15:18*	*1*
2,4,6-Tribromophenol (Surr)	*52*		*31 - 141*	*08/24/12 16:11*	*08/29/12 15:18*	*1*

Report reextraction

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U ~~H~~ L	9.5	1.0	ug/L		09/04/12 15:31	09/06/12 13:24	1
Bis(2-ethylhexyl) phthalate	9.5	U ~~H~~	9.5	1.5	ug/L		09/04/12 15:31	09/06/12 13:24	1
1,4-Dioxane	9.5	U ~~H~~	9.5	3.2	ug/L		09/04/12 15:31	09/06/12 13:24	1
Naphthalene	9.5	U ~~H~~	9.5	0.67	ug/L		09/04/12 15:31	09/06/12 13:24	1

HT

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*69*		*38 - 130*	*09/04/12 15:31*	*09/06/12 13:24*	*1*
2-Fluorophenol (Surr)	*74*		*25 - 130*	*09/04/12 15:31*	*09/06/12 13:24*	*1*
Nitrobenzene-d5 (Surr)	*69*		*39 - 130*	*09/04/12 15:31*	*09/06/12 13:24*	*1*
Phenol-d5 (Surr)	*72*		*25 - 130*	*09/04/12 15:31*	*09/06/12 13:24*	*1*
Terphenyl-d14 (Surr)	*22*		*10 - 143*	*09/04/12 15:31*	*09/06/12 13:24*	*1*
2,4,6-Tribromophenol (Surr)	*96*		*31 - 141*	*09/04/12 15:31*	*09/06/12 13:24*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/23/12 15:47	1
Methanol	5.0	U	5.0	1.0	mg/L			08/23/12 15:47	1

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Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**380**		0.58	0.29	ug/L			08/27/12 21:47	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Ashland Aqualon GW August 2012

TestAmerica Job ID: 680-82186-1
SDG: HAQ037

Client Sample ID: NAT-2

Date Collected: 08/21/12 11:50
Date Received: 08/22/12 10:00

Lab Sample ID: 680-82233-3
Matrix: Water

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1500		100	50	ug/L		08/23/12 08:17	08/25/12 02:50	1
Antimony	5.0	U	5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:50	1
Barium	70		5.0	1.4	ug/L		08/23/12 08:17	08/25/12 02:50	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/23/12 08:17	08/25/12 02:50	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/23/12 08:17	08/25/12 02:50	1
Chromium	11		5.0	2.5	ug/L		08/23/12 08:17	08/25/12 02:50	1
Cobalt	4.7		0.50	0.12	ug/L		08/23/12 08:17	08/25/12 02:50	1
Copper	2.1	J	5.0	1.1	ug/L		08/23/12 08:17	08/25/12 02:50	1
Iron	9400		100	44	ug/L		08/23/12 08:17	08/25/12 02:50	1
Lead	1.6	B	1.5 EBL	0.50	ug/L		08/23/12 08:17	08/25/12 02:50	1
Manganese	200		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:50	1
Mercury	0.80	U	0.80	0.40	ug/L		08/23/12 08:17	08/25/12 02:50	1
Nickel	9.8		5.0	2.0	ug/L		08/23/12 08:17	08/25/12 02:50	1
Selenium	2.5	U	2.5	1.1	ug/L		08/23/12 08:17	08/25/12 02:50	1
Vanadium	4.8	J	10	3.2	ug/L		08/23/12 08:17	08/25/12 02:50	1

GMM 10/29/2012

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	100		2.0	0.36	mg/L			09/10/12 14:15	2
Total Kjeldahl Nitrogen	1.9		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 09:22	1
Nitrate as N	0.019	J	0.050	0.010	mg/L			08/22/12 16:30	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/22/12 16:30	1
Sulfate	150		50	25	mg/L			09/06/12 11:09	10
Total Organic Carbon	18		1.0	0.50	mg/L			09/02/12 15:21	1
Ferrous Iron	0.12	HF	0.10	0.025	mg/L			08/22/12 16:43	1

Project: 2012 Annual Groundwater Monitoring Event – Ashland Aqualon Functional Ingredients, 1111 Hercules Road, Hopewell, Virginia
Laboratory: Test America, Savannah, Georgia
Sample Delivery Group: HAQ038
Fraction: Organic
Matrix: Aqueous
Report Date: 10/29/2012

This analytical quality assurance report is based upon a review of analytical data generated for groundwater samples. The sample locations, laboratory identification numbers, sample collection dates, sample matrix, and analyses performed are presented in Table 1. Test America's, Savannah, Georgia performed all analyses.

The samples were analyzed for select volatile organic compounds, select semivolatile organic compounds, and alcohols. The sample analyses were performed in accordance with the procedures outlined in "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, IVA, and IVB, January 2008. Test America's, Savannah, Georgia performed all analyses.

All sample analyses have undergone an analytical quality assurance review to ensure adherence to the required protocols. Results have been validated or qualified according to general guidance provided in the Region III modifications to "Laboratory Data Validation Functional Guidelines for Validating Organic Analyses", USEPA 9/94. This document specifies procedures for validating data generated for CLP analyses. Therefore, the quality control requirements specified in the methods and associated acceptance criteria were also used to evaluate the non-CLP data. The parameters presented on the following page were evaluated.

X	•	Data Completeness
X	•	Chain of Custody Documentation
X	•	Holding Times
X	•	Instrument Performance
X	•	Initial and Continuing Calibrations
X	•	Laboratory and Field Blank Analysis Results
X	•	Surrogate Compound Recoveries
	•	Matrix Spike/Matrix Spike Duplicate Recoveries and Reproducibility
	•	Field Duplicate Analysis Results
X	•	Laboratory Control Sample Results
X	•	Internal Standard Performance
X	•	Qualitative Identification
X	•	Quantitation/Reporting Limits

X - Denotes parameter evaluated.

It is recommended that the data only be used according to the qualifiers presented, and discussed in this report. All other data should be considered qualitatively and quantitatively valid as reported by the laboratory, based on the items evaluated.

Report Approved By:

Shawne M. Rodgers
President

10/30/2012
Date

1.0 DATA COMPLETENESS

None of the results originally included in the data package presented results for compounds detected at concentrations below the Reporting Limit (RL), but greater than their Method Detection Limit (MDL). The laboratory was contacted and provided revised data packages that included results reported to the MDL. The Level 2 report and electronic data deliverables were also resubmitted.

2.0 CHAIN OF CUSTODY DOCUMENTATION

The chain of custody documentation was complete.

3.0 HOLDING TIMES

All criteria were met. No qualifiers were applied.

4.0 INSTRUMENT PERFORMANCE

All criteria were met. No qualifiers were applied.

5.0 INITIAL AND CONTINUING CALIBRATIONS

All criteria were met. No qualifiers were applied.

6.0 LABORATORY AND FIELD BLANK ANALYSIS RESULTS

All criteria were met. No qualifiers were applied.

7.0 SURROGATE COMPOUNDS

All criteria were met. No qualifiers were applied.

8.0 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND REPRODUCIBILITY

The parent sample of the matrix spike/matrix spike duplicate was not selected for validation review. Therefore, the MS/MSD was not evaluated.

9.0 FIELD DUPLICATE RESULTS

There was no field duplicate sample submitted with this SDG..

10.0 LABORATORY CONTROL SAMPLE RESULTS

All criteria were met. No qualifiers were applied.

11.0 INTERNAL STANDARD PERFORMANCE

All criteria were met. No qualifiers were applied.

12.0 QUALITATIVE IDENTIFICATION

All criteria were met. No qualifiers were applied.

13.0 QUANTITATION/REPORTING LIMITS

The samples presented below were analyzed at dilutions for volatile organic compounds. The dilution analyses were performed because of the suspected presence of high levels of target compounds and/or interferences. RLs are elevated by the dilution factor for these samples for target compounds that were not detected. The elevated RLs should be noted when assessing the data for these samples.

Sample	Dilution Factor
MW-4U	100
WWL-3U	100

The following samples were re-analyzed at dilutions for volatile organic compounds. The samples were re-analyzed because the responses for compounds exceeded the linear range of the GC/ MS instrument. The results for these compounds have been reported from the dilution analyses. All other results are reported from the initial analyses.

Sample	Dilution Factor	Results Exceeding the Linear Range
LF-3	5.0	tert-Butyl alcohol
RAB-MW-2	5.0	tert-Butyl alcohol

As required by USEPA protocol, all compounds, which were qualitatively identified at concentrations below their respective RLs, have been marked with "J" qualifiers to indicate that they are quantitative estimates.

METHODOLOGY REFERENCES

Analysis	Reference
Volatile Organic Compounds	Method 8260B, "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, IVA, and IVB, January 2008.
Semivolatile Organic Compounds	Method 8270C, "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, IVA, and IVB, January 2008.
Alcohols	Method 8015B, "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, IVA, and IVB, January 2008.

Table 1 Samples For Data Validation Review
2012 Annual Groundwater Monitoring Event - Ashland Aqualon Functional Ingredients
1111 Hercules Road, Hopewell, Virginia
Test America Sample Delivery Group HAQ038

SAMPLE I.D.	LABORATORY I.D	DATE COLLECTED	MATRIX	ANALYSES PERFORMED				
				VOC	SVOC	ALC	TMET	DMET
WWL-3U	680-82341-10	08/23/2012 12:45	Groundwater	X	X	X	X	
LF-3	680-82341-4	08/23/2012 14:45	Groundwater	X	X	X	X	
MW-4U	680-82341-8	08/23/2012 09:15	Groundwater	X	X	X	X	
RAB-MW-2	680-82380-3	08/24/2012 14:30	Groundwater	X		X	X	X

Project: 2012 Annual Groundwater Monitoring Event – Ashland Aqualon Functional Ingredients, 1111 Hercules Road, Hopewell, Virginia
Laboratory: Test America, Savannah, Georgia
Sample Delivery Group: HAQ038
Fraction: Inorganic
Matrix: Aqueous
Report Date: 10/29/2012

This analytical quality assurance report is based upon a review of analytical data generated for groundwater samples. The sample locations, laboratory identification numbers, sample collection dates, sample matrix, and analyses performed are presented in Table 1. Test America's, Savannah, Georgia performed all analyses.

The sample analyses were performed in accordance with the procedures outlined in "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, IVA, and IVB, January 2008.

All sample analyses have undergone an analytical quality assurance review to ensure adherence to the required protocols. Results have been validated or qualified according to general guidance provided in the Region III modifications to "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", USEPA 10/2004. This document specifies procedures for validating data generated for CLP analyses. Therefore, the quality control requirements specified in the methods and associated acceptance criteria were also used to evaluate the non-CLP data. The parameters presented on the following page were evaluated.

X • Data Completeness

X • Chain of Custody Documentation

X • Holding Times

X • Initial and Continuing Calibrations

X • ICP Interference Check Sample Results

X • Laboratory and Field Blank Analysis Results

X • Matrix Spike Recoveries and Reproducibility

X • Laboratory Duplicate Analysis Results

	• ICP Serial Dilution Results
	• Field Duplicate Analysis Results
X	• Laboratory Control Sample Results
	• GFAA Post-Digestion Spike Recovery/Duplicate Burn Precision
X	• Qualitative Identification
X	• Quantitation/Reporting Limits

X - Denotes parameter evaluated.

It is recommended that the data only be used according to the qualifiers presented, and discussed in this report. All other data should be considered qualitatively and quantitatively valid as reported by the laboratory, based on the items evaluated.

Report Approved By:

Shawne M. Rodgers
President

10/29/2010

Date

1.0 *DATA COMPLETENESS*

None of the results originally included in the data package presented results for compounds detected at concentrations below the Reporting Limit (RL), but greater than their Method Detection Limit (MDL). The laboratory was contacted and provided revised data packages that included results reported to the MDL. The Level 2 report and electronic data deliverables were also resubmitted.

2.0 *CHAIN OF CUSTODY DOCUMENTATION*

All chain of custody documentation was complete.

3.0 *HOLDING TIMES*

All criteria were met. No qualifiers were applied.

4.0 *INITIAL AND CONTINUING CALIBRATIONS*

All criteria were met. No qualifiers were applied.

5.0 *ICP INTERFERENCE CHECK SAMPLE RESULTS*

All criteria were met. No qualifiers were applied.

6.0 *LABORATORY AND FIELD BLANK ANALYSIS RESULTS*

All criteria were met. No qualifiers were applied.

7.0 *MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND REPRODUCIBILITY*

All criteria were met. No qualifiers were applied.

8.0 *LABORATORY DUPLICATE RESULTS*

All criteria were met. No qualifiers were applied.

9.0 *ICP SERIAL DILUTION RESULTS*

The laboratory did not select a site sample to perform ICP serial dilution analyses. Therefore, the associated sample data could not be evaluated based on this parameter. This should be noted when assessing the sample data.

10.0 *FIELD DUPLICATE RESULTS*

There were no field duplicate samples submitted with this SDG.

11.0 *LABORATORY CONTROL SAMPLE RESULTS*

All criteria were met. No qualifiers were applied.

12.0 *GFAA POST-DIGESTION SPIKE/DUPLICATE BURN*

This parameter is not applicable to the analyses performed.

13.0 *QUALITATIVE IDENTIFICATION*

All criteria were met. No qualifiers were applied.

14.0 *QUANTITATION/REPORTING LIMITS*

The aluminum and beryllium results for sample RAB-MW-2 should be considered quantitative estimates. The recovery of associated internal standard Lithium6 was below 70 percent. Results for elemendts with masses up to the next acceptable internal standard should be considered estimates. The aluminum and beryllium results for the sample have been marked with "J" qualifiers to indicate that they are estimates.

As required by USEPA protocol, all inorganic analytes which were qualitatively identified at concentrations between their respective RLs and their method detection limits, have been marked with "J" qualifiers to indicate that they are quantitative estimates.

METHODOLOGY REFERENCES

Analysis	Reference
Appendix IX Metals	Method 6020, "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, IVA, and IVB, January 2008

Table 1 Samples For Data Validation Review
2012 Annual Groundwater Monitoring Event - Ashland Aqualon Functional Ingredients
1111 Hercules Road, Hopewell, Virginia
Test America Sample Delivery Group HAQ038

SAMPLE I.D.	LABORATORY I.D	DATE COLLECTED	MATRIX	ANALYSES PERFORMED				
				VOC	SVOC	ALC	TMET	DMET
WWL-3U	680-82341-10	08/23/2012 12:45	Groundwater	X	X	X	X	
LF-3	680-82341-4	08/23/2012 14:45	Groundwater	X	X	X	X	
MW-4U	680-82341-8	08/23/2012 09:15	Groundwater	X	X	X	X	
RAB-MW-2	680-82380-3	08/24/2012 14:30	Groundwater	X		X	X	X

Resubmitted

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-3
Date Collected: 08/23/12 14:45
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-4
Matrix: Water

8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/05/12 16:43	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/05/12 16:43	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/05/12 16:43	1
Diethyl ether	**7.0**	**J**	10	1.0	ug/L			09/05/12 16:43	1
t-Butanol ☆	~~240~~	~~E~~	5.0	2.6	ug/L	LR		09/05/12 16:43	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/05/12 16:43	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/05/12 16:43	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/05/12 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*09/05/12 16:43*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*09/05/12 16:43*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*09/05/12 16:43*	*1*

☆ Report from dilution

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	5.0	U	5.0	0.70	ug/L			09/05/12 20:34	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			09/05/12 20:34	5
1,2-Dichloroethane	5.0	U	5.0	0.50	ug/L			09/05/12 20:34	5
Diethyl ether	**5.2**	**J D**	50	5.0	ug/L			09/05/12 20:34	5
t-Butanol ☆	**180**	~~D~~	25	13	ug/L			09/05/12 20:34	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.90	ug/L			09/05/12 20:34	5
Tetrachloroethene	5.0	U	5.0	0.75	ug/L			09/05/12 20:34	5
Trichloroethene	5.0	U	5.0	0.65	ug/L			09/05/12 20:34	5

☆ Report

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*70 - 130*		*09/05/12 20:34*	*5*
Dibromofluoromethane	*105*		*70 - 130*		*09/05/12 20:34*	*5*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/05/12 20:34*	*5*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/27/12 15:44	08/29/12 17:02	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/27/12 15:44	08/29/12 17:02	1
1,4-Dioxane	**21**		9.5	3.2	ug/L		08/27/12 15:44	08/29/12 17:02	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/27/12 15:44	08/29/12 17:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*67*		*38 - 130*	*08/27/12 15:44*	*08/29/12 17:02*	*1*
2-Fluorophenol (Surr)	*64*		*25 - 130*	*08/27/12 15:44*	*08/29/12 17:02*	*1*
Nitrobenzene-d5 (Surr)	*73*		*39 - 130*	*08/27/12 15:44*	*08/29/12 17:02*	*1*
Phenol-d5 (Surr)	*64*		*25 - 130*	*08/27/12 15:44*	*08/29/12 17:02*	*1*
Terphenyl-d14 (Surr)	*63*		*10 - 143*	*08/27/12 15:44*	*08/29/12 17:02*	*1*
2,4,6-Tribromophenol (Surr)	*76*		*31 - 141*	*08/27/12 15:44*	*08/29/12 17:02*	*1*

SMM 10/26/2012

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			09/04/12 16:41	1
Methanol	**1.4**	**J**	5.0	1.0	mg/L			09/04/12 16:41	1

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: LF-3

Date Collected: 08/23/12 14:45
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-4

Matrix: Water

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	1.6		0.58	0.29	ug/L			09/04/12 15:21	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	650		100	50	ug/L		08/27/12 12:52	08/29/12 22:29	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:29	1
Barium	130		5.0	1.4	ug/L		08/27/12 12:52	08/29/12 22:29	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 22:29	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 22:29	1
Chromium	4.5	J	5.0	2.5	ug/L		08/27/12 12:52	08/29/12 22:29	1
Cobalt	4.6		0.50	0.12	ug/L		08/27/12 12:52	08/29/12 22:29	1
Copper	1.5	J	5.0	1.1	ug/L		08/27/12 12:52	08/29/12 22:29	1
Iron	2900		100	44	ug/L		08/27/12 12:52	08/29/12 22:29	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 22:29	1
Manganese	2500		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:29	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 22:29	1
Nickel	9.8		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:29	1
Selenium	1.3	J	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 22:29	1
Vanadium	3.4	J	10	3.2	ug/L		08/27/12 12:52	08/29/12 22:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	91		1.0	0.18	mg/L			09/13/12 15:59	1
Total Kjeldahl Nitrogen	1.5		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:55	1
Nitrate as N	0.076		0.050	0.010	mg/L			08/24/12 16:49	1
Nitrite as N	0.050	U	0.050	0.010	mg/L			08/24/12 16:49	1
Sulfate	140		25	13	mg/L			09/13/12 12:02	5
Total Organic Carbon	3.0		1.0	0.50	mg/L			09/05/12 15:01	1
Ferrous Iron	3.1	HF	0.10	0.025	mg/L			08/24/12 18:10	1

Resubmittal

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-4U

Date Collected: 08/23/12 09:15
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-8
Matrix: Water

8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	50	U	50	7.0	ug/L			09/05/12 17:41	50
1,1-Dichloroethane	50	U	50	13	ug/L			09/05/12 17:41	50
1,2-Dichloroethane	50	U	50	5.0	ug/L			09/05/12 17:41	50
Diethyl ether	**1800**		500	50	ug/L			09/05/12 17:41	50
t-Butanol	**3000**		250	130	ug/L			09/05/12 17:41	50
1,1,2,2-Tetrachloroethane	50	U	50	9.0	ug/L			09/05/12 17:41	50
Tetrachloroethene	50	U	50	7.5	ug/L			09/05/12 17:41	50
Trichloroethene	50	U	50	6.5	ug/L			09/05/12 17:41	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*70 - 130*		*09/05/12 17:41*	*50*
Dibromofluoromethane	*103*		*70 - 130*		*09/05/12 17:41*	*50*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/05/12 17:41*	*50*

SML 10/26/2012

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	9.5	U	9.5	1.0	ug/L		08/27/12 15:44	08/29/12 22:52	1
Bis(2-ethylhexyl) phthalate	9.5	U	9.5	1.5	ug/L		08/27/12 15:44	08/29/12 22:52	1
1,4-Dioxane	**6.9**	J	9.5	3.2	ug/L		08/27/12 15:44	08/29/12 22:52	1
Naphthalene	9.5	U	9.5	0.66	ug/L		08/27/12 15:44	08/29/12 22:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*57*		*38 - 130*	*08/27/12 15:44*	*08/29/12 22:52*	*1*
2-Fluorophenol (Surr)	*57*		*25 - 130*	*08/27/12 15:44*	*08/29/12 22:52*	*1*
Nitrobenzene-d5 (Surr)	*61*		*39 - 130*	*08/27/12 15:44*	*08/29/12 22:52*	*1*
Phenol-d5 (Surr)	*62*		*25 - 130*	*08/27/12 15:44*	*08/29/12 22:52*	*1*
Terphenyl-d14 (Surr)	*31*		*10 - 143*	*08/27/12 15:44*	*08/29/12 22:52*	*1*
2,4,6-Tribromophenol (Surr)	*88*		*31 - 141*	*08/27/12 15:44*	*08/29/12 22:52*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**1.4**	J	5.0	0.33	mg/L			09/04/12 17:52	1
Methanol	**2.3**	J	5.0	1.0	mg/L			09/04/12 17:52	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**6800**		0.58	0.29	ug/L			09/04/12 18:07	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**950**		100	50	ug/L		08/27/12 12:52	08/29/12 22:51	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:51	1
Barium	**890**		5.0	1.4	ug/L		08/27/12 12:52	08/29/12 22:51	1
Beryllium	**0.48**	J	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 22:51	1
Cadmium	**0.30**	J	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 22:51	1
Chromium	**6.2**		5.0	2.5	ug/L		08/27/12 12:52	08/29/12 22:51	1
Cobalt	**34**		0.50	0.12	ug/L		08/27/12 12:52	08/29/12 22:51	1
Copper	**9.4**		5.0	1.1	ug/L		08/27/12 12:52	08/29/12 22:51	1
Iron	**86000**		100	44	ug/L		08/27/12 12:52	08/29/12 22:51	1
Lead	**1.1**	J	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 22:51	1
Manganese	**1800**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:51	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 22:51	1

SML 10/26/2012

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: MW-4U

Date Collected: 08/23/12 09:15
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-8

Matrix: Water

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	9.1		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 22:51	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 22:51	1
Vanadium	6.0	J	10	3.2	ug/L		08/27/12 12:52	08/29/12 22:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	660		10	1.8	mg/L			09/13/12 16:28	10
Total Kjeldahl Nitrogen	11		1.0	0.75	mg/L		09/04/12 08:41	09/07/12 11:09	5
Nitrate as N	0.56		0.050	0.010	mg/L			08/24/12 16:25	1
Nitrite as N	0.014	J	0.050	0.010	mg/L			08/24/12 16:25	1
Sulfate	5.0	U	5.0	2.5	mg/L			09/10/12 10:21	1
Total Organic Carbon	27		1.0	0.50	mg/L			09/05/12 15:52	1
Ferrous Iron	33	HF	1.0	0.25	mg/L			08/24/12 18:33	10

Resubmitted

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: WWL-3U

Date Collected: 08/23/12 12:45
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-10
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	100	U	100	14	ug/L			09/05/12 18:39	100
1,1-Dichloroethane	100	U	100	25	ug/L			09/05/12 18:39	100
1,2-Dichloroethane	100	U	100	10	ug/L			09/05/12 18:39	100
Diethyl ether	**7400**		1000	100	ug/L			09/05/12 18:39	100
t-Butanol	500	U	500	260	ug/L			09/05/12 18:39	100
1,1,2,2-Tetrachloroethane	100	U	100	18	ug/L			09/05/12 18:39	100
Tetrachloroethene	100	U	100	15	ug/L			09/05/12 18:39	100
Trichloroethene	100	U	100	13	ug/L			09/05/12 18:39	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*70 - 130*		*09/05/12 18:39*	*100*
Dibromofluoromethane	*101*		*70 - 130*		*09/05/12 18:39*	*100*
Toluene-d8 (Surr)	*103*		*70 - 130*		*09/05/12 18:39*	*100*

SML 10/26/2012

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	10	U	10	1.1	ug/L		08/27/12 15:44	08/29/12 23:47	1
Bis(2-ethylhexyl) phthalate	10	U	10	1.6	ug/L		08/27/12 15:44	08/29/12 23:47	1
1,4-Dioxane	**19**		10	3.5	ug/L		08/27/12 15:44	08/29/12 23:47	1
Naphthalene	10	U	10	0.72	ug/L		08/27/12 15:44	08/29/12 23:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*65*		*38 - 130*	*08/27/12 15:44*	*08/29/12 23:47*	*1*
2-Fluorophenol (Surr)	*69*		*25 - 130*	*08/27/12 15:44*	*08/29/12 23:47*	*1*
Nitrobenzene-d5 (Surr)	*72*		*39 - 130*	*08/27/12 15:44*	*08/29/12 23:47*	*1*
Phenol-d5 (Surr)	*71*		*25 - 130*	*08/27/12 15:44*	*08/29/12 23:47*	*1*
Terphenyl-d14 (Surr)	*67*		*10 - 143*	*08/27/12 15:44*	*08/29/12 23:47*	*1*
2,4,6-Tribromophenol (Surr)	*79*		*31 - 141*	*08/27/12 15:44*	*08/29/12 23:47*	*1*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**5.8**		5.0	0.33	mg/L			09/04/12 18:40	1
Methanol	**1.9**	J	5.0	1.0	mg/L			09/04/12 18:40	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**32**		0.58	0.29	ug/L			09/04/12 17:42	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**64**	J	100	50	ug/L		08/27/12 12:52	08/29/12 23:06	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:06	1
Barium	**33**		5.0	1.4	ug/L		08/27/12 12:52	08/29/12 23:06	1
Beryllium	0.50	U	0.50	0.15	ug/L		08/27/12 12:52	08/29/12 23:06	1
Cadmium	0.50	U	0.50	0.13	ug/L		08/27/12 12:52	08/29/12 23:06	1
Chromium	**3.6**	J	5.0	2.5	ug/L		08/27/12 12:52	08/29/12 23:06	1
Cobalt	**71**		0.50	0.12	ug/L		08/27/12 12:52	08/29/12 23:06	1
Copper	**3.3**	J	5.0	1.1	ug/L		08/27/12 12:52	08/29/12 23:06	1
Iron	**170000**		100	44	ug/L		08/27/12 12:52	08/29/12 23:06	1
Lead	1.5	U	1.5	0.50	ug/L		08/27/12 12:52	08/29/12 23:06	1
Manganese	**11000**		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:06	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:52	08/29/12 23:06	1

SML 10/26/2012

Client Sample ID: WWL-3U

Date Collected: 08/23/12 12:45
Date Received: 08/24/12 09:21

Lab Sample ID: 680-82341-10

Matrix: Water

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	14		5.0	2.0	ug/L		08/27/12 12:52	08/29/12 23:06	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:52	08/29/12 23:06	1
Vanadium	10	U	10	3.2	ug/L		08/27/12 12:52	08/29/12 23:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1200		50	9.0	mg/L			09/13/12 16:28	50
Total Kjeldahl Nitrogen	1.7		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:55	1
Nitrate as N	0.21		0.050	0.010	mg/L			08/24/12 16:27	1
Nitrite as N	0.010	J	0.050	0.010	mg/L			08/24/12 16:27	1
Sulfate	430		100	50	mg/L			09/10/12 11:27	20
Total Organic Carbon	4.3		1.0	0.50	mg/L			09/05/12 17:30	1
Ferrous Iron	140	HF	5.0	1.3	mg/L			08/25/12 12:19	50

Resubmitted

Client Sample Results

Client: Ashland Inc.
Project/Site: Hercules Aqualon - GW AUG 2012

TestAmerica Job ID: 680-82341-1
SDG: HAQ038

Client Sample ID: RAB-MW-2

Date Collected: 08/24/12 14:30
Date Received: 08/25/12 09:20

Lab Sample ID: 680-82380-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	1.0	U	1.0	0.14	ug/L			09/06/12 14:53	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			09/06/12 14:53	1
1,2-Dichloroethane	1.0	U	1.0	0.10	ug/L			09/06/12 14:53	1
Diethyl ether	**12**		10	1.0	ug/L			09/06/12 14:53	1
t-Butanol ☆	~~180~~	~~E~~	5.0	2.6	ug/L			09/06/12 14:53	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18	ug/L			09/06/12 14:53	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			09/06/12 14:53	1
Trichloroethene	1.0	U	1.0	0.13	ug/L			09/06/12 14:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*		*70 - 130*		*09/06/12 14:53*	*1*
Dibromofluoromethane	*108*		*70 - 130*		*09/06/12 14:53*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/06/12 14:53*	*1*

☆ Report from dilution

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	5.0	U	5.0	0.70	ug/L			09/06/12 18:15	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			09/06/12 18:15	5
1,2-Dichloroethane	5.0	U	5.0	0.50	ug/L			09/06/12 18:15	5
Diethyl ether	**14**	J	50	5.0	ug/L			09/06/12 18:15	5
t-Butanol ☆	**150**	D	25	13	ug/L			09/06/12 18:15	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.90	ug/L			09/06/12 18:15	5
Tetrachloroethene	5.0	U	5.0	0.75	ug/L			09/06/12 18:15	5
Trichloroethene	5.0	U	5.0	0.65	ug/L			09/06/12 18:15	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*70 - 130*		*09/06/12 18:15*	*5*
Dibromofluoromethane	*99*		*70 - 130*		*09/06/12 18:15*	*5*
Toluene-d8 (Surr)	*107*		*70 - 130*		*09/06/12 18:15*	*5*

☆ Report

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	5.0	0.33	mg/L			08/31/12 18:27	1
Methanol	**1.1**	J	5.0	1.0	mg/L			08/31/12 18:27	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**0.32**	J	0.58	0.29	ug/L			09/06/12 19:10	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**7900**	J	100	50	ug/L	ISL	08/27/12 12:55	08/29/12 17:26	1
Antimony	5.0	U	5.0	2.0	ug/L		08/27/12 12:55	08/29/12 17:26	1
Barium	**92**		5.0	1.4	ug/L		08/27/12 12:55	08/29/12 17:26	1
Beryllium	**0.54**	J	0.50	0.15	ug/L	ISL	08/27/12 12:55	08/28/12 13:47	1
Cadmium	**0.99**		0.50	0.13	ug/L		08/27/12 12:55	08/29/12 17:26	1
Chromium	**57**		5.0	2.5	ug/L		08/27/12 12:55	08/29/12 17:26	1
Cobalt	**170**		0.50	0.12	ug/L		08/27/12 12:55	08/29/12 17:26	1
Copper	**17**		5.0	1.1	ug/L		08/27/12 12:55	08/29/12 17:26	1
Iron	**80000**		100	44	ug/L		08/27/12 12:55	08/29/12 17:26	1
Lead	**7.7**		1.5	0.50	ug/L		08/27/12 12:55	08/29/12 17:26	1
Manganese	**12000**		5.0	2.0	ug/L		08/27/12 12:55	08/29/12 17:26	1

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SM 10/29/2012

Client Sample ID: RAB-MW-2

Date Collected: 08/24/12 14:30
Date Received: 08/25/12 09:20

Lab Sample ID: 680-82380-3
Matrix: Water

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 12:55	08/29/12 17:26	1
Nickel	**120**		5.0	2.0	ug/L		08/27/12 12:55	08/29/12 17:26	1
Selenium	2.5	U	2.5	1.1	ug/L		08/27/12 12:55	08/29/12 17:26	1
Vanadium	**21**		10	3.2	ug/L		08/27/12 12:55	08/29/12 17:26	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**83**		50	23	ug/L		08/27/12 14:36	08/30/12 03:09	1
Antimony	5.0	U	5.0	2.3	ug/L		08/27/12 14:36	08/30/12 03:09	1
Barium	**34**		5.0	1.3	ug/L		08/27/12 14:36	08/30/12 03:09	1
Beryllium	0.50	U	0.50	0.25	ug/L		08/27/12 14:36	08/30/12 03:09	1
Cadmium	**0.32**	**J**	0.50	0.095	ug/L		08/27/12 14:36	08/30/12 03:09	1
Chromium	**4.1**	**J**	5.0	2.5	ug/L		08/27/12 14:36	08/30/12 03:09	1
Cobalt	**140**		0.50	0.15	ug/L		08/27/12 14:36	08/30/12 03:09	1
Copper	**1.8**	**J**	5.0	1.1	ug/L		08/27/12 14:36	08/30/12 03:09	1
Iron	**54000**		100	33	ug/L		08/27/12 14:36	08/30/12 03:09	1
Lead	1.5	U	1.5	0.20	ug/L		08/27/12 14:36	08/30/12 03:09	1
Manganese	**12000**		5.0	1.0	ug/L		08/27/12 14:36	08/30/12 03:09	1
Mercury	0.80	U	0.80	0.40	ug/L		08/27/12 14:36	08/30/12 03:09	1
Nickel	**100**		5.0	2.0	ug/L		08/27/12 14:36	08/30/12 03:09	1
Selenium	2.5	U	2.5	1.0	ug/L		08/27/12 14:36	08/30/12 03:09	1
Vanadium	10	U	10	3.8	ug/L		08/27/12 14:36	08/30/12 03:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**580**		10	1.8	mg/L			09/07/12 17:31	10
Total Kjeldahl Nitrogen	**1.8**		0.20	0.15	mg/L		09/04/12 08:41	09/07/12 10:46	1
Nitrate as N	0.050	U	0.050	0.010	mg/L			08/25/12 13:51	1
Nitrite as N	**0.042**	**J**	0.050	0.010	mg/L			08/25/12 13:51	1
Sulfate	**1500**		250	130	mg/L			09/06/12 12:44	50
Total Organic Carbon	**13**		1.0	0.50	mg/L			09/02/12 23:48	1
Ferrous Iron	**56**	**HF B**	2.0	0.50	mg/L			08/25/12 14:05	20